

City of Port St. Lucie • Utility Systems Department

2006 Water Quality Report





Dear Customer,

It is our pleasure to provide you this copy of our 2006 Annual Water Quality Report. The report includes a brief description of our water treatment process, summarizes results of the water quality tests we routinely perform, and it explains what those test results mean to you as a consumer of our finished water product.

As a leader in the water utility industry, one of our responsibilities is to educate the public about the need to conserve and protect our community's natural water resources. We can all practice water conservation by repairing leaky faucets, toilets, and hose bibs that might exist in our home's plumbing. Another conservation tip is to turn off the water while shaving or brushing one's teeth.

Water conservation must become more than just a short-term solution to this year's near-record drought. It needs to become a well-practiced part of our daily lives.

Should you have any questions about this report or your water and wastewater service, please contact us by calling 873-6400.



Jesus A. Merejo
Utility Systems Director



The mission of Port St. Lucie's Utility Systems Department is to:

- Lead the water and wastewater utility industry by relying on innovative operating and maintenance processes, effective management and strategic planning;
- Protect our natural water resources and enhance the public's awareness of the need to conserve those resources;
- Provide exceptional customer support and service;
- Insure the health, safety, and welfare of this community by providing a safe and dependable supply of drinking water.

Where does our water come from?

Our water supply comes from two independent sources, the shallow aquifer and the deeper Floridan aquifer. Raw water from the shallow aquifer, which is about 100 feet deep, is treated by our 8.0 million gallon per day lime softening facility. This process is a combination of pH adjustments with lime, coagulation with a polymer, multi-media filtration, and disinfection with chloramines. The deeper Floridan aquifer, which is about 1350 feet deep, is treated by our 11.15 million gallon per day and our 6.0 million gallon per day reverse osmosis facilities. Both finished waters are blended, pH adjusted, and fluoride is added.

The source of drinking water (both tap water and bottled water) includes 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 human activity.



Contaminants that may be present in source water include:

Microbiological 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 storm water 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 agricultural, urban storm water runoff, and residential uses.

Organic chemicals 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.

Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

How safe is our water?

In order to ensure that tap water is safe to drink, 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).

In addition, the Florida Department of Environmental Protection has implemented a Source Water Assessment and Protection program in order to assess and report potential source water contaminants and threats to public water systems. Potential sources of contamination are those facilities, sites, and activities that have the capacity to affect the underlying ground water or nearby surface waters used for public drinking water. A source water assessment that was conducted on our system in 2004 found that six of our wells are susceptible to contamination from petroleum storage tanks with vulnerability ranging from moderate to high.

TEST RESULTS TABLE For Prineville Water Treatment Plant

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR)	MCL VIOLATION YES/NO	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
INORGANIC CONTAMINANTS							
ANTIMONY (ppb)	3/05	NO	0.084	N/A	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
ARSENIC (ppb)	3/05	NO	0.62	N/A	N/A	50	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
BARIUM (ppm)	3/05	NO	0.0035	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
SELENIUM (ppb)	3/05	NO	1.5	N/A	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
SODIUM (ppm)	3/05	NO	100	N/A	N/A	160	Salt water intrusion, leaching from soil
THALLIUM (ppb)	3/05	NO	0.69	N/A	0.5	2	Leaching from ore-processing sites; drug factories
NITRATE (ppm)	9/06	NO	0.043	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

VOLATILE ORGANIC CONTAMINANTS							
DICHLOROMETHANE (ppb)	5, 9, 12/06	NO	0.82	ND - .82	0	5	Discharge from pharmaceutical and chemical factories

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR)	AL VIOLATION YES/NO	90TH PERCENTILE RESULT	# OF SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
LEAD AND COPPER RESULTS (These results apply to the entire distribution system)							
COPPER (ppm) (Tap Water)	6/06	NO	0.21	0	1.3	1.3	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
LEAD (ppb) (Tap Water)	6/06	NO	4	1	0	15	Corrosion of household plumbing systems, erosion of natural deposits;

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR)	MCL VIOLATION YES/NO	LEVEL DETECTED	RANGE OF RESULTS	MCLG or MRDLG	MCL or MRDL	LIKELY SOURCE OF CONTAMINATION
Stage 1 Disinfectant / Disinfection By-Product (D/DBP) Contaminants (These results apply to the entire distribution system)							
CHLORAMINES (ppm)	1-12, 2006	NO	3	1.77 - 3.91	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
HALOACETIC ACID (HAA5) (ppb)	1, 4, 9, 11 2006	NO	14.2	ND - 33.5	N/A	MCL =60	By product of drinking water disinfection
TTHM (Total trihalomethanes)(ppb)	1, 4, 9, 11 2006	NO	39.3	2.61 - 90.2	N/A	MCL =80	By product of drinking water disinfection

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR)	MCL VIOLATION YES/NO	HIGHEST MONTHLY PERCENTAGE/ NUMBER	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
Microbiological Contaminants (These results apply to the entire distribution system)						
Total Coliform Bacteria	1-12, 2006	NO	1 %	0	5%	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. For contaminants such as dichloromethane that were sampled more than once in 2006, the "level detected" will be the average of those results.

TEST RESULTS TABLE For James E. Anderson Water Treatment Plant

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR)	MCL VIOLATION YES/NO	LEVEL DETECTED	RANGE OF RESULTS	MCLG	MCL	LIKELY SOURCE OF CONTAMINATION
INORGANIC CONTAMINANTS							
ANTIMONY (ppb)	12/05	NO	0.25	N/A	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
ARSENIC (ppb)	12/05	NO	0.59	N/A	N/A	50	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
BARIUM (ppm)	12/05	NO	0.0024	N/A	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
FLUORIDE (ppm)	12/05	NO	0.89	N/A	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
SELENIUM (ppb)	12/05	NO	1	N/A	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
SODIUM (ppm)	12/05	NO	82	N/A	N/A	160	Salt water intrusion, leaching from soil
NICKEL (ppb)	12/05	NO	0.26	N/A	N/A	100	Polluting from mining and refining operations; natural occurrence in soil
NITRATE (ppm)	9/06	NO	0.043	N/A	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
VOLATILE ORGANIC CONTAMINANTS							
DICHLOROMETHANE (ppb)	1/06, 5/06	NO	0.76	ND - 0.76	0	5	Discharge from pharmaceutical and chemical factories
XYLENES (ppm)	1/06, 5/06	NO	0.00061	N/A	10	10	Discharge from petroleum factories; discharge from chemical factories
RADIOLOGICAL CONTAMINANTS							
Radium 226+228(pCi/L)	3,9,12/05	NO	0.6	0.4 - 0.6	0	5	Erosion of natural deposits

** 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. For contaminants such as dichloromethane that were sampled more than once in 2006, the "level detected" will be the average of those results.

IMPORTANT DEFINITIONS

AL- Action Level: The concentration of a contaminant which, if exceeded, triggers requirements that a water system must follow.

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: 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.

PPB - Parts Per Billion: Approximately one part by weight of analyte to 1 billion parts by weight of the water sample.

PPM - Parts Per Million: Approximately one part by weight of analyte to 1 million parts by weight of the water sample.

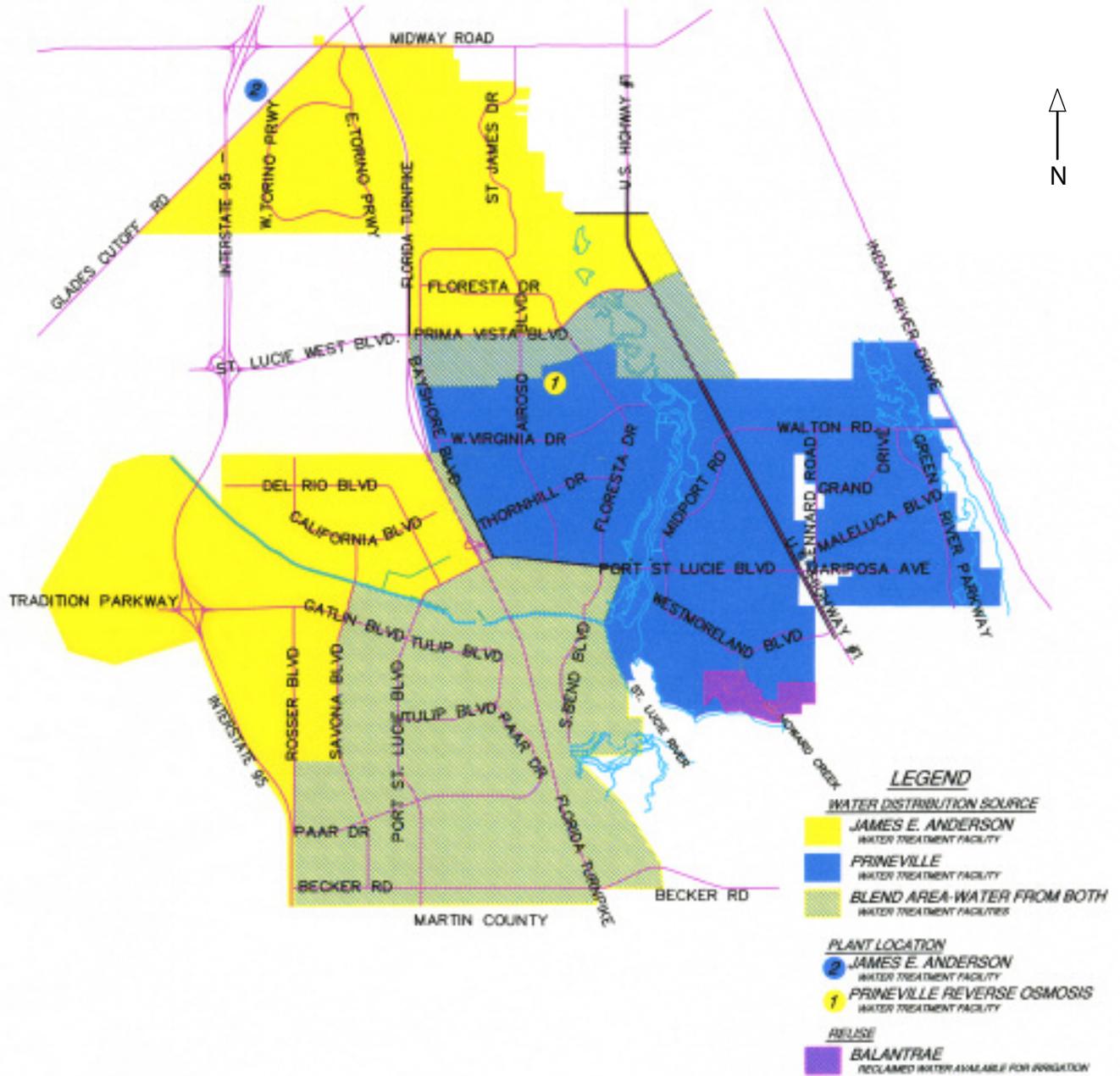
ND - Not Detected: The concentration of the parameter is too low to be detected by EPA approved laboratory method.

pCi/L (Pico Curies per Liter): Measure of the radioactivity in water.

NA: Not applicable, does not apply.



City of Port St. Lucie Utilities System Water Distribution Map



Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1st to December 31st, 2006. Data obtained before January 1st, 2006, and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations. If you have any questions about this report or concerning your water utility, please contact us at (772) 873-6400. We want our valued customers to be informed about their water utility.



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Councilman District 3

Donald B. Cooper
City Manager

Jesus A. Merejo
Utility Systems Director



City of Port St. Lucie
Utility Systems Department
900 S.E. Ogden Ln
Port St. Lucie, Fl. 34983

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