Data From
Jan. 1 - Dec. 31,
2010

2010 CCR

America's Best

Tasting Water

Annual Water Quality Report for Customers of the Macon Water Authority

Macon Water Authority recognized as an award-winning utility in 2010

When the Macon Water Authority (MWA) was awarded the Best Tasting Drinking Water in North America by the American Water Works Association (AWWA) in 2009, the utility set the bar high for excellence in performance for water storage, treatment, and distribution. This past year was another highlighted by industry accolades, which place the MWA among the nation's best water utilities.

For starters, the Frank C. Amerson, Jr. Water Treatment Facility won its fourth straight Gold Award from the Georgia Association of Water Professionals (GAWP) for 100% permit compliance. In addition, the Authority's Rocky Creek Plant won the GAWP Platinum Award for 12 straight years of operations without a permit violation.

The Government Finance Officers Association (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the MWA for the 13th straight year for its comprehensive financial statements. The Authority also received the 2010 Innovative Leadership Award from Cityworks for its use of this industry software to enhance GIS capabilities and customer service.

As for accomplished employees, Dale Johnson won the GAWP Top Wastewater Plant Operator award for Georgia's District 5, and Heather Veal, the Authority's CMOM Coordinator, was inducted into the GAWP Golden Manhole Society for professional achievement within the wastewater field. In addition, Gary McCoy, MWA Director of Water, received the AWWA William J. Greene, Jr. Award for his leadership in the industry on the state and national levels.

The 2010 calendar also was full of events, milestones, and opportunities for public outreach. More than 400 anglers took part in the annual Kids Fishing Derby in June, while another 300 volunteered for Ocmulgee Alive in the fall. In 2010, the Authority also issued $20 million in water and sewer revenue bonds for system improvements, with another $10 million dollar bond issue planned for the summer of 2011. Finally, the MWA scored a record 38.2 out of 40 on its portion of the ISO field survey conducted this past year, which enhanced the overall Public Protection Classification impacting fire insurance and other factors in Macon/Bibb County.

What's in my drinking water and why?

MWA has the highest water quality

In order to ensure that MWA tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by any public water system.

The detailed data of the contaminants detected in MWA drinking water during the 2010 calendar year are included in the table titled: "Water Quality Data 2010" on the back (page 2) of this report.

Notice to Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than others – such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly citizens and infants. They can be particularly at risk from infections and should seek advice about drinking water from their health care providers. Related concerns or questions can be addressed via the Safe Drinking Water Hotline at 1-800-426-4791.

Contaminants tested by the MWA

Contaminants that may be present in source water BEFORE it is treated at the MWA's Frank C. Amerson, Jr. Water Treatment Facility include:

Microbial contaminants, such as viruses and bacteria that may come from septic tanks/systems, agricultural livestock, wildlife, and wastewater treatment plants.

Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

Pesticides and herbicides, which may come from 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, in addition to coming from gas stations, urban storm water runoff, and septic tanks/systems.

Radioactive contaminants, which can be naturally occurring, or be the result of oil and gas production or mining activity.

Macon Water Authority instilling "consumer confidence"

The Macon Water Authority (MWA) is pleased to present the results of our annual Consumer Confidence Report (CCR), also referred to as the water quality report, which provides definitive, empirical evidence that you are enjoying some of the cleanest, safest, and best-tasting drinking water possible.

This report is intended to educate MWA customers about what is in their water and why, relative to your drinking water consumption.

MWA customers should be confident knowing their drinking water has had no violations in detected levels of inorganic contaminants, organic substances, disinfectants, or disinfectant by-products, in the year 2010. The MWA did have a violation for microbiological contaminants, when Total Coliform exceeded parameters in May of 2010. (See VIOLATION on page 2.)

This report encapsulates a year's worth of data, collected between Jan. 1, 2010 – Dec. 31, 2010, concerning the quality of water consumed by MWA customers. Copies of this CCR also are available at the MWA headquarters or on our Web site at www.maconwater.org.

MWA Drinking Water System

Our Raw Water Source(s)

The raw water used for drinking water production and distribution at the MWA is obtained from two primary sources – the Ocmulgee River and Javors J. Lucas Lake.

Javors Lucas Lake is a 589-acre reservoir that holds an estimated 5.8 billion gallons at full pool.

However, the Authority uses its intake at the Ocmulgee River to supply the majority of raw water for the reservoir – supplementing the surface water collected in Lucas Lake from runoff within its watershed.

Our Water Production Plant

The Frank C. Amerson, Jr. Water Treatment Plant produces all of the finished drinking water for MWA customers. Since opening in the summer of 2000, the Amerson Plant has been selected as the "Plant of the Year" in the state of Georgia on three occasions (years). Its production capacity is 60 million gallons per day (MGD), with the capability to expand to 90 MGD in the future, if necessary.

Our Water Storage and Distribution

The MWA drinking water distribution system includes four clear wells located at the Amerson Plant, as well as seven elevated and 10 ground storage tanks. Collectively, these 21 tanks throughout the system can store up to 35 million gallons of finished drinking water.

In addition, the MWA distribution system features approximately 1,664 miles of water lines and seven pumping stations, which carry an average of 24.8 million gallons of finished drinking water each day to approximately 51,000 customers.

The Authority also uses advanced SCADA technology to monitor and control drinking water distribution, 24/7.

Questions concerning any of the details of this Consumer Confidence Report, or the MWA Source Water Assessment Plan, should be directed to Gary McCoy, MWA director of water, at 478-464-5653.

Water Quality Data 2010

Substances	Units	MCL	MCLG	Highest Amount	Range	Violation	Typical Sources in Drinking Water
Inorganic							
Chlorine	ppm	MRDL=4	MRDLG=4	1.7	1.0 - 1.7	No	Water additive used to control microbes.
Chlorine Dioxide	ppb	MRDL=800	MRDLG=800	0.460	0.10 – 0.460	No	Water additive used to control microbes.
Fluoride	ppm	4	4	1.52	0.78 – 1.52	No	Water additive that promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
Nitrate	ppm	10	10	None Detected	None Detected	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.
Organic							
Total Organic Carbon	Removal Ratio RAA	TT	n/a	1.71	1.0 – 1.71	No	Naturally present in the environment.
Disinfection By-Products							
Chlorite	ppm	1	0.8	0.64	0.01 – 0.64	No	By-product of drinking water disinfection.
Haloacetic Acids (HAAs)	ppb	60	n/a	21.8	9.7 – 21.8	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs)	ppb	80	n/a	50.6	8.8 – 50.6	No	By-product of drinking water disinfection.
Microbiological							
Total Coliform	% of monthly samples	5	0	5.4	0 – 5.4	Yes	Naturally present in the environment, as well as pipe biofilms.
Turbidity	NTU	TT	n/a	0.24	0.03 – 0.24	No	Soil runoff.
Copper and Lead Sampled at Customer Taps in 2008							
Copper	ppm	AL = 1.3	1.3	The 90th percentile = 0.23 There were no samples above 1.3		No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	ppb	AL = 15	0	The 90th percentile = 2.6 There were no samples above 15		No	Internal corrosion of household plumbing systems; erosion of natural deposits.

This table lists drinking water substances detected at the source, at MWA's treatment plant, or within MWA's distribution system in 2010, except for copper and lead, which were sampled at customer taps in 2008. These samples, per EPD regulations, will be taken again in 2011.

VIOLATION: Total Coliform in May of 2010

- Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful bacteria may be present. Coliforms were found in more samples than allowed (in May of 2010), which was a warning of potential problems.
- However, only 5.4% of the monthly samples taken in May of 2010 tested positive for Coliform. None of the samples were found to have E. coli, which is the potentially harmful form of bacteria that the Authority also tested for during this same period. The Georgia EPD and the public were notified of this violation at the time, as required. Extensive follow-up testing was conducted, well beyond what was required, to verify that the Total Coliform violation was no longer in effect and that no further violations had occurred.
- The most likely cause of the Violation (of excessive measures of Total Coliform), as determined by the MWA and Georgia EPD, was naturally occurring pipe biofilm being broken off of the inside walls of water mains and lines, as a result of fire hydrant flushing around the time the water samples were taken. The Authority has implemented measures to prevent similar occurrences in the future.

How to Read the Report

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. For lead and copper, the reading is the 90th percentile value from the most recent sampling.

>: greater than.

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.

Maximum Contaminant Level Goal (MCLG): 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.

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 microbial 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. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

n/a: not applicable.

Nephelometric Turbidity Units (NTUs): Used in the measurement of turbidity. Turbidity is a measure of the cloudiness of the water. The MWA monitors turbidity because it is a good indicator of the effectiveness of our filtration system.

parts per billion (ppb): A measurement concentration that is equivalent to micrograms per liter (Mcg/L).

parts per million (ppm): A measurement concentration that is equivalent to milligrams per liter (mg/L).

% of monthly samples: The percent of samples taken during a month that had the substance present. For total coliforms, the MWA took a minimum of 140 samples per month in 2010.

Removal Ratio RAA: The amount removed in the process expressed as a ratio. MWA samples monthly the raw water and treated water for total organic carbon, and a removal ratio is then calculated. To meet the requirements, the MWA then calculates on a quarterly basis the RAA, which is the running annual average of the removal ratio.

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

Required Consumer Confidence Report (CCR) Statement Addressing Lead in Drinking Water

"If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water comes primarily from materials and components associated with service lines and home plumbing. The Macon Water Authority is 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 (1-800-426-4791), or at http://www.epa.gov/safewater/lead."