

***LET'S TALK WATER !***  
***HERNANDO COUNTY UTILITIES DEPARTMENT***  
***2012 WATER QUALITY REPORT***  
***FOR THE***  
***ROYAL OAKS WATER PLANT***

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**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.**

**HERNANDO COUNTY UTILITIES  
WATER QUALITY REPORT  
FOR THE ROYAL OAKS WATER PLANT**

**INTRODUCTION**

We are proud to report that the drinking water provided by Hernando County Utilities Department meets or exceeds all State and Federal Regulations. 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 2011 the Department of Environmental Protection performed a Source Water Assessment on our system and a search of the data source indicated no potential sources of contamination near our wells. The assessment results are available on the FDEP Source Water Assessment and Protection program website at [www.dep.state.fl.us/swapp](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.

## **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 in 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, 2012 to December 31, 2012. Data obtained before January 1, 2012, 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 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).

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.

# Royal Oaks Water Plant

**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 a 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 Disinfectant Level (MRDL) 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
- 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.*

**TEST RESULTS TABLE**  
Royal Oaks Water Plant PWS ID# 6271553

<b>Radioloactive Contaminants</b>							
Contaminant and Unit of Measurement	Date of sampling Mo-Yr	MCL Violation Y/N	Highest single measurement	The lowest monthly percentage of samples meeting regulatory requirements	MCLG	MCL	Likely Source of Contamination
Gross Alpha (pCi/L)	4-2009	N	1.2	N/A	0	15	Erosion of natural deposits
Radium - 226 and 228 (pCi/L)	4-2009	N	0.4	N/A	0	5	Erosion of natural deposits
Combined Uranium (ug/l) (U-234,U-235,U-238)	4-2009	N	1.1	N/A	0	30	Erosion of natural deposits

<b>Inorganic Contaminants</b>							
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
Arsenic (ppb)	4-2012	N	1.2	N/A	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	4-2012	N	0.0049	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	4-2012	N	6.5	N/A	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	4-2012	N	0.17	N/A	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 1.2 ppm
Nickel (ppb)	4-2012	N	1.3	N/A	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	4-2012	N	0.78	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	4-2012	N	3.7	N/A	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	4-2012	N	7.3	N/A	N/A	160	Salt water intrusion, leaching from soil

<b>Lead and Copper ( Tap Water )</b>							
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)	7-2012	N	2.4	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits
Copper (ppm)	7-2012	N	0.13	0	0	1.3	Corrosion of household plumbing systems ; erosion of natural deposits ; leaching from wood preservatives

<b>Stage 1 Disinfectant/Disinfection By-Products ( D/DBP ) Parameters</b>							
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 - 2012	N	1.1	.6 - 1.4	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
TTHM (Total Trihalomethanes) (ppb)	8 - 2012	N	2.0	N/A	N/A	MCL = 80	By-product of drinking water disinfection
HAA5s (Haloacetic Acids) (ppb)	8 - 2012	N	1.59	N/A	N/A	MCL = 60	By-product of drinking water disinfection