



Water System
ID No. 185002

2011 Water Quality Report

VALDOSTA
WATER TREATMENT PLANT

The mission of the City of Valdosta Utilities Department is to be known by our customers for delivery of the highest quality municipal utility services possible through continuous improvement.

Customer Service

For Utility Billings Questions
Call (229) 259-3556

To Report a Water Issue
Call (229) 259-3592

To Report a Sewer Issue
Call (229) 259-3592

To Report a Stormwater Issue
Call (229) 671-3642

To Report a Sanitation Issue
Call (229) 259-3599

To Report Any Utility Related
Issue After Hours
Call (229) 333-1832

More Information

www.valdostacity.com

[www.caes.uga.edu/topics/disasters/
drought](http://www.caes.uga.edu/topics/disasters/drought)

www.gaepd.org/

www.conservewatergeorgia.net

Providing Safe Water

During 2011, the City of Valdosta Utility Department provided safe, clean, good tasting water for all city water 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 the regulatory agencies.

Test results for water samples collected and analyzed are provided in the Water Quality Data Table, located on page 3 of this report. 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 dental profession recommends that fluoride levels of about 1.00 ppm (mg/l) are good for dental health and the City of 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 levels 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 a part of quality control of the treatment process. Ground water will always contain trace amounts of dissolved limestone or calcium as well as iron and other elements. The City of Valdosta's finished water contains some sodium, phosphates, fluoride and chlorine that have been added to improve the water quality.

This report also includes required health effects information on page 4 regarding the use of water.

During 2007, the water treatment plant upgrade was completed. The upgrade was undertaken to improve efficiency of the system as well as the inevitable need to increase system capacity from the 15 million gallons per day (MGD) plant to the capacity of 22.5 MGD. The operation of the new plant resulted in a more cost effective and higher quality end product.

The Utilities Department continues to receive recognition each year for its efforts to provide safe water to its customers. The system has received numerous awards of excellence for operations from the U.S. EPA, from Georgia EPD and from the Georgia Association of Water Professionals. The city's rates for water and sewer charges remain lower than more than 100 other systems of all sizes in Georgia, despite the cost of the state-of-the-art water treatment facility.

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Safe Water, *continued from page 1*

In 2012, the City of Valdosta Utility Department completed the rehabilitation of water well numbers four and six. During the years 2012- 2013, the city will be constructing a new elevated storage tank, will rehabilitate water well number seven, and will investigate the feasibility of constructing two new water wells.

For more information concerning your water supply or anything in this Water Quality Report, please call Director of Utilities Henry Hicks, at (229) 259-3592. The Utilities Department staff is available for water plant tours, public speaking and other public education opportunities within the community regarding any water-related or environmental subject.



Kenny Hughes checks the chlorine levels in the treated water before it goes to the distribution system. Hughes was named Top Water Operator of the Year by the Georgia Association of Water Professionals.

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 Floridian Aquifer. This limestone layer lies under most of South Georgia and all of Florida. Generally, the aquifer is able to 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.

The Upper Floridian Aquifer in the area of 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 and can cause special challenges for the city's water system. Just north of the City 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 2 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 users of the Upper Floridian Aquifer in this area.

The City of Valdosta Water Treatment Plant and its well field with seven wells is located in the far northeast end of the city and several miles away from the sinkholes that open into the aquifer. The water in the aquifer moves very slowly through the limestone, and measurements have shown the travel time from the sinkhole to the well field to be as much as 75 years. However, the water from the wells do contain some of the organic material as well as naturally occurring sulfides, iron and manganese from deposits scattered throughout the aquifer.

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 2002. The renewed permit from the Environmental Protection Division of the Department of Natural Resources also allows the withdrawal of an average of 11.4 MGD, annual average daily flow (AADF), and a maximum month daily flow (MMADF) of 15.3 MGD. At the present time, the city's AADF is 8.739 MGD, and the MMADF is 10.913 MGD.



City of Valdosta pumps transport the water from the well pumps to the Water Treatment Plant to be treated for consumption.

Water Quality Data Table 2011

The table below lists all the drinking water contaminants that were detected during the 2011 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, 2011. *EPD requires the city to monitor for 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 tested for many other contaminants that were not found in the water and, therefore, are not listed.

TABLE OF DETECTED CONTAMINANTS						
INORGANIC CONTAMINANTS						
CONTAMINANT	MCL	MCLG	Result [Range]	Violation?	Sample	Major Sources
Flouride (ppm)	4.0	4.0	.86 [0.41-1.17]	No	2011	Water additive that promotes strong teeth.
LEAD AND COPPER MONITORING						
CONTAMINANT	MCL (AL)*	MCLG	90th Percentile Value/ [Samples exceeding AL]	Violation?	Sample	Major Sources
Copper (ppb)	1300	0.0	320 [zero]	No	2011	Corrosion of household plumbing systems
Lead (ppb)	15	0.0	0.0 [zero]	No	2011	
VIOLATILE ORGANIC CONTAMINANTS (REGULATED)						
CONTAMINANT	MCL	MCLG	Result [Range]	Violation?	Sample	Major Sources
Trihalomethanes (ppb)	80	0.0	64.0 [50.0-82.0]	No	2011	By-product of drinking water chlorination
Haloacetic Acids (ppb)	60	0.0	42.0 [24.0-54.0]	No	2011	
MICROBIOLOGICAL CONTAMINANTS						
CONTAMINANT	MCL	MCLG	Highest Monthly % of Positive Samples [Range]	Violation?	Sample	Major Sources
Total Coliform Bacteria (TC)	<5% positive samples during a monthly testing period	Zero positive samples during a monthly testing period	0% [0.0-0.0%]	No	2011	Coliform bacteria are naturally present in the environment
FREE CHLORINE RESIDUAL						
CONTAMINANT	MCL (MRDL)*	MCLG (MRDLG)*	Results [Range]	Violation?	Sample	Major Sources
Free Chlorine (ppm)	4.0	4.0	1.62 [1.00-2.20]	No	2011	Chemical added for disinfection
OTHER CONTAMINANTS: RADIONUCLIDES						
CONTAMINANT	MCL	MCLG	Result	Violation?	Sample	Major Sources
Alpha Emitters (pCi/L)	15	15	4+/-1	No	2007*	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 an indicator 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).

Determining the Health Effects of Water

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.

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 Water System 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 wish to have your water tested.

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.

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.

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount 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.

More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline (800) 426-4791 or at www.epa.gov/safewater/lead.

Contaminants that may be present in source water before we treat 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 storm 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 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.

The City of Valdosta is committed to providing citizens with safe, dependable tap water.

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