



2017 Annual Drinking Water Quality Report

Consumer Confidence Report (CCR)

Clear Lake City Water Authority

281-488-1164 • www.clcwa.org

Serving the Community Since 1963

Reporting Period: January 1, 2017 to December 31, 2017

GENERAL INFORMATION

This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

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 (800) 426-4791.

For more information regarding this report contact:

Clear Lake City Water Authority
Phone: 281-488-1164

SOURCES OF DRINKING WATER

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 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 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.

CLCWA WATER SOURCE

The source of drinking water used by the Clear Lake City Water Authority is approximately 97% purchased surface water and 3% groundwater wells. The Authority draws most of its drinking water from Houston's Southeast Surface Water Treatment Plant near Ellington. The raw surface water comes from the Trinity River through Lake Livingston. On occasion, the raw surface water may come from the San Jacinto River through Lake Houston. The Authority supplements surface water with ground water from their permitted wells during high demand in summer months. These are deep wells, producing water from the Gulf Coast Aquifer.

Este reporte incluye información importante sobre el agua para tomar. Para mas asistencia en español, por favor de llamar al telefono, 281-488-1164.

SPECIAL NOTICE

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.

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, color, or odor of drinking water, please contact our office at 281-488-1164.

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; persons 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 providers. Additional guidelines on appropriate means to lessen the risk of infection by Cryptosporidium are available from the Safe Drinking Water Hotline (800-426-4791).

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. Clear Lake City Water Authority 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 or at <http://www.epa.gov/safewater/lead>.

SOURCE WATER ASSESSMENTS

The TCEQ completed an assessment of our source water, and results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system is based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this Consumer Confidence Report. For more information on source water assessments and protection efforts at our system, please call 281-488-1164.

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>

Further details about sources and source water assessments are available in Drinking Water Watch at the following URL: <http://dww2.tceq.texas.gov/DWW/>

PUBLIC PARTICIPATION OPPORTUNITIES

Board of Director's meetings are regularly scheduled at 7:00 p.m. on the second Thursday of each month at 900 Bay Area Boulevard. These meetings are subject to change and anyone interested in attending should verify the meeting date by calling 281-488-1164. Time is allotted at Board meetings for public questions and comments. Your attendance is welcome.

Definitions & Abbreviations

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

Maximum Contaminant Level Goal (MCLG):

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.

Maximum Contaminant Level (MCL):

The highest permissible 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.

Maximum Residual Disinfectant Level Goal (MRDLG):

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.

Maximum Residual Disinfectant Level (MRDL):

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.

Avg: Regulatory compliance with some MCLs are based on running annual average of monthly samples.

Action Level Goal (ALG):

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.

Action Level (AL):

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

MFL: Million fibers per liter (a measure of asbestos)

Treatment Technique (TT):

A required process intended to reduce the level of a contaminant in drinking water.

Level 1 Assessment:

A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment:

A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

mrem/year: Millirems per year (a measure of radiation absorbed by the body)

NTU: Nephelometric Turbidity Units (a measure of turbidity)

na: Not applicable.

CONTINUED ►

ABOUT THE FOLLOWING TABLES

The following tables list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test up to 97 contaminants. If a contaminant was reported in a prior year's report, but is not detected in this year's samples, that contaminant has been removed from the list.

Inorganic Contaminants

Collection Date	Contaminant	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2017	Arsenic	<2.0	<2.0 - <2.0	0	10	ppb	No	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
<i>This arsenic MCL became effective January 23, 2006. In the event of a violation, you will be notified.</i>								
2017	Barium	0.133	0.0502 - 0.133	2	2	ppm	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2017	Cyanide	30	0 - 30	200	200	ppb	No	Discharge from plastic and fertilizer factories; discharge from steel/metal factories.
2017	Fluoride	1.09	0.51 - 1.09	4	4	ppm	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2017	Nitrate	1	0.02 - 0.85	10	10	ppm	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2015	Nitrite	0.02	0 - 0.02	1	1	ppm	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.

Synthetic Organic Contaminants INCLUDING Pesticides AND Herbicides

Collection Date	Contaminant	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2017	Simazine	0.19	0 - 0.19	4	4	ppb	No	Herbicide runoff.
2017	Atrazine	0.24	0.13 - 0.24	3	3	ppb	No	Runoff from herbicide used on row crops.

Radioactive Contaminants

Collection Date	Contaminant	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2017	Beta/photon emitters	4.1	0 - 4.1	0	4	mrem/yr	No	Decay of natural and man-made deposits.
2017	Combined Radium 226 & 228	2.87	2.69 - 2.87	0	5	pCi/L	No	Erosion of natural deposits.

EPA considers 50 pCi/L to be the level of concern for beta particles.

Coliform Bacteria

Total Coliform Bacteria are used as indicators of microbial contamination of drinking water because testing of them is easy. While not disease-causing organisms themselves, they are often found in association with other microbes that are capable of causing disease. Coliform bacteria are hardier than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Max Contaminant Level Goal	Total Coliform Max Contaminant Level	Highest No. of Positive	Fecal Coliform or E. Coli Maximum Contaminant Level	Total No. of Positive E. Coli or Fecal Coliform Samples	Violation	Likely Source of Contamination
0	5% of Monthly Samples are positive	1.1	0	0	No	Naturally present in the environment.

Disinfectant Residual

Collection Date	Disinfectant	Average Level Detected	Range of Levels Detected	MRDLG	MRDL	Unit of Measure	Violation	Likely Source of Contaminant
2017	Chloramine Residual	1.9	0.5 - 4.0	4	4	ppm	No	Water additive used to control microbes.

pCi/L: picocuries per liter (a measure of radioactivity)

ppm: parts per million, or milligrams per liter (mg/L) – or one ounce in 7,350 gallons of water

ppb: parts per billion, or micrograms per liter (µg/L) – or one ounce in 7,350,000 gallons of water.

ppt: parts per trillion, or nanograms per liter (ng/L)

Disinfectants and Disinfection By-products

Collection Date	Disinfection By-products	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Unit of Measure	Violation	Likely Source of Contaminant
2017	Total Haloacetic Acids (HAA5)	50.3	6.4 – 50.3	na	60	ppb	No	By-product of drinking water disinfection.
2017	Total Trihalomethanes (TTHM)	58.7	16.2 – 58.7	na	80	ppb	No	By-product of drinking water disinfection.

Unregulated Contaminants

There is no maximum contaminant level for these chemicals at the entry point to distribution. 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.

Collection Date	Contaminant	Highest Level Detected	Range of Individual Samples	MCLG	MCL	Unit of Measure	Likely Source of Contaminant
2017	Chloroform	26.7	<1.0 – 26.7	na	na	ppb	By-product of drinking water disinfection.
2017	Bromoform	24	<1.0 – 24	na	na	ppb	By-product of drinking water disinfection.
2017	Bromodichloromethane	20.2	<1.0 – 20.2	na	na	ppb	By-product of drinking water disinfection.
2017	Dibromochloromethane	14	<1.0 – 14	na	na	ppb	By-product of drinking water disinfection.

Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial 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.

Collection Date	Contaminant	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Likely Source of Contaminant
2017	Turbidity	0.14	100.00	≤0.3	NTU	Soil runoff.

Lead and Copper

Collection Date	Contaminant	MCLG	Action Level (AL)	The 90th Percentile	# of Sites Over AL	Unit of Measure	Violation	Likely Source of Contaminant
2017	Lead	0	15	2	0	ppb	No	Corrosion of household plumbing systems; erosion of natural deposits.
2017	Copper	1.3	1.3	0.59	0	ppm	No	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

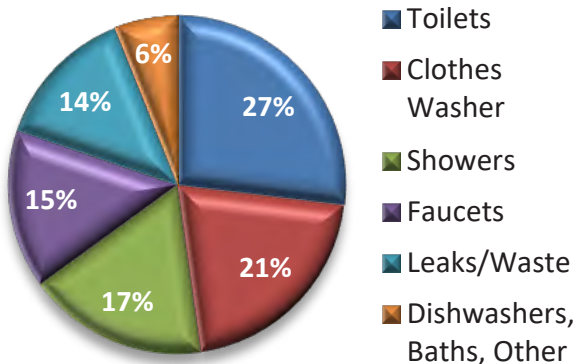
About the Sudden Freeze

We've got a freeze warning for tonight. What should I do about the sprinklers? Below are suggested ideas on how to drain the Backflow Prevention Device (BPD) on irrigation systems, and if you have an auto fill pool line, before and during a freezing event.

1. Turn off the isolation valve to the irrigation system or auto fill pool lines.
2. Open the test cocks on the body of the BPD. Drain the water from the device until it stops.
3. Turn all valves to 45 degrees to prevent water from freezing in the valves.
4. Leave all valves in that position until the event has passed.
5. Cover BPD with an old t-shirt, rags or a towel. Cover that with a plastic bag to keep the moisture off the rags. Tape or tie the bag on so that it does not come off due to wind.
6. After the event has passed, remove the rags and plastic bag.
7. Turn the isolation valve back to the open/on position; close all valves on the BPD to place back in service. The test cocks should be in the closed position.
8. Depending on cold weather effects, this does not guarantee that the device will not freeze.

Water Conservation

Average Daily Water Usage Per Person



Did You Know?

Pouring grease down sinks, disposals, toilets, or any other household drain can result in blocked sewer lines and costly repairs. It is a *myth* that hot water, soap, eggshells, coffee grounds, or other substances will keep the grease from sticking to the pipes.

CLCWA Website

Clear Lake City Water Authority invites you to visit its website:

www.clcwa.org

The Drinking Water Quality Report (Consumer Confidence Report) can directly be accessed at:

<http://www.clcwa.org/ccr.htm>

For previous reporting years 2002 through 2017 it can be accessed at the Authority website:

<http://www.clcwa.org/waterinfo.htm>

In addition, we have posted the Authority's Drought Contingency Plan for the Delivery of Water to Residential (Retail) Customers. This plan, approved by TCEQ, outlines the Authority's regulations and restrictions on the delivery and consumption of water during times of water shortage or other emergency

QUICK WATER SAVING TIPS:

- 💧 Run dishwasher only when full and use the shortest cycle necessary.
- 💧 Don't let water run continuously while washing dishes.
- 💧 Scrape dishes rather than rinse.
- 💧 Run the washing machine only when full and use the lowest, coolest water setting.
- 💧 A leaky toilet tank can waste lots of water. Put a little food coloring into the tank; if the color trickles into the bowl, repair the leak.
- 💧 Check your sprinkler system often for leaks and broken sprinkler heads.
- 💧 Water the yard early in the morning or in the evening to give the grass time to absorb as much as possible rather than evaporate in the heat of the mid-day.
- 💧 Running water down the drain while it gets hot is a waste. Capture the cool water for plant watering, to refill pet water bowls or heat it on the stove or in a microwave.
- 💧 Consider high efficiency models when replacing appliances. Some washing machines can use 50-60% less electricity, 40-50% less water, and are more effective in cleaning action. Also, up to 30% more water is removed in the spinning, reducing the drying time and saving energy.
- 💧 Take short showers rather than a bath. A four minute shower uses about 8 gallons of water, while a full bath uses about 50 gallons of water.
- 💧 If you bathe, fill bathtub 1/2 full. You can save 18 to 25 gallons per bath.
- 💧 Install reduced-flow showerheads that average 2.5 gallons a minute. The older types can average using 5-10 gallons /min.
- 💧 Brushing teeth can take up to 2 gallons of water if the tap is left running during the brushing versus 1 pint to wet brush, turn off faucet, and rinse briefly.



CLEAR LAKE CITY WATER AUTHORITY

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Houston, Texas 77058-2691

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NEW bill payment options available!!!

CLCWA partnered with First Billing Services to provide credit card/debit card and E-Check payment options to our customers. Please visit our website at www.clcwa.org, or call us at 281-488-1164..

STORM WATER *Dumping into storm drains is not just wrong, it's illegal.*

Storm water or rain water flows into the storm drains and storm inlets that you see along streets and at street corners or into roadside ditches. Unlike the water that flows inside your home, which goes to the sewer treatment facilities, the storm drain system is completely separate. Water in the storm drains receives no treatment or filtering process. This means that any pollution that gets washed into the storm drain goes directly to our creeks, rivers, bays, and streams, ultimately ending up in Galveston Bay.

Examples of common storm water pollution come from construction debris, material stockpiles, automotive fluids, erosion, paints, pesticides, litter, or any other industrial and household materials. Pet waste contributes to pollution that can contaminate streams and bays and harm shellfish beds.

A storm drain system's purpose is to prevent flooding of streets and roadways by quickly and efficiently transferring rainwater into waterways. After the water has filled up the waterways, then the streets are designed to handle the overflow. Also one can try and prevent flood damage to property by eliminating grass clippings, leaves, pine needles, trash, and debris in the storm drains that can cause slow drainage or flooding. Deposit of refuse into the Authority's storm sewer system or drainage ditches is punishable by a fine of not more than \$200 for each such violation.

Used oil can be taken to CLCWA's oil recycling drop-off point located at 17507 El Camino Real. Please leave the used oil in a sealed container (to prevent spills) outside the gate in the visibly marked concrete box. Please do not drop off any other chemicals including paints, antifreeze, hazardous liquids, or other items that need disposal. CLCWA is only able to recycle oil at this time.

The choice is clear and you can do your part. We all have a part to play in keeping our drainage system and our waterways clean. By understanding the problems and by being good neighbors, we can decrease storm water pollution. Please help clean up our waterways to ensure a brighter future for us all. For more information please see:

www.clcwa.org/stormwater.htm

WATER LOSS

In the Water Loss Audit submitted to the Texas Water Development Board for the period of January 1 – December 31, 2017, our system lost an estimated 380,783,535 gallons due to system maintenance, major main breaks and leaks.

This equates to 13.62% of our system input for 2017.



DON'T FLUSH TROUBLE – THE TOILET IS NOT A TRASH CAN!

The label might say "flushable", but disposable wipes and other products are clogging sewer lines and damaging pumps and other equipment. Not only are these problems expensive to fix, they can also cause raw sewage overflows into homes, businesses, and local waterways. This includes things like cleaning wipes, baby wipes, diapers, personal hygiene products, condoms, facial wipes, hair, grease, kitty litter, syringes, cigarette butts, and rags. Remember, your sinks and tubs also drain to the sanitary sewer system. **So, think trash, not toilets!**