

2011 Annual Drinking Water Quality Report

ORANGE CITY UTILITIES PWSID # 3640946

We're pleased to provide you with this year's Annual Water Quality Report. We want to keep you informed about 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 safe and dependable supply of drinking water. Our water source is groundwater from the Floridan aquifer and is chlorinated for disinfection purposes. It is aerated and orthophosphosphate is added to sequester iron and maintain the distribution system.

In 2011 the Florida 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 14 potential sources of contamination identified for this system with a low to high susceptibility level. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or they can be obtained from Orange City Utilities.

This report shows our water quality results and what they mean.

If you have any concerns about this report or questions concerning your water utility, please feel free to contact Cheryl Bredbenner, Utilities Superintendent at (386)775-5449 from 7:00am to 4:00pm, Monday - Friday. 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 council meetings. They are held on the second and fourth Tuesday of every month at the Orange City Council Chambers, 207 North Holly Avenue.

Orange City Utilities 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, 2011. Data obtained before January 1, 2011, and presented in this report are from the most recent testing done in accordance with the laws, rules, and 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: *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.*

Action Level (AL): *The concentration of a contaminant which, 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.*

ND means not detected and indicates that the substance was not found by laboratory analysis.

Parts per billion (ppb) or Micrograms per liter (µg/l): *one part by weight of analyte to 1 billion parts by weight of the water sample.*

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.*

Water Quality Test Results

Stage 1 Disinfectants and Disinfection By-Products

Disinfectant or Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
79. Chlorine (ppm)	1/2011-12/2011	N	1.1	0.7 - 1.8	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
80. Haloacetic Acids (five) (HAA5) (ppb)	1/2011-12/2011	N	18.2	2.3 - 34.9	NA	MCL = 60	By-product of drinking water disinfection
81. TTHM [Total trihalomethanes] (ppb)	1/2011-12/2011	N	71.9	14.2 - 116.0	NA	MCL = 80	By-product of drinking water disinfection

NON-SECONDARY CONTAMINANTS TABLE

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
Inorganic Contaminants							
12. Barium (ppm)	6/2011	N	.031	.027 - .031	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
17. Fluoride (ppm)	6/20/2011	N	0.11	0.10 – 0.11	4	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 1.3 ppm
21. Nitrate (as Nitrogen) (ppm)	6/2011	N	0.62	0.05 - 0.62	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
24. Sodium (ppm)	6/2011	N	58.2	37.9 - 58.2	N/A	160	Salt water intrusion, leaching from soil
Synthetic Organic Contaminants including Pesticides and Herbicides							
33. Dalapon (ppb)	6/2011	N	0.91	ND - 0.91	200	200	Runoff from herbicide used on rights of way
49. Methoxychlor (ppb)	6/2011	N	0.21	ND - .021	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	AL Exceeded (Y/N)	90th Percentile Result	No. of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead and Copper (Tap Water)							
85. Copper (tap water) (ppm)	8/2011	N	0.28	No sites exceeded the AL	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
86. Lead (tap water) (ppb)	8/2011	N	1.9	No sites exceeded the AL	0	15	Corrosion of household plumbing systems, erosion of natural deposits

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. Orange City Utilities is 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 <http://www.epa.gov/safewater/lead>.

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.

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).

ORANGE CITY UTILITIES CROSS-CONNECTION CONTROL PROGRAM

A CROSS-CONNECTION is a connection between a public water system and any source or system containing another substance. For example, a private well that is piped into an Orange City Utilities customer's home plumbing is a cross-connection. A garden hose left submerged in a bucket or swimming pool is another example.

BACKFLOW OR BACKSIPHONAGE is the reversal of flow of another substance into the customer's home or public water system.

A BACKFLOW EVENT can occur when the pressure in the water main drops. Water pressure drops are not uncommon. It can happen when firefighters use a hydrant to fight a fire or when a repair is performed on a broken water main on a nearby street. Another example is private wells that are cross-connected to the public water supply through the customer's home plumbing. These wells can overpower the public supply pressure and enter the distribution system. This can introduce harmful substances into the public supply and dilute the chlorine residual in the system allowing bacteriological growth to occur.

A BACKFLOW PREVENTER is a mechanism that provides a physical barrier to prevent backflow. There are several types of these devices. The proper device is based on the degree of hazard.

YOU CAN PROTECT YOURSELF from common backflow events by installing inexpensive backflow prevention devices for all threaded faucets around your home. Don't ever use spray attachments without a backflow prevention device. Never submerge hoses in buckets, pools, tubs or sinks.

ORANGE CITY UTILITIES CROSS-CONNECTION CONTROL PROGRAM is responsible for identifying and eliminating cross-connections that pose a threat to the public supply. For more information on this program please call (386)775-5496, 7:00am – 4:00pm, Monday – Friday.