

WATER QUALITY REPORT

A message from H.E. Holcomb, Executive Director

The management and employees of the Macon Water Authority are pleased to present the first Water Quality Report on Macon's drinking water. The purpose of this report is to assure the customers that their drinking water is safe. The Authority is proud to report that the water we provided during 1998 met all Federal and State regulations. This report will give you facts and figures concerning the quality of your drinking water. An explanation of the process that we use to treat your water is included in the report. We hope this report will stimulate your interest in your water system. Although less than one percent of the water we purify is for human consumption, we must assure that the more than 33 million gallons per day meets the highest standards. We strive to not only meet these high standards but to surpass them. We want the best possible water for our customers and that is our goal. We will have a new water treatment plant that will be operational in early 2000. This new plant will be named Town Creek Water Treatment Plant and have features that will give you even more confidence in your drinking water. We have specially trained operators who hold the highest certification in Georgia who will man this facility. We intend to improve an already excellent product for our customers. We want everyone to come and tour your new water treatment plant. We are proud of our drinking water, but are interested in your suggestions or questions. Please let us hear from you.

Information about your Water

Last year the Macon Water Authority conducted over 40,000 tests on your drinking water. Because it is our commitment and goal to ensure that the public, our customers and visitors to our community, receive a clean, safe, and reliable drinking water. These tests have been conducted on more than 150 drinking water parameters. We are proud to inform the Public that the Macon Water Authority did not have any violations in 1998. Included in this report is information about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. For more information about your water call George Couto at 741-2625 or 741-2626.

Our Source Water

Our water comes from the Ocmulgee River upstream of the City of Macon. The Ocmulgee River begins at the dam on Lake Jackson. It flows south through the Oconee and Piedmont National Forest. The upper Ocmulgee River basin receives flow from many creeks and the Towaliga River. We are extremely fortunate that there is very little development along its banks. The vast majority of the watershed is protected national forest land. We are currently performing a source water assessment which will provide more information about all of Bibb county's watershed sources. We will provide information on how to obtain a copy of that report when it becomes available.

Information about your Water Board

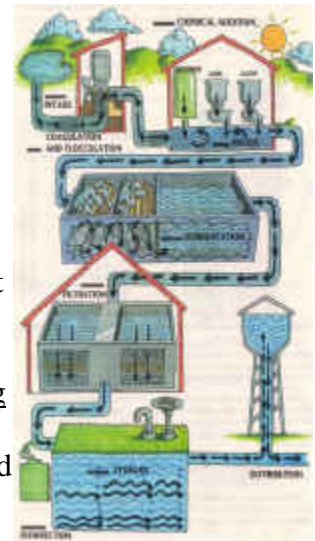
The Macon Water Authority holds Board meetings the first Thursday of each month at 4:30 p.m. in the Board Room on the second floor of the MWA Main Office at 790 Second Street in Macon.



The new Town Creek Water Treatment Plant, scheduled to come on line in February 2000.

How Your Drinking Water Is Treated

In 1998, Macon's water purification is a process of chemical treatment, settling, filtration, and disinfection. Water treatment chemicals include lime, aluminum sulfate, chlorine dioxide, polymers, activated carbon, hexametaphosphate, fluoride, and chlorine are added to water to remove impurities, kill harmful bacteria, eliminate taste and odor and help prevent tooth decay. After chemicals are rapidly mixed in the water, the water moves to flocculators, basins where large, slowly moving paddles stir the water to keep chemicals in suspension while they do their job. Most of the unwanted material in untreated water consist of millions of tiny particles, so light they float or are in suspension. Under the gentle mixing, the chemicals cause the small particles to group together and grow in size, large and heavy enough to sink. The water next passes into settling basins where it flows slowly for 3 to 6 hours to allow the enlarged particles, silt and other suspended matter to settle to the bottom and out of the water. At the end of the settling basins 95% or better of the impurities and chemicals have been removed. The next major step in purification is filtration, the passing of water through filters consisting of a bed of anthracite coal, sand, and gravel. As water trickles through, any remaining small suspended particles are caught in the filters for bad taste and odor control. Disinfection to kill bacteria takes place at the end of filtration. Chlorine is used for that purpose, and a residual is maintained until it reaches our customers. We also add hexametaphosphate for corrosion control, which is to prevent rusting of pipes. Fluoride is used for the prevention of tooth decay. Lime is used for pH balance, this keeps our water neutral so it is not to acidic or alkaline.



WATER QUALITY DATA

The table below lists all the drinking water contaminants that we have detected during the calendar year.

REGULATED SUBSTANCES

Parameter	Units	MCLG	MCL	Detected Amount	Range	Is it safe?	Typical Source of Contamination
Copper	ppb	1,300	1,300	150	0 - 250	YES	Corrosion of household plumbing systems.
Fluoride	ppm	4.0	4.0	0.9	0.9	YES	Erosion of natural deposits; Water additive which promotes strong teeth
Lead	ppb	0	15	2.7	0 - 6.5	YES	Corrosion of household plumbing systems.

Nitrate	ppm	10	10	0.4	0.4	YES	Erosion of natural deposits; Runoff from fertilizer use.
Sodium	ppm	N/A	500	4.5	4.5	YES	Erosion of natural deposits
Turbidity	NTU	N/A	TT	0.34	0.01 - 0.34	YES	Soil Runoff
Total Trihalomethanes	ppb	0	100	55.7	20.4 to 55.7	YES	By-product of drinking water chlorination.
Total Coliform	%	0	5	2.7	0 - 2.7	YES	Naturally present in the environment.
Zinc	ppm	5	5	0.12	0.12	YES	Corrosion control additive in water.

UNREGULATED SUBSTANCES

Parameter	Units	MCL	MCL	Detected Amount	Range	Is it safe?	Typical Source of Contamination
Chlorate	ppb	N/A	N/A	107	33 - 107	YES	From addition of chlorine dioxide for disinfection.
Chloride	ppm	TT	250	19.2	19.2	YES	Soil Runoff.
Chlorite	ppb	N/A	N/A	186	<20 - 186	YES	From addition of chlorine dioxide for disinfection.
Total Dissolved Solids	ppm	TT	500	67	49 - 67	YES	Soil Runoff.
Total Organic Carbon	ppm	TT	N/A	2.3	1.3 - 2.3	YES	Plant & animal material

LEGEND

MCL - Maximum Contaminant Level, is the highest amount of a substance allowed in drinking water.

MCLG Maximum Contaminant Level Goal, is the ideal goal, below which there is no known or

- expected health risk.

N/A - Not Applicable.

NTU - Nephelometric turbidity units.

- ppm** - Parts per million, means 1 part per 1,000,000 (same as milligram per liter)
ppb - Parts per billion, means 1 part per 1,000,000,000 (same as microgram per liter)
TT - Treatment technique means a required treatment technique or process intended to reduce the level of contaminant in drinking water.
< - Less than

ADDITIONAL INFORMATION ABOUT THE MWA, TESTING, RESEARCH AND PARTNERSHIPS.

The Macon Water Authority has voluntarily joined the EPA, State of Georgia and 211 other water supply systems in the Partnership for Safe Water.

In 1997, the U.S. Environmental Protection Agency required us and hundreds of other water systems to participate in a major testing program known as the Information Collection Rule (ICR). The ICR will provide the EPA with information about the occurrence of chemical by-products used in disinfection, and about disease causing pathogens. The data on how water supply systems control these two will be used to revise drinking water standards. With our involvement in the Partnership for Safe Water, the ICR, and the American Water Works Association Research Foundation we are working to better understand the water treatment process to control *Cryptosporidium* and other disease-causing organisms. *Cryptosporidium* is a protozoan parasite too small to be seen with a microscope. *Cryptosporidium* can cause symptoms that include diarrhea, nausea, stomach cramps or all three. Because many other conditions can produce these same symptoms, a special laboratory test is needed to see if *Cryptosporidium* is the cause. We have been testing our source and finished water every month since July 1997. Cryptosporidium has never been found in the source water we treat or the drinking water that goes to your tap. We will benefit from millions of dollars in research from our membership with the American Water Works Association, and the Association of Metropolitan Water Agencies, the EPA, and Georgia EPD. A pilot plant has been utilized since 1997 to simulate various technologies and treatment methods on a small scale. This information has been used in designing the new Town Creek Water Treatment Plant. This plant will utilize that latest technology and proven treatment methods, resulting in better quality water.


Other Drinking Water information


Drinking water, including bottled water, may reasonably be expected to contain at least a 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 (800)426-4791.


Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800)426-4791.


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, in some cases, 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 before we treat it include:

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

 *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.

 *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 can also come from gas stations, urban stormwater runoff, and septic systems.

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which must provide the same protection for public health.