

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 bubbles. The background is a blurred wooden surface. The text is overlaid on the central glass.

ANNUAL
WATER
QUALITY
REPORT
REPORTING YEAR 2018

Presented By
Harris Co. 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, 2018. 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.

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

Where Do We Get Our Drinking Water?

The source of drinking water for Harris County WCID #1 is purchased surface water blended with 20% groundwater from the Chicot Aquifer. Our main well site is located on E. Houston Street in Highlands, Texas. 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 available at the following URL: <http://www.tceq.texas.gov/gis/swaview>

Community Participation

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

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.

Further details about sources and source water assessments are available on Drinking Water Watch at the following URL:

<http://dww2.tceq.texas.gov/DWW/>

Our Water System ID # is TX1010159; Baytown Area Water Authority Water System ID # is TX1011742.

The 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 detections 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.

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.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Mark Taylor, Harris County WCID #1 General Manager, at (281) 426-2115.

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.

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.



We remain vigilant in delivering the best-quality drinking water

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.



BY THE NUMBERS

The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

800
TRILLION

1¢ The average cost for about 5 gallons of water supplied to a home in the U.S.

The amount of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers. **99%**

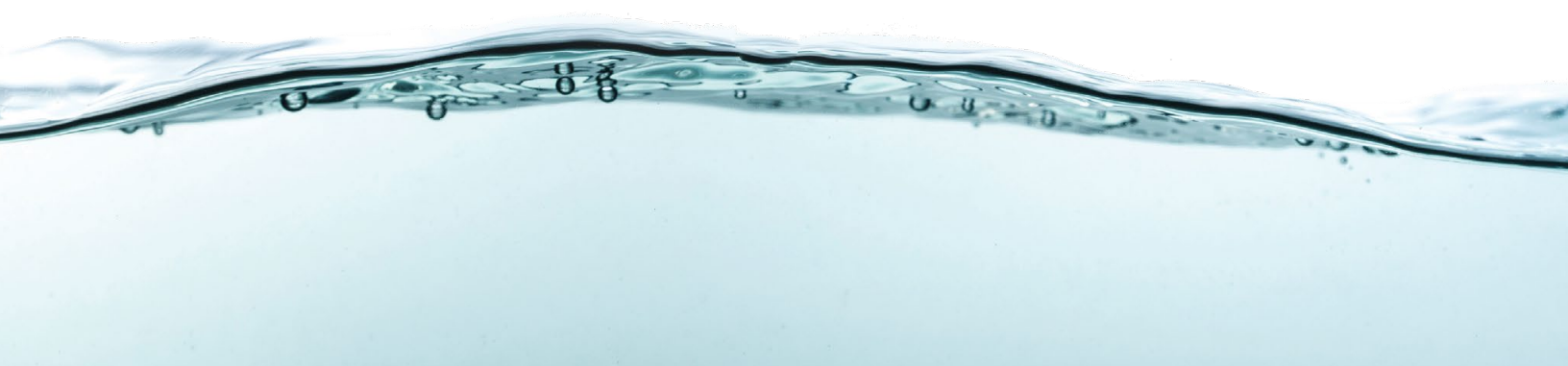
50
GALLONS The average daily number of gallons of total home water use for each person in the U.S.

The amount of Earth's surface that's covered by water. **71%**

330
MILLION The amount of water on Earth in cubic miles.

The amount of Earth's water that is available for all of humanity's needs. **1%**

75% The amount of the human brain that contains 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 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.

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) | 2018 | 3 | 3 | NA | NA | 0.18 | NA | No | Runoff from herbicide used on row crops |
| Barium (ppm) | 2016 | 2 | 2 | 0.0474 | NA | 0.0431 ¹ | NA ¹ | No | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits |
| Beta/Photon Emitters ² (pCi/L) | 2015 | 50 | 0 | NA | NA | 5.2 | NA | No | Decay of natural and man-made deposits |
| Chloramines (ppm) | 2018 | [4] | [4] | 1.76 | 0.50–3.33 | 3.46 | 2.8–3.9 | No | Water additive used to control microbes |
| Combined Radium (pCi/L) | 2016 | 5 | 0 | 1.5 | NA | NA | NA | No | Erosion of natural deposits |
| Fluoride (ppm) | 2017 | 4 | 4 | 0.75 | NA | 0.8 ¹ | 0.49–0.89 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 | 30 ³ | 16.8–37.1 | 22.6 | NA | No | By-product of drinking water disinfection |
| Nitrate (ppm) | 2018 | 10 | 10 | 0.41 | ND–0.41 | 0.037 | NA | No | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Simazine (ppb) | 2018 | 4 | 4 | NA | NA | 0.07 | NA | No | Herbicide runoff |
| TTHMs [Total Trihalomethanes] (ppb) | 2018 | 80 | NA | 37 ⁴ | 24.2–42.8 | 39.3 | NA | No | By-product of drinking water disinfection |
| Total Coliform Bacteria (Positive samples) | 2018 | TT | NA | 1 | NA | NA | NA | No | Naturally present in the environment |
| Total Organic Carbon ⁵ (ppm) | 2018 | TT | NA | NA | NA | 4.72 | 4.11–5.44 | No | Naturally present in the environment |
| Turbidity ⁶ (NTU) | 2018 | TT | NA | NA | NA | 0.2 | 0.08–0.2 | No | Soil runoff |
| Turbidity (Lowest monthly percent of samples meeting limit) | 2018 | 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

| 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 | 0.41 | 0/20 | No | Corrosion of household plumbing systems; Erosion of natural deposits |
| Lead (ppb) | 2017 | 15 | 0 | 4.7 | 0/20 | No | Corrosion of household plumbing systems; Erosion of natural deposits |

SECONDARY SUBSTANCES

| | | | | Harris County WCID #1 | | Baytown Area Water Authority | | | |
|-----------------------------|--------------|------|------|-----------------------|----------------|------------------------------|-----------------|-----------|--|
| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | SCL | MCLG | AMOUNT DETECTED | RANGE LOW-HIGH | AMOUNT DETECTED | RANGE LOW-HIGH | VIOLATION | TYPICAL SOURCE |
| pH (Units) | 2011 | >7.0 | NA | 8.2 | NA | 7.76 ¹ | NA ¹ | No | Naturally occurring |
| Zinc (ppm) | 2016 | 5 | NA | ND | NA | 0.0554 ¹ | NA ¹ | No | Runoff/leaching from natural deposits; Industrial wastes |

UNREGULATED SUBSTANCES ⁷

| SUBSTANCE (UNIT OF MEASURE) | YEAR SAMPLED | Harris County WCID #1 | | Baytown Area Water Authority | | TYPICAL SOURCE |
|--------------------------------|-----------------|-----------------------|-------------------|---------------------------------|-------------------|-----------------------------|
| | | AMOUNT DETECTED | RANGE LOW-HIGH | AMOUNT DETECTED | RANGE LOW-HIGH | |
| Sodium (ppm) | 2016 | 91.9 | NA | 30.6 ¹ | NA ¹ | Erosion of natural deposits |

¹ Sampled in 2018.

² 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.

³ LRAA for Harris County for 2018: 30 ppb.

⁴ LRAA for Harris County for 2018: 37 ppb.

⁵ The value reported under Amount Detected for TOC is the lowest ratio between the percentage of TOC actually removed to the percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

⁶ 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.

⁷ Unregulated contaminants are those for which 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.

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.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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).

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.