



# FORT PIERCE UTILITIES AUTHORITY

## ANNUAL DRINKING WATER QUALITY REPORT - 2004

Administrative Office (772) 466-1600 — Water Plant (772) 466-1600, Ext. 4390

### INTRODUCTION

We are proud to report that the water provided by the Fort Pierce Utilities Authority (FPUA) meets the State of Florida and the United States Environmental Protection Agency's (EPA) regulations. This report is furnished pursuant to the EPA Safe Drinking Water Act (SDWA). Beginning in 1999, all community water systems need to provide customers with an annual report on the quality of their water. FPUA tests for a variety of regulated and unregulated compounds to determine if your drinking water meets the SDWA requirements. Review of the Tables contained in this report will show that your drinking water is of excellent quality. The data presented is from the most recent testing done in accordance with regulations. FPUA Board meetings are conducted on the first and third Tuesday of each month at 4:00 p.m. at 100 N. U. S. 1 (City Hall), Fort Pierce, Florida.

### PARA LOS CLIENTES HISPANOS

Este es un reporte importante sobre la calidad de su agua. Si usted no cuenta con alguien que pueda traducirle este reporte, llame a la Division de Asuntos del Consumidor de Fort Pierce Utilities Authority al (772) 466-1600 y con mucho gusto le asistiremos.

### SOURCE OF FPUA's DRINKING WATER

Groundwater, from the Surficial Aquifer (about 100 feet below the surface) and the Floridan Aquifer (about 1000 feet), provides the source of water to all customers. 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. A Source Water Assessment has been conducted and is available by calling the above listed number. As many of our wells are located in an urban area there is a high concern level with respect to potential contamination. The City of Fort Pierce has built treatment systems and also adopted a Wellfield Protection Ordinance as a result of those concerns.

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.

FPUA's water treatment plant treats the groundwater and removes contaminants by conventional lime softening, aeration, disinfection, and sand filtration combined with reverse osmosis treatment. 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.

### IMMUNO-COMPROMISED INDIVIDUALS

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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

### DEFINITIONS & TEST RESULTS TABLE KEY (for tables on back)

**AL (Action Level)** – The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.

**CDC** – Centers for Disease Control

**Contaminant** – any substance or matter whether physical, chemical, biological, or radiological.

**MCL (Maximum Contaminant Level)** – 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.

**MCLG (Maximum Contaminant Level Goal)** – 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.

**MRDL** – Maximum Residual Disinfectant Level.

**MRDLG** – Maximum Residual Disinfectant Level Goals.

**N/A** – Not Applicable.

**non-detect (ND)** – Means not detected and indicates that the substance was not found by laboratory analysis.

**pCi/L (Picocuries per Liter)** – A measure of radioactivity in water.

**ppb** – One Part Per Billion; the equivalent of 1 penny in \$10,000,000.

**ppm** – One Part Per Million; the equivalent of 1 penny in \$10,000. Same as **mg/L** (milligrams per Liter).

**Range of Results** – The lowest and highest detected levels of a substance.

**Y/N** - Yes/No.

# TEST RESULTS TABLES - CONTAMINANTS DETECTED

## *Inorganic Contaminants*

<u>Contaminant and Unit of Measurement</u>	<u>Dates of Sampling (mo./yr.)</u>	<u>MCL Violation Y/N</u>	<u>Level Detected</u>	<u>Range of Results</u>	<u>MCLG</u>	<u>MCL</u>	<u>Likely Source of Contamination</u>
Barium (ppm)	03/02	N	0.007	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Chromium (ppb)	03/02	N	1.6	N/A	100	100	Discharge from steel and pulp mills; erosion of natural deposits.
Fluoride (ppm)	07/04	N	0.94	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Nitrate (as Nitrogen) (ppm)	01/04 & 12/04	N	0.07	0.067-0.07	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Nitrite (as Nitrogen) (ppm)	01/04	N	0.17	0.17	1	1	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium (ppb)	03/02	N	4.4	N/A	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Sodium (ppm)	02/04 & 05/04	N	65	45-65	N/A	160	Saltwater intrusion: leaching from soil.

NOTE: Results in the Level Detected column for Inorganic Contaminants are the highest level detected at any sampling point.

## *Radioactive Contaminants*

<u>Contaminant and Unit of Measurement</u>	<u>Dates of Sampling (mo./yr.)</u>	<u>MCL Violation Y/N</u>	<u>Level Detected</u>	<u>Range of Results</u>	<u>MCLG</u>	<u>MCL</u>	<u>Likely Source of Contamination</u>
Gross Alpha (pCi/L)	08/03	N	0.5	N/A	0	15	Erosion of natural deposits.
Combined Radiums (pCi/L)	08/03	N	0.7	N/A	0	5	Erosion of natural deposits.

## *Stage 1 Disinfectant/Disinfection By-Product (D/DBP) Parameters*

<u>Contaminant and Unit of Measurement</u>	<u>Dates of Sampling (mo./yr.)</u>	<u>MCL Violation Y/N</u>	<u>Level Detected</u>	<u>Range of Results</u>	<u>MCLG or MRDLG</u>	<u>MCL or MRDL</u>	<u>Likely Source of Contamination</u>
Total Trihalomethanes (TTHM) (ppb)	1/04, 4/04, 7/04, 10/04	N	13.5	5.3 - 34.0	N/A	MCL = 80	By-product of drinking water chlorination.
Haloacetic Acids Five (HAA5) (ppb)	1/04, 4/04, 7/04, 10/04	N	12.6	3.2 - 21.6	N/A	MCL = 60	By-product of drinking water chlorination.
Chloramines (ppm)	01/04 to 12/04	N	3.6	3.4 - 3.9	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes.

NOTE: The result in the Level Detected column for TTHMs, HAA5s and Chloramines is the highest of the four quarterly running annual averages (RAA) of results from all sampling sites. Range of Results is the range of results (lowest to highest) at the individual sampling sites.

## *Volatile Organic Contaminants (VOCs)*

<u>Contaminant and Unit of Measurement</u>	<u>Dates of Sampling (mo./yr.)</u>	<u>MCL Violation Y/N</u>	<u>Level Detected</u>	<u>Range of Results</u>	<u>MCLG or MRDLG</u>	<u>MCL or MRDL</u>	<u>Likely Source of Contamination</u>
Dichloromethane (ppb)	1/04, 6/04, 9/04, 12/04	N	3.1	0 - 24.7*	N/A	MCL = 5	Discharge from pharmaceutical and chemical factories.

NOTE: The result in the Level Detected column for VOCs is the highest of the four quarterly running annual averages (RAA) of results from all sampling sites.

## *Lead and Copper (Tap Water)*

<u>Contaminant and Unit of Measurement</u>	<u>Dates of sampling (yr.)</u>	<u>AL Violation Y/N</u>	<u>90th Percentile Results</u>	<u>Number of sampling sites exceeding AL</u>	<u>MCLG</u>	<u>AL</u>	<u>Likely Source of Contamination</u>
Copper (tap water) (ppm)	2004	N	0.19	0	1.3	1.3	Corrosion of household plumbing systems.
Lead (tap water) (ppb)	2004	N	3	0	0	15	Corrosion of household plumbing systems.

## REMARKS

- As authorized and approved by the U. S. Environmental Protection Agency (USEPA), 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. Some of our data (e.g., for Barium), though representative, is more than one year old.
- Additional testing of FPUA's drinking water for more than 90 other contaminants resulted in non-detects.
- \* Note: It is believed that one VOC sample was contaminated during transport to, or at testing lab.
- Another sample taken at the same time and at same location was a non-detect. No sample taken prior to this time or later has ever detected this contaminant. This compound is used extensively in testing labs.
- More than 600 bacteriological samples were collected from the water distribution system during 2004 and tested for Coliform Bacteria.
- FPUA's drinking water system has been in full compliance for lead and copper control since the USEPA instituted regulations in 1992.