

2016 **Water Quality Report**



**City of Apopka
Public Services Department
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The City of Apopka's top priority is to provide all utility customers with the best water and reliable service. Each day, our operators ensure that water delivered from our utility meets your expectations and all regulatory requirements for safety and quality.

All information provided in this report has been collected and reported in accordance with water quality standards established by the U.S. Environmental Protection Agency (USEPA) and the Florida Department of Environmental Protection (FDEP).

We are pleased to provide you with the 2016 Water Quality Report and an explanation of the numbers and terms included in it. If you have any questions, contact the Apopka Public Services Department at (407) 703-1731.

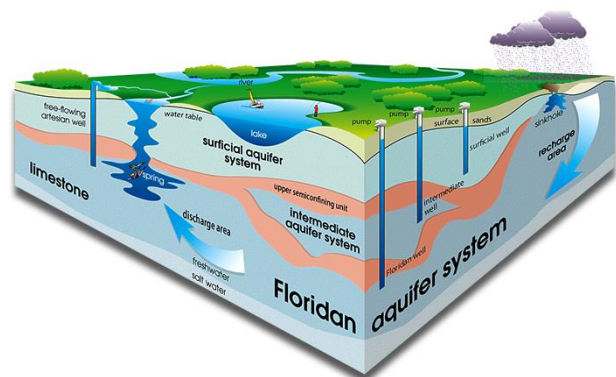
It is important to understand how the City of Apopka adheres to strict treatment and testing standards to consistently provide safe, clean water. We also encourage customers to learn how to conserve drinking water, protecting Florida's natural resources for years to come. For information about the city's water conservation program, please contact Water Conservation Specialist Jessica Schilling at (407) 703-1731, by email at jschilling@apopka.net, or visit the city's website at www.apopka.net.

OUR SOURCE OF WATER

The City of Apopka's drinking water – like most utilities throughout Florida - comes from deep underground in the Floridan Aquifer. The Floridan Aquifer is primarily fed by rain that is filtered through hundreds of feet of sand and rock, undergoing a natural filtration process.

Drinking water is distributed to 22,000 customers from five water treatment plants: the Jack G. Grossenbacher Water Plant, the Sheeler Oaks Water Plant, the Myrtle Rogers Womble Northwest Water Plant, the Plymouth Regional Water Plant and the Mt. Plymouth Lakes Water Plant.

These five facilities utilize thirteen groundwater wells, ranging from 483 to 1,400 feet in depth. The total daily pumping capacity of these wells is 36.288 million gallons per day. The utility is operated by state-certified water treatment operators who closely monitor the system 24 hours of every day. The water is treated using aeration to reduce organic compounds, such as hydrogen sulfide (odor causing). The water is then disinfected using sodium hypochlorite (chlorine) – a standard treatment process among utilities - prior to distribution to you, the consumer.



Source: The St. Johns River Water Management District

MEETING ALL FEDERAL AND STATE WATER QUALITY STANDARDS

The federal Safe Drinking Water Act was created by Congress in 1974 and amended in 1986 and 1996 to protect public health by regulating the nation's public drinking water supplies. The 1996 amendments greatly enhanced the existing law by setting strict requirements for source water protection, operator training and public information as important components of safe drinking water.



The City of Apopka routinely monitors for contaminants in your drinking water according to federal and state laws, rules and regulations. The table included in this report shows results of any contaminant that was detected in the water during the period of January 1, 2011, through December 31, 2016, unless otherwise indicated. The State of Florida permits the city to monitor for some contaminants less than once per year because concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, may be more than one year old.

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 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.

Since all detected concentrations are well below the maximum levels established by the Florida Department of Environmental Protection, no action is required from Apopka's water treatment facilities other than continued monitoring.

In 2016, FDEP also performed a Source Water Assessment on Apopka's water system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of city wells. There are no potential sources of contamination around the thirteen wells in the city. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at www.dep.state.fl.us/swapp or you can contact the city's Public Services Department for additional information at (407) 703-1731.

Immuno-Compromised Persons

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, and 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 U.S. Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

The City of Apopka is pleased to present you with the 2015 Annual Water Quality Report. This report is designed to inform you about the quality water and service we deliver to you every day. Our constant goal is to provide you with a safe and reliable supply of drinking water.

The water quality data table provides more detail of how Apopka's drinking water meets all State and Federal requirements.

Monitoring and Reporting

The City's water system experienced no monitoring and reporting violations during 2016.

Key Abbreviations

AL - Action Level is the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.

MCL - Maximum Contaminant Level is 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 is 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.

MRDLG - Maximum Residual Disinfectant Level Goal is 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.

MRDL - Maximum Residual Disinfectant Level is 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.

NA - Not Applicable.

ND - Not Detected and indicates that the substance was not found by laboratory analysis.

ppb - Parts Per Billion or micrograms per liter - one part by weight of analyte to 1 billion parts by weight of water sample.

ppm - Parts Per Million or milligrams per liter - one part by weight of analyte to 1 million parts by weight of water sample.

Microbiological Contaminants							
Contaminants and Unit of Measure	Dates of Sampling (Mo/Yr)	MCL Violation (Yes/No)	Highest Monthly Percentage / Number		MCLG or MRDLG	MCL or MRDL	Likely source of Contamination
Total Coliform Bacteria	Jan – Mar 2016	No	2.4% / 2		0	<5%	Naturally present in the environment
Microbiological Contaminants							
Contaminants and Unit of Measure	Dates of Sampling (Mo/Yr)	TT Violation (Yes/No)	Result		MCLG or MRDLG	TT	Likely source of Contamination
Total Coliform Bacteria	Apr – Dec 2016	Yes	Positive		N/A	TT	Naturally present in the environment
Radiological Contaminants							
Contaminants and Unit of Measure	Dates of Sampling (Mo/Yr)	MCL Violation (Yes/No)	Level Detected	Range/Results	MCLG or MRDLG	MCL or MRDL	Likely source of Contamination
Alpha Emitters (pCi/L)	Apr 2011	No	2.0	ND – 2.0	0	15	Erosion of natural deposits
Inorganic Contaminants							
Contaminants and Unit of Measure	Dates of Sampling (Mo/Yr)	MCL Violation (Yes/No)	Level Detected	Range/Results	MCLG or MRDLG	MCL or MRDL	Likely source of Contamination
Barium (ppm)	Feb 2014	No	0.0106	0.0053 - 0.0106	2.0	2.0	Discharge of drilling wastes; discharge of metal refineries; erosion of natural deposits
Fluoride (ppm)	Feb 2014	No	0.300	ND – 0.300	4.0	4.0	Erosion of natural deposits, water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Sodium (ppm)	Feb 2014	No	13.8	6.1 – 13.8	NA	160	Saltwater intrusion; leaching from the soil
Stage 2 Disinfectant/Disinfection by-Product (D/BBP) Parameters							
Contaminants and Unit of Measure	Dates of Sampling (Mo/Yr)	MCL Violation (Yes/No)	Level Detected	Range/Results	MCLG or MRDLG	MCL or MRDL	Likely source of Contamination
TTHM (Total Trihalomethanes) (ppb)	Jan-Dec 2016	No	64.1	36.7 – 70.1	NA	80	By-Product of drinking water disinfection
HAA5 (Haloacetic Acids) (ppb)	Jan-Dec 2016	No	35.9	2.4 – 48.0	NA	60	By-Product of drinking water disinfection

Lead and Copper (Tap Water)							
Contaminant and Unit of Measurement	Dates of Sampling	AL Violation (Yes/No)	90 th Percentile Result	No of sample sites exceeding the AL	N/A	AL (Action Level)	Likely source of Contamination
Copper (ppm)	Jun 2014	No	0.0781	0	1.3	1.3	Corrosion of household plumbing systems ; erosion of natural deposits ; leaching from wood preservatives

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 Apopka 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>.

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.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take one corrective action and we completed one of these actions.

During the past year one Level 2 assessment was required to be completed for our water system. One Level 2 assessment was completed. In addition, we were required to take one corrective action and we completed one of these actions.

At present, no health standards (for example, maximum contaminant levels) or likely sources have been established for UCs. However, we are required to publish the detected analytical results of our UC monitoring in our annual water quality report.

For the complete list of results, including the non-detected contaminants, contact the city's Public Services Department at (407) 703-1731.

Frequently Asked Questions

Does the city's water contain fluoride?

The City of Apopka does not add Fluoride to the water. However, there are small amounts that occur naturally in the water supply. The April 2014 test results for Fluoride produced a range between < 0.20 and 0.30 mg/L naturally occurring in the water.

Is the city's water hard or soft?

The City's water supply is considered moderately hard. Recent test results indicated a range of 107 mg/L (6.3 grains per gallon) to 214 mg/L (12.5 grains per gallon). Please contact the city to determine the actual hardness level in your area.

Is there chlorine in my drinking water?

The city is required by Federal and State regulations to maintain a chlorine levels in the water. This is to protect the water from microbial contamination as it travels from the treatment plants to homes and businesses. Trihalomethanes are a monitored byproduct of the treatment and are well below maximum state safety regulations.

Reclaimed Water System

The City of Apopka experiences wide variations in water use between wet weather and dry weather seasons. Spring and summer use approaches 8 million gallons per day, while winter use is closer to 4 million gallons a day. Irrigation is a substantial portion of the increased demand during the dry months.

In an effort to provide major irrigators with a source of water other than potable water, the City of Apopka expanded its water reclamation facility and built Project ARROW (Apopka Regional Reuse of Water) in 1990. This system provides treated reclaimed water to three golf courses, a horticultural nursery, an agricultural grower, and over 5,000 residents with reclaimed water for their irrigation needs today. This results in a reduction in demands on our ground water supply by an average of 2.6 MGD throughout the year. The City continues to explore opportunities for alternative water supplies for the reclaimed water system in an effort to conserve our precious potable water supply.

Water Conservation Facts and Tips

- Landscaping accounts for more than half the water used at a typical home.
- Water your lawn only when it needs it. If you step on the grass and it springs back up when you move, it doesn't need water. If it stays flat, it does need water.
- Water lawns during the early morning, or evening hours when temperatures and wind speed are the lowest.
- Limit the amount of water applied to your lawn to one-half to two-thirds of an inch of water per application.
- One inch of rainfall drops approximately 7,000 gallons of water on a 60' x 180' piece of land.

- We drink very little of our drinking water. Generally speaking, less than 1% of drinking water is actually consumed. The rest goes on lawns and landscape, washing machines, and down toilets and drains.
- Adjust lawn watering to the weather. Following a heavy rain, for instance, skip your regular watering day until the grass needs it again. Teach the family how to turn off an automatic sprinkler system in case a storm comes up during the sprinkling cycle. Test the rain sensor equipped with your irrigation system to insure it is working properly. Typically, it takes one-half an inch of rain to cause the rain sensor to lock out your irrigation system.
- Minimize grass areas in your yard, because less grass means less water demand. Survey the lawn and consider whether it might make sense to remove grass from areas that aren't used much. Replace it with low-water use landscaping.
- Consider installing drip irrigation for individual bushes, trees, flowers and garden areas. Drip systems are designed to get water slowly and directly to the roots of plants where they need it most. They deliver water in terms of quarts or gallons per hour instead of per minute.