

The City Of Port Orange 2006 Annual Drinking Water Quality Report

The City of Port Orange is very pleased to provide you with this annual water quality report. This report is being mailed to you in accordance with Federal and State requirements. The City of Port Orange hopes you are pleased with the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a dependable supply of drinking water. Our water source is forty (40) deep wells that draw water from the Floridian Aquifer.

In 2004 the Department of Environmental Protection performed a Source Water Assessment on our system and a search of the data sources indicated no potential sources of contamination near our wells. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp.

The well water is pumped to the Garnsey Water Plant, which is where the treatment begins. The treatment process consists of water softening, disinfection using sodium hypochlorite and anhydrous ammonia to form a chloramine residual, pH stabilization using carbon dioxide, fluoridation for dental protection, and filtration to further clarify the water.

This report shows our water quality results and what they mean

If you have any questions about this report, please contact Steven Miller (Chief Operator) or Michael McClendon or Pat Marsh (Lab Technicians) at 506-5770. We encourage our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. The public is welcome to participate in decisions that may effect water quality by attending regularly scheduled city council meetings at the first, third and fourth Tuesday of every month at 7:00 p.m. at City Council Chambers, in the City Hall Complex.

The City of Port Orange 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. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Data obtained before January 1, 2006 and presented in this report represents the most recent testing done in accordance with regulations.

In the table below, 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: <i>The highest level of a contaminant that is allowed in drinking water. MCLs are set close to MCLGs as feasible using the best available treatment technology.</i>
Maximum Contaminant Level Goal or MCLG: <i>The level of contaminant in drinking water below, which there is no known or expected risk to health. MCLGs allow for a margin of safety.</i>
Action Level (AL): <i>The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.</i>
TTHMs: or Total Trihalomethanes <i>consist of Chloroform, Bromodichloromethane, Dibromochloromethane, and Bromoform. TTHM's are formed when organic compounds in raw and finished water react with free Chlorine. They may be carcinogenic when the concentrations are in excess of the MCL.</i>
"ND" <i>means not detected and indicates that the substance was not found by laboratory analysis.</i>
Parts per million (ppm) or Milligrams per liter (mg/l) – <i>one part by weight of analyte to one million parts by weight of the sample.</i>
Parts per billion (ppb) or Micrograms per liter (ug/l) – <i>one part by weight of analyte to one billion parts by weight of the sample.</i>
Picocurie per liter (pCi/L) – <i>measure of the radioactivity in water.</i>
Maximum residual disinfectant level goal or MRDLG: <i>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.</i>
Maximum residual disinfectant level or MRDL: <i>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.</i>

Test Results Table

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
Radium 226 +228 or combined radium (pCi/L)	02/05	No	0.2	0.2	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)	02/05 09/05	No	.22	.14-.22	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (PPM)	02/05 09/05	No	.0041	.0036-.0041	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cyanide (PPB)	02/05 09/05	No	5.0	4.0-5.0	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
Fluoride (PPM)	All Months 2006	No	1.1	.14-1.1	4.0	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at optimum levels between 0.7 and 1.2 ppm
Lead (PPB) Point of Entry	02/05 09/05	No	.11	0.0-.11	N/A	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nitrate as (Nitrogen) (PPM)	10/06	No	.021	.021	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (PPM)	02/05 09/05	No	44	35-44	N/A	160	Salt water intrusion, leaching from soil

TTHM's and Stage I Disinfectant/Disinfection By-Product (D/DBP's) Contaminants							
<ul style="list-style-type: none"> For the following contaminants and disinfectant residuals monitored under Stage 1 D/DBP regulations, the level detected is the highest annual average of the quarterly averages: Bromate, Chloramines, Chlorine, Haloacetic Acids, and/or TTHM (MCL 80 ppb). Range of Results is the range of results (lowest to highest) at the individual sampling sites, including IDSE results. 							
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 and Chlorine (PPM)	Monthly 2006	No	3.5	1.2 -4.0	MRDLG 4.0	MRDL 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (PPB)	08/06	No	26.4	26.4	N/A	MCL 60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (PPB)	08/06	No	29.7	29.7	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	# sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (PPM)	08/05	No	.038	0	1.0	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (PPB)	08/05	No	6.4	1	15	15	Corrosion of household plumbing systems; erosion of natural deposits

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 sewerage treatment plants, septic systems, agricultural live-stock operations, and wildlife.
- (B) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm-water 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 storm-water 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 storm-water 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 the 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.

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.

We, at the City of Port Orange, would like you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to insuring the quality of your water. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed or visit our website @ www.port-orange.org.