

The City of Palm Coast

2003 Annual Drinking Water Quality Report



The City of Palm Coast is pleased to present your Annual Water Quality Report.



On October 30, 2003 the City purchased the Palm Coast water and wastewater system from Florida Water Services for \$83 million. The deal was finalized after more than two years of negotiations.

All of the Palm Coast utility employees accepted employment with the City and are continuing to operate the award-winning facilities. As we transition from private to public ownership of the utility, we are continuing to provide you with the same excellent water and wastewater service that you have always had.

By owning the utility, the City can ensure that the health, safety and welfare needs of the residents are met by providing safe, clean drinking water and clean sanitary sewer services at reasonable rates without a profit motive or tax impact. Ownership of these services enables the City to more effectively manage the location and timing of growth and gives the City yet another tool to encourage economic development.

The utility acquisition was funded by issuance of revenue bonds. These bonds will be retired utilizing utility revenues and not tax dollars. Included with the bond issue were additional funds that will be used to finance improvements and expansion of existing infrastructure. Immediately upon acquisition, the City embarked upon two major projects to expand the capacity of both the water and wastewater treatment plants. This increase in capacity is necessary due to the continued unprecedented population growth as evidenced by the utility's installation of almost 3,600 domestic water meters and approximately 100 irrigation meters in 2003.

The existing water treatment plant number two, a facility that utilizes low pressure reverse osmosis to soften well water, was expanded from 3.19 million gallons per day of capacity to 6.38 million gallons per day. The expansion project was completed in April.

A number of additional projects including water and wastewater pipelines and pumping stations are in various stages of development.

This report shows our water quality results and what they mean.

It also provides important information about your water and how it relates to your health. The information in this report is based primarily on 2003 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 about our water.

The City of Palm Coast Utility Department operates the water treatment and distribution system serving Palm Coast. Our water source is groundwater drawn from the Surficial and the Floridan Aquifer and is treated through a complex multi-step water treatment process that includes lime softening, filtration, membrane softening, corrosion control and chloramination for disinfection purposes. The Florida Department of Environmental Protection (DEP) plans to perform assessments of all the watersheds in the State within the next several years. An assessment of the Palm Coast area is not available at this time.

If you have any questions about this report or concerns about your water utility, please contact the **City of Palm Coast Utility Department at 386-986-2360**. You may also visit the DEP web site at www.myflorida.com or call the EPA Safe Drinking Water Hotline at 1-800-426-4791. We want our valued customers to be informed about their water utility. If you would like to learn more, please call us for information about the next opportunity for public participation in decisions about your drinking water.



What Can I Expect To Find In My 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, 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.**

The Hows & Whys Of Water Conservation

Saving Florida's water resources is a vital responsibility that will take everyone's participation to be successful. Water conservation may seem unnecessary in a state surrounded by water on three sides and filled with thousands of water bodies. But not all of that water is available for drinking or irrigation.

The City of Palm Coast watering restrictions limit outdoor water use to no more than three days a week. Odd addresses are allowed to water on Monday, Wednesday, or Saturday. Even addresses on Tuesday, Thursday, or Sunday. No watering is allowed at all on Fridays or between the hours of 10:00 a.m. – 4:00 p.m. on any day. More severe restrictions can be imposed under emergency conditions by the City or the St. Johns River Water Management District. Water restrictions apply to all users of water, whether from wells or surface water bodies.

There are many ways in which we can conserve our most precious resource. You may not know this, but over half of residential water use occurs outdoors. Here are just a few ways to save water outside the home:

- Water your lawn only when it needs it. The amount of rainfall your area receives should dictate how often you water your lawn and how much water you apply.
- Water lawns during the early morning or early evening hours when temperature and wind speed are lowest.
- For most Florida soils, an average of one-half to three-quarters of an inch of water per application is enough to replenish the grass. Saturate the root zone, then let soil dry to encourage healthy, deep root growth.
- Be sure your automatic sprinkler system is equipped with a working rain shutoff device, which overrides the system when enough rain has fallen.
- Cut your grass at the highest recommended height for your turf species or the highest setting on your lawn mower. Keep mower blades sharp for a clean cut.
- Plant drought-tolerant or Florida-friendly grasses, ground covers, shrubs and trees.
- To establish and maintain a healthy landscape that conserves water, use the following Xeriscape landscaping principles: get a soil analysis; plan your landscape; choose the proper plants; use grass wisely; irrigate effectively; mulch; and maintain your yard.
- Your garden hose can pour out 600 gallons or more in only a few hours. If you leave your sprinkler running all day or leave the hose unattended, thousands of gallons can be lost in a very short time.



Here are a few simple ways to conserve water inside your home:

- Check for leaks
- Install low-flow showerheads and faucet aerators, you could save about 450 gallons a month
- Operate your dishwasher only when you have a full load
- Store drinking water in the refrigerator instead of letting the tap run while you wait for cool water to flow
- Save about 100 gallons of water a month if you turn off the water while you brush your teeth, wash your face or shave
- Avoid flushing the toilet unnecessarily. Dispose of tissues, insects and other such waste in a trash can rather than in the toilet.



How Do I Read This?

It's easy. The table shows the results of our water quality analysis. 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.

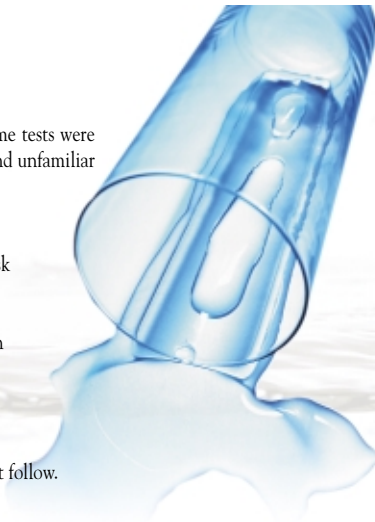
Parts per million (ppm) or Milligrams per liter (mg/l): One part by weight of analyte to 1 million parts by weight of the water sample, which corresponds to one minute in two years or a penny in \$10,000.

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, which corresponds to one minute in 2,000 years or a penny in \$10,000,000.

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.

"N/A" means not applicable.



2003 ANNUAL DRINKING WATER QUALITY TEST RESULTS

The City of Palm Coast Utility Department 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, 2003 for the City of Palm Coast - PWS ID # 2180863. 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.

** Results in the Level Detected column for radiological contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency.

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)	04/03	N	1.0	0.3 – 1.0	0	15	Erosion of natural deposits
Radium 226 or combined radium (pCi/l)	04/03	N	0.4	0.2 – 0.4	0	5	Erosion of natural deposits

Inorganic 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
Arsenic (ppb)	06/02	N	5	ND – 5	N/A	50	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	06/02	N	0.0083	0.0038 – 0.0083	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	06/02	N	0.18	0.13 – 0.18	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	04/03	N	1.3	0.022 – 1.3	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (as Nitrogen) (ppm)	04/03	N	0.06	0.031 – 0.06	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	06/02	N	3	2 – 3	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	06/02	N	34	33 – 34	N/A	160	Salt water intrusion, leaching from soil

Stage 1 Disinfectant/Disinfection By-Products (D/DBP) Parameters

For TTHMs monitored under rules adopted before the Stage 1 D/DBP rules (MCL = 100 ppb), the level detected is the highest running annual average calculated quarterly of the sampling period. The Range of Results is the range of results (lowest to highest) at the individual sampling sites.

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
TTHM [Total trihalomethanes] (ppb)	2nd Quarter 2002 through the 4th Quarter 2003	N	32 (3rd Quarter 2002)	3.9 – 50	N/A	100	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)	07/01	N	0.16	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	07/01	N	3.3	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 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 (1-800-426-4791).