2013 Annual Drinking Water Quality Report
Testing performed January through December 2012

THORSBY WATER WORKS BOARD
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We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water.

Number of Customers	Approximately 1150 service connections	
Water Sources	Three (3) groundwater wells producing from the Jemison Chert and the Hillabee Greenstone	
Water Treatment	Chlorination for disinfection, lime for pH, corrosion control	
Storage Capacity	One storage tank with total capacity of 300,000 gallons	
Existing Connections	Sell to Jemison Water	
	Emergency connection with Chilton County Water Authority	
City Council Members	Jean Nelson, Mayor	Marvin Crompton, Council
	Randall Higgins, Council	Roger Marcus, Council
	Neil Benson, Council	Nicole Hilyer, Council
Employees	Terry Jackson, Water Superintendent, Grade III Operator	
	Billy Wyatt, back-up Operator	
	Evan Bryan, operator trainee	

Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), **Thorsby Water Works Board** has developed a Source Water Assessment that will assist in protecting our water sources. This plan provides additional information such as potential sources of contamination. It includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or low (non-susceptible) to contaminating the water source. The report has been completed and approved by ADEM. A copy of the report is available in our office for review, or you may purchase a copy upon request for a nominal reproduction fee.

Please help us make this effort worthwhile by protecting our source water. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil.

Monitoring Schedule

Thorsby Water Works Board *routinely* monitors for constituents in your drinking water according to Federal and State laws. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

Constituent Monitored	**Date Monitored**
Inorganic Contaminants	2010
Lead/Copper	2011
Microbiological Contaminants	current
Nitrates	2012
Radioactive Contaminants	2003
Synthetic Organic Contaminants (including pesticides and herbicides)	2012
Volatile Organic Contaminants	2012
Disinfection By-products	2012

General Information

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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, and it 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 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 water run-off, 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, storm water run-off, 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 storm water runoff, and septic systems.
- Radioactive contaminants, which can be 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 (FDA) regulations establish limits for contaminants in bottled water.

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).

Based on a study conducted by ADEM with the approval of the EPA a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus, monitoring for these contaminants was not required.

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. Your water system 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 www.epa.gov/safewater/lead.

Questions?

If you have any questions about this report or concerning your water utility, please contact **Terry Jackson, Superintendent,** at 205-646-3575. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on **the first and third Monday of each month at 6:00 p.m. at the Thorsby Annex Building.**

More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).

As you can see by the table below, our system had no violations. We have learned through our monitoring and testing that some constituents have been detected. We are pleased to report that our drinking water is safe and meets federal and state requirements. This report shows our water quality and what it means.

TABLE OF DETECTED DRINKING WATER CONTAMINANTS						
Contaminants	**Violation Y/N**	**Level Detected**	**Unit Msmt**	**MCLG**	**MCL**	**Likely Source of Contamination**
Copper	NO	0.191***** 0 > AL	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Nitrate (as Nitrogen)	NO	0.36	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	ND-1.12	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	ND-1.03	ppb	0	60	By-product of drinking water chlorination
Secondary Contaminants						
Chloride	NO	3.40	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Hardness	NO	17.9	ppm	n/a		Naturally occurring in the environment or as a result of treatment with water additives
pH	NO	7.58	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sulfate	NO	3.61	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	NO	36.0	ppm	n/a	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff

* Amount shown is 90th percentile and # of sites above action level (1.3 ppm) = 0

Definitions

Action Level - the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.
Coliform Absent (ca) - Laboratory analysis indicates that the contaminant is not present.
Disinfection byproducts – are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established include trihalomethanes (TTHM), haloacetic acids (HAA5), bromate, and chlorite.
Initial Distribution System Evaluation (IDSE) - a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.
Maximum Contaminant Level - (mandatory language) The Maximum Allowed (MCL) is 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 - (mandatory language) The Goal (MCLG) is 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.
Millirems per year (mrem/yr) - measure of radiation absorbed by the body.
Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
Not Applicable (NA) – Not applicable to water system because not required to perform the referenced monitoring.
Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.
Not Required (NR) - laboratory analysis not required due to waiver granted by the Environmental Protection Agency for the State of Alabama.
Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in $10,000.
Parts per quadrillion (ppq) or Picograms per liter (picograms/l) - one part per quadrillion corresponds to one minute in 2,000,000,000 years, or a single penny in $10,000,000,000,000.
Parts per trillion (ppt) or Nanograms per liter (nanograms/l) - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.
Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.
Threshold Odor Number (TON) – The greatest dilution of a sample with odor-free water that yields a barely detectable odor.
Treatment Technique (TT) - (mandatory language) a required process intended to reduce the level of a contaminant in drinking water.
Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

At the end of this report a list of *Primary Drinking Water Contaminants* and a list of *Unregulated Contaminants* for which our water system routinely monitors. These contaminants were *not* detected in your drinking water unless they are listed in the *Table of Detected Drinking Water Contaminants.*

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Contaminant	**MCL**	**Unit of Msmt**	**Contaminant**	**MCL**	**Unit of Msmt**
Bacteriological			o-Dichlorobenzene	600	ppb
Total Coliform Bacteria	<5%	present or absent	p-Dichlorobenzene	75	ppb
Fecal Coliform and E. coli	0	present or absent	1,2-Dichloroethane	5	ppb
Turbidity	TT	NTU	Nitrite	1	ppm
Radiological Contaminants			Total Nitrate and Nitrite	10	ppm
Beta/photon emitters	4	mrem/yr	Selenium	50	ppb
Alpha emitters	15	pCi/l	Thallium	2	ppb
Combined radium	5	pCi/l	**Organic Contaminants**		
Uranium	30	pCi/l	2,4-D	70	ppb
Inorganic Chemicals			2,4,5-TP(Silvex)	50	ppb
Antimony	6	ppb	Acrylamide	TT	
Arsenic	10	ppb	Alachlor	2	ppb
Asbestos	7	MFL	Benzo(a)pyrene [PAHs]	200	ppt
Barium	2	ppm	Carbofuran	40	ppb
Beryllium	4	ppb	Chlordane	2	ppb
Cadmium	5	ppb	Dalapon	200	ppb
Chromium	100	ppb	Di (2-ethylhexyl)adipate	400	ppb
Copper	AL=1.3	ppm	Di (2-ethylhexyl)phthalate	6	ppb
Cyanide	200	ppb	Dinoseb	7	ppb
Fluoride	4	ppm	Diquat	20	ppb
Lead	AL=15.	ppb	Dioxin [2,3,7,8-TCDD]	30	Picograms/l
Mercury	2	ppb	Chloramines	4	ppm
Nitrate	10	ppm	Chlorite	1	ppm
Endothall	100	ppb	HAA5 [Total haloacetic	60	ppb
Endrin	2	ppb	1,1-Dichloroethylene	7	ppb
Epichlorohydrin	TT		cis-1,2-Dichloroethylene	70	ppb
Glyphosate	700	ppb	trans-1,2-Dichloroethylene	100	ppb
Heptachlor	400	Nanograms/l	Dichloromethane	5	ppb
Heptachlor epoxide	200	Nanograms/l	1,2-Dichloropropane	5	ppb
Hexachlorobenzene	1	ppb	Ethylbenzene	700	ppb
Hexachlorocyclopentadiene	50	ppb	Ethylene dibromide	50	ppt
Lindane	200	Nanograms/l	Styrene	100	ppb
Methoxychlor	40	ppb	Tetrachloroethylene	5	ppb
Oxamyl [Vydate]	200	ppb	1,1,1-Trichloroethane	200	ppb
Oxamyl [Vydate]	200	PCBs	1,1,2-Trichloroethane	5	ppb
Pentachlorophenol	1	ppb	Trichloroethylene	5	ppb
Picloram	500	ppb	TTHM [Total	80	ppb
Simazine	4	ppb	Toluene	1	ppm
Toxaphene	3	ppb	Vinyl Chloride	2	ppb
Benzene	5	ppb	Xylenes	10	ppm
Carbon tetrachloride	5	ppb	Chlorine	4	ppm
Chlorobenzene	100	ppb	Chlorine Dioxide	800	ppb
Dibromochloropropane	200	ppt	Bromate	10	ppb

UNREGULATED CONTAMINANTS			
1,1 – Dichloropropene	Aldicarb Sulfone	Dibromochloromethane	Metribuzin
1,1,1,2-Tetrachloroethane	Aldicarb Sulfoxide	Dibromomethane	N - Butylbenzene
1,1,2,2-Tetrachloroethane	Aldrin	Dicamba	Naphthalene
1,1-Dichloroethane	Bromobenzene	Dichlorodifluoromethane	N-Propylbenzene
1,2,3 - Trichlorobenzene	Bromochloromethane	Dicamba	O-Chlorotoluene
1,2,3 - Trichloropropane	Bromodichloromethane	Dichlorodifluoromethane	P-Chlorotoluene
1,2,4 - Trimethylbenzene	Bromoform	Dieldrin	P-Isopropyltoluene
1,3 – Dichloropropane	Bromomethane	Hexachlorobutadiene	Propachlor
1,3 – Dichloropropene	Butachlor	Isoprpylbenzene	Sec - Butylbenzene
1,3,5 - Trimethylbenzene	Carbaryl	M-Dichlorobenzene	Tert - Butylbenzene
2,2 – Dichloropropane	Chloroethane	Methomyl	Trichlorfluoromethane
3-Hydroxycarbofuran	Chloroform	MTBE	
Aldicarb	Chloromethane	Metolachlor	