



CITY OF VALDOSTA

2005 Water Quality Report



Water System I.D. No. 1850002

Providing Safe Water

During calendar year 2005, the City of Valdosta Water, Sewer and Drainage Department continued to meet all Drinking Water Standards and has provided safe, clean, good tasting water for all of our customers. The purpose of this Annual Water Quality Report is to inform customers about where their water is obtained, how it is treated and how it compares to the Standards set by the regulatory agencies.

Tests results for water samples collected and analyzed are provided in the Water Quality Data Table, located in this report. The report also includes required health effects information regarding the use of water. The 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 are good for dental health and we add fluoride to achieve this level. However, EPA regulates fluoride and requires that the amount detected be reported. Detection does not indicate a problem unless a violation is noted. The City analyzes hundreds of samples for other parameters, some hourly, daily and throughout the year, to control the treatment process and to provide the best tasting and looking water. Good tasting water from wells will always contain small amounts of dissolved limestone or calcium as well as iron and other elements and our water contains some sodium, phosphates, fluoride and chlorine that we have added to improve the quality.

In 2005, staff continued to operate the plant without any interruption of service while a contractor worked to replace and modernize practically every machine and system, improving the operational efficiency of the plant and increasing

the capacity of the plant from the present size of 15 million gallons per day (MGD) to a new capacity of 22.5 MGD. The new systems will reduce operating costs, improve the quality of treated water, and will make the plant safer for employees and the surrounding area.

The Department also continues to receive recognition each year for providing safe water to its customers. The system has received numerous awards of excellence of operations from the US EPA, from Georgia EPD and from the Georgia Association of Water Professionals. The City's water and sewer rates remain lower than more than 100 other systems in Georgia.

For more information about your water supply or this report, please call Director of Utilities, Leon V. Weeks at (229) 259-3592. Employees are happy to provide speakers and programs concerning water and environmental subjects.

Providing Quality Service — Making Our City Better

The vision of the City of Valdosta is quality service by quality people, and the employees of the Water Department have worked to operate the system to provide the best service possible and continue to meet the needs for growth.

During 2005, the last project to replace 30 miles of small, outdated water mains was completed to provide cleaner water with better pressure for existing customers. New hydrants were added to provide bet-

ter fire protection. New transmission mains were completed to provide service to new areas and additional mains are to be installed during 2006 to deliver water from the expanded plant to the City.

At the same time, the department has been busy planning for improvements to the wastewater treatment and transportation system. Negotiations are underway with EPD to allow renovation and expansion of the wastewater treatment

plants and sewer outfalls and lift stations to better serve the existing City as well as to allow growth into new areas and protect the environment by proper treatment, reuse and disposal of the water used by the City. The City also has worked for several years to improve the stormwater conveyance system and to improve and protect the streams and water bodies in the City and to educate the citizens concerning the protection of the area streams.

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 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 Floridan 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 outside of the City of Valdosta, one of these cracks crosses under the Withlacoochee River. The under ground crack has opened to the

ground surface and formed a sinkhole in the bottom of the flowing river. The river water constantly flows into the sinkhole and mixes with the water contained in the limestone. The 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 Floridan Aquifer in this area.

The Valdosta Water Treatment Plant and its well field with 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 built a modern, new plant in 1992 which makes use of ozone to treat the

organics and provide primary disinfections. The plant is being modernized and expanded to meet the needs of the future.

Our current Ground Water Withdrawal Permit, which allows the City of Valdosta to take water from the aquifer and distribute it to our customers, was renewed in December, 2002. The renewed permit from the Georgia, Environmental Protection Division, allows the withdrawal of an average of 11.4 million gallons per day (MGD) annual average daily flow and a maximum month daily flow of 15.3 MGD.



Water Conservation

The State of Georgia recognizes the need to protect its water supply as its most valuable natural resource. The State is working to develop a statewide water use and conservation plan and the Board of Natural Resources has adopted a statewide Drought Management Plan.

The Georgia Department of Natural Resources, in accordance with the drought management plan, has announced that effective June 1, 2002, that all water utility systems in the state should encourage their water customers to voluntarily schedule their outdoor water use in

compliance with the following schedule:

- Odd-numbered address should schedule outside water use on Tuesdays, Thursdays and Sundays.
- Even-numbered or unnumbered addresses should schedule outside watering on Mondays, Wednesdays and Saturdays.



Winter Average Billing

All residential water and sewer customers are billed for service by the winter average method. Each year, during the winter months of January, February and March, the computer records the average amount of water used and uses this average as the maximum amount for billing for sewer service during the remainder of the year. Customers who limit outside use during these months will be able to use water for outside watering for the remainder of the year without paying sewer charges for the outside use.

Drinking Water Analysis Table

TABLE OF DETECTED CONTAMINANTS 2005						
Contaminant units	MCL	MCLG	Result Range	Violation?	Sample Date	Major Sources
INORGANIC CONTAMINANTS						
Fluoride (ppm)	4.0	4.0	.77 [.35 - 1.01]	No	2005	Water additive that promotes strong teeth.
LEAD & COPPER MONITORING						
Copper (ppb) Lead (ppb)	1300 (AL) * 15 (AL)*	0.0	210 / [zero] 2.5 / [zero]	No	2005	Corrosion of household plumbing systems.
VOLATILE ORGANIC CONTAMINANTS (REGULATED)						
Total Trihalomethanes (ppb)	80	0.0	69.0 [51.0-83.0]	No	2005	By-product of drinking water chlorination.
Haloacetic Acids (ppb)	60	0.0	38.0 [26.0-43.0]	No	2005	By-product of drinking water chlorination.
MICROBIOLOGICAL CONTAMINANTS						
Total Coliform Bacteria	< 5% positive samples during a monthly testing	Zero positive samples during a monthly testing	1.5% [0%-1.5%]	No	2005	Coliform bacteria are naturally present in the environment.
FREE CHLORINE RESIDUAL						
Free Chlorine (ppm)	4.0 (MRDL)*	4.0 (MRDLG)*	1.87 [1.34-2.24]	No	2005	Chemical added for disinfection.
OTHER CONTAMINANTS: RADIONUCLIDES						
Alpha Emitters (ppm)	15	15	2 +/-1	No	2000	Erosion of natural deposits

The table above lists all the drinking water contaminants that were found during the 2005 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, 2005. *EPD requires the city to monitor for certain contaminants less than once per year because of 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.

Terms & 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. MRDLG's 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 which a water system must follow.

Total Trihalomethanes (TTHM's): Four separate compounds (chloroform, dichlorobromomethane, dibromochloromethane, and bromoform) that form as a result of disinfection. Samples were collected four times per year at four locations too determine TTHM'S.

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. Fifty to eighty one samples were collected monthly. No more than 5% can be positive for total coliform in any month.

Result: Annual average of analysis performed. **Range:** The lowest and highest result recorded for year.

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

N/D: Not detectable at testing limit. **n/a:** not applicable

Disinfection: A process that effectively destroys coliform bacteria. **pCi/L:** Picocuries per liter (a measure of radiation).

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

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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's SAFE DRINKING WATER HOT-LINE (800) 426-4791.

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are

available from the SAFE DRINKING WATER HOT LINE (800) 426-4791.

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 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.

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.

The Water, Sewer and Drainage Department is operated as an enterprise fund, owned by the City. The City has a City Manager/Mayor and Council form of government. The Mayor and Council sets policy, adopts annual budgets, and approves contracts and ordinances. The Mayor and Council meets in City Hall at 216 East Central Avenue. The meetings are at 5:30 P.M. on the first Thursday after the first Sunday each month and on Thursday, two weeks thereafter. All meetings are open to the public and opportunity for public input is provided during each meeting. The City of Valdosta is an equal opportunity employer.

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- Councilman - District 2. Willie T. Head, Jr.
- Mayor Pro-Tem
- Councilman - District 3. Joseph Vickers
- Councilman - District 4. Alvin Payton, Jr.
- Councilman - District 5. David J. Sumner
- Councilman - District 6. Robert Yost
- Councilman - At Large. John A. Eunice
- City Manager Larry H. Hanson

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