

# ANNUAL WATER QUALITY REPORT

Reporting Year 2022



***Presented By***  
**Harris County WCID #1**

## 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, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. 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.

We'd like to take this opportunity to list capital improvement projects from 2017 to the end of 2022. First, the bond projects:

- Water line replacements on East Houston, North Prairie, Clearlake, Wallisville, Magnolia, Maple, Stratford, Woodhaven, Jones, Julie, Lyndale, Camp, Irene, and Gossett
- Water plant upgrade at North Battlebell, including backup power
- Bluebell lift station upgrade, including backup power.
- Repainting and renovation of the water tower, including custom logos (Go Eagles!)
- Improvements to the wastewater treatment plant, including a new digester, dewatering press, motor control room, chlorination facilities, upgraded aeration, new pumps, and blowers on several units

In total, these represent \$7.9 million in improvements. Future bond projects include several miles of water line replacements and completion of the wastewater treatment plant improvements.

Second, projects funded directly from district revenue:

- Upgrade of Riverside lift station
- New pumps and controls for five additional lift stations
- Upgrade of the water plant at East Houston, including backup power
- A geographic information system (GIS) for mapping and a supervisory control and data acquisition (SCADA) system
- Renovation of the water barn and water office
- Relocation of two sets of water lines to facilitate the Wallisville at Main and Wallisville at Thompson roadway expansions

In total, these represent \$3.4 million in improvements.

Please remember that we are always available should you ever have any questions or concerns about your water.



## 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 55.4 million gallons of water. If you have any questions about the water loss audit, please call (281) 426-2115.

## 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 guide-

lines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.



## 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the Tuesday following the second Monday of each month at 6:00 p.m. at the Water Office, 125 San Jacinto Street, Highlands.

**QUESTIONS?** For more information about this report, or for any questions relating to your drinking water, please call Mark Taylor, General Manager, at (281) 426-2115.

## Water Conservation Tips

You can play a role in conserving water and saving 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.

## Source Water Assessment

The Texas Commission on Environmental Quality (TCEQ) completed an assessment of your source water, and results indicate that some of your sources are susceptible to certain contaminants. The sampling requirements for your water system are based on this susceptibility and previous sample data. Any detection of these contaminants may be found in this Consumer Confidence Report.

For more information on source water assessments and protection efforts at our system, contact Mark Taylor at (281) 426-2115. Further details about sources and source water assessments are available from Drinking Water Watch at <http://dww2.tceq.texas.gov/DWW/>. Our water system ID is TX1010159; Baytown Area Water Authority's water system ID is TX1011742.

## Where Do We Get Our Drinking Water?

The source of drinking water for Harris County WCID #1 is purchased surface water blended with up to 50 percent groundwater from the Chicot Aquifer. Our well sites are located on East Houston Street and North Battlebell Road in Highlands. Purchased water comes from the Trinity River and is processed by Baytown Area Water Authority on Thompson Road. For more information about your sources of water, please refer to the Source Water Assessment Viewer at <http://www.tceq.texas.gov/gis/swaview>.

## 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.



## 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 (unless a TOC violation is noted in the Violation column).



REGULATED SUBSTANCES									
				Harris County WCID #1		Baytown Area Water Authority			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Atrazine (ppb)	2021	3	3	ND	NA	0.39	0.1–0.39	No	Runoff from herbicide used on row crops
Barium (ppm)	2022	2	2	0.0465	NA	0.0535	0.0476–0.0535	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Beta/Photon Emitters (pCi/L)	2021	50 <sup>1</sup>	0	NA	NA	6.8	4.4–6.8	No	Decay of natural and human-made deposits
Chloramines (ppm)	2022	[4]	[4]	2.14 <sup>2</sup>	0.62–3.79	3.5	1.3–6.0	No	Water additive used to control microbes
Chlorite (ppm)	2022	1	0.8	NA	NA	0.163	ND–0.163	No	By-product of drinking water disinfection
Combined Radium (pCi/L)	2021	5	0	NA	NA	1.5	NA	No	Erosion of natural deposits
Cyanide (ppb)	2022	200	200	20	NA	180 <sup>3</sup>	ND–180 <sup>3</sup>	No	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Di(2-ethylhexyl) Phthalate (ppb)	2022	6	0	NA	NA	0.64	ND–0.64	No	Discharge from rubber and chemical factories
Fluoride (ppm)	2020	4	4	0.68	NA	0.62 <sup>3</sup>	0.5–0.62 <sup>3</sup>	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	56.8 <sup>4</sup>	ND–56.8	18.5	NA–18.5	No	By-product of drinking water disinfection
Nitrate (ppm)	2022	10	10	0.17	ND–0.17	0.37	0.14–0.37	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Simazine (ppb)	2021	4	4	ND	NA	0.09	ND–0.09	No	Herbicide runoff
Total Coliform Bacteria (Positive samples)	2022	TT	NA	0	NA	0	NA	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80	NA	38.1 <sup>5</sup>	ND–38.1	12.2	NA–12.2	No	By-product of drinking water disinfection
Turbidity <sup>6</sup> (NTU)	2022	TT	NA	NA	NA	0.24	0.04–0.24	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	NA	NA	100	NA	No	Soil runoff

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

				Harris County WCID #1	Baytown Area Water Authority				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2021	1.3	1.3	0.542	0/20	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits

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

<sup>2</sup>Average for 2022.

<sup>3</sup>Sampled in 2022.

<sup>4</sup>Locational running average for first quarter 2022 was 38 ppb.

<sup>5</sup>Locational running annual average for first quarter 2022.

<sup>6</sup>Turbidity 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.

## 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.

**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.

