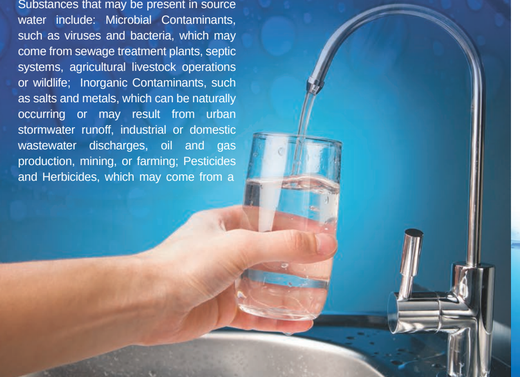
Substances That Could Be in Water

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.



A Primer on Water Quality

Is your water safe for drinking? Can fish and other aquatic life thrive in streams and lakes that are affected by human activities? What is the water quality? To answer these questions, it is helpful to understand what "water quality" means.

What is "water quality"? Water quality is a measure of the suitability of water for a particular use based on physical, chemical, and biological characteristics. To determine water quality, scientists measure and analyze characteristics of the water such as temperature, dissolved mineral content, and number of bacteria. Those characteristics are then compared to numeric standards and guidelines to decide if the water is suitable for a particular use.

How is water quality measured? Some aspects of water quality can be determined in the stream or at the well. These include temperature, acidity (pH), dissolved oxygen, and electrical conductance (an indirect indicator of dissolved minerals in the water). Analyses of individual chemicals generally are done at a laboratory.

Why are there water-quality standards and guidelines? Standards and guidelines are established to protect water for designated uses such as drinking, recreation, agricultural irrigation, or protection and maintenance of aquatic life. Standards for drinking-water quality ensure that public drinking-water supplies are as safe as possible. The U.S. Environmental Protection Agency (USEPA) and the States are responsible for establishing the standards for constituents in water that have been shown to pose a risk to human health.

What is naturally in the water? The most common dissolved substances in water are minerals or salts that, as a group, are referred to as dissolved solids. Dissolved solids include common constituents such as calcium, sodium, bicarbonate, and chloride; plant nutrients such as nitrogen and phosphorus; and trace elements such as selenium, chromium, and arsenic. In general, the common constituents are not considered harmful to human health.

What about bacteria, viruses, and other pathogens in water?

The quality of water for drinking cannot be assured by chemical analyses alone. The presence of bacteria in water, which are normally found in the intestinal tracts of humans and animals, signal that disease-causing pathogens may be present. Giardia and cryptosporidium are pathogens that have been found occasionally in public-water supplies and have caused illness in a large number of people in a few locations. Pathogens can enter our water from leaking septic tanks, wastewater-treatment discharge, and animal wastes.

City of Pearland
3519 Liberty Dr.
Pearland, TX 77581

Este reporte incluye información importante sobre el agua para tomar. Para asistencia en español, favor de llamar al telefono 281.652.1900.

Questions?

For more information about this report, or for any questions relating to your drinking water, call Tracy Sambrano at 281.652.1799.

Este reporte incluye información importante sobre elagua para tomar. Para asistencia en español, favor de llamar al telefono 281.652.1900.

City of Pearland
3519 Liberty Dr.
Pearland, TX 77581

City of Pearland

WATER QUALITY

Reporting year 2014

PWS ID #TX2000008

City of Pearland
3519 Liberty Dr.
Pearland, TX 77581

There when you need us.

Annually, the City of Pearland produces a Water Quality Report covering all testing performed between January 1 and December 31, 2014. Over the years, the City has been dedicated to producing drinking water that meets all state and federal standards and continually strives to adopt new methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, Pearland remains vigilant in meeting the goals of source water protection, water conservation and community education while continuing to serve the needs of water users.

Remember that our friendly Public Works representatives are always available to assist you if you have questions or concerns about your water.

Subscribe for Citizen Alerts

The City of Pearland uses Citizen Alerts to communicate with thousands of businesses and residents in minutes during an emergency.

Through the system, the City alerts residents about: severe weather, fires, floods, toxic environmental issues, interruptions of water or sewer services, and other critical information. In addition, the City of Pearland can notify residents who opt in for: City Council agenda items, traffic alerts, general City news, and more.

To sign up to receive alerts, visit ***pearlandtx.gov/alerts***.

Do Your Part to Keep Our Water Clean:

- Apply herbicides and pesticides per manufacturer's specifications to avoid chemical runoff to our waterways.
- Water Wisely. Watering too heavily or too often weakens your lawn and causes erosion and runoff pollution.
- Collect your food scraps, oil, and grease to avoid clogging sewer lines, which can cause overflow that pollute nearby creeks and streams.
- When performing preventative maintenance on your vehicles NEVER pour used fluids down the storm drains. This is a major source of contamination of Texas waterways.
- Check your car, boat, motorcycle, and other equipment for leaks and spills. Make repairs as soon as possible. Clean up spilled fluids with kitty litter or sand.
- Have your septic system inspected every 2 years, and have the septic tank pumped as necessary – usually every 3 to 5 years.

Where Does My Water Come From?

The City of Pearland water production customers are fortunate because Pearland enjoys an abundant water supply from two sources. The water wells draw water from the Chico and Evangelist aquifers. The second source is water purchased from the City of Houston. Combined, the City's treatment facilities provide roughly 3.5 billion gallons of clean drinking water every year. Our water supply is part of the Gulf Coast Watershed. To learn more about our watershed on the Internet, go to the U.S. Surf Your Watershed page at ***epa.gov/surf.***

Important Health Information

While your drinking water meets the U.S. EPA's standard for arsenic, it does contain low levels of arsenic. The U.S. EPA's standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

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.**

Regulated Substances				City of Pearland		City of Pearland MUD 1		City of Houston			
Disinfectants and Disinfection By-Products	Year Sampled	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Violation	Typical Source
Alkalinity	2014	N/A	N/A	240	36-301						Natural occuring soluble mineral salts
Hardness	2014	N/A	N/A	86	39-127						Natural occuring calcium
Haloacetic Acids (HAAs) (ppb)	2014	60	No goal for the total	12	0-42.3	1	0-1.1	27	2.6-50.1	No	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	2014	80	No goal for the total	14	0-45.8	4	1.4-5.9	33	6.3-45.6	No	By-product of drinking water disinfection
Inorganic Contaminants	Year Sampled	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Violation	Typical Source
Arsenic (ppb)	2014	10	0	3.6	0-3.6	N/A	N/A	0.02	0-4.8	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos (MFL)	1 . 31 .12	7	7	0.1952	0.1952 - 0.1952	N/A	N/A	N/A	N/A	No	Decay of asbestos cement water main; erosion of natural deposits
Barium (ppm)	2014	2	2	0.237	0.155-0.237	N/A	N/A	0.0478	0.0478-0.209	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Flouride (ppm)	2014	4.0	4	1.56	0.43-1.56	N/A	N/A	0.4	0-0.43	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen) (ppm)	2014	10	10	1	0-0.77	N/A	N/A	1	0.48	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitriate (measured as Nitrogen) (ppm)	2014	1	1	0.02	0-0.02	N/A	N/A	N/A	N/A	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Radioactive Contaminants	Year Sampled	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Violation	Typical Source
Combined Radium 226/228 (pCi/L)	2014	5	0	2.9	2.9-2.9	N/A	N/A	1	0-5.3	No	Erosion of natural deposits
Gross alpha excluding radon and uranium	2014	15	0	3	3.0-3.0	N/A	N/A	3	2-16.8	No	Erosion of natural deposits
Uranium (ug/1)	6 .13 . 12	0	15	N/A	N/A	N/A	N/A	11.4	0-11.4	No	Erosion of natural deposits
Synthetic organic contaminants including pesticides and herbicides	Year Sampled	MCL (MRDL)	MCLG (MRDLG)	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Amount Detected	"Range Low-High"	Violation	Typical Source
Atrazine (ppb)	2013	3	3	N/A	N/A	N/A	N/A	0.18	0-0.18	No	Runoff from herbicide used on row crops
D (2-ethylhexyl) phthalate (ppb)	2013	6	0	N/A	N/A	N/A	N/A	N/A	N/A	No	Discharge from rubber and chemical factories
Simazine (ppb)	2013	4	4	N/A	N/A	N/A	N/A	N/A	N/A	No	Herbicide runoff
Lead and Copper	Year Sampled	Action Level (AL)	MCLG	Amount Detected (90th Percentile)	Sites above AL/Total Sites	Amount Detected (90th Percentile)	Sites above AL/Total Sites	Amount Detected (90th Percentile)	Sites above AL/Total Sites	Violation	Typical Source
Copper (ppm)	9. 29 . 12	1.3	1.3	0.467	0/50	0.493	0/20	2014 0.331	0	No	Erosion of natural deposits; leaching from wood preservatives; corrosion of household plumbing system
Lead (ppb)	9 . 29 .12	15	0	2.3	0/50	1.19	0/20	3.72	0/50	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead and Copper	Follow- up or routine tap M/R (LCR) 2015									MUD 1 Violation began 10 . 1 .14 ended 2014	The City of Pearland failed to take lead and copper samples for MUD 1 in 2014. Samples scheduled to be taken in 2015

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.

MFL (million fibers per liter):
A measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

N/A: 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.

Do Your Part to Conserve Water:

- Use drip irrigation for plants and gardens, and water early in the morning to minimize evaporation.
- Collecting rainwater for landscape use is great for the plants and can save water and money.
- Install faucet aerators to cut in half the amount of water used by each faucet.
- Fix faucet leaks. A faucet leak can waste up to 3,000 gallons of water a year.
- Install water-efficient plumbing fixtures to reduce water consumption by 25 to 60 percent.
- Check your toilet for leaks by using a leak-detection dye table. Leaks can waste up to 200 gallons of water a day.
- Wash only full loads of laundry. This could save an average household more than 3,400 gallons of water each year.
- Invest in an ENERGY STAR-qualified clothes washer, which typically uses 50 percent less water and 30 percent less energy per load.