



**2018**

# **CITY OF VALDOSTA**

## **Water Quality Report**

Water System ID No.  
1850002



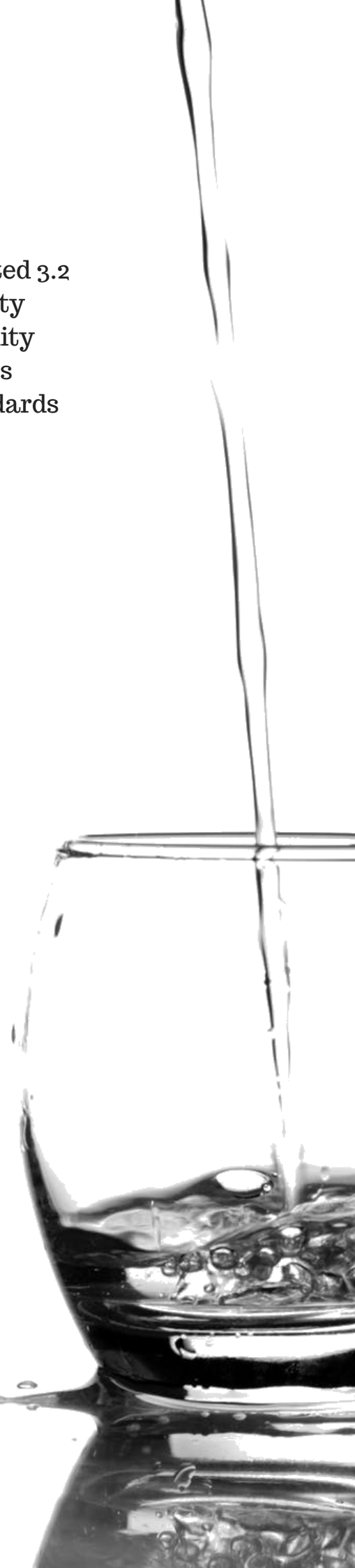


# PROVIDING SAFE WATER

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During 2018, the City of Valdosta Utilities Department treated 3.2 billion gallons of water and provided safe, clean, high-quality water for all our customers. The purpose of this Water Quality Report is to inform our customers about where their water is obtained, how it is treated and how it compares to the standards set by regulatory agencies.

Test results for water samples collected and analyzed are provided in the Water Quality Data Table, located on page 3. The Data Table provides information only for those items that are regulated by the Environmental Protection Agency (EPA) and whose presence was detected in representative system samples. For example, the American Dental Association recommends that fluoride levels of about 0.7 ppm (mg/l) are good for dental health, and the Valdosta Water Treatment Plant adds fluoride to achieve the recommended level as shown in the table. However, EPA regulates fluoride and requires that the concentration of fluoride in drinking water not exceed 4.0 ppm. The list of parameters and their concentration level in the table is not an indication of a problem unless a violation is noted. The city analyzes hundreds of samples for many parameters some hourly, some daily, and others on a quarterly basis. These samples are collected throughout the system as part of quality control of the treatment process. Groundwater will always contain trace amounts of dissolved limestone or calcium, as well as iron and other elements. The city's finished water contains some sodium, phosphates, fluoride, and chlorine that have been added to improve the water quality. The report also includes required health effects information regarding the use of water.



# Valdosta's Water Source

The City of Valdosta obtains its water supply from wells that are drilled into an underground layer of porous, water-bearing limestone known as the Upper Floridan Aquifer. This limestone layer lies under most of South Georgia and all of Florida. Generally, the aquifer can provide a prolific supply of good, clean water. In Valdosta, the top of the aquifer lies approximately 200 feet below ground surface, and the city's wells are drilled an additional 200 feet into the limestone.

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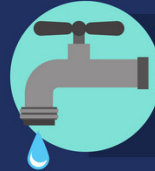
The Upper Floridan Aquifer below Valdosta and Lowndes County is known as a karst aquifer. This is an aquifer that has cracks, underground solution channels and caverns. These cracks can provide a route to allow contaminants to enter the aquifer, move about in the aquifer and alter the water supply, which can cause special challenges for the city's water system. Just north of Valdosta, one of these cracks is located beneath the Withlacoochee River. The underground crack has formed a sinkhole in the streambed of the flowing river. The river loses about 20 cubic feet per second (cfs) during the wet season and two cfs during the dry season to the aquifer below the sinkhole. The surface water contains tannic acids and organics from vegetation growing along the river. This mixture of water and organics causes a unique situation for all Upper Floridan Aquifer users in this area

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The City of Valdosta Ground Water Withdrawal Permit, which allows the city to take water from the aquifer and distribute it to its customers, was renewed in December 2012. This permit from the Environmental Protection Division of the Department of Natural Resources allows the withdrawal of an annual average daily flow (AADF) of 11.4 million gallons per day (MGD) and a maximum monthly average daily flow (MMADF) of 15.3 MGD. Currently, the city's AADF is 8.847 MGD, and the MMADF is 9.976 MGD.

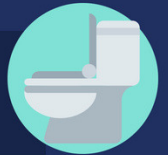


## WHERE DOES THE WATER GO?



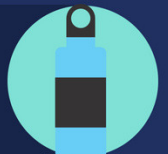
**WATER IS USED TO FLUSH TOILETS, BATHE AND TO WASH DISHES, CLOTHES AND CARS.**

**THE AVERAGE AMERICAN USES ABOUT 90 GALLONS OF WATER EACH DAY IN THE HOME**



**50-70 PERCENT OF THAT WATER IS BEING USED TO WATER LAWNS AND GARDENS.**

**BY USING WATER WISELY, CITIZENS CAN SAVE MONEY & ENSURE SUSTAINABLE WATER SUPPLIES FOR FUTURE GENERATIONS.**





# *Valdosta's* WATER TREATMENT PLANT



10 FULL TIME EMPLOYEES



9 WELL FIELDS A FEW MILES  
NORTHEAST OF THE CITY



300 MILES OF MAINS,  
WITH PIPE SIZES UP TO  
30 INCHES IN  
DIAMETER



11 MILLION GALLONS PER DAY



# DETERMINING HEALTH EFFECTS OF WATER



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 water poses a health risk.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those undergoing chemotherapy for cancer, who have undergone organ transplants, who have HIV/AIDS or other immune system disorders, as well as the elderly and infants, can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers.

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 Valdosta is responsible for providing high-quality drinking water, but it 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 two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may seek to have your water tested.

The sources of drinking water (both bottled water and tap water) include aquifers, 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 before the city treats it include the following:**

**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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

**Pesticide and Herbicides** which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

**Organic Chemical Contaminants** including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**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, EPA prescribes regulations that limit the number of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Citizens may receive more information about contaminants and potential health effects by calling the EPA Safe Drinking Water Hotline at 800-426-4791 or visiting [www.epa.gov/safewater](http://www.epa.gov/safewater).





# Water Quality Data Table 2018

**City of Valdosta Water System I.D. No. 1850002:** The table below lists all the drinking water contaminants that were detected during the 2018 calendar year. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 1 - December 31, 2018. \*EPD requires the city to monitor certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old. Samples were also tested for many other contaminants that were not found in the water and therefore are not listed.

TABLE OF DETECTED CONTAMINANTS						
INORGANIC CONTAMINANTS						
CONTAMINANT (units)	MCL	MCLG	Result [Range]	Violation	Sample Date	Major Source
Fluoride (ppm)	4.0	4.0	[.41-1.48]	No	2018	Water additive that promotes strong teeth
LEAD AND COPPER MONITORING						
CONTAMINANT (units)	MCL (AL)*	MCLG	90th Percentile Value/ [Samples Exceeding AL]	Violation	Sample Date	Major Source
Copper (ppb)	1300	0.0	320 / [zero]	No	2018	Corrosion of household plumbing systems
Lead (ppb)	15	0.0	0.0 / [zero]	No	2018	
VOLATILE ORGANIC CONTAMINANTS (REGULATED)						
CONTAMINANT (units)	MCL	MCLG	Result [Range]	Violation	Sample Date	Major Source
Trihalomethanes (ppb)	80	0.0	[58-77]	No	2018	By-product of drinking water chlorination
Haloacetic Acids (ppb)	60	0.0	[.002-66]	Yes	2018	
MICROBIOLOGICAL CONTAMINANTS						
CONTAMINANT (units)	MCL	MCLG	Highest Monthly % of Positive Samples {Range]	Violation?	Sample Date	Major Source
Total Coliform Bacteria (TC)	<5% positive samples during a monthly testing period	zero positive samples during a monthly testing period	0% [0.0 - 0%]	Yes	2018	Coliform bacteria are naturally present in the environment
FREE CHLORINE RESIDUAL						
CONTAMINANT (units)	MCL (MRDL)*	MCLG (MRDLG)*	Result [Range]	Violation?	Sample Date	Major Source
Free Chlorine (ppm)	4.0	4.0	[1.26-2.76]	No	2018	Chemical added for disinfection
OTHER CONTAMINANTS: RADIONUCLIDES						
CONTAMINANT (units)	MCL	MCLG	Result	Violation?	Sample Date	Major Source
*Alpha Emitters (pCi/L)	15	15	4 +/-1	No	2018	Erosion of natural deposits

## Terms and Definitions for Water Quality Data Table

**Contaminant:** Any natural or man-made physical, chemical, biological, or radiological substance or matter in water, which is at a level that may have an adverse effect on public health and which is known or anticipated to occur in public water systems.

**Maximum Contaminant Level (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 (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's allow for a margin of safety.

**Maximum Residual Disinfectant Level (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 microbiological contaminants.

**Maximum Residual Disinfectant Level Goal (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.

**Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements.

**Total Trihalomethanes (TTHM):** Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane and bromoform) that form as a result of disinfection.

**Total Coliform Bacteria (TC):** A group of bacteria commonly found in the environment. They are indicators of potential contamination of water. Adequate and appropriate disinfection effectively destroys coliform bacteria.

**Treatment Technology:** A required process intended to reduce the level of a contaminant in drinking water.

**Result:** Annual average of analysis performed.

**ppm:** Parts per million or milligrams per liter.

**N/D:** Not detectable at testing limit.

**Disinfection:** A process that effectively destroys coliform bacteria.

**Range:** The lowest and highest result recorded for year.

**ppb:** Parts per billion.

**N/A:** Not applicable.

**pCi/L:** Picocuries per liter (a measure of radiation).

The testing results from the 1st and 2nd Quarter sampling indicated that our system exceeded the standard or maximum contaminant level (MCL), for haloacetic acid (HAAs). The standard for HAA is 60 ppb averaged at an individual monitoring location over the year. During the 1st and 2nd Quarter, only one location measured 61 and 66 ppb. HAAs are one of five volatile organic chemicals formed when disinfectants react with natural organic matter in the water.