Consumer Confidence Report 2002

(Drinking Water Quality Report)

Clear Lake City Water Authority

281-488-1164

Serving the Community Since 1963

Know the Facts About Your Drinking Water

Clear Lake City Water Authority's goal and responsibility is to provide safe and reliable drinking water. The Authority supplies water to homes and businesses spread over 16,000 acres and currently serves a population of 92,400 people. We are committed to meeting your water needs by consistently providing high-quality water and excellent service.

This annual report provides information about the quality and sources of the drinking water you received in 2002. 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 bottom line is that our water 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 vulnerability assessment and security efforts. 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 will be reviewing all of Texas' drinking water sources. The source water assessment has been completed and the report will be available this year. It allows us to focus on our source water protection activities.

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 about drinking water from their health care providers. 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).

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.

How Can I Participate?

We encourage our customers to attend and participate in the meetings of the Authority. Board of Directors' meetings are regularly scheduled at 7 p.m. on the second and fourth 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. Your attendance is welcomed.

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En Espanol • Este informe contiene información muy importante sobre su aqua 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 MCLGs 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.

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 (ug/l)

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.

Water crew working on main line repair.

About The Following Tables

The Following Tables list all of the federally regulated or monitored constituents which have been found in your drinking water. 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	Constituent	Highest Level at any Sampling Point	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Constituent
2002	Arsenic	2.0	0.0000-2.0000	50	0	ppb	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.
2002	Barium	0.419	0.0420-0.4190	2	2	ppm	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
2002	Fluoride	1	0.0000-1.0000	4	4	ppm	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
2002	Nitrate	1.04	0.0000-1.0400	10	10	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
1999	Nitrite	0.22	0.0000-0.2200	1	1	ppm	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.
2002	Selenium	10.9	0.0000-10.9000	50	50	ppb	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.
2002	Gross Alpha adjusted	12.7	0.0000-12.7000	15	0	pCi/l	Erosion of natural deposits.
2002	Combined Radium 226 & 228	2.3	0.1000-2.3000	5	0	pCi/l	Erosion of natural deposits.
2002	Gross beta emitters	11.2	0.0000-11.2000	50	0	pCi/l	Decay of natural and man-made deposits.

Organics

Year	Constituent	Highest Average of any Sampling Point	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Constituent
2002	Atrazine	0.14	0.1400-0.1400	3	3	ppb	Runoff from herbicide used on row crops.
2002	Xylenes	0.0004	0.0000-0.0004	10	10	ppm	Discharge from petroleum factories; Discharge from chemical factories.
2002	Simazine	0.04	0.0400-0.0400	4	4	ppb	Herbicide runoff.
2002	Toluene	0	0.0000-0.0000	1	1	ppm	Discharge from petroleum factories.
2002	Ethylbenzene	0.08	0.0000-0.0800	700	700	ppb	Discharge from petroleum refineries.

Disinfection By-Products

Year	Constituent	Average of All Sampling Points	Range of Detected Levels	MCL	MCLG	Unit of Measure	Source of Constituent
2002	Total Haloacetic Acids	25.0563	14.10-58.10	60	0	ppb	By-product of drinking water disinfection.
2002	Total Trihalomethanes	19.4822	8.70-44.60	80	0	ppb	By-product of drinking water disinfection.

Unregulated Contaminants

Year	Constituent	Average of all Sampling Points	Range of Detected Levels	Unit of Measure	Reason for Monitoring
2000	Chloromethane	0.05	0.0000-0.0500	ppb	Unregulated contaminant monitoring helps EPA to determine where certain contaminants occur and whether it needs to regulate those contaminants.*
2002	Chloroform	8.3	3.1000-12.0000	ppb	"
2002	Bromoform	0.15	0.0000-0.8800	ppb	"
2002	Bromodichloromethane	2.14	1.5000-3.0000	ppb	"
2001	Chlorodibromomethane	2.18	0.6000-2.4000	ppb	"
2002	Dibromochloromethane	0.41	0.0000-1.7500	ppb	"

Turbidity

Year	Constituent	Highest Single Measurement	Lowest Monthly % of Samples Meeting Limits	Turbidity Limits	Unit of Measure	Source of Constituent
2002	Turbidity	0.16	100.00	0.5	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	Constituent	The 90th Percentile	Number of Sites Exceeding Action Level	Action Level	Unit of Measure	Source of Constituent
2001	Lead	2.1000	0	15	ppb	Corrosion of household plumbing systems; Erosion of natural deposits.
2001	Copper	0.570	0	1.3	ppm	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

Coliforms

What are coliforms?

Total coliform bacteria are used as indicators of microbial contamination of drinking water because they are easily detected. 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.

Although the absence of total coliform in drinking water is always our goal, occasionally a test can show the presence of total coliform. TCEQ requires a minimum of 80 microbial samples each month. Of the 84 routine total coliform samples taken in October 2002, one sample tested positive (1/84 = 1.19%). Immediate repeat samples did not confirm the presence of total coliform.

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 following table indicates whether total coliform or fecal coliform bacteria were found in the monthly drinking water samples we submitted for testing last year.

Total Coliform

Year	Constituent	Highest Monthly % of Positive Samples	MCL	Unit of Measure	Source of Constituent
2002	Total Coliform Bacteria	1.19	Presence of coliform bacteria in 5% or more of the monthly samples.	Presence	Naturally present in the environment

Fecal Coliform Not Detected

Water Main Repairs Require Skill and Prompt Response

In a system with over one million linear feet of water distribution piping, the importance of detecting leaks and fixing broken water mains is a task which requires top-of-the-line equipment, trained staff and prompt and precise action.

Water main breaks can be caused by shifts in the ground due to dry and cracking conditions, increased water demands, stress on the system, or age of the main.

When a water main break occurs, response time is vital, especially to homeowners or businesses interrupted by loss of water service. Crews work around the clock, in all weather conditions, to fix broken water mains.

Although the main break itself may otherwise take only two or three hours to repair, due to the Occupational Safety and Health Administration regulations, and city and state requirements, a break may take longer to be fixed. Regulations to ensure employee safety, including trench shoring and air monitoring, can increase the length of time required to repair a water main.

Before any repair can begin, each utility in the area of the break must identify the location of its buried utility lines. Telephone, cable, gas and electrical lines often run in the same area, and safety precautions must be taken. Proper traffic control and roadblocks must also be arranged.

It is a priority to notify customers of a break whenever possible. All main breaks are deemed to be serious. The first priority is to valve off the location of the break to minimize any individual property and/or street damage and to protect the water supply from contamination.

The Authority is proud of the job its repair crews perform and the round-the-clock service they provide in all types of weather.

Water crewmen, Paul Segura III and Jesus Bravo, reviewing water main plans.

CLEAR LAKE CITY WATER AUTHORITY
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Houston, Texas 77058-2691

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CONSUMER CONFIDENCE REPORT 2002

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Read Any Good Meters Lately?

How to Read a Water Meter and Use it to Measure Leaks

Using your water meter, your entire plumbing system can be checked for an undetected leak in five easy steps.

1. Find the water meter. Residential water meters are located in the front yard near the street.
2. Turn off all running water and water-using appliances, and do not flush the toilet.
3. Read the dial and record the reading. Most meters have a red triangle on the face of the meter; if it is moving, you have a leak.
4. After 15 to 20 minutes, re-check the meter.
5. If no water has been used and the reading has changed, your plumbing system has a leak. The rate (gallons per minute) of the leak in your system can be determined by dividing the number of gallons used by the elapsed time.

The water bill shows the amount of water in thousands of gallons used every billing period. You can monitor and record weekly or even daily use by reading your meter. Although water meters are not all alike, the type shown is a typical residential water meter in our system.

The meter has one large dial and a display in thousands of gallons. Each rotation of the needle measures ten gallons. The meter in the illustration reads 142,280 gallons. If the meter reads 143,780 a week later, 1,500 gallons of water was used during the week. Your water billing is based on thousands of gallons; therefore, the reading of 142 on the sample meter would be recorded on the bill.