City of Tallahassee
Your Own Utilities℠

2018 Water Quality Report

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

This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want 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.

CITY OF TALLAHASSEE

Water

Leonardo da Vinci said, *"Water is the driving force of all nature."* One of Earth's most precious resources, water is a fundamental building block for life on our planet. Even though 70 percent of the earth is water, only 2.5 percent of that is fresh water, and 884 million people in the world lack access to safe water supplies.

Maintaining a safe, dependable water supply is a challenge that the City of Tallahassee takes very seriously. Our team of engineers, water treatment plant operators, chemists, microbiologists, and technicians works throughout the day and night to ensure that our water supply is protected and that pure, clean drinking water is delivered safely and efficiently to our customers.

A Message from the Interim General Manager

I am pleased to present to you the annual Water Quality Report, an informational tool that will provide you with insight into the City of Tallahassee's drinking water. The following pages include detailed information about the quality of the water delivered to our customers between January 1 and December 31, 2017, a time period during which we met or surpassed all state and federal regulatory requirements.

Our number one goal is to provide you and your family with a safe and dependable supply of drinking water. Our highly skilled and dedicated team strives every day in many ways to ensure that the City's precious water resources are protected and to deliver to every faucet the purest, safest, and best-tasting water.

This team also strives to ensure that the City's water distribution system is continually evaluated and updated by our engineers and technicians to ensure adequate capacity and reliability to meet our peak demand. System dependability was proven during the busy 2017 hurricane season, when our water system continued to function despite widespread damage in the community; our customers were never without water.

Highlighted throughout this report are profiles of several of the City's water quality programs. Each plays a specific role in maintaining the quality of the water – from its natural place within the aquifer, into the wells and distribution system, through the meters, and right to your tap.

The City of Tallahassee delivers an average of 27 million gallons of water to more than 195,000 people every day. Our team is committed to this community and is proud to work around the clock to provide best-in-class services. This dedication has resulted in the City of Tallahassee being the only water system in Florida to be recognized by the Florida Section of the American Water Works Association as having the Best Tasting Water in the state three times. We look forward to continuing to deliver superior drinking water and superior customer service today and into the future.

Thank you for reviewing this important document.

Sincerely,

Jennifer Porter
Interim General Manager
Underground Utilities and Public Infrastructure, City of Tallahassee

"The City of Tallahassee delivers an average of 27 million gallons of water to more than 195,000 people every day."

Tallahassee's Water: 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. Here's a look at how it works.

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 27 water well sources are treated with chlorine for disinfection purposes and fluoride for dental health purposes. Six wells provide carbon filtration and one well provides Greensand filtration as an additional treatment.

Water Well Operators

Our team of seven licensed water treatment plant operators and one trainee visits all 27 water wells and eight tanks at least once a day, as required by the rules of the Florida Department of Environmental Protection. Each week, we collect bacteriological samples to ensure that the water we send out to customers is free of bacteria. In addition, we collect monthly fluoride samples to confirm concentrations. In order to provide the high quality service that our customers expect and deserve, there are always two operators who can respond to problems at any site at a moment's notice, any time of the day or night.

Source Water Protection

In 2017, 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-seven (47) 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 dep.state.fl.us/swapp, or they can be obtained by contacting the Water Quality Division at 850-891-1220.

Aquifer Protection Program

Every drop of the City's drinking water comes from the aquifer, so protecting this valuable source is essential to the quality and reliability of our community's drinking water. Private wells and sinkholes are just a couple of ways contaminants can directly enter the aquifer. Household products such as paints, solvents, cleaners, grease and oil, and pesticides and fertilizers are just a few items that can contaminate the water supply, if not properly disposed. City staff are dedicated to protecting our water source by proactively reviewing and inspecting new construction and (re)development projects, inspecting commercial and industrial facilities for proper handling and disposal of waste items, and educating citizens about the risk of improper waste disposal.

Tallahassee's Water: Drinking Water Monitoring and Quality

The City of Tallahassee routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations.

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 1-800-426-4791.

Tallahassee residents can rest assured that our water meets or exceeds all guidelines set forth by the Florida Department of Environmental Protection, the U.S. Environmental Protection Agency, and the Florida Department of Health.

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 (800-426-4791).

Water Quality Samplers

Every day, our water quality technicians collect samples throughout the city to ensure that the water in our distribution system is clean and pure. They also respond to your water quality questions and requests for information by making "house calls" – visiting businesses and residences to assess water taste, color, odor concerns and collecting samples to confirm the safety and purity of the 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.

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 to your home or business, 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***.

Water Test Results

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.
- **Picocurie per liter (pCi/L):** measure of the radioactivity in water.

Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2017. Data obtained before January 1, 2017, and presented in this report is from the most recent testing done in accordance with the laws, rules, and regulations.

LEAD AND COPPER (TAP WATER)

Contaminant and Unit of Measurement	Dates of Sampling (MM/YY)	AL Exceeded Y/N	90th 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 (mo/yr)	MCL Violation Y/N	Level Detected	Range of Results	MCLG	MCL	Likely Source of Contamination
Tetrachloroethylene (ppb)	01/17-9/17	N	0.85	ND-0.94	0	3	Discharge from factories and dry cleaners

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	3.4	ND-3.4	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)	01/17-12/17	N	0.87	0.79-0.91	MRDLG = 4	MRDL = 4.0	Water additive used to control microbes

STAGE 2 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
Haloacetic Acids (HAA5) (ppb)	01/17-12/17	N	23.6	ND-31.78	N/A	60	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	01/17-12/17	N	29.9	0.0529-38.19	N/A	80	By-product of drinking water disinfection

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**
Barium (ppm)	01/17-9/17	N	0.017	0.005-0.017	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
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	0.2-0.87	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)	01/17-09/17	N	0.68	0.212-0.68	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	01/17-09/17	N	6.54	1.66-6.54	N/A	160	Salt water intrusion, leaching from soil

Water Quality Laboratory

The City of Tallahassee Water Quality Laboratory is a nationally-accredited environmental laboratory that supports the compliance and operational sampling requirements for the drinking water system. Every year, the laboratory analyzes over 16,000 samples, testing against 105,000 analytes. The major focus of the lab is to evaluate water and environmental samples for a variety of nutrients and biological, organic, and inorganic constituents. The fundamental mission of the laboratory is to make sure that the drinking water provided to our customers' homes and businesses meets all state and federal regulations.

Where Water Reaches the Customer

To get to your house or business, water flows through the City's distribution system to your meter, where it then enters your water service line and household plumbing. For a single-family home, the meter is located near the front curb in the center or at the corner of the property line. The customer valve is located in the meter box directly behind the meter, on the side closest to the house, and the service line is the length of water pipe that extends from the back of the customer valve to the home. The service line is considered to be the beginning of the household plumbing, and maintenance and repair of pipes, fitting, or fixtures beyond the customer valve must be done by the customer.

Cross Connection Control

A cross-connection is any connection (direct or indirect) between the public water system and a source of contamination. The purpose of the City's Cross-Connection Control Program is to protect the public potable water supply system from the possibility of contamination or pollution by isolating potential hazards through the use of approved backflow prevention methods; to promote the elimination or control of existing cross-connections, actual or potential, with a customer's water system, non-potable water system, plumbing fixtures, and industrial piping systems; and to provide for a continuing program of cross-connection control that will prevent the contamination or pollution of the public potable water supply system.

Frequently Asked Questions

Why are there bubbles in my water?

Bubbles, grey-colored water, sputtering faucets, irregular water flow, and vibrating pipes may indicate that there is air in your water lines. When our crews repair broken water mains, they flush the entire system to ensure that air is removed from the pipes. If air remains in your household plumbing, you can perform the same type of flushing to allow the air to escape. Move through your house and turn on every spigot and faucet, beginning with the faucet nearest your service line and working toward the farthest faucet. Flush all toilets, and run the clothes washer and dishwasher through rinse cycles. Let the water flow for 15 minutes, or until sputtering has stopped. Turn off the water starting at the last one you opened and working toward the first one you opened.

Why does my water smell like chlorine?

To eliminate the pathogens that are responsible for waterborne diseases, utilities are required to provide a method of disinfection. The City of Tallahassee uses chlorine, which has been used in the United States since 1908 and is the most widely used method for disinfecting water supplies in the U.S. In order to be effective, the disinfectant must be present in all water found in the pipes that carry the water throughout the community; the chlorine concentration throughout the City is in line with state and federal requirements, which provide an upper limit for the amount of chlorine that can be measured in the system.

Why are there white flakes in my drinking water?

City of Tallahassee water is from the Floridan Aquifer, a body of underground limestone rock in which minerals such as calcium and magnesium are prevalent. The white flakes are most likely caused by deposits of these minerals, which can build up in household plumbing pipes and fixtures and then break off due to the motion of the water. You can reduce the amount of white flakes in your water by flushing your water heater and periodically cleaning the aerators on your faucets.

Why does my water smell like rotten eggs?

A rotten egg smell is usually caused by the presence of hydrogen sulfide gas. In household plumbing, the water heater can produce hydrogen sulfide gas in two ways:

- The warm environment provides a great place for sulfate-reducing bacteria to live.
- The magnesium anode, which is put inside a water heater to prevent corrosion, assists the reaction that produces hydrogen sulfide gas.

Though unpleasant, sulfur, sulfates, and hydrogen sulfates are not considered to be harmful. The smell can be reduced or eliminated through proper maintenance of your water heater or replacement of water heater components.

What is a Precautionary Boil Water Notice?

A Precautionary Boil Water Notice (PBWN) may be issued in the event of a water main break, a loss of power or water pressure, or another emergency that may create the opportunity for contaminants to enter the pipes. The PBWN does not mean that the water is contaminated; however, if you receive one, we recommend – as a precaution – that you boil your tap water before consuming it.

I think my water pressure is too high (or too low)!

Water pressure throughout our system is based upon the elevation of water in our eight elevated storage tanks and your proximity to the tanks.

- Low water pressure may be the result of a water leak – either within the distribution system or at your service location.
    - If the leak is within the distribution system, you can rest assured that City crews are working to make a repair as soon as possible.
    - If the leak is within the household plumbing, including the service line, a plumber should be consulted.
- High water pressure, above 80 psi, requires the installation of a pressure reducing valve to protect household plumbing.
- A faulty pressure reducing valve may cause the pressure to be too high or too low.

If you suspect that there is a problem with your water pressure, call 850-891-4968 to have a technician check for problems.

The City of Tallahassee's diverse team of water quality professionals strives to protect every drop of water from the aquifer, through the pipes, and straight to your tap. We consider you – the customer – to be a valued member of our team and thank you for all you do to help protect our pristine and remarkable water supply.

We encourage our customers to be informed about their water utility. Visit Talgov.com for more information. If you have questions about this report, please contact David Roberts, Manager of Water Operations, at 850-891-1228 or ***David.Roberts@Talgov.com***

City of Tallahassee
Your Own Utilities℠

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Water conservation is everyone's job.

The Floridan Aquifer is an abundant and prolific source of drinking water, but the supply is not infinite. We must all do our part to conserve water. Be sure to turn off the faucet when brushing your teeth, install low-flow toilets and shower heads, and fix the drip - because every drop counts.