

City of Valdosta 2009 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) 259-3590
After Hours..... (229) 333-1832

www.valdostacity.com

Providing Safe Water

During calendar year 2009, the City of Valdosta Utilities Department 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 (see page 3), which 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, the 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, added to improve the water quality.

Continued on page 2

In August 2009, a violation was received for not consistently maintaining the recommended amount of 0.2 ppm in all parts of the distribution system. The Utilities Department has taken action to correct the violation by reviewing the treatment processes, equipment and chemical feed rates, increasing the target chlorine residual leaving the water treatment plant, and implementing a program to flush dead-end lines within the distribution system.

The construction of the water treatment plant upgrade, completed in 2007, improved the efficiency of the system and increased the system capacity from the 15 million gallons per day (MGD) plant to 22.5 MGD. The Utilities Department continues

to receive recognition each year for its efforts to provide safe water to its customers, receiving numerous awards of excellence of operations from the EPA, Georgia Environmental Protection Division (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 treatment facility.

During the year 2010, the City of Valdosta will commence the construction of an additional transmission route, which will include about six miles of new pipe and a new elevated water tower. The new tower will be strategically located and will be instrumental in

providing adequate storage with regards to high quality fresh water. In addition, the city is working on evaluating a new groundwater well field before installation of at least three new groundwater wells to increase system capacity.

The Utilities Department staff is able to provide speakers and public education programs for the community and tours of the plant. For more information concerning your water supply or this report, please call Director of Utilities Henry Hicks at (229) 259-3592.

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. One of these cracks is located beneath the Withlacoochee River, just north of the city. 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 seven 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 Georgia EPD of the Department of Natural Resources 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 MMADF is 10.913 MGD.



Water Quality Data Table 2009

City of Valdosta Water System I.D. No. 1850002: The table below lists all the drinking water contaminants that were detected during the 2009 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, 2009. *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 (units)	MCL	MCLG	Result [Range]	Violation?	Sample Date	Major Sources
Fluoride (ppm)	4.0	4.0	.93 [.72 - 1.43]	No	2009	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 Sources
Copper (ppb)	1300	0.0	320 / [zero]	No	2008	Corrosion of household plumbing
Lead (ppb)	15	0.0	0.0 / [zero]	No	2008	
VOLATILE ORGANIC CONTAMINANTS (REGULATED)						
CONTAMINANT (units)	MCL	MCLG	Result [Range]	Violation?	Sample Date	Major Sources
Trihalomethanes (ppb)	80	0.0	56.0 [44.0 - 71.0]	No	2009	By-product of drinking water chlorination
Haloacetic Acids (ppb)	60	0.0	11.0 [0.0 - 28.0]	No	2009	
MICROBIOLOGICAL CONTAMINANTS						
CONTAMINANT (units)	MCL	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	4.0% [0.0 - 4.0 %]	No	2009	Coliform bacteria are naturally present in the environment
FREE CHLORINE RESIDUAL						
CONTAMINANT (units)	MCL (MRDL)*	MCLG (MRDLG)*	Result [Range]	Violation?	Sample Date	Major Sources
Free Chlorine (ppm)	4.0	4.0	1.58 [1.07 - 2.01]	No	2009	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	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. MCLs are set as close to the MCLGs 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): 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

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of contaminants. However, 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 people such as those undergoing cancer chemotherapy, have undergone organ transplants, 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 comes 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 cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you may 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.

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 we treat it include:

- ▶ 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 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, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) 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.



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

John J. Fretti	Mayor
James R. Wright	Councilman, District 1
Deidra White	Councilwoman, District 2
Joseph Vickers	Councilman, District 3
Alvin Payton, Jr	Councilman, District 4
Tim Carroll	Councilman, District 5
Robert Yost	Councilman, District 6
John A. Eunice	Councilman, At Large Mayor Pro Tem

Editorial Staff

Larry H. Hanson	City Manager
Henry Hicks	Utilities Director
Semantha Mathews	Public Information Officer

VALDOSTA
A City Without Limits

PRSRSTSD
U.S. Postage
PAID
Permit No. 16
Valdosta, GA