

# LET'S TALK WATER !

## HERNANDO COUNTY UTILITIES DEPARTMENT 2011 WATER QUALITY REPORT FOR THE EAST HERNANDO WATER SYSTEM

HERNANDO COUNTY UTILITIES DEPARTMENT  
21030 Cortez Boulevard  
Brooksville, FL 34601  
(352) 754-4037  
(352) 754-4485 FAX

As required by the Environmental Protection Agency's Clean Drinking Water Act of 1996, the following information will be provided to our customers on an annual basis.

### INTRODUCTION

We are pleased to provide you with this year's annual water quality report. This report is designed to inform you about the quality water we deliver to you every day. Hernando County Utilities will continue to use the most advanced technology to provide safe, potable and abundant supplies of drinking water to its customers.

### SOURCES OF HERNANDO COUNTY DRINKING WATER

The Hernando County Water System draws its water from the Floridan aquifer, by way of deep wells. The water from this aquifer is of consistently high quality. It is primarily fed by rain water that is filtered through hundreds of feet of sand and rock in a natural cleansing process. Because of its high quality, the water needs little or no treatment other than disinfection. The Floridan stretches 82,000 square miles beneath Florida and parts of Alabama, Georgia, and South Carolina. The aquifer is primarily made up of limestone. Limestone rock acts like a sponge to hold water. The holes in the rock allow the water to flow freely through it. The aquifer is replenished in a natural process called recharge. Recharge occurs when water seeps through the soil down into the aquifer's limestone layer to be stored. The Floridan has an average thickness of 1,000 feet, but has been estimated to be 3,500 feet thick in Southwest Florida.

In 2009 the Department of Environmental protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are three (3) potential sources of contamination identified for this system with Moderate susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at <http://www.dep.state.fl.us/swapp>

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:

- (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.

In order to ensure that tap water is safe to drink, the 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 1-800-426-4791.

Radioactive Contaminants							
Contaminant and Unit of Measurement	Date of Sampling Mo - Yr	MCL Violation Y/N	Highest single measurement	Range	MCLG	MCL	Likely Source of Contamination
Alpha (pCi/l)	6-2008	N	1.8	ND - 1.8	0	15	Erosion of natural deposits
Combined radium (pCi/l)	6-2008	N	0.9	ND - 0.9	0	5	Erosion of natural deposits
Uranium (ug/L)	6-2008	N	1.8	.18 - 1.8	0	30	Erosion of natural deposits

Inorganic Contaminants							
Contaminant and Unit of Measurement	Date of sampling Mo-Yr	MCL Violation Y/N	Level Detected	Range of results	MCLG	MCL	Likely Source of Contamination
Antimony ( ppb)	4-2011	N	0.12	ND - 0.12	N/A	6	Discharge from petroleum refineries: fire retardants; ceramics; electronics; solder
Arsenic (ppb)	4-2011	N	1.6	0.12 - 1.6	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	4-2011	N	0.0055	0.0029 - 0.0055	2	2	Discharge of drilling wastes: discharge from metal refineries : erosion of natural deposits
Chromium (ppb)	4-2011	N	1.1	ND - 1.1	100	100	Discharge from steel and pulp mills: erosion of natural deposits
Lead (point of entry) (ppb)	4-2011	N	0.39	ND - 0.39	N/A	15	Corrosion of household plumbing systems: Erosion of natural deposits.
Nitrate (as Nitrogen) (ppm)	4-2011	N	1.1	ND - 1.1	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	4-2011	N	6.5	4.4 - 6.5	N/A	160	Salt water intrusion, leaching from soil
Selenium (ppb)	4-2011	N	1.3	ND - 1.3	50	50	Discharge from petroleum and metal refineries: erosion of natural deposits: discharge from mines
Thallium (ppb)	4-2011	N	0.1	ND - 0.1	0.5	2	Leaching from ore processing sites: discharge from electronics, glass, and drug factories

Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Date of sampling Mo-Yr	AL Violation Y/N	90 <sup>th</sup> Percentile results	No. of sampling sites exceeding the AL	MCLG	AL	Likely Source of Contamination
Lead (ppb)	8-2011	N	2.4	1	0	15	Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppm)	8-2011	N	0.54	0	0	1.3	Corrosion of household plumbing systems ; erosion of natural deposits; leaching from wood preservatives

Stage 1 Disinfectant/Disinfection By-Products ( D/DBP ) Parameters							
For bromate, chloramines, or chlorine, 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.							
Contaminant and Unit of Measurement	Date of sampling Mo-Yr	MCL Violation Y/N	Level Detected	Range of Results	MRDLG	MCL or MRDL	Likely Source of Contamination
Chlorine (ppm)	1 Thru 12 - 2011	N	1.1	.8 - 1.4	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	8 - 2011	N	3.44	ND - 7.82	N/A	MCL = 60	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) (ppb)	8 - 2011	N	9.17	0.18 - 24.56	N/A	MCL = 80	By-product of drinking water disinfection

**WATER QUALITY IS MAINTAINED TO THE TAP**

The water from the aquifer is of consistently high quality. Because of its high quality, the water requires only minimal treatment. Prior to distribution, the water is treated with chlorine. Water from the treatment plant is delivered to your home through an extensive distribution system of underground pipes. Water quality can deteriorate in these pipes. The first step is preventing degradation begins with a comprehensive surveillance and monitoring program. Water samples at selected locations throughout the distribution system are constantly checked for chemical and microbiological quality. In addition, water pipes in some areas are periodically flushed to remove stale water.

Hernando County Utilities routinely monitors for contaminants in your drinking water according to 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, 2011 to December 31, 2011. Data obtained before January 1, 2011, and represented in this report are from the most recent testing done in accordance with the laws, rules, and regulations

**CRYPTOSPORIDIUM**

Cryptosporidium is a microscopic organism that when ingested, can result in diarrhea, fever and other gastrointestinal symptoms. Hernando County's water system has never detected the presence of this organism. Cryptosporidium comes from waste material of warm-blooded animals and is found in surface water. Since Hernando County's water system utilizes wells as the sole source of raw water, the presence of Cryptosporidium is not expected to occur.

**LEAD**

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 Hernando County Utilities Department 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 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 <http://www.epa.gov/safewater/lead>.

**ADDITIONAL INFORMATION**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons, such as a people with cancer, people who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be at risk from infections. 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. For additional information you may contact your local health provider, or call the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

An active cross connection control program further protects the distribution system. This program identifies and corrects, as well as protects, against unauthorized hookups between the county distribution system and non-potable water, at sources such as irrigation wells.

Water is Worth Saving! Help us preserve and protect our water resources by learning practical ways that you can save water in your home and landscape. The Hernando County Utilities Department Water Conservation Division has educational programs, volunteer opportunities and incentive programs, which may assist HCUD customers to conserve this valuable resource. For more information on water conservation please call: 352-540-4368 Ext. 35139

We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future. The Hernando County Utilities Department operates 24 hours a day, 7 days a week to provide top quality water to every tap.

If you have any questions about this report or concerning your water utility, please contact Mack Washington, Water Plants Supervisor, at (352) 754-4490, Monday through Friday from 7:30 a.m. until 4:00 p.m.

**East Hernando Water System**

**DEFINITIONS:**

Contaminant:

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

Maximum Contaminant Level (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 (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 which, if exceeded, triggers treatment or other requirements which water system must follow.

ND:

Not Detected - indicates that the substance was not found by laboratory analysis.

PPB or ug/l:

Parts per billion or Micrograms per liter - One part by weight of analyte to 1 billion parts by weight of the water sample.

PPM or Mg/l:

Parts per million or Milligrams per liter - One part by weight of analyte to 1 million parts by weight of the water sample.

pCi/L:

Picocurie per liter - Measure of the radioactivity in water.

N/A:

Not Applicable ( does not apply ).

Maximum Residual

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for the control of microbial contaminants.

Disinfectant Level (MRDL)

Initial Distribution

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.

TEST RESULTS TABLE East Hernando Water System PWS ID# 6277060						
<u>Microbiological Contaminants</u>						
Contaminant and Unit of Measurement	Date of Sampling Mo - Yr	MCL Violation Y/N	Highest monthly number of positive samples	MCL	MCLG	Likely Source of Contamination
Total Coliform Bacteria (positive samples)	6 - 2011	N	1	For systems collecting fewer than 40 samples per month: presence of coliform bacteria in >1 sample collected during a month.	0	Naturally present in the environment
Fecal Coliform/E-coli in the distribution system (positive samples)	6 - 2011	N	1	0	0	Human and animal fecal wastes

The Hernando County Utilities Department is constantly monitoring for the presence of various contaminants in the water supply to ensure all regulatory requirements are met. On July 2, 2011 The East Hernando water system was found to be in violation of federal and state water quality standards for fecal coliform/e-coli. The affected area was limited to the Rolling Acres Subdivision. Staff checked equipment, flushed the distribution system, checked for adequate chlorine residuals, and confirmation samples were collected in the affected area. A total of three confirmation samples were collected on July 7, 2011 and all results came back showing NO signs of Microbiological Contamination.

- (1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was warning of potential problems.
- (2) 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.

Contaminant and Unit of Measurement	Date of Sampling Mo - Yr	MCL Violation Y/N	Total Number of Positive Samples for the Year	MCL	MCLG	Likely Source of Contamination
<i>E. coli</i> (at the ground water source)	6 - 2011	N	1	0	0	Human and animal fecal wastes

The Hernando County Utilities Department is constantly monitoring for the presence of various contaminants in the water supply to ensure all regulatory requirements are met. On July 2, 2011 we sampled Hill-N-Dale Well 1 and Well 2 for the fecal-indicator, *E. coli*. We were notified on July 6, 2011 The East Hernando water system was found to be in violation of federal and state water quality standards for fecal coliform/e-coli. Hill-N-Dale Well 2 tested positive for *E. coli*. The affected area was limited to the Hill-n-dale subdivision. Staff immediately removed well # 2 from service and notified the residents served by the Hill-N-Dale Water System. On July 7, 2011, we took five additional confirmation samples to be analyzed for Total Coliform and E. coli. All five samples showed NO signs of Microbiological Contamination.

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.