



# 2004 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*

## Know the Facts About Your Drinking Water

Clear Lake City Water Authority is committed to providing the highest quality water and service to our customers. The Authority supplies water to homes and businesses spread over 16,000 acres and currently serves 92,400 people. We strive to maintain, preserve and conserve our valuable water resources in order to ensure adequate water quality and supply for future generations.

This annual report provides information about the quality and sources of the drinking water you received in 2004. In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

The Authority is again proud to report that your water is safe to drink. Our employees take great pride in delivering water to you that consistently meets or exceeds state and federal water quality standards. The Texas Commission on Environmental Quality (TCEQ) and the U.S. Environmental Protection Agency (EPA) monitor our compliance with regulatory standards, including evaluating our susceptibility to potential threats and identifying corrective action. Drinking water standards continue to tighten, and our challenge is to meet these stricter regulations. Clear Lake City Water Authority's water system routinely receives the highest ranking (Superior) given by the State of Texas.

## 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. We supplement 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. TCEQ completed a Source Water Susceptibility Assessment for Clear Lake City Water Authority and is on file in our office. Results indicate that some of our sources are susceptible to certain contaminants. The sampling requirements for our water system are based on this susceptibility and previous sample data. Any detections of these contaminants will be found in this report. We purchase water from other systems and their susceptibility is not included in this assessment. More information about source water assessment and protection can be found at <http://www.epa.gov/safewater/protect.html>.

## SPECIAL NOTICE for the ELDERLY, INFANTS, CANCER PATIENTS, people with HIV/AIDS or other immune problems

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice from their health care providers about drinking water. The EPA/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

## 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 Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

**En Español • Este informe contiene información muy importante sobre su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.**

## 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.

**NTU** Nephelometric Turbidity Units  
**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 ( $\mu\text{g/L}$ )

## 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 constituents. As you can see by the tables, no detected contaminants were above the MCL.

### Inorganics

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	MCL	MCLG	Unit of Measure	Source of Constituent
2002	Arsenic	1.071	0	2	50 *	0 *	ppb	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
* On January 23, 2006, the MCL will become 10 ppb and there is currently no MCLG.								
2002	Barium	0.110	0.042	0.145	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2002	Fluoride	0.732	0.9	0.9	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2004	Nitrate	.595	0.45	0.89	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2004	Nitrite	0.035	0.09	0.09	1	1	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2002	Combined Radium 226 & 228	0.231	0	0.231	5	0	pCi/L	Erosion of natural deposits.
2002	Gross beta emitters	2.443	0	3.3	50	0	pCi/L	Decay of natural and man-made deposits.
2002	Gross alpha	1.537	0	1.537	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
2003	Simazine	0.070	0	0.14	4	4	ppb	Herbicide runoff.
2004	Atrazine	0.233	0	0.28	3	3	ppb	Runoff from herbicide used on row crops.
2004	Xylenes	0.012	0	0.0133	10	10	ppm	Discharge from petroleum factories; Discharge from chemical factories.
2004	Benzene	0.690	0	0.69	5	0	ppb	Discharge from factories; leaching from gas storage tanks and landfills.
2004	Toluene	0.012	0	0.012	1	1	ppm	Discharge from petroleum factories.

### Maximum Residual Disinfectant Level

Year	Constituent	Average Level	Minimum Level	Maximum Level	MRDL	MRDLG	Unit of Measure	Source of Constituent
2004	Chloramine	3.235	0.5	4	4	4	ppm	Disinfectant used to control microbes.

### Disinfection By-Products

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	MCL	Unit of Measure	Source of Constituent
2004	Total Haloacetic Acids	35.642	18.3	56.7	60	ppb	By-product of drinking water disinfection.
2004	Total Trihalomethanes	24.758	15.3	36.7	80	ppb	By-product of drinking water disinfection.

## 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.

## Unregulated Contaminants

Year (Range)	Constituent	Average Level	Minimum Level	Maximum Level	Unit of Measure	Source of Constituent
2004	Chloroform	6.570	0	51.04	ppb	By-product of drinking water disinfection.
2004	Bromoform	0.965	0	19	ppb	By-product of drinking water disinfection.
2003	Bromodichloromethane	2.893	0	8	ppb	By-product of drinking water disinfection.
2003	Dibromochloromethane	1.966	0	2.7	ppb	By-product of drinking water disinfection.

### Availability of Unregulated Contaminant Monitoring Rule Data (UCMR)

We participated in gathering data under the UCMR in order to assist EPA in determining the occurrence of possible drinking water contaminants. If any unregulated contaminants were detected, they are shown in the table above. This data may also be found on EPA's website at <http://www.epa.gov/safewater/data/ncod.html>, or you can call the Safe Drinking Water Hotline at 1-800-426-4791.

## Turbidity

Year	Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2004	Turbidity	0.102	100	0.3	NTU	Soil runoff.

Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

## Lead and Copper

Year (Range)	Constituent	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Constituent
2004	Lead	5.8000	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.
2004	Copper	0.5240	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.

## Total Organic Carbon (TOC)

TT=% removal  $\geq$  1.0

The average TOC of raw water for 2004 is 9.05 mg/L, and the average TOC of finished water for 2004 is 7.10 mg/L. The average TOC removal is 21.39%. Major source: naturally present in the environment. Total organic carbon (TOC) has no health effects.

## Microbiological

Year	Constituent	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Constituent
2004	Total Coliform Bacteria	1	*	Presence	Naturally present in the environment.

\* Presence of coliform bacteria in 5% or more of the monthly samples.

### Fecal Coliform NOT DETECTED

#### What are coliforms?

Total coliform bacteria are used as indicators of microbial contamination of drinking water because testing for 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 more hardy than many disease-causing organisms; therefore, their absence from water is a good indication that the water is microbiologically safe for human consumption.

Fecal coliform bacteria and, in particular, E. coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of fecal coliform bacteria (E. coli) in drinking water may indicate recent contamination of the drinking water with fecal material. The table above indicates whether total coliform or fecal coliform bacteria was found in the monthly drinking water samples submitted for testing last year by the Authority.

## Web Site

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 2004, 2003 and 2002 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.

## Master Shut-off Valve

Do you know where the master water shut-off valve is to your home? Does everyone else in the family know where it is? If there's an emergency, you'll need to know in a hurry. You can't afford to waste precious minutes searching while the carpets are drenched. You've got to act fast.

The valve is normally located where the water lines enter the building and may also be located outside the meter box. Almost every home, apartment and business has a master water shut-off valve. Be sure you've found the right one. Try turning it off briefly and see if all the water faucets in the building are shut off. If they aren't, try again. If you cannot locate your shut-off valve, please call our customer service office for assistance.

Once you have found the right valve, mark it with a tag, a bright ribbon or colorful paint. Make it easy to see. If there is an emergency, such as broken lines, you'll have to find it quickly to shut off water to your entire home. If the valve is not working, have it repaired or replaced. Maintenance of the main shut-off valve is the owner's responsibility.

Before it's too late...know what to do now!



## CLEAR LAKE CITY WATER AUTHORITY

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Houston, Texas 77058-2691

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## 2004 ANNUAL DRINKING WATER QUALITY REPORT (Consumer Confidence Report)



## Our Licensed Water Operators

Licensed water operators are the very heart of the Authority's water supply. They require training and experience to perform their jobs in protecting the water quality in our distribution system. They continue to face new challenges in drinking water regulations that affect the way we operate our system. The water system is monitored 24 hours a day by licensed operators as required by the Texas Commission on Environmental Quality. They are responsible for providing safe and potable drinking water, including daily water tests and maintenance and repair of the water system.

One of the responsibilities of our water operators is to monitor the performance of the disinfection facilities to ensure that appropriate disinfectant levels are maintained. One of the changes in the Consumer Confidence Report (CCR) for 2004 is the inclusion of the results from the hundreds of disinfectant residual samples taken by our operators in the distribution system.

Are we in compliance? Absolutely! Please refer to the table "Maximum Residual Disinfectant Level".



C. Rodgers, M. Jarvis, R. Sears, D. Morrow, P. Segura, J. Aceves, G. Mackey

## How Can I Participate?

Board of Directors' meetings are regularly scheduled at 7 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 welcomed.