

# City of Valdosta 2008 Water Quality Report

Water System I.D. No 1850002



## Mission Statement

To be known by our customers for delivery of the highest quality municipal utility services possible through continuous improvement.

## Customer Service Numbers

Utility Billing.....(229) 259-3556  
Water Issues.....(229) 259-3592  
Sewer Issues.....(229) 259-3592  
Stormwater Issues..(229) 259-3592  
Sanitation Issues.....(229) 259-3599  
After hours..... (229) 333-1832

To learn more about water conservation, please visit:

[www.conservewatergeorgia.net](http://www.conservewatergeorgia.net)

Please visit the city of Valdosta's web site at:

[www.valdostacity.com](http://www.valdostacity.com)



## Providing Safe Water

During calendar year 2008, the City of Valdosta Utility Department remained in compliance with all Drinking Water Standards and has provided safe, clean, good tasting water for all of 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 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 report includes required health effects information regarding the use of water. 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 finished water contains some sodium, phosphates, fluoride and chlorine that have been added to improve the water quality.

The construction of the Water Treatment Plant upgrade was completed in 2007 and did not cause any interruption of service to the City's water customers. This 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 capacity of 22.5 MGD. The upgrade to the operation of the plant is producing a more cost-effective and higher-quality end product.

*Continued on page 2*

## Safe Water

*Continued from page 1*

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 of operations from the U.S. EPA, the Georgia EPD and 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 treatment facility.

In 2009, the Utilities Department will begin construction of an additional transmission route. The new route will include about six miles of new pipe. In addition to the new transmission line, the Utility

Department is working on evaluating a new groundwater well field before the installation of at least three new groundwater wells to increase system capacity.

Citizens who would like additional information concerning the City's water supply or anything addressed within this Water Quality Report may call Director of Utilities Henry Hicks at (229) 259-3592.

The Department provides speakers and public education programs to the community concerning water, as well as many other environmental subjects, and

also provides tours of the plant. Citizens may also receive additional information by visiting the City of Valdosta's web site at [www.valdostacity.com](http://www.valdostacity.com).



The City of Valdosta Water Treatment Plant, located on Guest Road, treated over 3 billion gallons of drinking water in year 2008.

# 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 have the ability of providing a route to allow contaminants to enter the aquifer, move about in the aquifer, and alter the water supply, and have the capability of causing special

challenges for the City's water system. One of these cracks is located beneath the Withlacoochee River, just north of the City of Valdosta. 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 Valdosta Water Treatment Plant and its well field--which includes eight wells--is located a few miles northeast 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 does 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 allows the withdrawal of an average of 11.4 MGD, annual average daily flow (AADF) and a maximum monthly daily flow (MMADF) of 15.3 MGD. Currently, the City's AADF is 9.252 MGD, and its MMADF is 11.640 MGD.

# Water Quality Data Table

**City of Valdosta Water System I.D. No. 1850002:** The table below lists all the drinking water contaminants that were detected during the 2008 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, 2008. \*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						
<b>INORGANIC CONTAMINANTS</b>						
CONTAMINANT (units)	MCL (AL)*	MCLG	Result (Range)	Violation?	Sample Date	Major Sources
Fluoride (ppm)	4.0	4.0	.84 [52 - 1.19]	No	2008	Water additive that promotes strong teeth.
<b>LEAD AND COPPER MONITORING</b>						
CONTAMINANT (units)	MCL (AL)*	MCLG	Result (Range)	Violation?	Sample Date	Major Sources
Copper (ppb)	1300	0.0	320 / [zero]	No	2008	Corrosion of household plumbing systems
Lead (ppb)	15	0.0	0.0/[zero]			
<b>VOLATILE ORGANIC CONTAMINANTS (REGULATED)</b>						
CONTAMINANT (units)	MCL (AL)*	MCLG	Result (Range)	Violation?	Sample Date	Major Sources
Total Trihalomethanes (ppb)	80	0.0	78.0 [62.0-93.0]	No	2008	By-product of drinking chlorination
Haloacetic Acids (ppb)	60	0.0	54.0 [27.0 - 83.0]	No	2008	By-product of drinking chlorination
<b>MICROBIOLOGICAL CONTAMINANTS</b>						
CONTAMINANT (units)	MCL (AL)*	MCLG	Highest Monthly % of Positive Samples [Range]	Violation?	Sample Date	Major Sources
Total Coliform Bacteria (TC)	<5% positive samples during a monthly testing period	Zero positive samples during a monthly testing period	4.9% [0.0 - 4.9%]	No	2008	Coliform bacteria are naturally present in the environment
<b>FREE CHLORINE RESIDUAL</b>						
CONTAMINANT (units)	MCL (AL)*	MCLG	Result (Range)	Violation?	Sample Date	Major Sources
Free Chlorine (ppm)	4.0	4.0	1.69 [1.06 - 2.40]	No	2008	Chemical added for disinfection
<b>OTHER CONTAMINANTS: RADIONUCLIDES</b>						
CONTAMINANT (units)	MCL (AL)*	MCLG	Result (Range)	Violation?	Sample Date	Major Sources
*Alpha Emitters (pCi/L)	15	15	4 +/-1	No	2007*	Erosion of natural deposits

## Terms and Definitions of Abbreviations 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. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**Maximum Contaminant Level (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's):** Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane, and bromoform) that form as a result of disinfection.

**Total Coliform Bacteria:** 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

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

Some people may be more vulnerable to contaminants in drinking water than others in 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 may be particularly at risk to 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 microbial contaminants are also available from the Safe Drinking Water Hotline.

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 may pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water before is properly treated include some of 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.

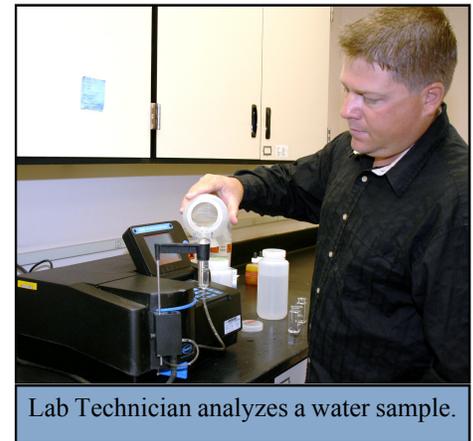
■ **Pesticide and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.

■ **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 may be naturally occurring or the result of oil and gas production and mining activities.

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 also establish such 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's Safe Drinking Hotline at (800) 426-4791.



Lab Technician analyzes a water sample.

The City of Valdosta is committed to providing its citizens with safe, dependable tap water on a year-round basis and is proud to provide this water quality report.

### City Council

- |                     |                        |
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