

*Annual*  
**WATER**  
**QUALITY**  
**REPORT**

*Reporting Year 2012*



*Presented By* \_\_\_\_\_



PWS ID#: GA0670005

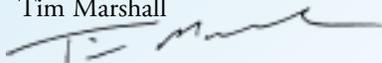
## There When You Need Us

Once again we proudly present our annual water quality report. This edition covers all testing completed from January through December 2012. Marietta Water is committed to providing consumers with high-quality water and excellent service. We have developed this report to inform and educate our consumers about the quality of the drinking water distributed in your community. When reading this report, you will find that Marietta Water delivers water to you that exceeds federal drinking water standards established by the U.S. EPA.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water. For more information, visit our website at [www.mariettawater.com](http://www.mariettawater.com).

Sincerely,

Tim Marshall



Environmental Compliance Coordinator



## Where Does My Water Come From?

Marietta Water purchases water from the Cobb County-Marietta Water Authority (CCMWA), a public utility founded in 1951. The CCMWA treatment facilities are supplied from two separate surface water sources. The James E. Quarles Treatment Facility, built in 1953, withdraws water from the Chattahoochee River. The Quarles plant can treat a maximum of 86 million gallons of water a day. This water is distributed and utilized on the eastern side of Cobb County and Marietta. The Hugh A. Wyckoff Treatment Facility, put online in 1972, withdraws water from Lake Allatoona. Lake Allatoona is a Corps of Engineers impoundment in north Cobb, south Cherokee, and south Bartow counties. This manmade, multi-use lake is part of the Etowah River Basin. The Wyckoff plant can treat a maximum of 72 million gallons of water a day. This water is distributed and utilized on the north and west side of Cobb County and Marietta. (<http://www.ccmwa.org/>)

## Lead in Home Plumbing

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. We 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 [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## 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, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) 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 (800) 426-4791 or <http://water.epa.gov/drink/hotline>.

## Community Participation

Marietta Water operates under the supervision of the Board of Lights and Water (BLW). The BLW was created through the State Legislature. There are seven Board Members, including the Mayor (as Chair), a City Council Member (appointed by the Mayor), and five other members of the community (appointed by the City Council).

The board meets the Monday before the second Wednesday of each month. Marietta Water maintains regular operating hours of Monday through Friday, 7:00 a.m. to 4:00 p.m. To reach the service and maintenance department 24 hours a day, please call (770) 794-5230.

## Source Water Assessment

The CCMWA 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 that 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.

Individual source pollution involves actual facilities, which have contaminants on site that can pose a potential health risk if humans consume those contaminants. Nonpoint source pollution is caused by development and by everyday activities that take place in residential, commercial, and rural areas; nonpoint source pollution is carried by rainfall to streams and lakes. After evaluating these sources of pollution, the report found the Chattahoochee watershed susceptibility ranking to be high and the Lake Allatoona watershed susceptibility ranking to be medium.

For more information on this project, visit the source water assessment website at <http://www.atlantaregional.com/environment/water/source-water-assesment-project>, or you can request information by mail from the Environmental Planning Division, Atlanta Regional Commission, 40 Courtland Street NE, Atlanta, GA 30303.

## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Tim Marshall, Environmental Compliance Coordinator, at (770) 794-5229.

## Testing For *Cryptosporidium*

*Cryptosporidium* is a microbial pathogen found in surface water throughout the United States. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Our 2012 monthly monitoring indicates the presence of these organisms in one of our source waters. 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 two *Cryptosporidium* oocysts in the November sample only. These organisms were detected in the water prior to treatment. During the same monitoring periods as the Chattahoochee River, the water at Allatoona Lake was tested. No oocysts were detected. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people, infants and small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

## Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and substances resulting from the presence of animals or from human activity. Substances that may be present in source water include:

**Microbial Contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, or wildlife;

**Inorganic Contaminants**, such as salts and metals, which can be naturally occurring or may result from urban stormwater 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 may also come from gas stations, urban stormwater runoff, and septic systems;

**Radioactive Contaminants**, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



You may not be aware of it, but every time you pour fat, oil, or grease (FOG) down your sink (e.g., bacon grease), you are contributing to a costly problem in the sewer collection system. FOG coats the inner walls of the plumbing in your house as well as the walls of underground piping throughout the community. Over time, these greasy materials build up and form blockages in pipes, which can lead to wastewater backing up into parks, yards, streets, and storm drains. These backups allow FOG to contaminate local waters, including drinking water. Exposure to untreated wastewater is a public health hazard. FOG discharged into septic systems and drain fields can also cause malfunctions, resulting in more frequent tank pump-outs and other expenses.

Communities spend billions of dollars every year to unplug or replace grease-blocked pipes, repair pump stations, and clean up costly and illegal wastewater spills. Here are some tips that you and your family can follow to help maintain a well-run system now and in the future:

### NEVER:

- Pour fats, oil, or grease down the house or storm drains.
- Dispose of food scraps by flushing them.
- Use the toilet as a waste basket.

### ALWAYS:

- Scrape and collect fat, oil, and grease into a waste container such as an empty coffee can, and dispose of it with your garbage.
- Place food scraps in waste containers or garbage bags for disposal with solid wastes.
- Place a wastebasket in each bathroom for solid wastes like disposable diapers, creams and lotions, and personal hygiene products including nonbiodegradable wipes.



## Sampling Results

During the past year, many water samples have been routinely analyzed in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine <sup>1</sup> (ppm)	2012	[4]	[4]	1.92	ND–1.92	No	Water additive used to control microbes
Chlorite (ppm)	2012	1.0	0.8	0.37	0.10–0.37	No	By-product of drinking water disinfection
<i>Escherichia coli</i> ( <i>E. coli</i> ) bacteria <sup>2</sup> (% positive samples)	2012	5% of monthly samples are positive	0	1.27	NA	No	Human and animal fecal waste
Fluoride (ppm)	2012	4	4	0.91	ND–0.91	No	Erosion of natural deposits; Water additive which promotes strong teeth
Haloacetic Acids [HAA]–Stage 1 <sup>3</sup> (ppb)	2012	60	0	24.0	9.7–50.3	No	By-products of drinking water disinfection
Nitrate+Nitrite (ppm)	2012	10	10	1.4	0.31–1.4	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes]–Stage 1 <sup>3</sup> (ppb)	2012	80	0	37.0	14.8–74.6	No	By-products of drinking water disinfection
Total Coliform Bacteria (% positive samples)	2012	5% of monthly samples are positive	0	3.80	NA	No	Naturally present in the environment
Total Organic Carbon (ppm)	2012	TT	NA	1.9	0.92–1.9	No	Naturally present in the environment; Decay of organic matter in the water withdrawn from sources such as lakes and streams
Turbidity <sup>4</sup> (NTU)	2012	TT=1 NTU	0	0.15	ND–0.15	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2012	TT=95% of samples <0.3 NTU	0	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community<sup>5</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2011	1.3	0	0.027	0/50	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2011	15	0	2.5	1/50	No	Corrosion of household plumbing systems; Erosion of natural deposits

### INITIAL DISTRIBUTION SYSTEM EVALUATION (IDSE)<sup>6</sup>

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Haloacetic Acids [HAA]–IDSE Results (ppb)	2008	25.5	8.6–39.0	By-products of drinking water disinfection
TTHMs [Total Trihalomethanes]–IDSE Results (ppb)	2008	59.8	11.9–93.5	By-products of drinking water disinfection

## Definitions

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

**MCL (Maximum Contaminant Level):** 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):** 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.

**MRDL (Maximum Residual Disinfectant Level):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**MRDLG (Maximum Residual Disinfectant Level Goal):** 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.

**NA:** Not applicable.

**ND (Not Detected):** Indicates that the substance was not found by laboratory analysis.

**NTU (Nephelometric Turbidity Units):** Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**ppb (parts per billion):** One part substance per billion parts water (or micrograms per liter).

**ppm (parts per million):** One part substance per million parts water (or milligrams per liter).

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

<sup>1</sup> Detection limit for chlorine is 0.05 ppm. Disinfection was confirmed by heterotrophic plate count. This is a method that measures total bacteria in a sample. The results were within acceptable limits.

<sup>2</sup> One positive sample out of 79 samples tested for the month and 870 samples tested during 2012. Compliance with the E. coli MCL is determined upon additional repeat testing. All required repeat sample testing was negative.

<sup>3</sup> This contaminant is regulated by the average concentration over a period of a year.

<sup>4</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.

<sup>5</sup> The next round of testing is due in 2014.

<sup>6</sup> We were required by the U.S. EPA to conduct an evaluation of our distribution system. This is known as an Initial Distribution System Evaluation (IDSE) and is intended to identify locations in our distribution system that have elevated disinfection by-product concentrations. Disinfection by-products (e.g., HAAs and TTHMs) result from continuous disinfection of drinking water and form when disinfectants combine with organic matter that naturally occurs in the source water. Amount detected is the highest LRAA (Locational Running Annual Average) for 17 sample sites. The range is for all samples taken during this evaluation from October 2007 to August 2008.