

## Substances That Could be in 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: Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; 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; Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; 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; 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 U.S. 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 (800) 426-4791.

Fort Pierce Utilities Authority  
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## Source Water Assessment

In 2012, the Department of Environmental Protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are 10 potential sources of contamination identified for this system with a low to moderate susceptibility level. The assessment results are available on the FDEP Source Water Assessment and Protection Program Web site at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp) or they can be obtained by calling FPUA's Customer Service Department at (772) 466-1600. Additionally, FPUA has built treatment systems as a result of those potential sources of contamination.

## Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Source of FPUA's Drinking Water

FPUA obtains water from two sources - groundwater from the Surficial Aquifer, which is about 100 feet below the surface, and the Floridan Aquifer, which is about 1,000 feet below the surface.

FPUA's Water Treatment Plant treats the groundwater and removes contaminants by conventional lime softening, aeration, and sand filtration combined with reverse osmosis treatment. The water is chlorinated for disinfection purposes and then fluoridated for dental health reasons.

## Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council, bottled water is not necessarily cleaner or safer than most tap water. In fact, about 25 percent of bottled water is actually just bottled tap water (40 percent according to government estimates).

The Food and Drug Administration is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water.

For a detailed discussion on the NRDC study results, check out their Web site at [ww.nrdc.org/water/drinking/bw/exesum.asp](http://ww.nrdc.org/water/drinking/bw/exesum.asp).



## Quality First

We are proud to report that the water provided by 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 2013 or the most recent testing done in accordance with regulations for sampling that is required less frequently than annually.

As in years past, we are committed to delivering the best quality drinking water possible. To that end, we remain vigilant in meeting the challenges of new regulations, source water protection, water conservation, and community outreach and education while continuing to serve the needs of all of our water users. Thank you for allowing us to continue providing you and your family with quality drinking water.

Please share with us your thoughts about the information in this report. After all, well-informed customers are our best allies. Additionally, please note that we encourage community participation and invite you to attend our Board meetings which are held 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 traducir 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.

## Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

<b>Inorganic Contaminants</b> <sup>1</sup>							
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation (yes/no)	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Barium (ppm)	4/20/2011	No	0.0031	0.0031-0.0031	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural resources
Chromium (ppm)	4/20/2011	No	0.46	ND - 0.46	100	100	Discharge from steel and pulp mills; erosion from natural resources
Cyanide (ppb)	4/20/2011	No	110	ND - 110	200	200	Discharge from steel and metal factories; discharge from plastic and fertilizer factories
Fluoride (ppm)	1/1/2013 - 12/31/2013	No	0.67	0.25 - 1.03	4	4	Erosion of natural resources; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nickel (ppb)	4/20/2011	No	0.8	ND - 0.8	NA	100	Pollution from mining and refining operations. Natural occurrence in soil.
Nitrate [as Nitrogen] (ppm)	1/17/2013	No	0.099	0.099 - 0.099	10	10	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits.
Selenium (ppb)	4/20/2011	No	5.2	ND - 5.2	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines.
Sodium (ppm)	4/20/2011	No	43	43	NA	160	Salt water intrusion, leaching from soil.
<b>Stage 1 Disinfectants/Disinfection By-Product (D/DBP)</b>							
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation (yes/no)	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chloramines (ppm) <sup>2</sup>	1/1/2013 - 12/31/2013	No	3.3	0.6 - 4.5	MRDLG = 4	MRDL = 4.0	By-product of drinking water disinfection.
<b>Stage 2 Disinfectants/Disinfection By-Product (D/DBP)</b>							
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation (yes/no)	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
THM [Total Trihalomethanes] (ppb) <sup>3</sup>	1/1/2013 - 12/31/2013	No	20.8	13.2 - 20.8	NA	MCL = 80	By-product of drinking water disinfection.
HAA5 [Haloacetic Acids] (ppb) <sup>3</sup>	1/1/2013 - 12/31/2013	No	24.2	12.7 - 24.2	NA	MCL = 60	By-product of drinking water disinfection.
<b>Lead and Copper (Tap Water)</b>							
Contaminant and Unit of Measurement	Date of Sampling (mo/yr)	MCL Violation (yes/no)	90th Percentile Result	No. of Sites Exceeding the AL	MCLG	AL	Likely Source of Contamination
Copper [tap water] (ppm)	2011	No	0.11	0	1.3	1.3	Corrosion of household plumbing systems
Lead [tap water] (ppb)	2011	No	1.9	0	0	15	Corrosion of household plumbing systems

## Definitions

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

**LRAA (Locational Running Annual Average):** The average of sample results taken at a particular monitoring location during the previous four calendar quarters.

**MCL (Maximum Contaminant Level):** The maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

**MCLG (Maximum Contaminant Level Goal):** The maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety.

**MRDL (Maximum Residual Disinfectant Level):** 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.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

**RAA (Running Annual Average):** The average of all samples collected from all sample locations within a calendar year.

**TT (Treatment Technique):** A required process intended to reduce the level of a contaminant in drinking water.

1 Results in the Level Detected column for Inorganic Contaminants are the highest average detected at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency, except for RAA.

2 For Chloramines the level detected is the highest Running Annual Average (RAA), computed quarterly, of the monthly averages of all samples collected.

3 For Haloacetic Acids (HAA5) and Total Trihalomethanes (THM), the level detected is the highest Locational Running Annual Average (LRAA), computed quarterly of all samples collected. Range of Results is the range of quarterly LRAA results (lowest to highest).

## What's Your Water Footprint?

You may have some understanding about your carbon footprint, but how much do you know about your water footprint? The water footprint of an individual, community, or business is defined as the total volume of freshwater that is used to produce the goods and services that are consumed by the individual or community or produced by the business. For example, 11 gallons of water are needed to irrigate and wash the fruit in one half-gallon container of orange juice. Thirty-seven gallons of water are used to grow, produce, package, and ship the beans in that morning cup of coffee. Two hundred and sixty-four gallons of water are required to produce one quart of milk, and 4,200 gallons of water are required to produce two pounds of beef.

According to the U.S. EPA, the average American uses about 100 gallons of water daily. In fact, in the developed world, one flush of a toilet uses as much water as the average person in the developing world allocates for an entire day's cooking, washing, cleaning, and drinking. The annual American per capita water footprint is about 8,000 cubic feet; twice the global per capita average. With water use increasing six-fold in the past century, our demands for freshwater are rapidly outstripping what the planet can replenish.

To check out your own water footprint, go to [www.h2oconserve.org](http://www.h2oconserve.org) or visit [www.waterfootprint.org](http://www.waterfootprint.org) to see how the water footprints of other nations compare.

## Lead in Home Plumbing

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. We are 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## DID YOU KNOW

Did you know that the world uses:

- 70 percent freshwater for irrigation
- 22 percent freshwater for industry
- 8 percent freshwater for domestic use

Did you know that by 2025, water withdrawals are predicted to increase by:

- 50 percent in developing countries
- 18 percent in developed countries

Did you know that by 2025:

- 1800 million people will be living in countries or regions with absolute water scarcity
- two-thirds of the world population could be under stress conditions caused by water scarcity

Did you know that:

- the world's six billion people are using 54 percent of all accessible freshwater contained in rivers, lakes and underground aquifers

Source: UN Water