

Data From
Jan. 1 - Dec. 31,
2011

America's Best



2011 CCR



Tasting Water

Annual Water Quality Report for Customers of the Macon Water Authority

From the best tasting water to the best operated system

Macon Water Authority soars to success in 2011

Not only does the Macon Water Authority (MWA) boast the Best Tasting Drinking Water in North America, as declared by the American Water Works Association in 2009, the utility continues to rank among the best water systems in the state of Georgia, with a number of accolades in 2011 as evidence.

The MWA Frank C. Amerson, Jr. Water Treatment Facility, which is one of the largest in the state with 60 million gallons per day (MGD) of treatment capacity, won this year's Plant of the Year Award, as judged by the Georgia Association of Water Professionals (GAWP). It was the fourth time the facility has received this honor since opening in 2000. The Amerson Plant also won a GAWP Gold Award for 100% permit compliance.

In addition, Amerson Plant Operator Dave Blackwell won the GAWP Top Op Award for Georgia's District 5, while other MWA employees garnered statewide awards in 2011 as well. Ray Simmons was inducted into the GAWP Golden Manhole Society last year, while Darryl Macy was selected to join the "5-S" Society. Kate Kubesheski won the WEF William D. Hatfield Award for excellence as a wastewater treatment plant operator, and MWA Executive Director Tony Rojas served as GAWP

President this past year.

The Authority's sewer operations came in for praise in 2011 by winning the GAWP Collection System Gold Award for grading out at 95% on its system evaluation – ranking it among the best systems in the state.

As for public education and outreach, the MWA won the GAWP Innovative Initiative Award for its annual Kids Fishing Derby, held on the first Saturday in June, while the annual Ocmulgee Alive river cleanup in October garnered a GAWP Certificate of Distinguished Achievement as well.

The MWA Rocky Creek Water Reclamation Facility won a GAWP Platinum Award for 100% permit compliance in 2011, marking the 13th straight year the facility has gone without a permit violation.

Finally, the MWA received a Certificate of Achievement in Financial Reporting from the Government Finance Officers Association, to round out the individual, facility, and system awards for the Authority in 2011.

The utility also was busy this past year obtaining the necessary financing to advance a number of capital projects for the benefit of MWA customers. The Series 2011A Bond Issue brought in approximately \$12 million dollars to fund capital improvements. This bond issue followed one in 2010 to the tune of \$20 million, while another \$18 million is on tap for this year and the next, bringing the total current investment in capital projects to \$50 million.

Among the capital projects completed or under construction during 2011 included the Skipper Road Pump Station, the 1 million gallon Hartley Bridge Road and 500,000 gallon Sofkee Industrial Park elevated storage tanks, as well as the addition of Variable Frequency Drive Pumps for the Amerson Water Treatment Plant. The Authority also began work last year on the Allen Road II Lift Station project, which included construction of a 24-inch force main to enhance wastewater treatment efficiency at the Rocky Creek Plant.

Finally, 2011 was highlighted by the utility-wide effort to improve water efficiency and reduce water loss in the system. The MWA completed a water audit and established a water efficiency program and team to sustain success in the future. As a result, MWA customers enjoy the benefits of daily outdoor watering of landscapes, thanks to proper long-term planning and plentiful water supply for residential use and economic development.



MWA attaining "consumer confidence" in its performance

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 that their drinking water has had no violations in detected levels of inorganic contaminants, organic substances, micro-biological contaminants, disinfectants, or disinfectant by-products, during the 2011 calendar year. As evidence, this report encapsulates a year's worth of data, collected

between Jan. 1, 2011 – Dec. 31, 2011, concerning the quality of water consumed by MWA customers.

Copies of this CCR also are available at the MWA headquarters at 790 Second Street in downtown Macon, as well as 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 581-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. The MWA can also pump raw water directly from the Ocmulgee River into the Authority's Amerson Water Treatment Plant, if needed.

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 four 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, with 5 million gallons of storage capacity each, as well as nine elevated and 10 ground storage tanks, with another 16.9 million gallons of capacity. Collectively, these 23 tanks throughout the system can store up to 36.9 million gallons of finished drinking water.

In addition, the MWA distribution system features approximately 1,664 miles of water lines and eight pumping stations, which carry 25.7 million gallons of finished drinking water, on average each day, to approximately 51,000 customers.

The Authority also uses advanced SCADA technology to monitor and control drinking water distribution 24 hours a day, seven days per week.



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 or gmcocoy@maconwater.org.

Water Quality Data 2011

SUBSTANCES	UNITS	MCL	MCLG	HIGHEST AMOUNT	RANGE	VIOLATION	TYPICAL SOURCES IN DRINKING WATER
INORGANIC							
Chlorine	ppm	MRDL=4	MRDLG=4	1.60	0.90 - 1.60	No	Water additive used to control microbes.
Chlorine Dioxide	ppb	MRDL=800	MRDLG=800	0.57	0.01 - 0.57	No	Water additive used to control microbes.
Fluoride	ppm	4	4	1.27	0.80 - 1.27	No	Water additive that promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories.
Nitrate	ppm	10	10	0.4	N/A	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits.
ORGANIC							
Total Organic Carbon	Removal Ratio RAA	TT ≥ 1	n/a	1.37	1.0 - 1.37	No	Naturally present in the environment.
DISINFECTION BY-PRODUCTS							
Chlorite	ppm	1	0.8	0.73	0.01 - 0.73	No	By-product of drinking water disinfection.
Haloacetic Acids (HAAs)	ppb	60	n/a	19	7 - 19	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHMs)	ppb	80	n/a	45	19 - 45	No	By-product of drinking water disinfection.
MICROBIOLOGICAL							
Total Coliform	% of monthly samples	5	0	1	0 - 1	No	Naturally present in the environment, as well as pipe biofilms.
Turbidity	NTU	TT	n/a	0.26	0.02 - 0.26	No	Soil runoff.
COPPER AND LEAD SAMPLED AT CUSTOMER TAPS IN 2011							
Copper	ppm	AL = 1.3	1.3	The 90th percentile = 0.17 There were no samples above		No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.
Lead	ppb	AL = 15	0	The 90th percentile = 2.5 There were no samples above		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 2011. In September of 2011, the MWA completed its Lead and Copper testing that's required to be conducted every three years. All samples met the 95th percentile, as required by the U.S. Environmental Protection Agency.

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>."

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 2011 calendar year are included in the table titled: "Water Quality Data 2011" (see above).

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.

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 or equal to.

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 2011.

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