



# 2009 Annual Drinking Water Quality Report

(Consumer Confidence Report)

**Clear Lake City Water Authority**

281-488-1164

[www.clcwa.org](http://www.clcwa.org)

Serving the Community Since 1963

## SPECIAL NOTICE

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).

## 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.

## Where do we get our drinking water

Our drinking water is obtained from surface and ground water sources. 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 our permitted wells during high demand in summer months. These are deep wells, producing water from the Gulf Coast Aquifer. A Source Water Susceptibility Assessment for your drinking water sources is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus our source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

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

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

## Water Sources

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 before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

## ALL drinking water may contain trace 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 (1-800-426-4791).

## Website

Clear Lake City Water Authority invites you to visit its website: [www.clcwa.org](http://www.clcwa.org)

**En Español • Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre este informe en español, favor de llamar al tel. 281-488-1164 - para hablar con una persona bilingüe en español.**

## Definitions

### Maximum Contaminant Level (MCL)

The highest permissible level of a contaminant in drinking water. MCLs are set as close to the Maximum Contaminant Level Goals (MCLG) as feasible using the best available treatment technology.

### Maximum Contaminant Level Goal (MCLG)

The level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

### Maximum Residual Disinfectant Level (MRDL)

The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

### 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 contamination.

### Treatment Technique (TT)

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

### Action Level (AL)

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

## Abbreviations

**NTU** Nephelometric Turbidity Units

**MFL** million fibers per liter (a measure of asbestos)

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

**ppm** parts per million, or milligrams per liter (mg/L)

**ppb** parts per billion, or micrograms per liter ( $\mu\text{g/L}$ )

**ppt** parts per trillion, or nanograms per liter

**ppq** parts per quadrillion, or picograms per liter

## About The Following Tables

The Following Tables list all of the federally regulated or monitored constituents which have been found in your drinking water. The U.S. EPA requires water systems to test up to 97 contaminants.

### Inorganics

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Constituent
2009 2005	Arsenic	1	0	6	10	0	ppb	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes.
<i>This arsenic value was effective January 23, 2006. In the event of a violation, you will be notified.</i>								
2009 2005	Barium	0.091	0.049	0.341	2	2	ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
2008 2005	Fluoride	0.84	0.24	1	4	4	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
2009 2005	Nitrate	0.21	0	0.47	10	10	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2009 2006	Nitrite	0.01	0	0.24	1	1	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
2009 2005	Selenium	0.3	0	8.6	50	50	ppb	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
2009 2005	Uranium	0.4	0	12.2	30	0	ppb	Erosion of natural deposits.
2009 2005	Combined Radium 226 & 228	0.5	0	4.37	5	0	pCi/L	Erosion of natural deposits.
2009 2005	Gross beta emitters	3.6	0	8.7	50	0	pCi/L	Decay of natural and man-made deposits.
2009 2005	Gross Alpha	2.74	0	13.81	15	0	pCi/L	Erosion of natural deposits.

### Organics

Year (Range)	Constituent	Highest Average	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Constituent
2009 2005	Simazine	0.1	0	0.2	4	4	ppb	Herbicide runoff.
2009 2005	Hexachlorocyclopentadiene	0.01	0	0.18	50	50	ppb	Discharge from chemical factories.
2009 2005	Atrazine	0.19	0	0.71	3	3	ppb	Runoff from herbicide used on row crops.
2009 2005	Heptachlor	0.04	0	40	400	0	ppt	Residue of banned termiticide.
2009 2005	Benzo(a)pyrene (PAH)	0.03	0	30	200	0	ppt	Leaching from linings of water storage tanks and distribution lines.
2009 2005	Xylenes	0.14	0	12.6	10,000	10,000	ppb	Discharge from petroleum factories; discharge from chemical factories.
2009 2005	Carbon tetrachloride	0.01	0	1.2	5	0	ppb	Discharge from chemical plants and other industrial activities.
2009 2005	Toluene	0.01	0	3.7	1,000	1,000	ppb	Discharge from petroleum factories.
2009 2005	Ethylbenzene	0.02	0	2.4	700	700	ppb	Discharge from petroleum refineries.

### 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.

Year	Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2009	Turbidity	0.28	100.00	0.3	NTU	Soil runoff.

**Total Coliform:** REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA.

**Fecal Coliform:** REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

## Maximum Residual Disinfectant Level

Year	Constituent	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Constituent
2009	Chloramine Residual	2.82	1	4	4	4	ppm	Disinfectant used to control microbes.

## Disinfection Byproducts

Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Constituent
2009	Total Haloacetic Acids	17.6	4.3	36.1	60	ppb	Byproduct of drinking water disinfection.
2009	Total Trihalomethanes	23.3	14.9	38.7	80	ppb	Byproduct of drinking water disinfection.

## Unregulated Initial Distribution System Evaluation for Disinfection Byproducts

This evaluation is sampling required by EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. These samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data to be reported here.

Year	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Constituent
2007	Total Haloacetic Acids	26.6	5.5	115.2	N/A	ppb	Byproduct of drinking water disinfection.
2007	Total Trihalomethanes	23.7	12.1	102.1	N/A	ppb	Byproduct of drinking water disinfection.

## Unregulated Contaminants

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Constituent
2009 2005	Dibromomethane	0.01	0	2.3	ppb	Byproduct of drinking water disinfection.
2009 2005	Chloroform	8.78	0	72	ppb	Byproduct of drinking water disinfection.
2009 2005	Bromoform	1.19	0	13	ppb	Byproduct of drinking water disinfection.
2009 2005	Bromodichloromethane	5	0	42	ppb	Byproduct of drinking water disinfection.
2009 2005	Dibromochloromethane	2.41	0	20	ppb	Byproduct of drinking water disinfection.

## Unregulated Contaminant Monitoring Rule 2 (UCMR2)

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. Any unregulated contaminants detected are reported in the following table. For additional information and data visit <http://www.epa.gov/safewater/ucmr/ucmr2/index.html>, or call the Safe Drinking Water Hotline at (800) 426-4791.

Year	Constituent	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Constituent
2009	Dimethoate	0.68	0.66	0.70	ppb	Insecticide used on cotton and other field crops, orchard crops, vegetable crops, in forestry and for residential uses.
2009	Terbufos sulfone	0.39	0.38	0.40	ppb	Degradate of the parent compound, terbufos; terbufos used for systemic control of soil-borne insects and nematodes in fields of corn, grain sorghum, and sugar beets.
2009	Tetrabromodiphenyl ether (BDE-47)	0.29	0.28	0.30	ppb	Flame retardants added to plastics (for products such as computer monitors, televisions, textiles, and plastic foams).
2009	Pentabromodiphenyl ether (BDE-99)	0.88	0.85	0.90	ppb	Flame retardants added to plastics (for products such as computer monitors, televisions, textiles, and plastic foams).
2009	Hexabromobiphenyl (HBB-245)	0.68	0.66	0.70	ppb	Flame retardants added to plastics (for products such as computer monitors, televisions, textiles, and plastic foams).
2009	Hexabromodiphenyl ether (BDE-153)	0.78	0.75	0.80	ppb	Flame retardants added to plastics (for products such as computer monitors, televisions, textiles, and plastic foams).
2009	Pentabromodiphenyl ether (BDE-100)	0.49	0.47	0.50	ppb	Flame retardant additive; production of polybrominated biphenyls ended in 1976 in U.S. after an incident of significant accidental agricultural contamination in 1973.
2009	Dinitrobenzene	0.79	0.78	0.81	ppb	Used in explosives; also formed as a byproduct during the manufacture of the explosive TNT; used in the manufacture of aramid fibers, spandex, and dyes.
2009	Trinitrotoluene (TNT)	0.79	0.78	0.81	ppb	Used as an explosive in bombs and grenades, also used as a propellant; small amounts used for industrial explosive chemic intermediate in manufacture of dyestuffs and applications, such as deep well and underwater blasting; photographic chemicals.
2009	Hexahydro-trinitro-triazine (RDX)	0.99	0.98	1.01	ppb	Used in detonators, primers, mines, rocket boosters, and plastic explosives; used in fireworks and demolition blocks, and as a rodenticide.

## CLCWA Website

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

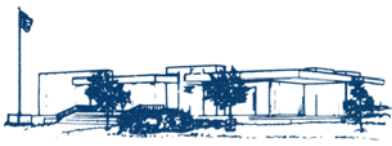
[www.clcwa.org](http://www.clcwa.org)

The Drinking Water Quality Report (Consumer Confidence Report) for years 2002 through 2009 can be accessed at the Authority website.

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 water supply conditions.

## Secondary Constituents

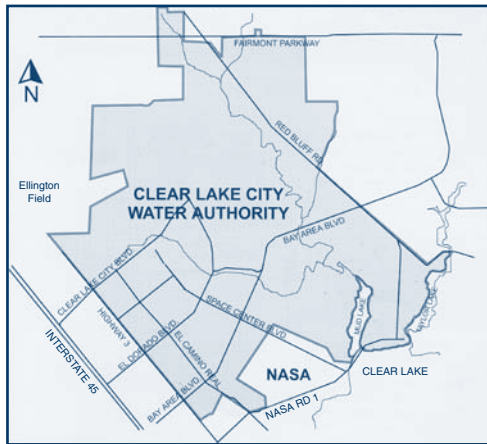
Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concerns. Therefore, secondaries are not required to be reported in this document but they may affect the appearance and taste of your water.



**CLEAR LAKE CITY WATER AUTHORITY**  
 900 Bay Area Boulevard  
 Houston, Texas 77058-2691

**PRESORTED STANDARD**  
**US POSTAGE**  
**PAID**  
**WEBSTER, TX**  
**PERMIT NO. 228**

## 2009 ANNUAL DRINKING WATER QUALITY REPORT (Consumer Confidence Report)



### Lead and Copper

Year (Range)	Constituent	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Constituent
2009	Lead	4.7	0	15	ppb	Corrosion of household plumbing systems; erosion of natural deposits.
2009	Copper	0.668	0	1.3	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.

**Required Additional Health Information for 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. This water supply is responsible for providing high quality drinking water, but 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>.”

### Storm Water

Storm water is rain that travels down gutters into the storm drains, flowing directly into waterways such as bays, lakes and Galveston Bay. Impervious surfaces like driveways, sidewalks, and streets prevent storm water runoff from naturally soaking into the ground. Dumping materials into storm drains has chemicals, dirt, and other pollutants. It is never treated, so everything storm water collects as it travels through storm drains ends up in local waterways.

A storm drain system’s purpose is to prevent flooding of streets and highways by quickly and efficiently transferring rainwater into waterways. After the water has filled up waterways, then the streets are designed to handle the overflow, to try and prevent flood damage to property. Grass clippings, trash, and debris in the storm drains can cause slow drainage or flooding.

Oil can be taken to the CLCWA’s oil recycling drop-off point located at [17507 El Camino Real](http://www.clcwa.org). 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, liquids, or other items that need disposal. CLCWA is only able to recycle oil at this time.

For more information please see: [www.clcwa.org/stormwater.htm](http://www.clcwa.org/stormwater.htm).