

ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2019

Presented By
City of Tavares Utilities

City Council Meetings

The Tavares City Council meets the first and third Wednesdays of each month at 4:00 p.m. Agendas may contain items pertaining to water quality, water treatment, and other water-related topics. You are invited to participate in this public forum and to voice your concerns about your drinking water. Agendas can be obtained from the City Clerks office at 201 E. Main St., by calling (352) 253-4546, or by visiting www.Tavares.org.

Message from the Mayor

On behalf of the City Council, we at the City of Tavares want you to know we take great pride in delivering high-quality drinking water to our customers. Special thanks to our dedicated employees in the Utilities Department, water treatment is a complex, time-consuming process. So, the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Sincerely,
Amanda Boggus, Mayor

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 we 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.

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>.

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2019. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education, while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

Source Water Description

Our system begins with a dependable groundwater source drawn from the Florida Aquifer. The system is pumped from a source of six wells, ranging from 223 feet to 850 feet. These wells are located at four water plant facilities throughout the city. The two main finished water distribution facilities are equipped with aerators to remove hydrogen sulfide, a natural occurring compound normally found in Florida aquifers. The system has a storage capacity of 2.5 million gallons, with combined wells pumping capacity of approximately 10,000 gallons per minute. The system is treated with chlorine and fluoride to ensure quality residuals are maintained throughout the distribution system to meet regulatory compliance. The distribution system consists of approximately 132+ miles of piping, hydrants, and approximately 10,000 meters connections, which include potable, irrigation, and re-claimed water.

QUESTIONS?

We encourage you to share your thoughts with us on the information contained in this report. Should you have any questions related to the drinking water provided to by the City of Tavares, please contact Christopher Abbott, Tavares Utility/Water Department Supervisor, at (352) 742-6222, or email at cabbott@tavares.org or tbinkley@tavares.org.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides—they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

We remain vigilant in delivering the best-quality drinking water

Source Water Assessment

In 2019, the Department of Environmental Protection performed a Source Water Assessment on the Tavares water system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are seven potential sources of contamination identified for this system, with six low and one high susceptibility levels. The latest 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 the City of Tavares Water Department by calling (352) 742-6222.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tank, which allows for oxidation of the high iron levels and the removal of hydrogen sulfide that are present in the raw groundwater. Chlorine is then added for disinfection.

Chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, fluoride (used to prevent tooth decay) and a corrosion inhibitor (used to protect distribution system pipes) are added before the water is pumped to sanitized, underground reservoirs, water towers, and into your home or business.

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 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 agriculture, urban storm-water 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 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.

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.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. And, the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The State recommends monitoring 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.

The City of Tavares Water Department has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards have been established for UCs. However, we are required to publish analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA's Unregulated Contaminant Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791, or go to <http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/ucmr4/index.cfm>.

RADIOACTIVE CONTAMINANTS

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
Alpha Emitters (pCi/L)	12/05/2017	No	3.22	ND-3.22	0	15	Erosion of natural deposits

PRIMARY REGULATED CONTAMINANTS

Inorganic Contaminants

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
Barium (ppm)	12/05/2017	No	0.016	ND-0.016	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	01/01/19-12/31/19	No	0.67	0.38-0.76	4	4.0	Erosion of natural deposits; discharge from fertilizer and aluminum factories; water additive, which promotes strong teeth when at the optimum level of 0.7 ppm
Lead [point of entry] (ppb)	08/2017	No	2.8	ND-15	NA	15	Residue from man-made pollution such as auto emissions and paint; lead pipe, casing, and solder
Nickel (ppb)	12/05/17	No	2.5	ND-2.8	NA	100	Pollution from mining and refining operations; natural occurrence in soil
Sodium (ppm)	12/05/2017	No	7.1	ND-7.1	NA	160	Salt-water intrusion; leaching from soil

STAGE 1 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	MCL VIOLATION (YES/NO)	LEVEL DETECTED	RANGE OF RESULTS	MRDLG	MRDL	LIKELY SOURCE OF CONTAMINATION
Chlorine (ppm)	01/01/2019-12/31/2019	No	0.8	0.6-1.0	4	4.0	Water additive used to control microbes

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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 analytical results for samples taken at a particular monitoring location during the previous four calendar quarters.

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.

NA: Not applicable.

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

pCi/L (picocuries per liter): A measure of radioactivity.

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).

STAGE 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

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
Haloacetic Acids (five) [HAA5] (ppb)	01/23/2019	No	15.9	8.0–15.9	NA	60	By-product of drinking water disinfection
TTHM [Total trihalomethanes] (ppb)	01/23/2019	No	26.2	18.8–26.2	NA	80	By-product of drinking water disinfection

Lead and Copper (Tap water samples were collected from sites throughout the community)

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	AL EXCEEDANCE (YES/NO)	90TH PERCENTILE RESULT	NO. OF SAMPLING SITES EXCEEDING THE AL	MCLG	AL (ACTION LEVEL)	LIKELY SOURCE OF CONTAMINATION
Copper [tap water] (ppm)	08/2017	No	0.25	0	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead [tap water] (ppb)	08/2017	No	1.7	0	0	15	Corrosion of household plumbing systems, erosion of natural deposits

UNREGULATED CONTAMINANTS

CONTAMINANT AND UNIT OF MEASUREMENT	DATES OF SAMPLING (MO./YR.)	AVERAGE RESULT	RANGE OF RESULTS
Bromide (ppb)	10/02/2019	37.27	35.5–38.9
Bromochloroacetic Acid (ppb)	10/02/2019	2.1	NA
Bromodichloroacetic Acid (ppb)	10/02/2019	1.4	NA
Chlorodibromoacetic Acid (ppb)	10/02/2019	0.74	NA
Dibromoacetic Acid (ppb)	10/02/2019	0.94	NA
Dichloroacetic Acid (ppb)	10/02/2019	3.0	NA
HAA5 (ppb)	10/07/2019	5.73	4.59–6.54
HAA6Br (ppb)	10/02/2019	5.23	4.90–5.62
HAA9 (ppb)	10/02/2019	10.1	8.80–10.78
Manganese (ppb)	10/02/2019	1.265	0.70–1.9
Total Organic Carbon [TOC] (ppb)	10/02/2019	1690	1440–2020
Trichloroacetic Acid (ppb)	10/02/2019	2.6	NA

About Our Violations

We failed to complete the required sampling for Nitrate/Nitrite on time and therefore were in violation of monitoring and reporting requirements. Because we did not take the required number of samples, we did not know whether the contaminants were present in your drinking water; possible adverse health effects are unknown. The monitoring period was 01/01/19 through 12/31/19. Nitrate/nitrite samples were taken on 2/13/2020. The results were well below the MCL.

Due to an error in sample reporting for the August bacteriological samples, the City of Tavares was delayed in providing acceptable sample reports to Florida Department Environmental of Protection, which resulted in a reporting violation. All bacteriological samples for the month of August were taken on schedule and were found to be satisfactory by laboratory analysis. This violation has no impact on the quality of the water our customers received, and it posed no risk to public health.