



2011 Flagler County Water Quality Report

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Our water is purchased from the City of Palm Coast. Their water is drawn from forty-seven production wells pumping from the surficial aquifer and six from the Floridian Aquifer. Their treatment process includes lime softening, filtration, forced draft aeration, **chloramination, corrosion control, and membrane softening - nanofiltration**. We're working hard to carefully monitor, maintain and protect our water from contaminants. We are pleased to report that our drinking water is safe and meets or exceeds all Federal and State standards for drinking water and is amongst the best in the State of Florida.

We encourage our valued customers to be informed about their water utility. If you have any questions about this report or concerns about your water utility, please contact your **Flagler County Utility Department Representative at 386-313-4192**. You may also visit the **Flagler County website at www.flaglercounty.org** or call the **EPA Safe Drinking Water Hotline at 1-800-426-4791**.

The City of Palm Coast Utility Department and Flagler County Utilities routinely monitor for contaminants in your drinking water according to Federal and State laws, rules, and regulations. This report is based on the results of monitoring for the period of January 1 to December 31, 2011 by the City of Palm Coast -PWS #2180863, except for lead and copper results and monthly bacteriological analysis, which were performed by Flagler County Utilities - PWS #2180002.

What Can We Expect to Find in Our Drinking 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:

- 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 that 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.**

How This Report Shows Our Water Quality Results and What They Mean

This report shows our water quality results and what they mean to you. It also provides important information about your water and how it relates to your health. The information in this report is based primarily on 2011 facts and figures. However, the U.S. Environmental Protection Agency (EPA) does not require us to perform all tests every year. When necessary, some data was obtained from prior years. As directed by the agencies that regulate our industry, only values from these tests that exceeded specified criteria are included. We will notify you immediately if there is any reason for concern.

The Florida Department of Environmental Protection (DEP) has completed a Source Water Assessment for the Palm Coast watershed. The State has determined that ten of our forty-seven wells have a low to moderate susceptibility to contamination based on their proximity to the eight potential sources of contamination that were last evaluated in 2011. For additional information, please visit the DEP website at www.DEP.state.fl.us/swapp.

How Do I Read This?

It's easy. The table shows the results of our water quality analyses. The column marked "Level Detected" shows the highest results from the last time tests were performed. "Likely Sources" shows where this substance usually originates. Descriptions below explain other important details. In this table 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.

ND: Means not detected and indicates that the substance was not found by laboratory analysis.

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

Parts per billion (ppb) or Micrograms per liter (ug/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.

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

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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

N/A: Means not applicable.

2011 ANNUAL DRINKING WATER QUALITY TEST RESULTS

The City of Palm Coast Utility 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 to December 31, 2011 for the **Flagler County-PWS ID # 2180002**. 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.

Total coliform bacteria: Highest Monthly Number is the highest monthly number of positive samples for systems collecting fewer than 40 samples per month.

Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (Positive Samples)	01/11 - 12/11	Y	3	0	For systems collecting fewer than 40 samples per month: presence of coliform bacteria in >1 sample collected during a month	Naturally present in the environment. CONTAMINATED SAMPLE CONTAINERS.
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 E.coli in the distribution system (positive samples)	01/11- 12/11	Y	1	0	0	Human and animal fecal waste

Results in the Level Detected column for radiological contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides are the highest detected level at any sampling point. Range of Results is the range of results (lowest to highest) at the individual sampling sites.

Radiological 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
Alpha emitters (pCi/l)	01/09, 04/09, 08/09	N	2.2	ND - 2.2	0	15	Erosion of natural deposits
Radium 226 or combined radium (pCi/l)	01/09, 04/09, 08/09, 5/11, 08/11, 10/11	N	0.6	ND - 0.6	0	5	Erosion of natural deposits

Inorganic Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
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Arsenic (ppb)	05/11	N	0.32	ND - 0.32	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	05/11	N	0.0043	0.0016-0.0043	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	05/11	N	0.090	ND - 0.090	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.
Lead (point of entry)(ppb)	05/11	N	0.058	ND - 0.058	0	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nickel (ppb)	05/11	N	0.35	ND - 0.35	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil.
Selenium (ppb)	05/11	N	1.9	ND - 1.9	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	05/11	N	34	17 - 34	N/A	160	Salt water intrusion, leaching from soil

Stage 1 Disinfectant and Disinfection By-Product

For the following parameters monitored under Stage 1 D/DBP regulations, the level detected is the average of the individual sampling sites: Chloramines, Haloacetic Acids (MCL 60 ppb), and/or TTHM (MCL 80 ppb). Range of Results is the range of results (lowest to highest) at the individual sampling sites.

Disinfectant or Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm)	01/11 - 12/11	N	2.22	0.6-3.25	MRDLG = 4.0	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	08/11	N	24.18	21.15 - 25.83	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	08/11	N	28.63	23.76 -37.32	N/A	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	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	08/11	N	0.24	0 of 18	1.3	1	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water)(ppb)	08/11	N	2.1	1 of 18	0	15	Corrosion of household plumbing systems, erosion of natural deposits

We failed to complete required sampling for bacteriological sampling on time and therefore were in violation of monitoring and reporting requirements. Because we did not take the required number of samples, we did not know whether the contaminants were present in your drinking water, and we are unable to tell you whether your health was at risk during that time. The monitoring period was July 2011. Five samples were required, and only two were taken. Sampling resumed in August 2011.

We constantly monitor for various contaminants in the water supply to meet all regulatory requirements. Our water system was in violation of federal and state water quality standards for Total Coliforms for August 2011. The levels of Total Coliforms are shown in the Test Results Table. 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 a warning of potential problems.

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. Flagler County 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>

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink two liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect. **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).**