



2009 Annual Drinking Water Quality Report Water & Wastewater Board of the City of Madison (dba Madison Utilities)

We are pleased to present our Annual Drinking Water Quality Report. We designed this report to inform you about the quality of the drinking water delivered to you every day. Our goal is to provide you with a safe dependable supply of drinking water. Our system had no violations of the Alabama Safe Drinking Water Act during 2009. We also expect to have no violations in 2010. We are also happy to announce three awards that we received in the past year that further reinforces our commitment to excellence.

- Best Operated Plant Award (Package Plants) for our Quarry Plant (by the Alabama Water Pollution Control Association)
- Award of Excellence for Distribution Systems with 5001-15,000 meters (by the Alabama Water Pollution Control Association)
- Water Fluoridation Quality Award (by the Centers for Disease Control (CDC) and the U.S. Department of Health and Human Resources)

As you read the information listed below, if you have questions, please contact Jeff Taylor at 256-461-0845 extension 115 between the hours of 7:00 a.m. to 4:00 p.m. Monday through Friday. If you want to learn more about your water utility operations, you may attend any of our regularly scheduled Board meetings or visit our web site at www.madisonutilities.org. Our Board meetings are on the first and third Monday (unless otherwise posted) of each month at 5:30 p.m. in the conference room of Madison Utilities located at 101 Ray Sanderson Drive.

As you will recall, rainfall for 2009 was abundant. Water supply was more than ample to supply the area needs and our system performed well. While we do not expect water shortages this summer, we do encourage wise use of our limited resources.

While the local economy has remained sluggish during the past year, we continue to work diligently to increase future water supplies. We will be bringing a new well online in Triana this summer (Collier Well) that will add an additional 1 MGD for the peak season. We are also evaluating the possible use of the Rock Quarry as a seasonal supply source for 2011. Long term we continue our pursuit of an intake into the Tennessee River as well as other supply alternatives.

We thank you for allowing us to be your service provider. We will continue to work hard to earn your trust and loyalty in the days ahead. We are always available to discuss any concerns or questions that may arise.

Sincerely,

Ricky K. Pounders
General Manager

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In these tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Maximum Contaminant Level Goal or 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 Contaminant Level or 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 Residual Disinfectant Level Goal or 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 contaminants.

Maximum Residual Disinfectant Level or 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.

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

Action Level - The concentration of a contaminant that triggers treatment or other requirement a water system shall follow.

RAA – Running Annual Average

Table of Primary Drinking Water Contaminants

Contaminant	MCL	Amount Detected	Contaminant	MCL	Amount Detected
Bacteriological					
Total Coliform Bacteria	< 5%	0	Endothall	100 ppb	0
Turbidity	TT	.3	Endrin	2 ppb	0
Fecal Coliform and <i>E. coli</i>	0	0	Epichlorohydrin	TT	0
Fecal Indicators (enterococci or coliphage)	TT	0	Glyphosate	700 ppb	0
Radiological					
Beta/Photon emitters (mrem/yr)	4	n/a	1,2,4-Trichlorobenzene	70 ppb	0
Alpha emitters (pCi/l)	15	1	Heptachlor	400 ppt	0
Combined radium (pCi/l)	5	1.5	Heptachlor epoxide	200 ppt	0
Uranium	30 pCi/L	n/a	Hexachlorobenzene	1 ppb	0
Inorganic Chemicals					
Antimony	6 ppb	0	Hexachlorocyclopentadiene	50 ppb	0
Arsenic	10 ppb	0	Lindane	200 ppt	0
Asbestos (MFL)	7	n/a	Methoxychlor	40 ppb	0
Barium	2 ppm	.024	Oxamyl (Vydate)	200 ppb	0
Beryllium	4 ppb	0	PCBs	500 ppt	0
Cadmium	5 ppb	0	Pentachlorophenol	1 ppb	0
Chromium	100 ppb	0	Picloram	500 ppb	0
Copper	AL= 1.3 ppm	.22 90 th percentile	Simazine	4 ppb	0
Cyanide	200 ppb	0	Toxaphene	3 ppb	0
Fluoride	4 ppm	1.2	Benzene	5 ppb	0
Lead	AL= 15 ppb	3.9 90 th percentile	Carbon tetrachloride	5 ppb	0
Mercury	2 ppb	0	Chlorobenzene	100 ppb	0
Nitrate	10 ppm	3.1	Dibromochloropropane	200 ppt	0
Nitrite	1 ppm	0	o-Dichlorobenzene	600 ppb	0
Total Nitrate and Nitrite	10 ppm	2.5	p-Dichlorobenzene	75 ppb	0
Selenium	50 ppb	0	1,2-Dichloroethane	5 ppb	0
Thallium	2 ppb	0	1,1-Dichloroethylene	7 ppb	0
Organic Chemicals					
2,4-D	70 ppb	0	cis-1,2-Dichloroethylene	70 ppb	0
2,4,5-TP (Silvex)	50 ppb	0	trans-1,2-Dichloroethylene	100 ppb	0
Acrylamide	TT	0	Dichloromethane	5 ppb	0
Alachlor	2 ppb	0	1,2-Dichloropropane	5 ppb	0
Benzo(a)pyrene (PAHs)	200 ppt	0	Ethylbenzene	700 ppb	0
Carbofuran	40 ppb	0	Ethylene dibromide	50 ppt	0
Chlordane	2 ppb	0	Styrene	100 ppb	0
Dalapon	200 ppb	0	Tetrachloroethylene	5 ppb	0
Di (2-ethylhexyl)adipate	400 ppb	0	1,1,1-Trichloroethane	200 ppb	0
Di (2-ethylhexyl)phthalates	6 ppb	0	1,1,2-Trichloroethane	5 ppb	0
Dinoseb	7 ppb	0	Trichloroethylene	5 ppb	3.8
Diquat	20 ppb	0	TTHM	80 ppb	54.5
Dioxin (2,3,7,8-TCDD)	30 ppq	n/a	Toluene	1 ppm	0
Chloramines	4 ppm	n/a	Vinyl Chloride	2 ppb	0
Chlorite	1 ppm	n/a	Xylenes	10 ppm	0
HAA5	60 ppb	41.3	TOC	TT	4.9
			Chlorine	4 ppm	3.16
			Chlorine dioxide	800 ppb	n/a
			Bromate	10 ppb	n/a
			Atrazine	3 ppb	0

Table of Detected Contaminants

Contaminants and (units of measure) Year	Violation Y/N	MCLG	MCL	Highest Level Detected	Range	Major Sources
Barium (ppm) 2009	N	2	2	.024	.0098-.024	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm) 2009	N	4	4	1.2	0-1.2	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Alpha emitters (pCi/l) 2009	N	0	15	1	0-1	Erosion of natural deposits
Combined Radium (pCi/l) 2009	N	0	5	1.5	0-1.5	Erosion of natural deposits
Nitrate (ppm) 2009	N	10	10	3.1	1.17-3.1	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHM (ppb) 2009	N	n/a	80	54.5	1.24-54.5	By-product of drinking water chlorination
Haloacetic Acids (HAA5) (ppb) 2009	N	n/a	60	41.3	0-41.3	By-product of drinking water disinfection
Turbidity (NTU) 2009 Surface Water	N	n/a	TT	.14	n/a	Soil runoff
Turbidity (NTU) 2009 Groundwater	N	n/a	5	.3	n/a	Soil runoff
Lead (ppb) 2007	N	0	AL= 15	3.9 (90 th percentile)	0-19	Corrosion of household plumbing systems; erosion of natural deposits
One sample site exceeded the action level but a retest of that site was 2						
Copper (ppm) 2007	N	1.3	AL=1.3	.22 (90 th percentile)	0-.29	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives
Chlorine (ppm) 2009	N	MRDLG=4	MRDL=4	3.16	1.21-3.16	Water additive used to control microbes
Trichloroethylene (ppb) 2009	N	0	5	3.8	0-3.8	Discharge from metal degreasing sites and other factories
Total Organic Carbon 2009	N	n/a	TT	4.9	0-4.9	Naturally present in the environment

Table of Detected Contaminants

Unregulated Contaminants	Range	Average	Unregulated Contaminants	Range	Average
Alkalinity (ppm) 2009	82-175	137	Sulfate (ppm) 2009	0-16	8
Calcium (ppm) 2009	30-56	45	Carbon dioxide (ppm) 2009	5-290	19
Chloride (ppm) 2009	9.44-12	11	Chloroform (ppb) 2009	1.5-6.54	4
Dissolved Solids (ppm) 2009	130-190	160	Bromodichloromethane (ppb) 2009	0-4.6	2
Hardness (ppm) 2009	120-170	136	Chlorodibromomethane (ppb) 2009	0-1.7	1
Magnesium (ppm) 2009	4.69-7.6	6	Manganese (ppb) 2009	0-46	21
PH (su) 2009	6.4-8.0	7.3	Color (units) 2009	0-12	3
Sodium (ppm) 2009	1.52-8	7	Iron (ppb) 2009	0-40	9
Specific Conductance (umhos/cm) 2009	230-330	287			

Microbiological Contaminants	Violation Y/N	Highest Level Detected	Unit of Measure	MCLG	MCL	Likely source of Contamination
Total Coliform Bacteria (including fecal coliform and E. Coli) 2009	N	0	n/a	0	Presence of coliform bacteria in =5% of monthly samples or if a routine sample and a follow up repeat sample are total coliform positive and one is also fecal Coliform or E. coli positive	Human and animal fecal waste

Key

AL = Action Level

TT = Treatment Technique

MCL = Maximum Contaminant Level

MCLG = Maximum Contaminant Level Goal

mg/l = milligrams per liter, or parts per million

mrem/year = millirems per year (a measure of radiation absorbed by the body)

pCi/l = picocuries per liter (a measure of radioactivity)

ppb = parts per billion or micrograms per liter

ppm = parts per million or milligrams per liter

ppq = parts per quadrillion or picograms per liter

ppt = parts per trillion or nanograms per liter

MFL = million fibers per liter

GWR = Ground Water Rule

Frequently Asked Questions

* What are our sources of water?

We utilized eleven groundwater sources for 2009. They are the Fiorentino, Drake, New Gillespie, Dublin, McCrary, Williams, Hardiman, Nickelson, Rowe, Triana and Murphy Wells, which are in the Tuscumbia/Fort Payne Aquifer. We also purchased a limited amount of treated water from the Limestone County Water and Sewer Authority.

and it can pick up substances resulting from the presence of animals or from human activity.

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) establishes limits for contaminants in bottled water.

* How is our water treated?

The water from the Drake, Rowe, Triana and Murphy Wells was treated at the Quarry Water Treatment Plant using aeration, coagulation, filtration, disinfection and the addition of fluoride. The water from the Fiorentino, New Gillespie, McCrary, Williams, Hardiman and Nickelson Wells is treated at the Keene Water Treatment Plant using coagulation, filtration, pH adjustment, disinfection and fluoridation. The Dublin Well is treated on site with disinfection, fluoridation and pH adjustment.

* Does all water include some contaminants?

Consumers should be aware that all 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). Madison Utilities routinely monitors for contaminants in your drinking water in accordance with Federal and State regulations. The tables included in this report detail the results of our monitoring for the period of January 1 - December 31, 2009 or the data as of the latest testing done in accordance with applicable regulations. All data presented is in the highest levels detected unless otherwise noted. Based on a study conducted by the Department with the approval of the EPA, a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for any of these contaminants was not required.

* Who regulates our drinking water?

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 radioactive material,

- **Are some people more susceptible than others to contaminants?**

Some people may be more vulnerable to contaminants in drinking water than the general population. People who are immuno-compromised such as cancer patients undergoing chemotherapy, organ transplant recipients, HIV/AIDS positive or other immune system disorders, some elderly, and infants can be particularly at risk from infections. People at risk 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 microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

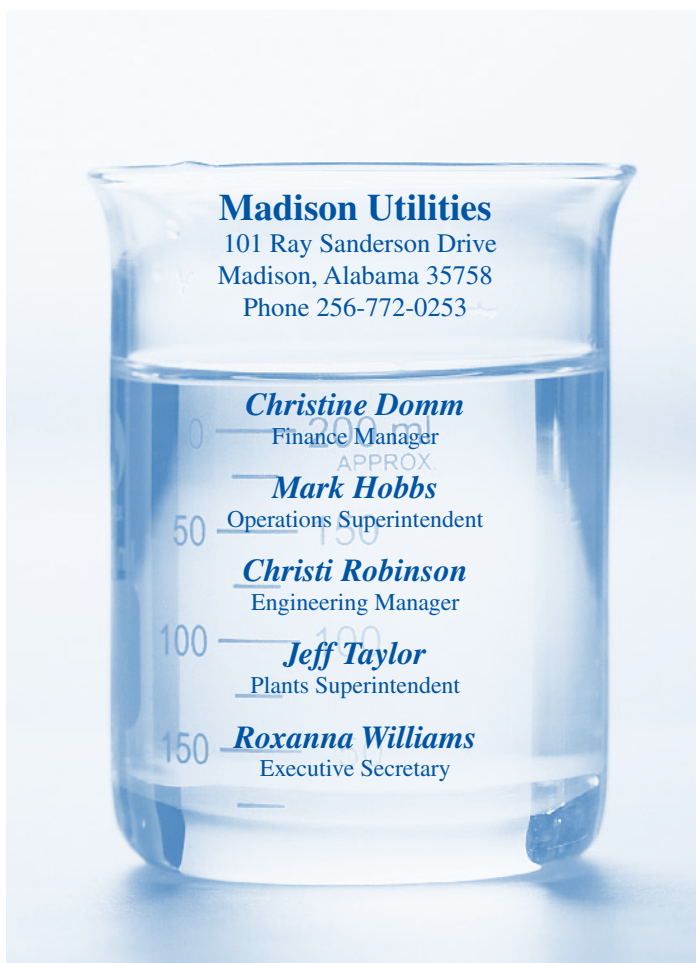
- **Do you have a Source Water Assessment Plan?**

Yes. We have completed our Source Water Assessment Plan and Susceptibility Analysis. We also have an established Wellhead Protection Plan. These documents are very extensive and cannot be included within this

report but these documents are available for public review at our office located at 101 Ray Sanderson Drive.

- **What information do you have about lead in the drinking water?**

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Madison Utilities 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 or at <http://www.epa.gov/safewater/lead>.



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