

Your Water

ORANGE CITY UTILITIES

PWS# 3640946

Water Quality Report 2019

Orange City Utilities (OCU) is a leader in natural resource protection. The City is proud of its treasured natural resources, such as Blue Spring, and is striving to protect them throughout comprehensive management of water resources while ensuring public health. The City completed the water quality improvements projects, which included the installation of new water mains, valves and fire hydrants, a new potable water well, rehabilitation of old water mains and improvements to the water treatment plant. After the initial fine tuning of the new chlorination system at the water plants, the staff is experiencing the full benefit of all water quality improvements completed in 2019. The City's water quality has improved allowing the city to reduce disinfectant levels, which has led to a reduction of the Trihalomethanes (TTHM) in the last three quarters. We are expecting to continue this parameter residual improvement for next compliance sampling. OCU provides this Annual Water Quality Report to our customers so you may understand the concerted and rigorous efforts that are made to continually maintain and improve the water-treatment process and preserve Orange City's precious water resources.

OCU's water system provides safe, clean, drinking water to an approximate population of 11,850 who use a system-wide daily average of approximately 1.60 million gallons per day. Making every drop safe is our top priority. OCU's water is tested continuously at our water treatment plants and throughout the distribution system. Water straight from the faucet continues to be safe, and the use of home filtration systems remains a matter of preference.

Orange City Utilities is very pleased to provide you with this year's Annual Water Quality Report. We strive 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 OCU customers a safe and dependable supply of drinking water. OCU treats groundwater pumped from the Floridan Aquifer. Our treatment process consists of aeration and disinfection using sodium hypochlorite.

This report depicts our water quality results. 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, 2019. Data obtained before January 1st, 2019 and presented in this report are from the most recent testing done in accordance with the laws, rules, and regulations.

OCU is a municipally-owned utility, governed by the Orange City Council. The Orange City Council meets at City Hall, 201 N Holly Ave, Orange City, Fla., on the second and fourth Tuesday of every month. Additional information is available at www.OurOrangeCity.com, or contact: Orange City Water Plant, 386-775-5442. Your tap water is tested for bacteria and other pollutants of concerns every year. This report shows our water quality results and what they mean.

S p e c i a l H e a l t h C o n s i d e r a t i o n s

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).

Table Terms and Abbreviations

- Non-Applicable (NA): Does not apply
- Non Detect (ND): Means not detected and indicates the substance was not found by laboratory analysis
- 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 ($\mu\text{g/l}$): one part by weight of analyte to 1 billion parts by weight of the water sample
- Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow
- Locational Running Annual Average (LRAA): the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters
- Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.
 - 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.
- 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 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 contaminant.
- Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

During the past year one (1) Level 2 Assessment was required to be completed for our water system due to a second Level 1 TT trigger within a rolling 12-month period which was caused by a total coliform positive repeat sample. The Level 2 assessment was completed in August 2019. No corrective action was required but we have increased flushing at dead ends and low usage areas and installed an auto-flusher in one of the low flow areas.

Total Coliform Bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne, pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

Microbiological Contaminants						
Contaminant and Unit of Measurement	Dates of sampling (mo/yr)	TT Violation	Result	MCLG	TT	Likely Source of Contamination
Total Coliform Bacteria	8/2019	Yes	Positive	N/A	TT	Naturally present in the environment

The following table shows the results of the monitoring period from January 1 to December 31, 2019. The State of Florida allows for the monitoring of some contaminants less than once a year because the concentration of some of these contaminants does not change frequently. Therefore, some of the provided data, though representative, is more than a year old.

Inorganic Contaminants							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCGL	MCL	Likely Source of Contamination
Barium (ppm)	11/2017	N	.0148	.0123 - .0148	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Nitrate (as Nitrogen) (ppm)	03/2019	N	0.46	0.30 – 0.46	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	11/2017	N	62.2	13.7 – 62.2	NA	160	Salt water intrusion, leaching from soil
Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Dates of Sampling (mo/yr)	AL Exceeded Y/N	90 th Percentile Result	No. of Sampling Sites Exceeding the AL	MCLG	AL (Action Level)	Likely Source of Contamination
Copper (tap water) (ppm)	09/2017	N	0.56	2	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead (tap water) (ppb)	09/2017	N	2.4	2	0	15	Corrosion of household plumbing systems, erosion of natural deposits
Stage 2 Disinfectant/Disinfection By-Product							
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
Chlorine (ppm)	1/2019 – 12/2019	N	.63	0.20 - 1.60	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes
Haloacetic Acids (five) (HAA5) (ppb)	1/2019 – 12/2019	N	30.23	12.13 – 30.23	NA	60	By-product of drinking water disinfection
TTHM (Total Trihalomethanes) (ppb)	1/2019 – 12/2019	Y	114.45 (highest LRAA site OCU 33)	37.19 - 114.45	NA	80	By-product of drinking water disinfection

During 2019 Orange city had (8) Trihalomethanes (TTHM) results that exceeded the MCL of 80 ppb. The results were (109.92) (105.92) (93.98) (84.77) (114.45) (81.73) (80.89) (81.41) respectively. The system incurred an MCL violation, because location OCU-31 at 247 Minnesota Ave and OCU-33 at 1038 W. French Ave second third and fourth quarter Locational Running Annual Average (LRAA) exceeded the MCL of 80 ppb. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or nervous systems, and may have an increased risk of getting cancer.

TTHM Monitoring Results (ppb)	1st Quarter 2019	2 nd Quarter 2019	3 rd Quarter 2019	4 th Quarter 2019
OCU 31 – 247 Minnesota Ave Quarterly Results	73.78	109.92	65.60	78.32
OCU 31 – 247 Minnesota Ave – LRAA*	73.32	80.7	80.5	81.91
OCU 32 – 920 Crittenden Ave Quarterly Results	62.18	105.92	57.23	93.98
OCU 32 – 920 Crittenden Ave – LRAA*	68.25	77.3	74.9	79.83
OCU 33 – 1038 W. French Ave Quarterly Results	84.77	114.45	81.73	70.42
OCU 33 – 1038 W. French Ave – LRAA*	76.37	85.8	86.8	87.84
OCU 34 – 1221 Integra Landing Quarterly Results	80.89	81.41	75.57	37.19
OCU 34 – 1221 Integra Landing – LRAA*	58.06	63.1	71.9	68.77

*Reported LRAA for Quarters 1 – 3 are based on results from previous quarters not reported on this table.

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 (EPA) Safe Drinking Water Hotline at 1-800-426-4791.

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 storm water 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 storm water 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 storm water 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.

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>

Source Water Assessment

The Florida Department of Environmental Protection (DEP) under the Federal Safe Drinking Water Act has created the Source Water Assessment and Protection Program. The program is designed to ensure the safety of drinking water at the source. Contamination of ground water can occur from contaminants such as hazardous chemicals, storm water runoff, waste disposal sites and underground storage tanks. In 2019 the Department of Environmental Protection updated the Source Water Assessment on our system. The assessment was updated to provide information about any potential sources of contamination in the vicinity of our wells. There are eleven (11) potential sources of contamination identified for this system with low susceptibility levels. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at <https://fldep.dep.state.fl.us/swapp/> or they can be obtained from Orange City Utilities at 426 S Volusia Ave, Orange City, 32763.

For Additional information contact: Orange City Water Plant, Office 386-775-5442

Service and Billing Questions: (386) 775-5444 or After Hours Contact: (386) 736-5999