

# City of Smyrna

## 2008 Annual Water Quality Report

This is an annual report on the quality of water delivered by the Cobb County – Marietta Water Authority. This report meets the federal Safe Drinking Water Act (SDWA) requirements for the Consumer Confidence Report (CCR) and contains information on the source of our water, its constituents, and the health risks associated with any contaminants.

Safe water is vital to our community. Please know that your drinking water is safe. Please read this report carefully, and if you have any questions, contact the City of Smyrna Water Department at 770 319-5338.



### Water Source

The Cobb County – Marietta Water Authority has two (2) surface water sources supplying two treatment facilities. The Wyckoff Treatment Division is supplied from Lake Allatoona, a Corps of Engineers impoundment in north Cobb, south Cherokee and south Bartow counties. The Quarles Treatment Division receives water from the Chattahoochee River.

During 2002 the Cobb County – Marietta Water Authority and the Atlanta Regional Commission completed a source water assessment itemizing potential sources of water pollution to our surface drinking water supplies. This information can help you understand the potential for contamination of your drinking water supplies and can be used to prioritize the need for protecting drinking water sources.

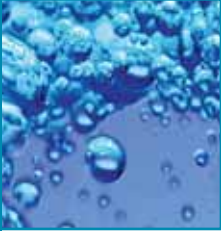
A Source Water Assessment is a study and report which provides the following information:

- Identifies the area of land that contributes the raw water used for drinking water,
- Identifies potential sources of contamination to drinking water supplies, and
- Provides an understanding of the drinking water supply's susceptibility to contamination.

For more information on this project visit the Source Water Assessment website at <http://www.atlantaregional.com/swap/> or you can request information by mail from the ARC:

Attn: Matthew Harper  
Environmental Planning Division  
Atlanta Regional Commission  
40 Courtland Street, NE  
Atlanta, GA 30303





## An Explanation of the Water Quality Data Table

The table shows the results of our water quality analyses. Every regulated contaminant **that we detected** in the water, even in the most minute traces, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health (MCLG), the usual sources of such contamination, footnotes explaining our finding, and a key to units of measurement. Definitions of MCL, MCLG, AL, and TT are important:

**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 Goal (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.

**Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must implement.

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

**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.

The data presented in this report are from the most recent testing done in accordance with regulations.

### Key to Table

AL . . . . .	Action Level
MCL . . . . .	Maximum Contaminant Level
MCLG . . . . .	Maximum Contaminant Level Goal
NTU . . . . .	Nephelometric Turbidity Unit
MRDL . . . . .	Maximum Residual Disinfectant Level
MRDLG . . . . .	Maximum Residual Disinfectant Level Goal
ppm . . . . .	parts per million or milligrams per liter (mg/L)
ppb . . . . .	parts per billion or micrograms per liter (µg/L)
TT . . . . .	Treatment Technique
n/a . . . . .	not applicable
n/d . . . . .	not detected
BDL . . . . .	Below Detection Limits

## Tables of Contaminants

The Georgia Environmental Protection Division (GaEPD) has determined that the concentrations of certain water quality monitoring parameters does not change frequently with our system, therefore some of the data presented in this report are greater than one year old.

### INORGANIC CONTAMINANTS

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources	Violation
Fluoride <sup>1</sup>	2/03/2008	ppm	4	4	0.97	0.0 – 0.97	Erosion of natural deposits; water additive which promotes strong teeth	NO
Lead <sup>2</sup>	07/15/2008	ppb	AL =15	0	9.7	n/a	Corrosion of household plumbing systems.	NO
Copper <sup>3</sup>	09/03/2008	ppm	AL =1.3	0	0.032	n/a	Corrosion of household plumbing systems.	NO
Nitrate/Nitrite <sup>4</sup>	04/01/2008	ppm	10	10	1.2	0.48 -1.2	Runoff from fertilizer use; leaching from septic tanks; erosion of natural deposits	NO

**Notes:**

<sup>1</sup>Fluoride is added to water to help in the prevention of dental cavities (caries) in children.

<sup>2</sup>Of the 50 sites tested, three exceeded the action level. The next round of testing is due in 2011.

<sup>3</sup>Of the 50 sites tested, none exceeded the action level. The next round of testing is due in 2011.

<sup>4</sup>Nitrate and Nitrite are measured together.

## DISINFECTION BY-PRODUCTS, BY-PRODUCT PRECURSORS AND DISINFECTANT RESIDUALS

Contaminant	Date Tested	Unit	MCL	MCLG	Detected Level	Range	Major Sources	Violation
TTHM's (Total Trihalomethanes)	11/05/2008	ppb	80	0	36.0	15.0 – 68.5 <sup>1</sup>	By-products of drinking water disinfection	NO
HAA5's (Haloacetic Acids)	08/06/2008	ppb	60	0	20.0	8.5 – 34.3 <sup>1</sup>	By-products of drinking water disinfection	NO
TOC (Total Organic Carbon)	04/07/2008	ppm	TT	n/a	2.0	1.0 – 2.0	Decay of organic matter in the water withdrawn from sources such as lakes and streams	NO
Chlorite	12/03/2008	ppm	1.0	0.8	0.42	<0.01 – 0.42	By-product of drinking water disinfection	NO
Chlorine Free	05/21/2008	ppm	MRDL = 4	MRDLG = 4	2.12	BDL <sup>2</sup> – 2.12	Drinking water disinfectant	NO

<sup>1</sup>This contaminant is regulated by the average concentration over a period of a year.

<sup>2</sup>Detection Limit for chlorine is 0.05 mg/L. Disinfection was confirmed by heterotrophic plate count. This is a method that measures total bacteria in a sample. The result was within acceptable limits.

## TURBIDITY

Contaminant	MCL	MCLG	Level Found	Range	Sample Date	Violation	Typical source
Turbidity <sup>3</sup>	TT = 1 NTU	0	0.23	n/a	04/01/2008	NO	Soil runoff
Turbidity <sup>3</sup>	TT = percentage of samples <0.3 NTU	0	100%	n/a	04/01/2008	NO	Soil runoff

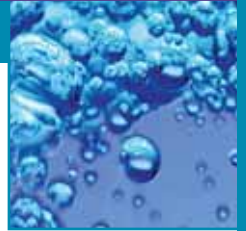
Note:

<sup>3</sup>Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

## MICROBIOLOGICAL CONTAMINANTS

Contaminant	MCL	MCLG	Highest level detected (%)	Average detected level (%)	Violation
Total coliform bacteria	<5% positive samples during a monthly sampling period	0% positive samples during a monthly sampling period	0.00%	0.00%	NO
Escherichia coli (E. coli) bacteria	<5% positive samples during a monthly sampling period	0% positive samples during a monthly sampling period	0.00%	0.00%	NO

## Unregulated Contaminants – *Cryptosporidium* spp. and *Giardia Lamblia*



The Cobb County – Marietta Water Authority participated in a major drinking water quality testing program called the Supplemental Information Collection Rule (SICR). Two of the contaminants tested for under this rule are the parasites *Cryptosporidium* and *Giardia*, which have caused outbreaks of intestinal disease in the United States and abroad. These parasites are common in surface water, very difficult to kill and even a well-run water system may contain some live oocysts (in the case of *Cryptosporidium*) or cysts (in the case of *Giardia*). The U.S. Environmental Protection Agency is working to resolve several scientific issues that will allow it to set *Cryptosporidium* and *Giardia* safety standards. Our testing, performed at the raw (**untreated**) water intake on the Chattahoochee River, located immediately north of the Johnson Ferry Road crossing, revealed the presence of *Cryptosporidium* and/or *Giardia* in several months' samples. **These organisms were detected in the water prior to treatment.** Following is a table detailing these occurrences. Our treatment technique is designed and optimized to remove these contaminants, therefore no precaution about our drinking water is currently needed for the general public. See advice about special populations and a source for further information below in the **Required Additional Health Information** section.

### CRYPTOSPORIDIUM OCCURRENCES

Date	# of Oocysts/10 L
June 16, 1999	1
June 29, 1999	1
September 28, 1999	1
November 8, 1999	2

### GIARDIA OCCURRENCES

Date	# of Cysts/10 L
September 28, 1999	19
October 12, 1999	9
October 25, 1999	10
November 8, 1999	10
November 22, 1999	6

These organisms were detected prior to treatment.

During the same monitoring periods as the Chattahoochee River, the water at Lake Allatoona was tested. No oocysts or cysts were detected.

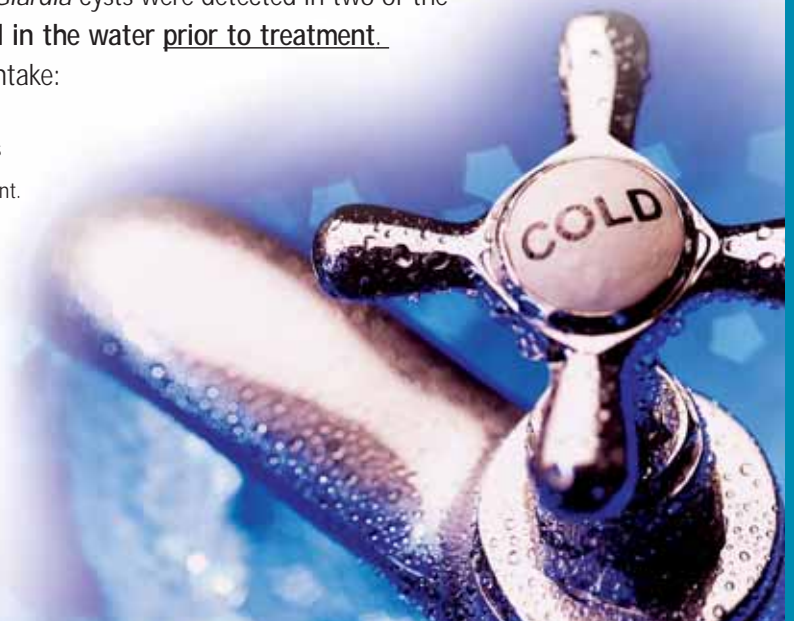
In order to comply with an upcoming federal regulation, the Cobb County – Marietta Water Authority has been monitoring for *Cryptosporidium* and *Giardia* in the raw water from both its water sources, the Chattahoochee River and Lake Allatoona. The monitoring was performed on both Lake Allatoona and the Chattahoochee River water sources monthly during 2005. No *Cryptosporidium* oocysts were detected at either source. *Giardia* cysts were detected in two of the twelve samplings. Again, **these organisms were detected in the water prior to treatment.**

All of the occurrences were at the Chattahoochee River intake:

### GIARDIA OCCURRENCES

Date	# of Cysts/10 L
January 14, 2005	2
February 14, 2005	1

These organisms were detected prior to treatment.





## Required Additional Health Information

To ensure tap water is safe to drink, EPA prescribes limits on the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

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 at 1.800.426.4791**.

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 Cobb County – Marietta Water Authority along with the City of Smyrna are 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 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. 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>.

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 the land or through the ground, it dissolves naturally-occurring minerals and 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:

- a) Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- b) 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.
- c) Pesticides and herbicides which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- d) Organic chemical contaminants, including synthetic (man-made) and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban storm water runoff, and septic systems.
- e) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

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 people, and infants can be particularly at risk. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the EPA's **Safe Drinking Water Hotline at 1.800.426.4791**.

Water quality data for community water systems throughout the United States are available on the internet at [www.waterdata.com](http://www.waterdata.com).



## Concerning Lead in Our Water

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at the customer's home may be higher than at other homes in the community as a result of materials used in their home's plumbing. If a customer is concerned about elevated lead levels in

their home's water, they may wish to have the water tested. In order to ensure the lowest possible lead levels, the home's tap should be flushed for 30 seconds to 2 minutes before using the water.

Additional information is available from the EPA's [Safe Drinking Water Hotline at 1.800.426.4791](tel:18004264791).

Water quality data for community water systems throughout the United States are available on the internet at [www.waterdata.com](http://www.waterdata.com).

City of Smyrna Water System Microbiological results for 2008	Number of coliform-positive samples	Number of samples collected	% Total coliform-positive samples	Number of <i>E.coli</i> -positive samples	Number of samples collected	% Total <i>E.coli</i> - positive samples	Violation
Jan-08	0	40	0.0%	0	40	0.0%	NO
Feb-08	0	40	0.0%	0	40	0.0%	NO
Mar-08	0	40	0.0%	0	40	0.0%	NO
Apr-08	0	40	0.0%	0	40	0.0%	NO
May-08	0	40	0.0%	0	40	0.0%	NO
Jun-08	0	40	0.0%	0	40	0.0%	NO
Jul-08	0	40	0.0%	0	40	0.0%	NO
Aug-08	0	40	0.0%	0	40	0.0%	NO
Sep-08	0	40	0.0%	0	40	0.0%	NO
Oct-08	0	40	0.0%	0	40	0.0%	NO
Nov-08	0	40	0.0%	0	40	0.0%	NO
Dec-08	0	40	0.0%	0	40	0.0%	NO
	<b>Highest detected total coliform level</b>		<b>0.0%</b>	<b>Highest detected <i>E.coli</i> level</b>		<b>0.0%</b>	<b>NO</b>