

2008 Annual Drinking Water Quality Report
Orange City Utilities
PWS # 3640946

We're very 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; orthophosphosphate is also added to maintain the lines and the quality of the water, along with aeration.

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

If you have any questions about this report or concerning your water utility, please contact Cheryl Bredbenner, Utilities Superintendent at (386) 775-5449. 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. They are held on the second and fourth Tuesday of every month, at the Orange City Council Chambers, 207 North Holly Ave.

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, 2008. Data obtained before January 1st, 2008 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 that, if exceeded, triggers treatment or other requirements that a water system must follow.

Picocurie per liter (pCi/L): Measure of the radioactivity in water.

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

Maximum residual disinfectant level (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 (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.

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.

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.

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

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 Orange City Utilities, 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 ensuring 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.

Water Quality Testing Results

NON-SECONDARY CONTAMINANTS TABLE

Microbiological Contaminants						
Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Monthly Number	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria	1/08-12/08	Y	2	0	For systems collecting fewer than 40 samples per month: presence of coliform bacteria in 1 sample collected during a month.	Naturally present in the environment

Microbiological Contaminants:

- (1) Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.

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
Radiological Contaminants							
Alpha emitters (pCi/L)	8/08	N	3.4	ND -3.4	0	15	Erosion of natural deposits

Alpha emitters. Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.

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)	8/08	N	0.7	0-0.7	N/A	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	8/08	N	.033	.022 -.033	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	8/08	N	0.11	0.05 -0.11	4	4	Erosion of natural deposits; discharge from fertilizer and aluminum factories water additive which promotes strong teeth when at optimum levels between 0.7 and 1.3ppm.
Nitrate (as Nitrogen) (ppm)	8/08	N	1.0	0.03 -1.0	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	8/08	N	75	10 - 75	N/A	160	Salt water intrusion, leaching from soil

- Arsenic. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
- Barium. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
- Fluoride. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children’s teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
- Nitrate. Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
- Sodium. The Florida Department of Environmental Protection (DEP) has set the drinking water standard for sodium at 160 parts per million (ppm) to protect individuals that are susceptible to sodium-sensitive hypertension or diseases that cause difficulty in regulating body fluid volume. Sodium is monitored so that individuals who have been placed on sodium (salt) restricted diets may take into account the sodium in their drinking water. Drinking water contributes only a small fraction (less than 10 percent) to the overall sodium intake. Sodium levels in drinking water can be increased by ion-exchange softeners at water treatment facilities or certain point-of-use treatment devices. If you have been placed on a sodium restricted diet, please inform your physician that our water contains 75 ppm of sodium.

Stage 1 Disinfectants And Disinfection By-Products							
For the following parameters monitored under Stage 1 D/DBP regulations, the level detected is the annual average of quarterly averages: Bromate, Chloramines, Chlorine, Haloacetic Acids, and/or TTHM (MCL 80ppb). Range of results is the range of results (lowest to highest) at the individual sampling sites.							
Disinfectant or Contaminant	Days of Sampling (mo./yr.)	MCL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chlorine(ppm)	1/08 -12/08	N	1.0	0.3-2.5	MRDLG=4	MRDL=4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	1/08 -12/08	N	14.0	1 – 41.2	N/A	MCL=60	By-product of drinking water disinfection
TTHM (Total trihalomethanes) (ppb)	1/08 -12/08	N	57.7	2.4-140	N/A	MCL=80	By-product of drinking water disinfection
Contaminant and Unit of Measurement	Days of Sampling (mo./yr.)	AL Violation Y/N	90th Percentile Results	No.of sampling sites exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Lead and Copper (Tap Water)							
Copper (tap water) (ppm)	9/08	N	0.42	0 site exceeded the AL	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	9/08	N	3.0	0 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>.

SECONDARY CONTAMINANTS TABLE

Contaminant and Unit of Measurement	Dates of sampling (mo./yr.)	MCL Violation Y/N	Highest Result	Range of Results	MCLG	MCL	Likely Source of Contamination
Secondary Contaminants							
Iron (ppm)	8/08-12/08	Y	0.36	0.02-0.36		0.3	Natural occurrence from soil leaching
Odor (threshold odor number)	8/08-12/08	Y	17	1.0-17		3	Naturally occurring organics

We now sample for iron on a quarterly basis. This subsequent sampling for iron has revealed no MCL violations.

The threshold odor number is the greatest dilution of a sample with odor free water that still yields a detectable odor. Orange City Utilities provides aeration to destroy odor causing compounds.

Secondary contaminants are associated with the aesthetic qualities of water. An exceedance of the MCL for a secondary contaminant is a nuisance and does not pose a health concern.

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. The **Source Water Assessment and Protection Program** or SWAPP was created in order to protect our vital resources. SWAPP is meant to ensure that your drinking water is safe, not just at the tap, but at its source. In 2008 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 12 potential sources of contamination identified for this system with a Low-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 at 386-775-5449.

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.

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply, we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

