

2010 Annual Drinking Water Quality Report

Collier County Water Department

The Collier County Water Department is pleased to present this annual water quality report. We trust that you will read this report and become informed about the high quality of the water that comes out of your faucet.

Source Water for Collier County

The Collier County Water Department (CCWD) pumps groundwater from three well fields located in Golden Gate Estates. The North Hawthorn Well field has 24 wells that provide water to the North County Regional Water Treatment Plant. The South Hawthorn Well field has 42 wells that provide water to the South County Regional Water Treatment Plant. The Golden Gate Tamiami Well field has 36 wells that provide water to both treatment plants.

The Florida Department of Environmental Protection performed a Source Water Assessment on the system in 2004 to provide information about any potential sources of contamination in the vicinity of the wells. Potential sources of contamination identified included underground petroleum storage tanks, injection wells, and industrial wastewater treatment plants. The assessment results are available on the Department of Environmental Protection (DEP) Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

The CCWD has an extensive and continuous testing program to routinely monitor for contaminants in your drinking water in accord with federal and state laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2010. Data obtained before January 1, 2010, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

Other Sources of Information

Florida Department of Environmental Protection: www.dep.state.fl.us

United States Environmental Protection Agency Safe Drinking Water Hotline: 1-800-426-4791

United States Environmental Protection Agency Office of Water: www.epa.gov/OW

The American Water Works Association: www.awwa.org

Important Phone Numbers

If you have questions about this report or your water service, please contact us at:

For questions concerning this report and its contents call (239) 252-4H2O.

For questions concerning your water service (account information, service requests, billing inquiries) call (239) 252-2380.

Definitions

In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Maximum Contaminant Level or MCL: 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.

Maximum Contaminant Level Goal or MCLG: 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.

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

“**ND**” means not detected and indicates that the substance was not found by laboratory analysis.

Initial Distribution System Evaluation (IDSE): 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.

Parts per million (ppm) or Milligrams per liter (mg/L): One part by weight of analyte to 1 million parts by weight of the water sample.

Parts per billion (ppb) or Micrograms per liter (µg/L): One part by weight of analyte to 1 billion parts by weight of the water sample.

Picocurie per liter (pCi/L): Measure of the radioactivity in water.

Maximum residual disinfectant level or MRDL: 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.

Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health.

Contaminant: Any physical, chemical, biological or radiological substance in the water.

Violation: Violations occur when detected limits are greater than Maximum Contaminant Levels or Action Levels set by the EPA.

90th Percentile: The analytical result that is greater than or equal to 90% of the results.

This report shows the results of our monitoring for the period of January 1 to December 31, 2010. Federal and state regulations allow us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, may be more than one year old. The Environmental Protection Agency (EPA) requires monitoring of over 80 drinking water contaminants. Those contaminants listed in the table below are the only contaminants detected in your drinking water.

Microbiological Contaminants						
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Percentage of Positive Samples	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (positive samples)	Monthly 2010	N	0.9% during (6/10)	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in 5% or more of monthly samples.	Naturally present in the environment
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Total Number of Positive Samples for the Year	MCLG	MCL	Likely Source of Contamination
Fecal coliform and <i>E.coli</i> in the distribution system (positive samples)*	Monthly 2010	Y	1 (8/10)	0	0	Operator sampling error

*A routine sample collected August 10, 2010, for a bacteriological evaluation confirmed positive for fecal coliform. On August 11, 2010, the affected sample point and additional sample locations upstream and downstream were tested to verify water quality. As all additional tests showed no fecal or total coliform bacteria

present, it was determined the likely cause of contamination was due to an error in operator sampling or testing. Testing completed through the remainder of 2010 verified no additional samples were fecal coliform positive.

Health Effects: Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Radioactive Contaminants							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Radium 226+228 or combined radium (pCi/L)	7/09	N	0.66	0 -0.66	0	5	Erosion of natural deposits

Inorganic Chemicals							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Cyanide (ppb)	5/08	N	10	9-10	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	Monthly 2010	N	1.1	0.7-1.1	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3 ppm
Nitrate (as Nitrogen) (ppm)	5/10	N	0.11	ND-0.11	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	5/08	N	70	48-70	N/A	160	Salt water intrusion, leaching from soil

Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Parameters							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm)	Monthly 2010	N	3.3	0.7-4.4	MRDLG = 4	MRDL = 4	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	08/2010	N	12.6	7.2-17.9	NA	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	08/2010	N	32.2	15.9-48.6	NA	MCL = 80	By-product of drinking water disinfection

Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Violation Y/N	90th Percentile Result	Number of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	07/2008	N	0.07	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	07/2008	N	2.3	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

The sources of drinking water (for 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:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) 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.
- (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) 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.
- (E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

To ensure tap water is safe to drink, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration 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 EPA's Safe Drinking Water Hotline at 1-800-426-4791.

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. The CCWD 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 two 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 (800-426-4791) or at www.epa.gov/safewater/lead.

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/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Hardness of Your Water

General guidelines for classification of the hardness of water are: 0 to 60 mg/L (milligrams per liter) of hardness is classified as soft water; 61 to 120 mg/L as moderately hard water; 121 to 180 mg/L as hard water; and more than 180 mg/L as very hard water. The range of hardness of water delivered to your home by the CCWD in 2010 was 19 to 70 mg/L, or 1.1 to 4.1 grains per gallon, with an average hardness of 46 mg/L.

Cross Connection Control

Any connection between the drinking water supply and any other source of water has the potential to contaminate the drinking water supply and is illegal in any form, permanent or temporary. Some common things done around the house and yard can create a cross connection. For instance, without the proper vacuum breaker installed, leaving a garden hose submerged in a swimming pool is a cross connection. Attaching a pesticide or weed-killer mixing sprayer to the end of a hose has the potential to contaminate the drinking water. Connecting an irrigation system to both irrigation quality (reclaimed) water and the drinking water system is a cross connection that is not

only dangerous, but also illegal. Only a licensed plumber should make changes to the plumbing on any property, or in any structure where other sources of water exist.

To prevent the possibility of backflow, Collier County adopted the “Collier County Cross-connection Control/Backflow Prevention Ordinance” (Ordinance 97-33). This ordinance requires the installation of backflow prevention assemblies as part of any water service connection. The CCWD maintains a Cross-connection Control and Backflow Prevention Section to install, maintain, repair, and annually test backflow prevention assemblies.