

ANNUAL WATER QUALITY REPORT

Reporting Year 2021



Presented By
**Memorial Villages
Water Authority**

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono (713) 465-8318.

PWS ID#: TX1010148



Our Mission Continues

Once again, we are pleased 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 Assessment

The Texas Commission on Environmental Quality, the state regulatory agency, completed an assessment of your source water, and the 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 sampling data. Any detections of these contaminants may be found in this Consumer Confidence Report.

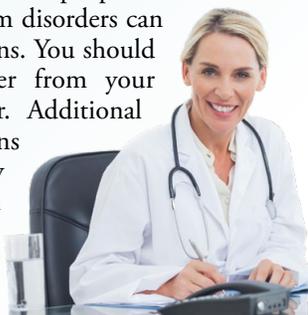
Further details about sources and source water assessments are available at Drinking Water Watch, dww2.tceq.texas.gov/DWW. If you would like a copy of our assessment, please feel free to contact our office during regular business hours at the number provided in this report.

Where Does My Water Come From?

Our drinking water comes from two sources. One source is groundwater drawn from the Evangeline Aquifer in Harris County. The other source is surface water received from the City of Houston. Combined, our treatment facilities provide roughly 1.3 billion gallons of clean drinking water every year.

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.



What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of manufactured chemicals used worldwide since the 1950s to make fluoropolymer coatings and products that resist heat, oil, stains, grease, and water. During production and use, PFAS can migrate into the soil, water, and air. Most PFAS do not break down; they remain in the environment, ultimately finding their way into drinking water. Because of their widespread use and their persistence in the environment, PFAS are found all over the world at low levels. Some PFAS can build up in people and animals with repeated exposure over time.

The most commonly studied PFAS are perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS). PFOA and PFOS have been phased out of production and use in the United States, but other countries may still manufacture and use them.

Some products that may contain PFAS include:

- Some grease-resistant paper, fast food containers/wrappers, microwave popcorn bags, pizza boxes
- Nonstick cookware
- Stain-resistant coatings used on carpets, upholstery, and other fabrics
- Water-resistant clothing
- Personal care products (shampoo, dental floss) and cosmetics (nail polish, eye makeup)
- Cleaning products
- Paints, varnishes, and sealants

Even though recent efforts to remove PFAS have reduced the likelihood of exposure, some products may still contain them. If you have questions or concerns about products you use in your home, contact the Consumer Product Safety Commission at (800) 638-2772. For a more detailed discussion on PFAS, please visit atsdr.cdc.gov/pfas/index.html.

QUESTIONS? For more information about this report, or for any questions relating to your drinking water, please call Customer Service at (713) 465-8318.

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.

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 144.5 million gallons of water. If you have any questions about the water loss audit, please call (713) 465-8318.

Safeguard Your Drinking Water

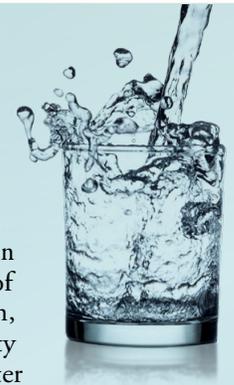
Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Water Stress

Water stress occurs when the demand for water exceeds the amount available during a certain period or when poor water quality restricts its use. Water stress causes deterioration of freshwater resources in terms of quantity (aquifer overexploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.).

According to the World Resources Institute (wri.org), the Middle East and North Africa remain the most water-stressed regions on Earth. However, several states in the western half of the U.S. are similarly experiencing extremely high levels of water stress from overuse. It is clear that even in countries with low overall water stress, individual communities may still be experiencing extremely stressed conditions. For example, South Africa and the United States rank #48 and #71 on WRI's list, respectively, yet the Western Cape (the state home to Cape Town) and New Mexico experience extremely high stress levels. There are undeniably worrying trends in water quality. But by taking action now and investing in better management, we can solve water issues before it's too late.



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
Arsenic (ppm)	2017	0.01	0	0.034	0.0034–0.0077	No	Erosion of natural deposits; runoff from orchards, runoff from glass and electronics production wastes
Atrazine (ppb)	2021	3	3	0.15	0.15–0.15	No	Runoff from herbicide used on row crops
Barium (ppm)	2020	2	2	0.0601	0.0601–0.0601	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	2021	[4]	[4]	2.67	0.77–4.70	No	Water additive used to control microbes
Cyanide (ppm)	2021	200	200	0.09	0.05–0.15	No	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	2020	4.0	4.0	0.21	0.02–0.22	No	Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]– Stage 1 (ppb)	2021	60	NA	23	12.9–38.5	No	By-product of drinking water disinfection
Nitrate (ppm)	2021	10	10	0.28	0.26–0.32	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium (ppm)	2018	0.05	0.05	0.0046	0.0046–0.0046	No	Discharge from petroleum refineries; erosion of natural deposits; discharge from mines
Simazine (ppb)	2021	4	4	0.08	0.08–0.08	No	Herbicide runoff
TTHMs [total trihalomethanes]– Stage 1 (ppb)	2021	80	NA	28.9	19.9–40.7	No	By-product of drinking water disinfection
Turbidity ¹ (NTU)	2021	TT	NA	0.49	0.07–0.49	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	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2020	1.3	1.3	0.2647	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2020	15	0	4.9	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹ Turbidity 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.

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.

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 responsibly. To find a convenient drop-off location near you, please visit bit.ly/3IeRyXy.

Community Participation

Public input concerning the water system can be made at regularly scheduled board meetings, generally held on the first Tuesday of each month at 7:00 p.m. at the Water Authority building, 8955 Gaylord Drive, Houston.



Definitions

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.

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).

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