2009
CITY OF PALM COAST
WATER QUALITY REPORT

EVERY LIVING THING COMES TO WATER

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 2009 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 City of Palm Coast Utility Department operates the water treatment and distribution system serving Palm Coast. Our water source is groundwater drawn through forty-six wells from the Surficial and the Floridan Aquifers 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) has completed a Source Water Assessment for the Palm Coast watershed. The State has determined that two of our forty-six wells have a low to moderate susceptibility to contamination based on their proximity to the three potential sources of contamination that were last evaluated in 2009. For additional information, please visit the DEP website at **www.DEP.state.fl.us/swapp**.

The following information will assist you in making adjustments to your water softener, washer or dishwasher:

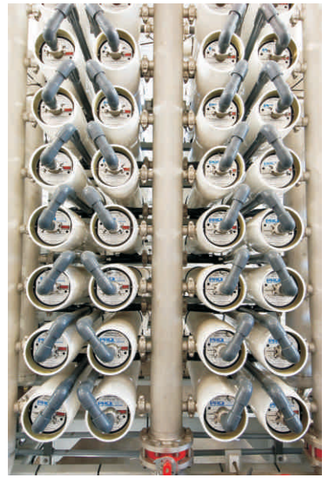
Total Hardness: 100ppm = 5.8 grains/gal.
Calcium Hardness: 80ppm = 4.7 grains/gal.

If you have any questions about this report or concerns about your water utility, please contact your **City of Palm Coast Utility Department Representative at 386-986-2360**. You may also visit the **City of Palm Coast website at www.ci.palm-coast.fl.us** 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.

A MESSAGE FROM THE UTILITY/PUBLIC WORKS DIRECTOR

Water is the source of life for all living things and mankind must learn to value, preserve and protect all water resources. As your Utility Director, it is my obligation to plan ahead for the possibility of a shrinking fresh water supply and the need for the development of sustainable new resources. Although our Utility endorses and implements increased water conservation and reclaimed water usage, these initiatives will eventually become inadequate. They may certainly minimize the immediate need for finding a new resource, but they will not eliminate the need.

The City of Palm Coast has taken a leadership role in the regional Coquina Coast Seawater Desalination Project. This cooperative group of government agencies has determined that a land-based plant that turns seawater into drinking water would be a viable alternative to meet future demands in our region.



Palm Coast needs a water supply resolution in order to continue its growth from what was once a planned retirement community to a self-sustained City, allowing for future commercial and industrial development and providing for a well-rounded diverse economy. There is and will be sufficient water for all of us if together we approach this issue wisely.

Seawater desalination is an advanced process that removes dissolved salts and minerals from seawater to produce high-quality drinking water.

HOW IS YOUR CITY CONSERVING WATER?

With Palm Coast customers consuming an average of 7.3 million gallons per day, it's astonishing that staff can conserve any amount of water that actually can make a difference. Yet saving water is the highest priority for City residents and staff, so a variety of approaches are therefore practiced year 'round.

A new irrigation system was installed in 2009 in the median on south Belle Terre Pkwy. The state-of-the-art system utilizes stream rotors that reduce drift onto roadways. A computer-monitored alert system detects breaks, flow problems and pump malfunctions without having a technician visit the site. Additionally, stormwater runoff is the water source for this irrigation, not potable or well water.

Reusing water also helps to solve the water supply challenge in our community. Currently, the Utility Department captures and treats wastewater from our own treatment plant to irrigate golf courses, commercial and residential development. Within the next few years, a new Wastewater Treatment Plant will be built and activated to provide reuse irrigation for consumers living and working west of US1.

The City Council enacted a stringent water conservation policy that prohibits irrigation with private irrigation wells between 10AM and 4PM. Irrigation with City-supplied water is allowed only between midnight and 10 AM according to these scheduled days:

Daylight Savings Time
(March through November)
Odd numbered addresses or no addresses—Wednesday & Saturday
Even numbered addresses—Thursday & Sunday
Non-residential—Tuesday & Friday

Eastern Standard Time
(November through March)
Odd numbered addresses—Saturday
Even numbered addresses—Sunday
Non-residential—Tuesday

HOW CAN YOU CONSERVE WATER?

- Water lawns/gardens slowly during cool, windless hours, as infrequently as possible. Let grass grow taller in hot weather and use mulch to save moisture. Plant native shrubs that don't need watering. Inspect your sprinkler system often.
- Never put water down the drain when there may be another use for it, such as watering a garden or cleaning.
- Store drinking water in a bottle in your refrigerator rather than letting the tap run every time you want a glass of water. Select only one drinking glass per day, as it will take you longer to fill your dishwasher.
- Let your pots and pans soak instead of letting the water run while you clean them.
- Take a short shower instead of a bath. A 5-minute shower uses 12-25 gallons of water while a tub requires about 70 gallons.
- Don't leave water running when brushing your teeth or shaving. Get in the habit of turning water off when it's not being used, no matter what you are doing.
- PAY ATTENTION TO YOUR WATER BILL and become familiar with your water meter. Use them to track your water use and detect leaks.

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.

2009 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, 2009 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 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	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 Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	07/08	N	0.0051	0.0022 – 0.0051	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (ppb)	07/08	N	1.6	ND – 1.6	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	07/08	N	0.077	ND – 0.077	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
Nickel (ppb)	07/08	N	0.37	ND – 0.37	N/A	100	Pollution from mining and refining operations. Natural occurrence in soil
Selenium (ppb)	07/08	N	1.7	ND – 1.7	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	07/08	N	35	21 – 35	N/A	160	Salt water intrusion, leaching from soil

Synthetic Organic Contaminants including Pesticides and Herbicides

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
Di(2-ethylhexyl) phthalate (ppb)	10/08, 01/09, 04/09, 08/09	N	2.4	ND – 2.4	0	6	Discharge from rubber and chemical factories

We failed to complete required sampling for Di(2-ethylhexyl) phthalate during the fourth quarter of 2009 and therefore were in violation of monitoring and reporting requirements. Because we did not take the sample, we did not know whether the contaminant was 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 10/1/09 through 12/31/09 with one sample being required and none were taken. Samples collected during the first three quarters of 2009 and the first quarter of 2010 did not detect this contaminant in the water.

TTHMs and Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Parameters

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)	01/09 – 12/09	N	3.5	1.2 – 4.6	MRDLG = 4.0	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	08/09	N	25.1	5.8 – 25.1	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	08/09	N	14.4	1.3 – 14.4	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)	08/07	N	0.097	0 of 30	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	08/07	N	1.9	0 of 30	0	15	Corrosion of household plumbing systems, erosion of natural deposits

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 City of Palm Coast 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.

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).