

Klein PUD 2016 Annual Water Quality Report

Water Sources

The sources of drinking water (both tap 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 dissolves naturally-occurring minerals, and in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water before treatment include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water 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 storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

The water sources for this water system are groundwater wells located within the District as well as surface water from the North Harris County Regional Water Authority whose source is Lake Houston. 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 is included in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, contact the District Operator at **832-467-1599, or toll free at 1-866-467-1599.**

Important Information about Lead

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. We are 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 or at <http://www.epa.gov/safewater/lead>.

All Drinking Water May Contain Contaminants

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Special Notice:

Required language for ALL community public water supplies: 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 1-800-426-4791.

Protecting the Water You Drink

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Public Participation Opportunities

The Board meets regularly each month typically at 6:30 PM on the 3rd Monday of the month at 19001 Mirror Lake Dr, Spring, TX 77388. For more information regarding the date, time and location of the meeting call **832-467-1599** or send your comments to:

Klein PUD
P.O. Box 690928
Houston, Texas 77269-0928

Secondary Constituents

Contaminants, such as calcium, sodium or iron, may be found in drinking water and may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns.

This report is a summary of the quality of the water we provide our customers. The analysis was made using data from 2016 EPA required tests (unless noted). The State of Texas allows us to monitor some substances less than annually because the concentration does not change frequently. Although the District samples your water for up to 97 substances we are listing only those substances detected in your water. The District is required by the Federal Safe Drinking Water Act to send the report annually.

Please call the District's Operator, Environmental Development Partners, EDP, at **832-467-1599, or toll free at 1-866-467-1599** if you have any questions regarding this report.

EDP
ENVIRONMENTAL DEVELOPMENT PARTNERS

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The Board of Directors of Klein PUD is pleased to give you this report about our drinking water based upon 2016 test results.

**Our Drinking Water Meets or Exceeds All
Federal (EPA) Drinking Water
Requirements.**

Este reporte incluye informacion importante sobre el agua potable. Para asistencia en español, favor de llamar a District Operator al telefono **832-467-1599.**

Regulated Contaminants

	Contaminant	Year	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Unit	Violation	Likely Source of Contamination
Disinfectant By-Products	Haloacetic Acids (HAA5)	2016	3.6	3.6 / 3.6	NA	60	ppb	No	By-product of drinking water disinfection.
	Total Trihalomethanes (TTHM)	2016	2.5	2.5 / 2.5	NA	80	ppb	No	By-product of drinking water disinfection.
Inorganic Contaminants	Barium	2016	0.0775	0.0589 / 0.0775	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
	Fluoride	2014 2016	0.19	0 / 0.19	4	4	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
	Nitrate [measured as Nitrogen]	2016	0.6	0.18 / 0.6	10	10	ppm	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
Radioactive Contaminants	Beta/photon emitters	2011	5.4	5.4 / 5.4	0	50	pCi/L*	No	Decay of natural and man-made deposits. *EPA considers 50 pCi/L to be the level of concern for beta particles.
	Combined Radium 226/228	2011	1	1 / 1	0	5	pCi/L	No	Erosion of natural deposits.
Synthetic Organic Contaminants	Atrazine	2016	0.77	0.77 / 0.77	3	3	ppb	No	Runoff from herbicide used on row crops.
Secondary Contaminants	Calcium	2016	17.3	17.3 / 17.3	NA	NA	ppm	No	Erosion of natural deposits.
	Iron	2016	0.01	0.01 / 0.01	NA	NA	ppm	No	Erosion of natural deposits.
	Hardness	2016	53.3	53.3 / 53.3	NA	NA	ppm	No	Erosion of natural deposits.

The water we conserve today can serve us tomorrow!

The single most effective conservation step that can be taken inside the home is to install water efficient showerheads. They provide great showers, yet use 30% to 70% less water. - Use half as much water by installing water efficient aerators on the bathroom and kitchen sinks. - Laundry accounts for about 14% of home water use. Adjust the water level on your machine to match the size of your load. - Repair leaks immediately! A dripping faucet can waste 2 gallons of water per hour.

Lead and Copper

Contaminant	Year	MCLG	AL	90th Percentile	# Sites over AL	Unit	Violation	Likely Source of Contamination
Copper	2016	1.3	1.3	0.0757	0	ppm	No	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	2016	0	15	1.29	0	ppb	No	Corrosion of household plumbing systems; Erosion of natural deposits.

Turbidity

Contaminant	Year	Turbidity Limit	Highest Single Measurement	Lowest % of Samples Meeting Limit	Unit	Violation	Typical Source
Turbidity	2016	0.3	0.17	100%	NTU	No	Soil runoff.

95% or more of the monthly samples must be below the 0.3 NTU limit to be in compliance. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbiological growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Disinfectant

Disinfectant	Year	MRDLG	MRDL	Annual Average	Range of Levels Detected	Unit	Violation	Source of Contaminant
Total Chlorine	2016	4	4	2.48	0.81 / 4.10	ppm	No	Disinfection used to control microbes.

Definitions - The following tables contain scientific terms and measures, some of which may require explanation.

ALG	Action Level Goal. The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
AL	Action Level. The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Avg	Regulatory compliance with some MCLs are based on running annual average of monthly samples.
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.
MFL	million fibers per liter (a measure of asbestos)
NA	not applicable
NTU	nephelometric turbidity units (a measure of turbidity)
pCi/L	picocuries per liter (a measure of radioactivity)
ppb	micrograms per liter or parts per billion - or one ounce in 7,350,000 gallons of water
ppm	milligrams per liter or parts per million - or one ounce in 7,350 gallons of water

Most importantly, your water meets all state and federal drinking water standards.