



CITY OF VALDOSTA WATER WORKS

2004 Annual Water Quality Report

Water System I.D. No. 1850002



Providing safe water to Valdostans

The City of Valdosta is pleased to announce that for all of 2004, the City again provided clean safe water to its customers and met all Drinking Water Standards. 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.

2004 tests results are provided in the Water Quality Data Table, located later in this report. The report also 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 and whose presence was detected in representative system samples. Detection does not indicate a problem unless a violation is noted. The

City analyzes hundreds of samples for other parameters, some hourly, some daily and throughout the year to control the treatment process and to provide the best tasting and looking water for our customers.

A highlight of the Water and Sewer Department activities during 2004 was the award of a contract in the amount of \$18,298,000 for the expansion of the water treatment plant to increase the capacity from 15 million gallons per day (MGD) to a new capacity of 22.5 MGD and for replacement of equipment and technology to improve the operation and efficiency of the treatment processes to provide safe water in sufficient quantity to meet the needs of a growing City. The City has continued each year to make plant operational improvements to provide higher quality water and approve the appearance of the

water in the system.

The Water Department is recognized for its efforts at 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 Water and Pollution Control Association. During the past year, the plant laboratory was recognized for compliance with requirements for analysis and reporting of water quality parameters.

If you need more information concerning your water supply or this report, please call Leon V. Weeks, Director of Utilities at (229) 259-3592. Tours of our facilities are available and our employees are happy to provide speakers and programs to the community concerning water as well as many other environmental subjects.

Service Improvements

The City of Valdosta continued during 2004 to implement projects from the Water and Sewer Master Plan in order to continue to provide an adequate supply of good, safe water to meet the needs of a growing metropolitan area. Earlier mention is made of the renovation and expansion of the Water Treatment Plant. Another highlight during the year was completion of the design for the final contract for replacement of small, outdated water

mains in the system. This will add about five additional miles of new mains to 25 miles of mains that had been replaced in prior years. The City now provides water service to more than 18,000-metered customers inside and surrounding the corporate limits of the City.

In addition to these improvements, new, large water transmission mains are being added to improve delivery of an adequate supply of water to the existing City

and to new growth areas outside of the City. A new water tank is planned to provide additional storage for peak use and during emergency periods and plans were made for repair and painting of an existing storage tank. Hundreds of new fire hydrants have been added in existing neighborhoods throughout the City to place a hydrant within an acceptable distance of every residence, business and industry in the City.

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 re-furnished and expanded to meet the needs of the future.

Source water assessments are to be completed for all water systems by the end of 2004. Our Source Water Assessment is scheduled for completion no later than 2004. Once completed, a summary of the Assessment will be included in the Annual Water Quality Report, along with instructions on how to obtain a copy.

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 Environmental Protection Division of the Department of Natural Resources 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

<i>TABLE OF DETECTED CONTAMINANTS 2002</i>						
Contaminant units	MCL	MCLG	Result Range	Violation?	Sample	Major Sources
INORGANIC CONTAMINANTS						
Fluoride (ppm)	4.0	4.0	.93 [.51-1.3]	No	2004	Water additive that promotes strong teeth.
LEAD & COPPER MONITORING						
Copper (ppb)	1300 (AL) *	0.0	670 [zero]	No	2002*	Corrosion of household plumbing systems.
VOLATILE ORGANIC CONTAMINANTS (REGULATED)						
Total Trihalomethanes (ppb)	80	0.0	59.0 [41.0-84.0]	No	2004	By-product of drinking water chlorination.
Haloacetic Acids (ppb)	60	0.0	37.0 [25.0-47.0]	No	2004	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	1.4% [0%-1.4%]	No	2004	Coliform bacteria are naturally present in the environment.
FREE CHLORINE RESIDUAL						
Free Chlorine (ppm)	4.0 (MRDL)*	4.0 (MRDLG)*	2.06 [1.74-2.40]	No	2004	Chemical added for
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 2004 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, 2004. *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 4. John R. Sessions
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