

City of Tallahassee
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CITY OF TALLAHASSEE

2019 Water Quality Report





We are pleased
to present this year's
Water Quality Report
for the City of Tallahassee.



A Message About Tallahassee's Water Quality Report

The Underground Utilities & Public Infrastructure (UU&PI) team is pleased to provide you with this year's Water Quality Report. This report is the City of Tallahassee's opportunity to share with you our commitment to delivering safe, dependable, high-quality, water every day. Providing drinking water is serious business, and the City, our team of scientists, engineers, inspectors and water experts embrace the challenge of delivering safe, sustainable and affordable water services to the nearly 180,000 residents in our community.

Our 2019 Water Quality Report describes the quality of the City's drinking water for the period between January 1 and December 31, 2018. Test results for the City's water consistently show that regulated components of drinking water are either not detected or are present in amounts well below limits permitted by the Florida Department of Environmental Protection, the U.S. Environmental Protection Agency and the Florida Department of Health.

We are fortunate in the northwest region of Florida to have an abundant supply of high-quality drinking water flowing beneath us in the Floridan aquifer. To sustain and protect this vital resource, staff work around the clock to provide our community with service they can depend on. We have developed many programs, some of which are described below, to protect the aquifer; operate, maintain and improve the water distribution system; and keep pace with the growth of Tallahassee.

The City's Aquifer Protection Program tracks and inspects commercial facilities to ensure that best management practices and protocols are followed to protect the aquifer from potential pollutants. A focus of our Capital Improvement Program is to replace aging infrastructure and design projects that meet the current and future needs of our community. Our Think About Personal Pollution (TAPP) program participates in public education and outreach events to provide easy tips for residents to do their part to protect our water and environment. Finally, the City's Water

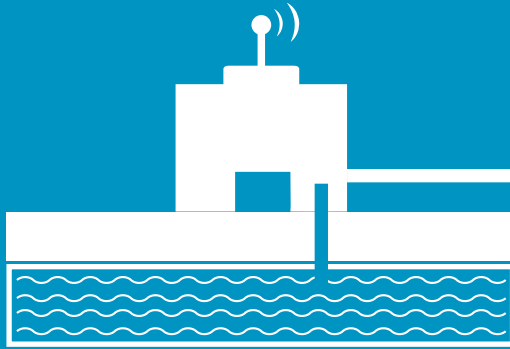
Operations Team monitors all components of our distribution system from the source to the faucet. Please read page 4 of this report to see how staff work 24/7 to deliver high-quality, great-tasting water to our customers every day.

Maintaining a safe, clean and dependable water supply is a team effort.

Underground Utilities & Public Infrastructure Team
City of Tallahassee

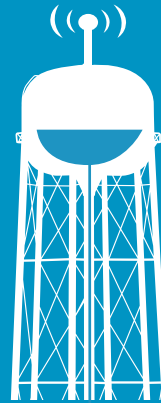


Tallahassee's Water Cycle



1. Well House

Water is pumped from the Floridan aquifer at one of 27 water well / treatment plants throughout the City. Once treated, it flows directly into the water distribution system for delivery to customers. These wells and treatment plants are operated and maintained by Florida DEP Licensed Water Treatment Plant Operators.

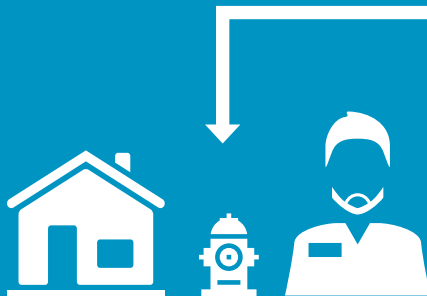
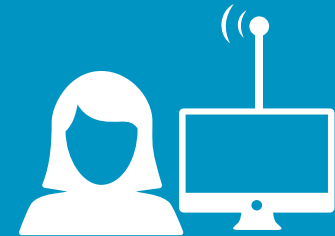


2. Elevated Water Tank

Eight elevated water storage tanks provide adequate water volume to meet peak customer demands and fire protection. The height of water in the tanks controls the water system pressure in the distribution system. Also, the City leases space on top of the water tanks to cellular telephone networks for mounting network antennas. These leases help improve cell phone signals in our city without new antenna tower construction.

3. Monitoring Supply & Distribution

Licensed City staff also provide constant (24/7) monitoring of the water supply and distribution system. This is possible through the use of a Supervisory Control and Data Acquisition (SCADA) system that provides continuous data to monitor and control the water supply wells and elevated storage tanks. In an emergency, wells and tanks can be shut down and isolated from the water distribution system within seconds of discovering a problem.



4. Collecting Water Samples

Licensed water distribution system operators routinely collect water samples from various locations throughout the City. These samples are then analyzed in our laboratory to ensure the drinking water is safe for consumption.



5. Analyzing Water Samples

The City operates a laboratory for analyzing water samples to ensure the water we provide our customers meets all EPA drinking water standards. The laboratory is certified by the Florida Department of Health and National Environmental Laboratory Accreditation Program.



6. Maintaining Infrastructure

The City employs licensed utility technicians that perform routine maintenance and emergency repairs to the water distribution system. New construction is supervised by City construction inspectors to ensure both state and local construction regulations are followed.

Tallahassee's Drinking Water: Source and Treatment

For more than 100 years, the City of Tallahassee has provided our community with clean, reliable and safe drinking water.

Where does our water come from?

Tallahassee sits on top of one of the largest and most abundant sources of groundwater in the world – the Floridan aquifer. The Floridan aquifer underlies all of Florida, as well as parts of Alabama, Georgia and South Carolina, covering an area of nearly 100,000 square miles. The Floridan aquifer system provides water for several large cities, including Savannah and Brunswick in Georgia, and Jacksonville, Tallahassee, Orlando and St. Petersburg in Florida. Currently, the City of Tallahassee operates 27 deep wells drilled directly into the Floridan aquifer.

Because of the excellent quality of the Floridan aquifer water, only limited treatment is required. All water well sources are treated with chlorine for disinfection purposes and fluoride for dental health purposes. During 2018, two of the 27 wells were out of service or offline for the entire year. Six wells provide carbon filtration to remove certain chemicals found in the aquifer in those locations, and one well (offline for 2018) provides Greensand filtration as additional treatment.

Lead and Drinking Water

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. The City of Tallahassee 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 the 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 & Protection

In 2018, 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 forty-eight (48) potential sources of contamination with low to high susceptibility levels. 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 by contacting the City's Water Quality Division at (850) 891-1235.

Summary of Non-Compliance

Due to an administrative oversight last year, the City of Tallahassee missed the deadline to submit the 2017 data to one of our buyer water systems by the due date of April 1, 2018. This violation was corrected as soon as it was discovered and had no impact on the quality of the water our customers received and posed no risk to public health. We have established a report tracking file to ensure that all reporting requirements are met in the future.

In the Future

In our continuing efforts to maintain a safe and dependable water supply, it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary to address these improvements. Thank you for understanding.



Tallahassee's Drinking Water: Monitoring & Quality

According to federal and state laws, rules and regulations, the City of Tallahassee routinely monitors for over 80 contaminants in our drinking water.

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.

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 (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.

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/Center for Disease Control (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 at (800) 426-4791.

Test Results: Understanding Our Water Quality Data Table

In the tables below, you may find unfamiliar terms and abbreviations. To help you better understand these terms, please refer to the definitions below:

- **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 the 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”** refers to "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.
- **Picocurie per liter (pCi/L):** Measure of the radioactivity in water.

LEAD AND COPPER (TAP WATER)

Contaminant and Unit of Measurement	Dates of Sampling (MM/YY)	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)	06/17-09/17	N	0.506	0 out of 50	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (tap water) (ppb)	06/17-09/17	N	2.1	0 out of 50	0	15	Corrosion of household plumbing systems; erosion of natural deposits



VOLATILE ORGANIC CONTAMINANTS

Contaminant and Unit of Measurement	Dates of Sampling (MM/YY)	MCL Violation (Y/N)	Level Detected	Range of Results	Max Contaminant Level Goal (MCLG)	Max Contaminant Level (MCL)	Likely Source of Contamination
Tetrachloroethylene (ppb)	01/17-12/18	N	0.87	ND-1.0	0	3	Discharge from factories and dry cleaners

MICROBIOLOGICAL

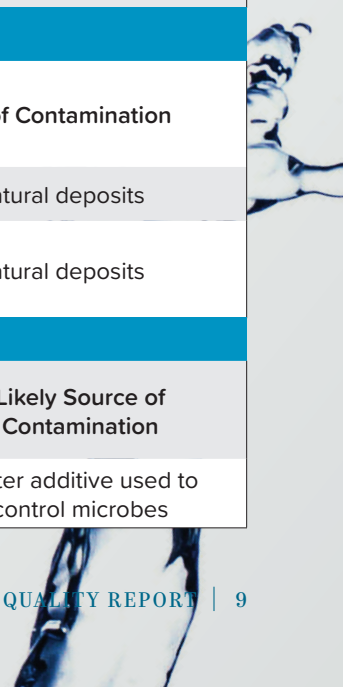
Contaminant	Dates of Sampling (MM/YY)	Violation (Y/N)	Total Number of Positive Samples for the Year	Max Contaminant Level Goal (MCLG)	Max Contaminant Level (MCL)	Likely Source of Contamination
E. coli	07/18	N	1	0	Routine and repeat samples are total coliform positive and either is E. coli positive or system fails to take repeat samples following E. coli positive routine sample or system fails to analyze total coliform positive repeat sample for E. coli	Human and animal fecal waste

RADIOACTIVE CONTAMINANTS

Contaminant and Unit of Measurement	Dates of Sampling (MM/YY)	MCL Violation (Y/N)	Level Detected	Range of Results	MCLG	Max Contaminant Level (MCL)	Likely Source of Contamination
Alpha emitters (pCi/L)	01/14-09/17	N	6.6	ND-6.6	0	15	Erosion of natural deposits
Radium 226 + 228 or combined radium (pCi/L)	01/14-09/17	N	2.1	ND-2.1	0	5	Erosion of natural deposits

STAGE 1 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling (MM/YY)	MCL or MRDL Violation Y/N	Level Detected	Range of Results	MCLG or MRDLG	MCL or MRDL	Likely Source of Contamination
Chlorine (ppm)	01/18-12/18	N	0.82	0.77-0.85	MRDLG = 4.0	MRDL = 4.0	Water additive used to control microbes



STAGE 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS

Contaminant and Unit of Measurement	Dates of sampling (MM/YY)	MCL Violation (Y/N)	Level Detected (average)	Range of Results	MCLG	MCL	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	01/18-12/18	N	24.04	ND-27.64	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	01/18-12/18	N	23.68	ND-26.08	N/A	80	By-product of drinking water disinfection

INORGANIC CONTAMINANTS

Contaminant and Unit of Measurement	Dates of Sampling (MM/YY)	MCL Violation (Y/N)	Highest Level Detected	Range of Results	Max Contaminant Level Goal (MCLG)	Max Contaminant Level (MCL)	Likely Source of Contamination
Barium (ppm)	01/17-09/17	N	0.017	0.005-0.017	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Cadmium (ppb)	01/17-09/17	N	0.2	ND-0.2	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints.
Chromium (ppb)	01/17-09/17	N	2.0	ND-2.0	100	100	Discharge from steel and pulp mills; erosion of natural deposits
Fluoride (ppm)	01/17-09/17	N	0.87	0.17-0.87	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
Nitrate (as Nitrogen) (ppm)	03/18	N	0.61	0.07-0.61	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	01/17-09/17	N	4.25	1.66-4.25	N/A	160	Salt water intrusion, leaching from soil

The contaminants listed in the tables above are the only contaminants detected in our drinking water. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2018. Data obtained before January 1, 2018, and presented in this report are from the most recent testing done in accordance with the laws, rules and regulations.

The City of Tallahassee is participating in a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence of unregulated contaminants (UC) in drinking water and whether these contaminants need to be regulated. We are monitoring during two six-month periods, (the first six-month period was sampled in December 2018, and the second six-month period will be sampled in June 2019). We are required to publish the analytical results of our UC monitoring in our annual water quality report. All detects are shown on the table below, including two regulated contaminants (manganese and HAA5).

UNREGULATED CONTAMINANTS				
Contaminant and Unit of Measurement	Dates of Sampling (MM/YY)	Level Detected (average)	Range of Results	Likely Source of Contamination
Manganese (ppb)	12/18	0.04	ND-0.27	Natural occurrence from soil leaching
HAA5 (ppb)	12/18	1.00	0.3-1.7	By-product of drinking water disinfection
HAA6Br (ppb)	12/18	1.68	1.3-2.0	Unavailable
HAA9 (ppb)	12/18	2.49	1.7-3.3	Unavailable
Bromide (ppb)	12/18	28.38	20.0-41.2	Unavailable

As we have not completed the second sample period yet, those results will be in our 2020 Water Quality Report. If you would like a copy of those results, please contact Catherine.Bray@Talgov.com or (850) 891-1235 to receive a copy when they become available. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

Please **DO NOT FLUSH** your unused/unwanted medications down toilets or sink drains. More information is available at <http://www.dep.state.fl.us/waste/categories/medications/pages/disposal.htm>.

City of Tallahassee

Your Own UtilitiesSM

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Tallahassee, FL 32305

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We encourage our valued customers to be informed about their water utility.

If you have any questions about this report or concerning your water utility, please contact (850) 891-1235 or *Catherine.Bray@Talgov.com*. If you want to learn more, please attend any of our regularly scheduled City Commission meetings.

Call (850) 891-8181 for the schedule of Commission meeting dates and times.

For answers to Frequently Asked Questions about your drinking water, visit <http://www.Talgov.com/you/water-quality-report.aspx>.