THE CITY OF PALM COAST

2004 Annual DRINKING WATER Quality Report

THE CITY OF PALM COAST IS PLEASED TO PRESENT YOUR ANNUAL WATER QUALITY REPORT

After acquisition of the water and wastewater systems in late 2003, the City of Palm Coast embarked upon an aggressive Capital Improvement Program for the utility. A Florida Department of Environmental Protection (DEP) State Revolving Fund Loan was secured to fund a $13 million expansion to the wastewater treatment facility and an upgrade to the wastewater collection system. Design and permitting has been completed for both projects, and construction began in early 2005. In 2004 a water supply well was added, and design and permitting was completed to provide four additional wells and associated pipelines with construction underway. Construction of a new water main along State Road 100 from Old Kings Road to Roberts Road will be completed and activated by June 2005. Preliminary site work and pilot testing has also started for the next water treatment facility to be constructed within the next two to three years.

The Utility Department received the prestigious *Plant Excellence Award* from Florida DEP in recognition of outstanding drinking water treatment plant operation, maintenance, and compliance for both water treatment facilities. By owning the utility, the City can ensure that the health, safety and welfare needs of our 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.

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.**

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 2004 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) has completed a Source Water Assessment for the Palm Coast watershed. The State has determined that four of our thirty-one 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**.

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 the first Tuesday of each month at 6:30 p.m. and the third Tuesday at 9 a.m. at the Palm Coast Community Center, 305 Palm Coast Parkway, N.E.

MANDATORY WATERING RESTRICTIONS

Mandatory watering restrictions have been implemented by the Palm Coast City Council. Base level restrictions normally allow watering three days per week, anytime other than the hours of 10:00 am to 4:00 pm. However, due to past severe drought conditions, all Palm Coast water users are currently required to adhere to the City's Conservation Policy - Ordinance No. 2001-06, Section 3.3 Level II - Severe Water Shortage restrictions. These restrictions include at least, but are not limited to the following:

EXISTING LANDSCAPE IRRIGATION - INCLUDES RESIDENTIAL, COMMERCIAL AND RECREATIONAL USE PROPERTIES

Water use for irrigation shall be restricted to the hours of 4 a.m.-8 a.m., two days per week per the odd/even address schedule below.

- **Even numbered addresses: Thursday & Sunday - 4 a.m.-8 a.m.**
- **Odd numbered addresses: Wednesday & Saturday - 4 a.m.-8 a.m.**

Other outside uses:

- Street, driveway, sidewalk washing or cleaning is prohibited.
- No watering or car washing is permitted on Friday or any other day other than the hours listed above.

NEW LANDSCAPE (IN PLACE FOR LESS THAN 30 DAYS) IRRIGATION - INCLUDES RESIDENTIAL, COMMERCIAL AND RECREATIONAL USE PROPERTIES

- **Water use for irrigation shall be restricted to the hours of 2 a.m. to 8 a.m., Monday, Wednesday, and Friday.**

Special Note:

- Water restrictions apply to all sources of supply, including the public water supply system, privately-owned wells and surface supplies.

Customers should pay heed to the restrictions that are in place and be aware of any changes to the regulations that may occur from time to time. Please report violators by calling our **Utility Customer Service Department at 386-986-2360.**

CONSERVING WATER INSIDE AND OUTSIDE

- Only run the dishwasher and clothes washer when they are fully loaded.
- Defrost frozen food in the refrigerator or in the microwave instead of running water over it.
- When washing dishes by hand, use two basins - one for washing and one for rinsing rather than letting the water run.
- Repair dripping faucets and leaky toilets. Dripping faucets can waste about 2,000 gallons of water each year. Leaky toilets can waste as much as 200 gallons each day.
- Install an ultra low-flow toilet that requires only 1.6 gallons (6 liters) per flush.
- Check toilets periodically for leaks and repair them promptly.

Plant drought-tolerant or Florida-friendly grasses, groundcovers, shrubs and trees. Once established, they do not need to be watered as frequently and usually will survive a dry period with little or no watering.

To establish and maintain a healthy landscape that conserves water, consider using the following Xeriscape landscaping principles:

1. **Plan your landscape**
2. **Get a soil analysis**
3. **Choose proper plants**
4. **Use grass wisely**
5. **Irrigate efficiently**
6. **Use mulches**
7. **Perform proper maintenance**

Courtesy American Water Works Association and the St. Johns River Water Management District. To read more about how you can conserve water, visit their websites at www.awwa.org and www.sjrwmd.com

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.*

2004 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, 2004 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, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, + 12/04	N	08/04 4 of 108 = 3.7 %	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, 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
Nitrite (as Nitrogen) (ppm)	03/04	N	0.17	ND – 0.17	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

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 annual average of the quarterly averages: 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)	01/04 – 12/04	N	3.25	1.0 – 5.5	N/A	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	02, 04, 07, 10/04	N	7.3	2.8 – 12	N/A	MCL = 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	02, 04, 07, 10/04	N	8.3	1.9 – 20	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).**