

1999 Drinking Water Quality

Mobile Area Water and Sewer System

REPORT

Message from the Board

We are pleased to report that the Mobile Area Water and Sewer System (MAWSS) met or exceeded all federal and state standards for drinking water during the 1999 calendar year. The details of this accomplishment are provided in the following information. We hope you will take a few moments to review these facts and see what we are doing on behalf of the health and safety of your water supply.

Among several key topics, the Report provides information about where your drinking water originates. Safeguarding our drinking water sources is an important issue that faces us and most other communities. The Mobile area is fortunate to have the Converse Reservoir as our primary source of drinking water. Completed in 1952, it is an important asset for us all. The watershed for the 3600-acre Reservoir is 103 square miles in surface area and lies totally within Mobile County. For over 45 years, the Reservoir has supplied our community with an abundant supply of good quality water. The water has been in such abundance that there is ample water to supply all of Mobile County's drinking water requirements for the 21st century. At present, approximately 260,000 people, or about 60% of the county's population, receive their water from the Reservoir.

Our concern is that while water has been excellent for over 45 years, this quality over the next 45 or 50 years may be threatened, especially if the Mobile area continues to grow at the rate experienced in the last several years. We have a great opportunity now by being the best stewards of this essential resource. Few communities have the luxury of having their drinking water source and watershed located within the county in which they live. For example, the City of New Orleans treats water from the Mississippi River for drinking water where a large percentage of the United States, including many major cities, contributes to the quality of their water supply.

Our opportunity to protect this Mobile area resource begins with messages like this in which we provide information about the reservoir, the watershed, and the issues that affect our water quality. We will be developing a source water assessment for the Reservoir as a comprehensive plan for protecting our water supply for the future. We look forward to this effort and request your support. Please feel free to call us or visit any of our facilities. We look forward to hearing from you and discussing any of your drinking water concerns.

The Board



Board of Water and Sewer Commissioners

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Mobile Area Water and Sewer System (MAWSS)



MAWSS Supervisor Benny White makes an adjustment to one of the eight 800 HP raw water pumps at the S. Palmer Gaillard Pumping Station that pumps an average of 85 million gallons of water per day from J.B. Converse Reservoir to the Board's two water filtration facilities and to local industries.

Your Water Safety

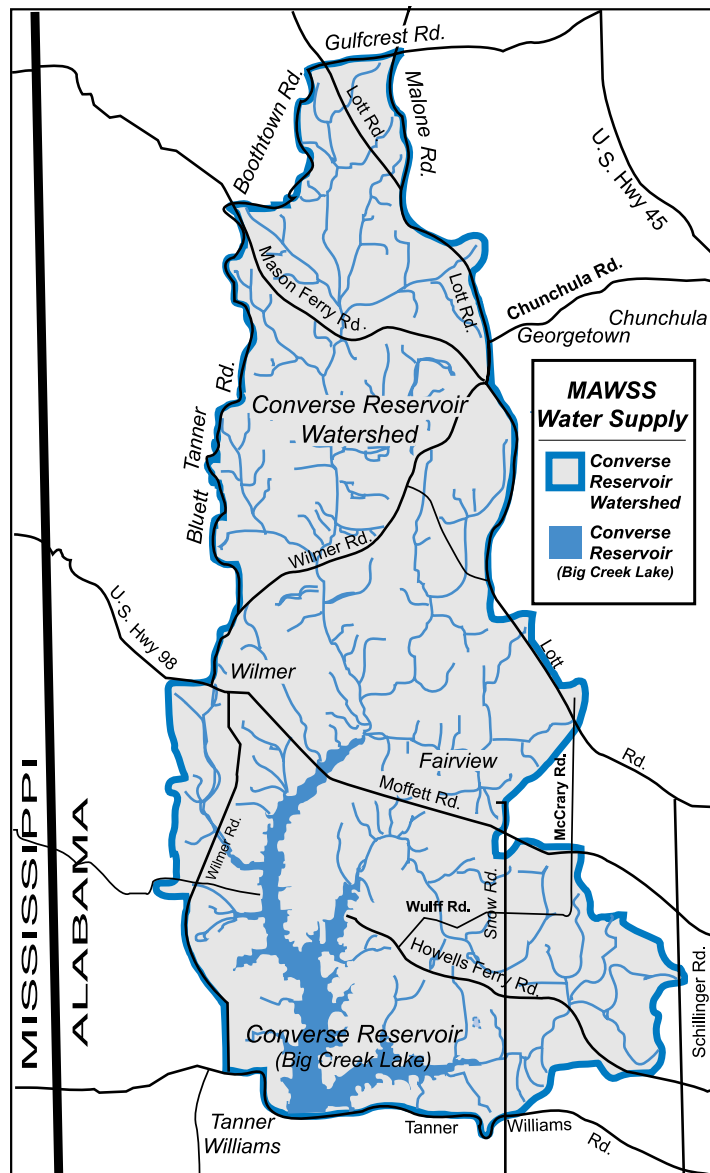
The source of MAWSS customers' drinking water is Converse Reservoir (Big Creek Lake), which is fed by springs, streams, and rainfall in the Converse Reservoir Watershed. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from stormwater runoff or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.
- Radioactive contaminants, which are naturally occurring.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which can come from gas stations, stormwater runoff, and septic systems.

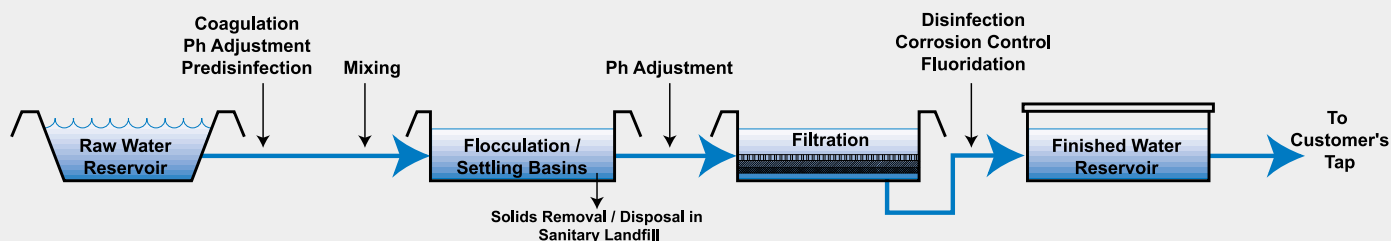
To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems.

The EPA advises: "Drinking water, including bottled water, may reasonably be expected to contain at least 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 Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791)."



Converse Reservoir (formerly Big Creek Lake) is 3,600 acres in surface area. The reservoir's watershed covers 103 square miles and lies totally within Mobile County. The reservoir provides all the drinking water for MAWSS customers.

Water Treatment Process



MAWSS Drinking Water Quality for 1999

Substance	MCL	Highest Level Detected	MCLG
REGULATED AT THE TREATMENT PLANT			
Nitrate	10 ppm	0.26ppm	10 ppm
Barium	2 ppm	0.022 ppm	2 ppm
Fluoride	4 ppm	0.88 ppm	4 ppm
Alpha Emitters	15 pCi/L	1.8 +/- 1.7 pCi/L	0
Turbidity	*TT = 1 ntu	0.75 ntu	N/A
	TT = at least 95% of samples < 0.5 ntu	99.6% of samples < 0.5 ntu (TT requirement not exceeded)	
REGULATED IN THE DISTRIBUTION SYSTEM			
Total Trihalomethanes	100 ppb Average	Highest average = 68.2 ppb Range = 21.2 ppb to 108.0 ppb	N/A
Haloacetic Acids (Five)	60 ppb Average	Highest average = 17.2 ppb Range = 10 ppb to 32.2 ppb	N/A
UNREGULATED COMPONENTS OF TOTAL TRIHALOMETHANES AND HALOACETIC ACIDS (FIVE)			
Bromodichloromethane	Not Regulated	Highest average = 10.9 ppb Range = 4.2 ppb to 15 ppb	0
Chloroform	Not Regulated	Highest average = 55.4 ppb Range = 17 ppb to 95 ppb	0
Dibromochloromethane	Not Regulated	Highest average = 2.1 ppb Range = Non-detect to 2.9 ppb	60 ppb
Dichloroacetic Acid	Not Regulated	Average = 7.8 ppb Range = 3 ppb to 20 ppb	0
Trichloroacetic Acid	Not Regulated	Average = 2.9 ppb Range = 1.0 ppb to 5.4 ppb	300 ppb
REGULATED AT THE CUSTOMER'S TAP			
Lead	**AL = 15 ppb at the 90th percentile	4.41 ppb at the 90th percentile (AL exceeded at 2 sites)	0
Copper	AL = 1.3 ppm at the 90th percentile	0.0353 ppm at the 90th percentile (AL exceeded at 0 sites)	1.3 ppm
<p>Listed above are 14 contaminants detected in Mobile's drinking water during 1999. All are below allowed levels. Not listed are the 136 health-related contaminants for which we tested that were not detected. The MAWSS water treatment facilities perform many tests through daily process control and quality control programs. Some of these tests include continuous in-line monitors that report data to the plant computer.</p> <p>Definitions:</p> <p>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.</p> <p>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.</p> <p>ppm = parts per million by weight ppb = parts per billion by weight ntu = Nephelometric Turbidity Units</p> <p>*Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.</p> <p>**Action level - The concentration of a contaminant which, if exceeded, triggers a treatment or other requirement which a water system must follow.</p>			

You May Have Heard About Giardia and Cryptosporidium

Giardia and Cryptosporidium - These are two types of microscopic organisms that can cause illness in humans. There are many ways to come in contact with these organisms including contaminated foods, swimming pools, recreational waters, day care centers, contact with contaminated soil, nursing homes, and drinking water. MAWSS is taking steps to ensure these organisms do not pose a problem in the drinking water. The treatment plants have multiple barriers of protection such as enhanced chemical coagulation, filtration, disinfection, and careful monitoring of turbidity to ensure the optimum removal of these organisms. The water in our system is tested routinely for *Cryptosporidium* and *Giardia*. Their presence in raw water is common, and we have discovered an occasional presence in raw water. We have never found either *Cryptosporidium* or *Giardia* in the treated drinking water.

For people with compromised immune systems, the EPA advises: "Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 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 infections by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791)."

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Mobile Area Water and Sewer System

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More Information About Drinking Water

Fluoride - Fluoride is added to drinking water to help prevent tooth decay. There is minimal naturally occurring fluoride in our water, therefore we add a small amount to meet the EPA, American Medical Association, and American Dental Association recommended levels.

Lead - There is no significant amount of lead in the water as it leaves MAWSS' Stickney and Myers Filtration Plants. On occasion, samples collected at taps from within customers' homes with lead plumbing or copper plumbing with lead soldered joints did show elevated lead levels. The source of the lead would be household plumbing devices, which leach lead into the water under corrosive conditions. In response to this, we have a corrosion control program which has reduced lead levels to almost zero in most homes. We also maintain an extensive monitoring program of customers' homes.

Microbial Testing - The daily tests we perform at the treatment plants and on the distribution system look for indicator organisms called *Coliform Bacteria*. These are harmless bacteria, but if they are detected there may be a potential for harmful (pathogenic) organisms to be present. We collect over 150 bacterial samples per month throughout our service area to ensure the water is as safe when it arrives at your home as it is when it leaves the drinking water treatment plant.

Nitrate, Barium, and Alpha Emitters - Nitrate, barium, and alpha emitters are contaminants that were detected at

minimal levels in your drinking water. The source of nitrate is erosion of natural deposits and runoff from fertilizer use. The source of barium is erosion of natural deposits. The source of alpha emitters is erosion of natural deposits.

Trihalomethanes and Haloacetic Acids - Trihalomethanes and haloacetic acids are formed as by-products of the disinfection process, which uses chlorine to kill harmful bacteria. Total trihalomethanes (TTHMs) are suspected to be possible cancer causing agents at very high levels over many years. The current annual average of TTHMs found in MAWSS water is 64.9 parts per billion (ppb) which is well BELOW the EPA limit of 100 ppb. MAWSS has achieved low TTHM levels and minimized the use of chlorine by making changes to the disinfection process. Haloacetic acids, also a by-product of the chlorination process, have been shown to cause reproductive or developmental effects in laboratory animals and may present a public health risk. The current level of five haloacetic acids (HAA5) is 17.2 ppb, which is well BELOW the EPA limit of 60 ppb.

Turbidity - Turbidity is a measurement of the clarity of the water and is an indicator of overall water quality. As an example, milk is turbid—you cannot see through it. Turbidity has no health effects. However, it can interfere with disinfection and provide a medium for microbial growth. MAWSS measures the turbidity of the water on a continuous basis 24 hours a day, and has consistently produced water that is well BELOW the EPA limit.

For more information on your water quality, write Mobile Area Water and Sewer System, 207 North Catherine Street, Mobile, AL 36604. Phone: 694-3188 or online: www.MAWSS.com