



ANNUAL  
WATER  
QUALITY  
REPORT

*Water testing performed in 2008*



CITY OF CLEARWATER



PWS ID#: FL6520336

Este informe contiene información muy importante sobre su agua potable.  
Tradúzcalo o hable con alguien que lo entienda bien.

## Meeting the Challenge

We are once again proud to present to you our annual water quality report. This edition covers all testing completed from January 1 through December 31, 2008. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal drinking water standards. We continually strive to adopt new and better methods for delivering the best quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the challenges of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

For more information about this report, please call Lynn Stevens, Water Production Coordinator, at (727) 462-6326.

## Source Water Assessment

In 2008 the Department of Environmental Protection performed a Source Water Assessment on the City of Clearwater, Tampa Bay Water (TBW), and Pinellas County utility systems. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. The well water source is considered to be at low to moderate risk due to potential sources of contamination such as gas stations present in the assessment area. The assessment of the Tampa Bay Water surface water intakes considers that source to be at high risk because of the many potential sources of contamination present in the assessment area. The complete assessment results are available on the FDEP Source Water Assessment and Protection Program Web site at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp).

## Community Participation Is Welcome

You are invited to participate in our regularly scheduled meetings. The City of Clearwater Commission normally meets at 6:00 p.m. on the first and third Thursday of each month at City Hall, 112 S. Osceola Avenue, Clearwater, Florida. The meeting agendas are published on the city's Web site at [www.myclearwater.com](http://www.myclearwater.com). For more information, call (727) 562-4093.

The Pinellas County Board of County Commissioners meets twice a month, usually, but not always, on the first and third Tuesday of the month. The earlier meeting begins at 9:30 a.m. Meetings in the latter part of the month are held in two parts. Agenda items are discussed with the Board at 3:00 p.m., after which there is a break and the meeting reconvenes at 6:30 p.m. The public is invited to attend. For more information, call (727) 464-3485.

Tampa Bay Water's Board of Directors meeting occurs on the third Monday of every other (even) month at 9:00 a.m. at Tampa Bay Water, 2575 Enterprise Road, Clearwater, Florida. For more information, visit their Web site at [www.tampabaywater.org](http://www.tampabaywater.org) or call (727) 796-2355.

## Substances That Could Be in 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 stormwater 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 stormwater 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 stormwater runoff, and septic systems.

**Radioactive Contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

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

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 the 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.

### Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791.

## Where Does My Water Come From?

The City of Clearwater residents use approximately 12.3 million gallons of potable water every day. Approximately 30 percent is pumped from City owned and operated groundwater wells; the remaining daily demand is supplied by water purchased from Pinellas County Utilities. The groundwater source for Clearwater comes from a groundwater supply called the Floridan Aquifer. This aquifer is one of the major sources of groundwater in the United States. It underlies all of Florida, southern Georgia, and small parts of adjacent Alabama and South Carolina.

A portion that the City of Clearwater withdraws from the Floridan Aquifer is treated using reverse osmosis technology. The process includes sand filtration, reverse osmosis membrane treatment, and stabilization. The RO plant produces up to three million gallons per day of high-purity drinking water. The remaining portion is mixed with water supplied by Pinellas County Water System, then treated with corrosion control inhibitor, disinfected, and distributed to our residents. The corrosion inhibitor is added to control corrosion in the distribution system and home plumbing. The water is also treated with chloramines for disinfection to guard against bacteria.

Pinellas County Utilities receives drinking water from Tampa Bay Water, a regional water supplier, which in turn becomes part of the water supplied to the residents of Clearwater. The water supplied by Tampa Bay Water is a blend of groundwater, treated surface water, and desalinated seawater. Eleven regional well fields, pumping from the Floridan Aquifer, are the primary source for the regional groundwater supply. The Alafia River, the Hillsborough River, C.W. Bill Young Regional Reservoir, and the Tampa Bypass Canal are the primary supplies for the regional treated surface water supply. Hillsborough Bay is the primary supply of seawater for the regional desalinated supply. For more information on the Tampa Bay Water system, visit their Web site at [www.tampabaywater.org](http://www.tampabaywater.org).

## Lead and Drinking Water

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 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. Water use of Clearwater residents in 2008 was 85 gallons per person per day.

## Unregulated Contaminant Monitoring

The City of Clearwater has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (U.S. EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the U.S. EPA Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

## Sampling Results

The City of Clearwater Public Utilities Water Division routinely monitors for contaminants in your drinking water as directed by federal and state laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2008, as reported to the FDEP and the U.S. EPA. The U.S. EPA requires monitoring of more than 80 drinking water contaminants. The contaminants listed below are only those contaminants detected in your drinking water.

### PRIMARY REGULATED CONTAMINANTS

#### Microbiological Contaminants

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	HIGHEST MONTHLY PERCENTAGE	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
<b>Total Coliform Bacteria</b> (% positive samples)	Jan.–Dec. 2008	No	1.7	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment

#### Radiological Contaminants

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED <sup>1</sup>	RANGE OF RESULTS <sup>1</sup>	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
<b>Alpha Emitters</b> (pCi/L)	March 25, 2008	No	6.2	4.7–6.2	0	15	Erosion of natural deposits
<b>Radium 226 + 228 [Combined Radium]</b> (pCi/L)	March 25, 2008	No	0.9	0.5–0.9	0	5	Erosion of natural deposits
<b>Uranium</b> (pCi/L)	March 25, 2008	No	0.25	0.05–0.25	0	20	Erosion of natural deposits

#### Inorganic Contaminants

<b>Arsenic</b> (ppb)	March 25, 2008	No	3	ND–3	NA	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
<b>Fluoride</b> (ppm)	March 25, 2008	No	0.64	0.092–0.64	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories; water additive that promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
<b>Nitrate [as Nitrogen]</b> (ppm)	March 25, 2008	No	0.12	0.081–0.12	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Sodium</b> (ppm)	March 25, 2008	No	56	24–56	NA	160	Salt water intrusion, leaching from soil

#### Stage 1 Disinfectants and Disinfection By-Products

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED <sup>2</sup>	RANGE OF RESULTS <sup>2</sup>	MCLG OR [MRDLG]	MCL OR [MRDL]	LIKELY SOURCE OF CONTAMINATION
<b>Chloramines</b> (ppm)	Jan.–Dec. 2008	No	3.2	2.6–3.6	[4]	[4.0]	Water additive used to control microbes
<b>Haloacetic Acids (five) [HAA5]</b> (ppb)	Jan.–Dec. 2008	No	25.14	5.1–34.7	NA	60	By-product of drinking water disinfection
<b>TTHM [Total trihalomethanes]</b> (ppb)	Jan.–Dec. 2008	No	45.33	15.3–61.3	NA	80	By-product of drinking water disinfection

#### Lead and Copper (Tap water samples were collected from sites throughout the community)

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	AL VIOLATION (YES/NO)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
<b>Copper [tap water]</b> (ppm)	June–August 2008	No	0.5	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

### OTHER CONTAMINANTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	AVERAGE RESULT	RANGE OF RESULTS	LIKELY SOURCE OF CONTAMINATION
<b>N-nitroso-dimethylamine (NDMA)<sup>3</sup></b> (ppt)	Mar.–Dec. 2008	2.1	ND–2.1	Nitrosamines can exist in sources of drinking water or can form when disinfectants are added to water to kill microbes

<sup>1</sup> Results in the Level Detected column for radiological contaminants and inorganic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

<sup>2</sup> For chloramines the level detected is the the highest running annual average (RAA), computed quarterly, of monthly averages of all samples collected. For haloacetic acids or TTHM, the level detected is the highest RAA, computed quarterly, of quarterly averages of all samples collected if the system is monitoring quarterly or is the average of all samples taken during the year if the system monitors less frequently than quarterly. Range of Results is the range of individual sample results (lowest to highest) for all monitoring locations, including Initial Distribution System Evaluation (IDSE) results as well as Stage 1 compliance results.

<sup>3</sup> Nitrosamines are part of a study by the EPA. The EPA is currently evaluating any health effects.

## Definitions

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**IDSE (Initial Distribution System Evaluation):**

An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

**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.

**NA:** Not applicable.

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**ppt (parts per trillion):** One part substance per trillion parts water (or nanograms per liter).

