



CUMMING UTILITIES 2011 DRINKING WATER QUALITY REPORT

SOURCE OF OUR WATER

During the mid-1970's, the City of Cumming received permission from the United States Army Corps of Engineers (USACE) to withdraw raw lake water from Lake Sidney Lanier and to pump it to the City's Potable Water Production Facility located at 935 Dahlonega Highway for treatment. The Mayor and Council have recently completed the installation of the City's new Raw Water Intake Facility and a 3,000-ft long intake pipe out into the lake bed. The City's new intake facility was installed at an elevation of 1020-ft MSL and is capable of withdrawing water down to a Lake elevation of 1025-ft MSL. Presently, the City has the piping capacity to withdraw up to 105 MGD from Lanier. According to a study conducted by the Metropolitan North Georgia Water Planning District, 105 MGD should be adequate capacity to meet both the City and County's water demands through 2050 and beyond.

WATER TREATMENT PROCESS

Raw water from Lake Lanier is withdrawn from the lake by the City's 6 high service vertical turbine pumps. The pumps force the water through an approximately 5-mile-long raw water main to the City's Potable Water Production Facility (PWPF), located on Dahlonega Highway, just north of town. Upon arrival to the PWPF, alum and polymer are added to the raw water to cause the finely divided mud particles to clump together and thus become heavier so that these particles will settle to the bottom of the settling basin. The water is then filtered and disinfected with chlorine to make the water biologically safe. Lime is added to the water to adjust the pH, a corrosion inhibitor is added to make the water non-corrosive, and fluoride is added to help prevent dental cavities. The demand for

potable water in the City of Cumming's service area has steadily increased over the past twelve years. The City withdraws up to 18 million gallons per day of raw water from Lake Lanier and with it, all of the mud, silt, and organics associated with lake water. As a result, the quantity of material removed from the lake water by the Potable Water Production Facility, called residual solids,

has significantly increased. In response to the increase in residual solids, the City constructed a state-of-the-art Settled Solids Dewatering Facility in 2001. Residual Solids (solids) are generated when the mud, silt, clay, and organics from Lake Lanier are mixed with aluminum sulfate (alum) and polymer, allowed to coagulate together, and eventually settle to the bottom of the treatment basins at the Potable Water Production Facility. The solids are collected and pumped to the Sludge Thickener Tanks and eventually to the Sludge Press Building where a plate-and-frame press is used to "squeeze" up to 48% of the water out of the solids. Once the solids have been dewatered, they are released into a truck and hauled to a sanitary landfill.

RECENT ACCOMPLISHMENTS

During calendar year 2009, the City completed the expansion of its Potable Water Production Facility (PWPF) from 18 MGD to **24 MGD** in order to meet the growing demands of development in the City's Water and Sewer Service Area, which includes a portion of unincorporated Forsyth County. The City also completed the construction of a new **105 MGD** Raw Water Intake Facility on Lake Lanier which will meet the City and County's water needs through 2050 and beyond - even in times of extreme drought. This structure is the deepest intake structure on Lake Lanier. The City also completed the construction of the Hendrix Road **1-million gallon** elevated water storage tank. Also a noteworthy accomplishment, in 2008 the City completed the construction of its Bethelview Road **8 MGD** Advanced Water Reclamation Facility.

PUBLIC INVOLVEMENT

The Mayor and Council meet the third Tuesday night of each month at City Hall which is located at 100 Main Street in Cumming. Citizens are welcome to attend these meetings each month.

CONTACT INFORMATION

If you have any questions or comments regarding this publication, please contact the Department of Utilities at (770) 781-2020 or log onto our website at www.cummingutilities.com. En Español: *Este informe contiene informacion muy importante sobre la calidad de su agua beber. Traduscalo o hable con alguien que lo entienda bien. (This report contains very important information about your drinking water. Please have it translated or speak with someone who fully understands it.)*

(SWAP) SOURCE WATER

ASSESSMENT PROGRAM

The City completed a Source Water Assessment during 2003. The overall point source susceptibility for the Cumming Water System was determined to be "low." For more information, please contact the Georgia Mountains RDC at (770) 538-2626. Potential

contaminant sources pinpointed by the study included septic tanks, poultry and swine farms, gas stations, boat and automotive repair shops, marinas, golf courses, etc.

SPECIAL HEALTH ALERTS

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 EPA's Safe Drinking Water Hotline at (1-800-426-4791).

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, persons 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 Hotline at (1-800-426-4791).

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 City is responsible for providing high quality drinking water but can not control the variety of materials used in plumbing components. When your water has been sitting for several hours in your home water lines, you can 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 by a private lab. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>

HOW DOES OUR WATER BECOME POLLUTED?

The sources of drinking water in many communities (both tap water and bottled water) include 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 include the following:

- **Microbial Contaminants**, such as viruses and bacteria that may come from septic systems, sewage treatment plants, 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.

Pesticides and Herbicides, which 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, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater 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 such as the Cumming Utilities Water System. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

USEFUL WEBSITE SUBJECTS AT www.cummingutilities.com:

- Pay your water, sewer, and garbage bill on-line.
- Find current water, sewer, and garbage rates and schedules – learn about the City's tiered water rate structure.
- Determine what the most current watering restrictions and bans are – download the current outdoor watering restrictions.
- Get water conservation ideas - Plumbing retrofit kits for houses constructed before 1992 – low-flow shower heads, low-flow bathroom and kitchen faucets, and toilet leak repair kits.
- Download Gardening and Xeriscape brochures – learn to conserve water via these new landscaping techniques.
- Download Do-it-Yourself Household Water Audit brochures – is your home a Water Hog?
- Download a Septic Tank Maintenance Guide – learn how to properly maintain your septic tank and prevent pollution of our streams and lakes – like the old saying goes “out of sight, out of mind”.
- Get stormwater runoff prevention ideas – wash your car while it is parked on your lawn –your lawn will be watered and will absorb the soap and cleaners (keeps the soap out of the storm drain).
- Dispose of household chemicals in a sanitary landfill

WHAT CAN I DO TO PROTECT OUR DRINKING WATER?

I live in Forsyth County, does the storm water that falls on my property drain to a Drinking Water Supply? Yes! It may not drain to the City of Cumming's Lake Lanier Intake, but it definitely drains into someone's water supply. For example, if you live in the Big Creek Basin, all storm water that drains to Big Creek from your property eventually flows to the City of Roswell's Water Intake in Fulton County. If you live in the Settingdown Creek Basin, all storm water that drains to Settingdown Creek from your property

eventually flows to the Cherokee County Water Intake in Cherokee County.

What pollutants do I have at my home that could potentially jeopardize the Drinking Water Supply? Well, let's list a few: fertilizer, paint, gasoline, motor oil, cleaners, solvents, garbage, pet waste, metal waste, pesticides and herbicides. In addition, leaking and neglected septic tanks are a potential source of pollution.

What can I do? First of all, BE RESPONSIBLE! Don't over-fertilize your yard or golf course – follow the instructions on the fertilizer bag. Dispose of waste in a proper manner. Take used motor oil to a recycling facility and don't pour it on the ground. If you find a suspicious connection to a stream or storm sewer, or if you witness someone “dumping” waste into a stream or manhole, call the Department of Utilities at (770) 781-2020 and immediately report such illegal activities. In addition, you may want to get involved with the City of Cumming storm sewer decal installation program. For more information on storm sewer decals, call the City at (770) 781-2020. See also an example of the City's storm sewer decal (to right) “No Dumping Drains to Creek” with a picture of a frog. For more information on the City's Storm Water Program, please visit the City's Web Site at www.cummingutilities.com.

What local groups could I join to make a difference in Water Quality? Please consider joining or organizing an Adopt-A-Stream Program for your watershed. Typically, community groups such as Boy Scout and Girl Scout Troops, Kiwanis, Optimist, and other similar clubs are great candidates for creating an Adopt-A-Stream Program. For more information log on to: www.riversalive.org or contact the City's Adopt –A-Stream Coordinator at (770)781-2020.

Forsyth County's Endangered Species List: Bald Eagle, Amber Darter, Bluestripe Shiner, Cherokee darter, Etowah darter, Frecklebelly madtom, Do you part to protect these endangered species – don't overuse fertilizers, pesticides, and cover all soil in your yard with grass or mulch to prevent soil erosion and run-off. Also on the list are the following plants: White fringeless orchid, and Piedmont barren strawberry. Taken from the US Fish and Wildlife website www.fws.gov/endangered/counties/forsyth_county.html.

What can I do as a restaurant owner to make a difference? Maintaining a clean environment is a priority for restaurants. The following are environmentally friendly practices both indoors and out.

- Pour wash water into a janitorial or mop sink, not a dish washing sink. Don't pour it out onto a parking lot, alley, sidewalk or street. Oil and grease can cause sewers to be clogged.
- Recycle grease and oil instead of dumping down the drain. Rendering services are available to sample grease for pesticides and other chemicals before it can be resold.
- Check your outdoor cleaning. If you use cleaning products or detergents, you should mop up wastewater or capture it with a portable pump or a wet vacuum. Pour the water into a janitor sink or a sanitary sewer if approved of by the local sanitary sewer

authorities. Train outside cleaning contractors on company cleanup practices.

- Clean floor mats, filters, and garbage cans in a mop sink or floor drain. Don't wash them in a parking lot, alley, sidewalk, or street. The oils can travel into drains and pollute stormwater.
- Inspect dumpsters and grease traps for leaks.
- If strong chemicals are sprayed on roof-mounted equipment (vents, air conditioning coils, etc.), they will flow from the roof drains into the storm drain and end up in the nearest creek. Collect the wastewater and pour it into a mop sink or sanitary sewer clean out. **Did You Know?** It is illegal to discharge wastewater or water containing soaps, detergents, cleaning products, grease, etc. into streets or curb inlets. Curb inlets were designed to drain water from the streets to prevent flooding, but the same curb inlets carry pollution (detergents, disinfectants, grease, trash, grass clippings etc.) to the nearest neighborhood creek. They do not remove pollutants.

HIGH WATER BILL WARNING

The City would like to take this opportunity to remind you of our water conserving **TIERED WATER RATE STRUCTURE**. Please limit your outdoor water usage during the summer months and repair all leaking sprinkler systems, water lines, faucets, and toilets as soon as you discover them. The City's tiered water rate structure was adopted so that the City could comply with the requirements of the Metropolitan North Georgia Water Planning District Water Supply and Water Conservation Plan (for more information, please log onto www.northgeorgiawater.com) and the requirements of the Georgia EPD. Please conserve water! For helpful water conservation ideas please log onto our website at www.cummingutilities.com. Also, water conserving retrofit kits are available for \$10.00 at City Hall. Also, the City is involved with the MNGWPD toilet rebate program (see: <http://www.northgeorgiawater.org/html/315.htm> for more information regarding toilet rebates in your area). Please call the City for information regarding our septic tank workshop to be held soon (770)781-2020.

CONTACT US: If you have any questions or comments about this report, please contact the Department of Utilities at (770) 781-2020 or via US Mail at City of Cumming Department of Utilities Water Production Division 935 Dahlonega Highway, Cumming, Georgia 30040. For more information, See www.cummingutilities.com. Also, please contact the City of Cumming Director of Utilities at jon.heard@cityofcumming.net. Contact Tom Bryson, Superintendent of the Water Production Division at (770) 781-2039 or via email at tombryson@cityofcumming.net.

Water Quality Data Report

Regulated Substances

Parameter Tested	MCLG	Maximum Allowed MCL	Cumming Water System	Range of Detections	Test Date	Violation? (Exceeds AL)?	Typical Source of Contaminant
Fluoride ppm	4	4	1.18	0.70 – 1.18	2010	NO	Water additive that promotes strong teeth
Sodium ppm	N/A	N/A	3.6	0 – 3.6	2010	NO	Erosion of natural deposits
Nitrate/ Nitrite ppm	10.0	10.0	0.39	0 – 0.39	2010	NO	Runoff from fertilizer use Leaching from septic tanks, sewage, erosion of natural deposits
Turbidity NTU	N/A	5	0.09	0.01-0.09	2010	NO	Soil runoff
Total Trihalo-methanes ppm	N/A	80	0.026	0.023-0.026	2010	NO	By-product of drinking water chlorination
Total Coliform Bacteria %	0	<5%	0%	0% - 0%	2010	NO	Bacteria naturally present in the environment; used as an indicator that other potentially harmful bacteria may be present
Chlorine ppm	MRDLG 4	MRDL 4	Maximum 1.77	Range 1.25 – 1.77	Test Date 2010	Violation? NO	Water additive used to control microbes

Unregulated Substances

Substance Tested	MCLG	Maximum Allowed MCL	Amount Detected	Range of Detections	Test Date	Violation? (Exceeds AL?)	Typical Source of Contaminant
Total Organic Carbon ppm	N/A	N/A	1.6	0.9-1.6	2010	NO	Plant & animal material
Haloacetic Acid HAA5 ppm	N/A	60	0.025	0.022-0.025	2010	NO	By-product of drinking water chlorination

Regulated at the Customer's Tap

Substance Tested	MCLG	Maximum Allowed MCL	Amount Detected 90% Percentile	Number Of sites Above AL	Test Date	Violation? (Exceeds AL?)	Typical Source of Contaminant
Copper ppb	1300	1300	140	0	2007	NO	Corrosion of household plumbing systems
Lead ppb	ND	15	0	0	2007	NO	Corrosion of household plumbing systems

The table above lists all of the drinking water contaminants that we detected during calendar year 2010. The presence of 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 performed during 2010. The EPA or the Georgia EPD requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants

do not change frequently. The bottom line of this report is – **Your water is safe to drink and the City met all federal EPA and state EPD requirements during the year 2010.** **Definition of Terms & Abbreviations Used in This Report:**

- **MCL – Maximum Contaminant Level** is 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.
- **MCLG – Maximum Contaminant Level Goal** is the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
- **(AL) - Action Level** is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow
- **(TT) - Treatment Technique** is a required process intended to reduce the level of a contaminant in drinking water.
- **(MRDL) – Maximum Residual Disinfectant Level** is 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.
- **(MRDLG) – Maximum Residual Disinfectant Level Goal** is 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.
- **(ppm) Parts Per Million** means one part per million part (same as milligrams per Liter) and corresponds to 1 minute in 2 years or 1 penny in \$10,000.
- **(ppb) parts per billion** means one part per billion parts (same as micrograms per Liter) and corresponds to 1 minute in 2,000 years or 1 penny in \$10 million.
- **N/A) Not Applicable** means does not apply.
- **ND – Not Detected**

National Primary Regulated Contaminants <i>All byproducts Of chlorination:</i>		Most Recent	Below		Violation?	
		Lab Results 2010	MCL?			
Parameter:	Units	Analysis	YES	NO	YES	NO
Chloroform	ug/L	9.5	X			X
Bromodichloromethane	ug/L	2.4	X			X

Below: City's New 8 MGD Advanced Water Reclamation Facility



Below: City's New 24 MGD Water Production Facility



Left: City's New 1 Million Gallon Hendrix Rd Tank



Below: City's New 105 Million Gallon Per Day Raw Water Inake Facility



H. Ford Gravitt
Mayor

John D. Pugh
Councilman

Lewis Ledbetter
Councilman

Quincy Holton
Councilman

Ralph Perry
Councilman

Rupert Sexton
Councilman