



*Annual*  
**WaterQualityReport**

*Water testing performed in 2010*

*Presented By*



PWS ID#: FL6520336

## Meeting the Challenge

Once again we are proud to present our annual Water Quality Report. This report covers all testing performed between January 1 and December 31, 2010. As in previous years, we are committed to producing and delivering drinking water that meets all state and federal drinking water standards. To that end, we remain committed to meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users.

## Community Participation Is Welcome

You are invited to participate in our regularly scheduled meetings. The City of Clearwater Council 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) 562-4090.

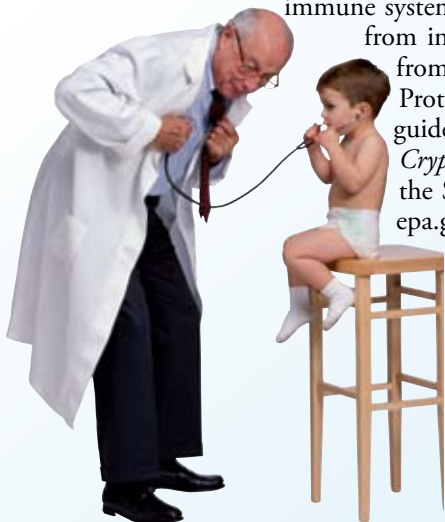
The Pinellas County Board of County Commissioners meets twice a month, usually, but not always, on the first and third Tuesday of the month. The earlier meeting begins at 9:30 a.m. Meetings in the latter part of the month are held in two parts. Agenda items are discussed with the Board at 3:00 p.m., 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) 464-3000.

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.

## Important Health Information

While your drinking water meets the U.S. Environmental Protection Agency's (EPA's) standard for arsenic, it does contain low levels of arsenic. The Environmental Protection Agency's (EPA's) standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The Environmental Protection Agency (EPA) continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects, such as skin damage and circulatory problems.

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 (Environmental Protection Agency/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 or <http://water.epa.gov/drink/hotline>.



## Where Does My Water Come From?

City of Clearwater residents use approximately 11.15 million gallons of potable water every day. Approximately 40 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 (RO) technology. The process includes sand filtration, reverse osmosis membrane treatment, and stabilization. The RO plant produces up to 3 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 a 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 wellfields, 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).

## Water Conservation

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.

## Questions?

For more information about this report, please contact Greg Turman, Water Production Coordinator, at (727) 562-4960.

## 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. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. 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.

## 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).

## Source Water Assessment

In 2009, 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 and waste cleanup sites present in the assessment area. The assessment of the Tampa Bay Water surface water intakes are considered 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 Florida Department of Environmental Protection (FDEP) Source Water Assessment and Protection Program Web site at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp) or they can be obtained from Tampa Bay Water, 2575 Enterprise Road, Clearwater, FL 33763, phone (727) 796-2355.

## Sampling Results

The City of Clearwater Public Utilities Water Division routinely monitors for contaminants in your drinking water as directed by state and federal laws. The following tables show the results of our monitoring for the period of January 1, 2010, through December 31, 2010, as reported to the Florida Department of Environmental Protection (FDEP) and U.S. Environmental Protection Agency (EPA). The U.S. Environmental Protection Agency (EPA) requires monitoring of more than 80 drinking water contaminants. The contaminants listed below are ONLY those contaminants detected in your drinking water.

The Florida Department of Environmental Protection (FDEP) requires us to monitor for certain substances less than once per year because concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

### PRIMARY REGULATED CONTAMINANTS

#### Microbiological Contaminants

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	HIGHEST MONTHLY PERCENTAGE/NUMBER	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
<b>Total Coliform Bacteria</b> (% positive samples)	01–12/2010	No	3.28	0	Presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment

#### Radioactive Contaminants<sup>1</sup>

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
<b>Alpha Emitters</b> (pCi/L)	02/10/2010	No	3.2	ND–3.2	0	15	Erosion of natural deposits
<b>Radium 226 + 228 [Combined Radium]</b> (pCi/L)	02/10/2010	No	0.7	0.6–0.7	0	5	Erosion of natural deposits
<b>Uranium</b> (ppb)	02/10/2010	No	0.2	ND–0.2	0	30	Erosion of natural deposits

#### Inorganic Contaminants

<b>Arsenic</b> (ppb)	02/10/2010	No	2.2	ND–2.2	NA	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
<b>Barium</b> (ppm)	02/10/2010	No	0.02	0.0084–0.02	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
<b>Beryllium</b> (ppb)	02/10/2010	No	0.2	ND–0.2	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
<b>Cadmium</b> (ppb)	02/10/2010	No	1.2	ND–1.2	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
<b>Fluoride</b> (ppm)	02/10/2010	No	0.6	0.075–0.6	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)	02/10/2010	No	0.13	0.032–0.13	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Sodium</b> (ppm)	02/10/2010	No	58	32–58	NA	160	Salt water intrusion; leaching from soil

#### Synthetic Organic Contaminants including Pesticides and Herbicides

<b>Dalapon</b> (ppb)	8/17/2010	No	1.3	ND–1.3	200	200	Runoff from herbicide used on rights of way
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#### Stage 1 Disinfectants and Disinfection By-Products<sup>2</sup>

CONTAMINANT AND UNIT OF MEASUREMENT	DATE OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MCLG OR [MRDLG]	MCL OR [MRDL]	LIKELY SOURCE OF CONTAMINATION
<b>Chloramines</b> (ppm)	01–12/2010	No	3.3	2.5–3.7	[4]	[4.0]	Water additive used to control microbes
<b>Haloacetic Acids (five) [HAA5]</b> (ppb)	01–12/2010	No	25.7	4.6–42.6	NA	60	By-product of drinking water disinfection
<b>TTHM [Total trihalomethanes]</b> (ppb)	01–12/2010	No	44.74	13.7–59.3	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 EXCEEDANCE (YES/NO)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
Copper [tap water] (ppm)	06/08/2008	No	0.5	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

<sup>1</sup> Results in the level detected column for radioactive contaminants, inorganic contaminants and synthetic organic contaminants including pesticides and herbicides 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.

## 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 By-products 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).