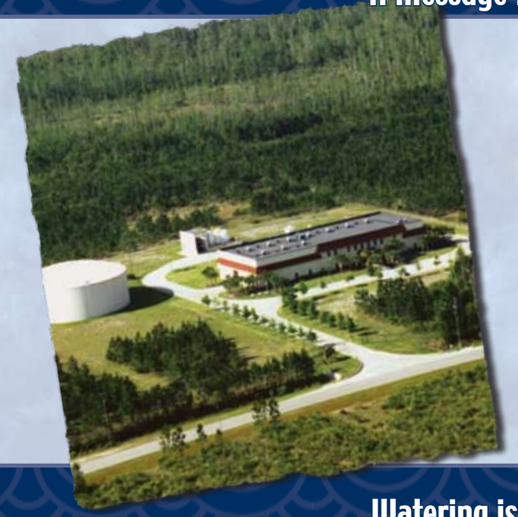
Liquid Assets

Preserving Palm Coast's

2006 CITY OF PALM COAST
WATER QUALITY REPORT

A Message from the Utility Director



The year 2006 was uncommonly challenging for Palm Coast's Utility Department, attributable to the City's continuing unprecedented growth and the year's prolonged drought conditions. The blend of these elements contributed to record residential and commercial water usage, peaking in May at 11.3 million gallons per day. To ensure the ability to meet this increased usage, the City broke ground to construct a third water treatment plant, scheduled to open in 2008. This low pressure reverse osmosis water treatment facility will have a capacity to process 3.0 million gallons of water per day, with a future expansion capacity of 9.0 millions of gallons per day..

The 2006 expansion of the City's Wastewater Treatment Plant also addressed the City's growth issues. This enhancement upgraded the plant's capacity from 4.55 MGD (million gallons per day) to 6.83 MGD per day of wastewater effluent treated to 100% reuse ability.

Additionally, the Water Utility proudly accepted two prestigious awards in 2006: the Department of Environmental Protection (DEP) Award for Best Operated and Maintained Water Facility in Florida's Northeast 19-County area (its 22nd Award since 1979) and the American Water Works Association's TOP-OPS International Championship. (Five State and National Awards)

What You Can Expect to Find in your 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.

Watering is a Tough Habit to Break

It is a common site in Florida: sprinklers that are running full blast during storms, all hours of the day and night and even during restricted times. Residents often are not vigilant of seasonal rainfall alterations and don't address these changes in their automatic sprinkler systems. Most Florida lawns and gardens do not need excessive water. Summer rains and even drier winters usually provide enough water for lawns and shrubs.

Here are a few important methods to irrigate landscaping and still conserve water:

- **A** *As a general rule, lawns need watering every 5-7 days in summer or every 10-14 days in winter. A hearty rain eliminates the need for watering for up to two weeks. Equip your sprinklers with a rain sensor device which overrides the irrigation cycle when adequate rainfall occurs.*
- **B** *Position sprinklers to water only landscaping and not streets, sidewalks or driveways.*
- **C** *Raise your lawn mower blade to at least 3". A higher cut encourages roots to grow deeper, shades the root system and holds soil moisture.*
- **D** *Don't leave sprinkler hoses unattended. A garden hose can pour out 600+ gallons in only a few hours.*
- **E** *Landscape with drought-tolerant grasses, plants and trees. Group plants together based on similar water needs.*
- **F** *Water only on designated days.*

To locate information about Palm Coast's current watering restrictions, visit the City's website at www.ci.palm-coast.fl.us.

Xeriscaping Conserves Water

'Xeriscaping' your outdoor landscaping is synonymous with conserving water in Palm Coast. People often misinterpret the term "Xeriscape" as landscape designed with cactus and rocks. This is not correct. Xeriscaping encourages property owners to establish and maintain a healthy landscape with lush greenery, matching appropriate plants with existing site conditions so that the use of water, fertilizer and pesticides is minimized. For Palm Coast horticulturalists and gardeners, this means assessing the natural features of the land and determining the soil's composition. It means choosing plants that thrive in specific conditions where they are planted, such as sun, shade or saltwater. It also means planting grass only where it is functional, mulching plants to hold moisture and placing moisture-loving plants in wet areas and shrubs that prefer well-drained sites in drier areas.

Finally, xeriscaping means irrigating efficiently, only when plants need water or when rain is inadequate. Too much water promotes weak growth and increases pruning and mowing requirements. Your irrigation system needs to be designed or modified, if possible, to irrigate St. Augustine lawns on a separate zone from your shrubbery zones, which typically require less water than this type of grass.

Each of these principals of xeriscaping works simultaneously to promote healthy plant growth and to conserve water. The proper plant placed in the proper location will grow substantially with self-sufficiency, needing little water to survive. If you love rocks and cactus, plant them and enjoy them. If you love the flourishing Florida landscape, xeriscaping will not only look magnificent, but it will also conserve Florida's precious water resources.

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

This report provides important information about your water and how it relates to your health. The information in this report is based primarily on 2006 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 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) has completed a Source Water Assessment for the Palm Coast watershed. The State has determined that four of our thirty-eight wells have a low to moderate susceptibility to contamination based on their proximity to potential sources of contamination.

For additional information, please visit the DEP website at www.dep.state.fl.us/swapp.

The following information will assist you in making adjustments for 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, our City Council meets on the first Tuesday of each month at 6:30 p.m. and the third Tuesday at 9:00 a.m. at the Palm Coast Community Center, 305 Palm Coast Parkway N.E.

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 of 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.*

2006 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, 2006 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.

Total coliform bacteria: Highest Monthly Percentage/Number is the highest monthly percentage of positive samples for systems collecting at least 40 samples per month.

Microbiological Contaminants

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Percentage/Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	01/06-12/06	N	11/06 3 of 91 = 3.3 %	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in 5% of monthly samples.	Naturally present in the environment

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)	09/06 + 11/06	N	2.0	1.8 – 2.0	0	15	Erosion of natural deposits
Radium 226 or combined radium (pCi/l)	09/06 + 11/06	N	0.4	0.3 – 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
Barium (ppm)	02/05	N	0.0053	0.0043 – 0.0053	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	02/05 + 04/05	N	1.3	0.36 – 1.3	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	02/05	N	0.12	ND – 0.12	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen) (ppm)	05/06	N	0.053	ND – 0.053	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	02/05	N	1.6	ND – 1.6	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	02/05	N	32	N/A	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)	09/06 + 11/06	N	1.2	ND – 1.2	0	6	Discharge from rubber and chemical factories

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, and/or TTHM (MCL 80 ppb). 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 or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm)	01/06 – 12/06	N	3.6	1.0 – 5.9	MRDLG = 4.0	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	08/06	N	21.3	11.9 – 30.7	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	08/06	N	16.8	8.9 – 24.8	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)	07/04 and 09/04	N	0.099	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	07/04 and 09/04	N	1.7	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).**