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 are also 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 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 23.7 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.
**Water Quality Data 2011**

<table>
<thead>
<tr>
<th>SUBSTANCES</th>
<th>UNITS</th>
<th>MCL</th>
<th>MCLG</th>
<th>HIGHEST AMOUNT</th>
<th>RANGE</th>
<th>VIOLATION</th>
<th>TYPICAL SOURCES IN DRINKING WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INORGANIC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine</td>
<td>ppm</td>
<td>MRDL=4</td>
<td>MRDLG=4</td>
<td>1.60</td>
<td>0.00 – 1.60</td>
<td>No</td>
<td>Water additive used to control microbes.</td>
</tr>
<tr>
<td>Chlorine Dioxide</td>
<td>ppm</td>
<td>MRDL=800</td>
<td>MRDLG=800</td>
<td>0.57</td>
<td>0.01 – 0.57</td>
<td>No</td>
<td>Water additive used to control microbes.</td>
</tr>
<tr>
<td>Fluoride</td>
<td>ppm</td>
<td></td>
<td></td>
<td>4</td>
<td>4.27</td>
<td>No</td>
<td>Water additive that promotes strong tooth; erosion of natural deposits; discharge from fertilizer and aluminum factories.</td>
</tr>
<tr>
<td>Nitrate</td>
<td>ppm</td>
<td></td>
<td></td>
<td>10</td>
<td>10</td>
<td>No</td>
<td>Runoff from fertilizer use; leaching from septic tank sewerage; erosion of natural deposits.</td>
</tr>
<tr>
<td><strong>ORGANIC</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Organic Carbon</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine</td>
<td>ppm</td>
<td></td>
<td></td>
<td>1</td>
<td>0.87</td>
<td>No</td>
<td>By-product of drinking water disinfection.</td>
</tr>
<tr>
<td>Haloacetic Acids (HAAs)</td>
<td>ppm</td>
<td></td>
<td></td>
<td>60</td>
<td>19</td>
<td>No</td>
<td>By-product of drinking water disinfection.</td>
</tr>
<tr>
<td><strong>MICROBIOLOGICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Coliform</td>
<td>% of monthly samples</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0 – 1</td>
<td>No</td>
<td>Naturally present in the environment.</td>
</tr>
<tr>
<td>Turbidity</td>
<td>NTU</td>
<td>TT</td>
<td>n/a</td>
<td>0.26</td>
<td>0.02 – 0.26</td>
<td>No</td>
<td>Soil runoff.</td>
</tr>
<tr>
<td><strong>COPPER AND LEAD SAMPLED AT CUSTOMER TAPS IN 2011</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Copper</td>
<td>ppm</td>
<td>AL = 1.3</td>
<td>1.3</td>
<td>The 90th percentile = 0.17</td>
<td>No</td>
<td>Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives.</td>
<td></td>
</tr>
<tr>
<td>Lead</td>
<td>ppm</td>
<td>AL = 15</td>
<td>0</td>
<td>The 90th percentile = 2.5</td>
<td>No</td>
<td>Internal corrosion of household plumbing systems; erosion of natural deposits.</td>
<td></td>
</tr>
</tbody>
</table>

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

**What’s in my drinking water and why?**

MWA has the highest quality water.

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 tank systems, agricultural livestock, wildlife, and wastewater treatment plants.

**What can I do to protect myself?**

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

**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.

**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 highest 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.

**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 (Mg/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.

**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.

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