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waterwords
April 2011

A Water Quality Report Presented to the Citizens of Gwinnett County

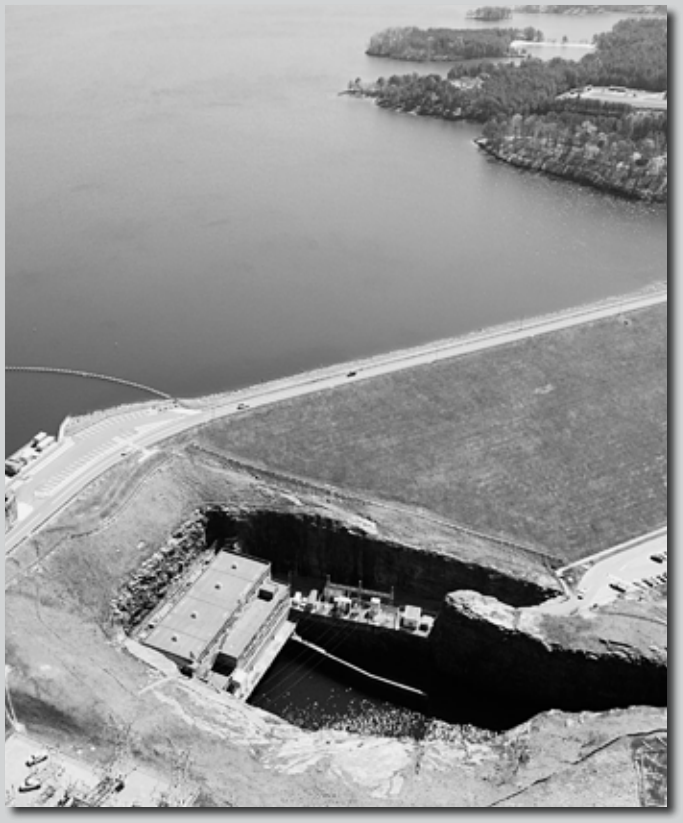
Este informe contiene información muy importante. Tradúscala o hable con alguién que lo pueda entender.

Lake Lanier provides excellent water

Gwinnett County receives its surface water supply from Lake Sidney Lanier located just north of Buford. Our water intakes, located in coves three miles from Buford Dam, provide a uniform raw water supply that is low in suspended materials, bacteria, dissolved organics, and metals.

Lake Lanier, formed by Buford Dam holding the Chattahoochee and Chestatee Rivers, is a major recreation area in north Georgia. In fact, it is one of the most-visited U.S. Army Corps of Engineers projects in the country and offers opportunities for boating, fishing, and other water pastimes. People throughout the region enjoy Lanier and its plentiful recreation opportunities. Lake Lanier is key in providing water to Georgia, since more than 60 percent of Georgia's population receives drinking water from the Chattahoochee system. The Lake Lanier watershed comprises more than 1,000 square miles in 10 Georgia counties.

The watershed contains heavily forested areas and smaller cities. Additionally, agriculture is the primary activity in the watershed.



Gwinnett focuses on water conservation

Gwinnett County's Water Conservation Plan includes a suite of programs and initiatives designed to educate our customers and the community about water-efficient behaviors and safeguarding our future water supply. Our efforts include public outreach activities, rebates and incentives for replacing older fixtures, and efficient water management practices throughout the county.

Public outreach

The Department of Water Resources (DWR) has developed ***Homeowner H_2O***, a free program to educate residents about water conservation behaviors. The presentation focuses on leak detection and repair, installing water-efficient fixtures, and increasing water-saving behaviors inside and outside the home. Department representatives are available to speak to homeowners associations, civic clubs, or other community groups.

Because the future of our water supply will be dependent on the children of this generation, DWR launched a school outreach program called ***Water on Wheels*** to target primary grades. These classroom-based programs are available to travel to schools throughout Gwinnett County. Students participate in engaging hands-on lessons that teach the importance of water conservation and foster attitudes that will inspire lifelong water stewardship. All Water on Wheels lessons support Academic Knowledge and Skills standards for science. Programs are also available to Gwinnett County scouts, summer camps, libraries, and recreation centers.

To schedule an educational program for your group, please contact Heather Moody at dwrconserve@gwinnettcounty.com or at 678.376.6722. These programs are offered **free of charge** to all Gwinnett County residents, schools, and businesses.

Rebates and incentives

Gwinnett County will continue participation in the Metro Water District toilet rebate program for 2011. The program provides rebates to qualified customers for replacing old, inefficient toilets. Details are available by calling 404.463.8645 or at **www.northgeorgiawater.org/html/315.htm**.

…continued page 3

2010 Detected Contaminants

PRIMARY INORGANIC SUBSTANCES*							
Substance	Units	MCL	MCLG	Highest Level Detected	# of sample sites found above the Action Level	Violation (yes/no)	Source of Substance
Copper	ppm	AL=1.3	1.3	0.108	0	No	Corrosion of household plumbing systems, erosion of natural deposits; leaching from wood preservatives
Lead	ppb	AL=15	0	<1.14	0	No	Corrosion of household plumbing systems, erosion of natural deposits

UNREGULATED VOLATILE ORGANIC SUBSTANCES						
Substance	Units	MCL	MCLG	Water System Results	Violation (yes/no)	Source of Substance
Bromodichloromethane	ppb	None Established	None Established	1.3	No	By-product of drinking water chlorination
Chloroform	ppb	None Established	None Established	2.1	No	By-product of drinking water chlorination

PRIMARY INORGANIC SUBSTANCES							
Substance	Units	MCL	MCLG	Water System Results	Violation (yes/no)	Range of Detections	Source of Substance
Fluoride	ppm	4.0	4.0	0.75	No	0.70 – 0.80	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate/Nitrite	ppm	10.0	10.0	0.43	No	<0.2 – 0.43	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

DISINFECTION BY-PRODUCTS							
Substance	Units	MCL	MCLG	Average	Violation (yes/no)	Range of Detections	Source of Substance
Total Trihalomethanes	ppb	80	0	22.3	No	12.8 – 40.3	By-product of drinking water chlorination
Total Haloacetic Acids	ppb	60	0	18.3	No	14.0 – 26.5	By-product of drinking water chlorination
Bromate	ppm	0.01	0	<0.005	No	<0.005-0.005	By-product of drinking water chlorination

TURBIDITY							
Substance	Units	MCL	MCLG	Highest Level Detected	Lowest % of Samples Meeting Limits	Violation (yes/no)	Source of Substance
Turbidity	NTU	TT	N/A	0.150	100	No	Soil Runoff

MICROBIOLOGICAL				
Substance	MCL	MCLG	Highest Monthly % of Positive Samples	Major Sources in Drinking Water
Total Coliform bacteria	No more than 5% of monthly samples can test positive for Coliforms	0.0	1.6	Naturally present in the environment

Due to low concentrations of lead and copper as a result of Gwinnett's corrosion control process, we have been given **Reduced Monitoring Status by Georgia EPD. Because of **Reduced Monitoring Status**, we were not required to sample lead and copper in 2010. Values reported are from 2009. Sampling will resume in 2011.*

Water conservation ...continued from page 1

Is your house as water-efficient as it can be? **Do-It-Yourself Household Water Audit** brochures are available to assist water customers in reducing their water bills. This simple step-by-step guide will help residents understand how much water they use, identify leaks, and use less water around the home. The following kits are also available free of charge to help residents improve their household efficiency:

- **Retrofit kits for older homes:** For homes built before the low-flow fixture standards of 1993, DWR provides free retrofit kits. Inside the kit are two 1.0 gallon-per-minute bathroom faucet aerators, a 1.5 gallon-per-minute swivel kitchen faucet aerator, a low-flow showerhead, two toilet leak detection dye tablets, and a toilet tank bank

- **Residential leak detection kits:** To help homeowners eliminate costly hidden water leaks in their toilets, DWR also provides free leak detection kits. The kits contain toilet dye tablets with directions, instructions on how to fix minor leaks, and a drip guide to see how much water is lost over time

Homeowners can pick up the free kits at the billing counter at DWR's Central Facility on Winder Highway. Kits may also be available at select water conservation presentations, workshops, and events. Please call 678.376.6722 for details.

Efficient water management

Through best management practices such as an aggressive leak-detection program, a pricing structure that encourages water conservation, and a range of progressive County ordinances, the Department of Water Resources strives to maximize water efficiency and serve as water conservation leaders in the region. Gwinnett has also made a concerted effort to reduce water usage in our own County facilities. All departments have taken

positive steps to conserve water, such as discontinuing irrigation, car washing, and installing water-efficient fixtures.

Since beginning the program in 2003, Gwinnett County has been a pioneer of reclaimed water use for the state of Georgia. At the state-of-the-art **F. Wayne Hill Water Resources Center**, wastewater undergoes a stringent treatment process that cleans it to an almost pristine state before discharge to the Chattahoochee River or Lake Lanier. Reclaimed water is also available to commercial customers for landscape irrigation and other non-potable uses.

To learn more about water conservation in Gwinnett County, visit **www.gwinnetth2o.com** or send an e-mail to dwrconserve@gwinnettcounty.com.

Public Input Opportunities

The Gwinnett County Water and Sewerage Authority, which owns the Water Resources water and wastewater system, acts as an advisory agency to the Gwinnett County Board of Commissioners. The Water and Sewerage Authority is made up of five members, appointed by each district commissioner and the chairman. The Authority meets monthly at the DWR Central Facility. For a schedule of meetings, visit the County's website at **www.gwinnettcounty.com**.

Glossary

PPM and PPB
Simply put, "ppm" means "parts per million" and "ppb" means "parts per billion." PPM corresponds to one penny in $10,000 or one minute in two years. PPB corresponds to one penny in $10,000,000 or one minute in 2,000 years.

Maximum Contaminant Level Goal (MCLG)
The level of a known contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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.

Action Level (AL)
The concentration of a contaminant, which, if exceeded, triggers a treatment or other requirement that a water system must follow.

Nephelometric Turbidity Unit (NTU)
A measure of suspended material in water. Turbidity is measured by shining a beam of light through water and measuring the angle at which the light is scattered by the suspended material. An instrument called a *Turbidimeter* is used for this purpose.

Treatment Technique (TT)
A required process intended to reduce the level of a contaminant in drinking water.

Notes About Contaminants

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of land or through the ground, it dissolves naturally occurring minerals and, in some cases, can pick up substances resulting from the presence of animal or human activity. Contaminants that may be present in source water include:

- **Microbial contaminants,** such as viruses and bacteria, which may come from septic systems, agriculture, livestock operations, wildlife, and sewage treatment plants
- **Pesticides and herbicides** that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses
- **Organic chemical contaminants,** including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems
- **Inorganic contaminants,** such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil or gas production, mining, or farming
- **Radioactive contaminants,** like radon, 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, the EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which provide the same protection for public health.

A note about lead

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 Gwinnett Department of Water Resources 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. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the ***Safe Drinking Water Hotline,*** 800.426.4791, or at **www.epa.gov/safewater/lead**.

Contaminants and health risks

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 water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the EPA's ***Safe Drinking Water Hotline,*** 800.426.4791.

Important health information

Some people may be more vulnerable to contaminants in drinking water than the general population.

Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, and some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their healthcare 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 Hotline,*** 800.426.4791.

For more information

For additional information or questions about this report, contact the Gwinnett County Department of Water Resources Environmental Laboratory at 770.614.2080. Director of Water Production Neal C. Spivey may be reached at 770.904.3200. Tours of the water plants are available for school groups and individuals by calling 770.904.3200.

What is Cryptosporidium?

Cryptosporidium (Crypto) is a one-celled parasitic protozoan often found in water sources that receive runoff from animal waste. Crypto can infect humans and have severe impacts on certain people, including organ transplant recipients, immunocompromised persons, young children, and persons undergoing cancer treatment. Water Resources has a monthly sampling and analysis program for Crypto and Giardia, another protozoan often found in water. Samples of both lake water and finished drinking water are analyzed each month. Crypto and Giardia both form cysts when the environment is unfavorable for their survival. During 2010, all Giardia and Crypto sample results were <0.980 and <0.980 cysts, respectively. This test program is ongoing.