



# Annual Drinking Water Quality Report

(January 1, 2008 – December 31, 2008)

## Drinking Water Quality

Your City Water officials vigilantly safeguard its water supplies and once again we are proud to present to you this year's Annual Drinking 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. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. This year's report, sometimes called the "Consumer Confidence Report" covers the calendar year 2008 water quality testing and has been prepared in compliance with all applicable State and Federal regulations. In accordance with the Safe Drinking Water Act, the City of Talladega Water & Sewer Department monitors over 100 compounds in your water supply. This report includes a complete listing of all these compounds, whether they were actually detected or not.

The United States Environmental Protection Agency (USEPA) and the Alabama Department of Environmental Management (ADEM) are the agencies responsible for establishing drinking water quality standards. To ensure that your tap water is safe to drink, USEPA and ADEM prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.

## What You Need to Know About Your Water, and How it May Affect You

### Sources of Supply & Water Treatment Techniques

The City of Talladega Water & Sewer Department's water supply comes from a blend of groundwater from six active wells and surface water from the City's Surface Water Treatment Plant. The wells draw water from the Rome and Knox Aquifers. This comprises approximately eighty percent of our total drinking water supply. The water produced by Talladega's six groundwater sources is chlorinated for disinfection purposes and fluoride is added to promote dental hygiene. The remaining twenty percent of our drinking water supply comes from the Surface Water Treatment Plant, which draws raw water from a reservoir created by a low head dam constructed on Talladega Creek around 1923. Treatment at this facility includes the addition of lime and liquid alum for coagulation and flocculation. In the next stage, chlorine is added for disinfection and algae control prior to sedimentation, which allows unwanted solids to settle out. The water is then filtered through media beds containing various sizes of sand and gravel, and then chlorinated again for disinfection purposes. Caustic soda is then added for pH adjustment and corrosion control along with fluoride to promote dental hygiene. The combined capacity of all these sources gives us the ability to pump over 8 million gallons per day. Our average usage is just slightly over 4 million gallons per day.

A Source Water Assessment Plan has been completed for all the sources listed above. The plan is available for review at the City of Talladega Water & Sewer Department's office, located at 100 North Court Street, Talladega, Alabama. A public hearing was held January 30, 2003 to present the results of the Source Water Assessment Program and answer any questions. A Wellhead Protection Plan for the groundwater (well) sources has also been completed and is also available for review. The City of Talladega Water & Sewer Department routinely completes a water storage facility inspection plan, utilizes a Bacteriological Monitoring Plan and a Cross Connection Policy to ensure good safe drinking water for our customers.

## Basic Information About Drinking Water Contaminants

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 layers of the ground, it dissolves naturally occurring minerals and, in some cases, 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 bacteria and viruses, which may come from wastewater 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 and farming.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production or mining activities.
- Pesticides and herbicides, which may come from a variety of 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, and can also come from gasoline stations, urban storm water runoff, agricultural applications and septic systems.

In order to assure that tap water is safe to drink, the USEPA and ADEM prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The Federal Food and Drug Administration (FDA) establishes limits for contaminants in bottled water. 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline at (800) 426-4791 between 9:00 a.m. and 5:00 p.m. Eastern Time.

## Immuno-compromised People

Some people may be more vulnerable to contaminants in drinking water than others in the general population. Immuno-compromised people such as those with cancer who are undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons and infants can be particularly at risk for infections. These people should seek advice about drinking water from their health care providers. The USEPA and CDC (Centers for Disease Control) 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).

## Explanation of Reasons for Variances and Waivers

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, therefore monitoring for these contaminants was not required.

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

### Important Drinking Water Definitions:

**Non-Detects (ND)** - laboratory analysis indicates that the constituent is not present.

**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 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 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.

**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 one penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.

**Millirems per year (mrem/yr)** - measure of radiation absorbed by the body.

**Nephelometric Turbidity Unit (NTU)** - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Variances & Exemptions** - ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.

**Action Level** - the concentration of a contaminant that triggers treatment or other requirements that a water system shall follow.

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

**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 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 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.

**Unregulated Contaminants** - Contaminants for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

## Table of Primary Contaminants

At high levels some primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detections.

CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED
<b>Bacteriological</b>			Endothall	100	ND
Total Coliform Bacteria	< 5%	ND	Endrin	2	ND
Turbidity	TT	4.24	Epichlorohydrin	TT	ND
<b>Radiological</b>			Glyphosate	700	ND
Beta/photon emitters (mrem/yr)	4	ND	Heptachlor	400	ND
Alpha emitters (pci/l)	15	2.0	Heptachlor epoxide	200	ND
Combined radium (pci/l)	5	0.9	Hexachlorobenzene	1	ND
Uranium	30	ND	Hexachloropentadiene	1	ND
<b>Inorganic</b>			Lindane	200	ND
Antimony (ppb)	6	ND	Methoxychlor	40	ND
Arsenic (ppb)	50	ND	Oxamyl [Vydate]	200	ND
Asbestos (MFL)	7	ND	PCBs	500	ND
Barium (ppm)	2	ND	Pentachlorophenol	1	ND
Beryllium (ppb)	4	ND	Picloram	500	ND
Cadmium (ppb)	5	ND	Simazine	4	ND
Chromium (ppb)	100	ND	Toxaphene	3	ND
Copper (ppm) (2007 Results)	AL=1.3	0.18	Benzene	5	ND
Cyanide (ppb)	200	ND	Carbon Tetrachloride	5	0.5
Fluoride (ppm)	4	2.20	Chlorobenzene	100	1.0
Lead (ppb) (2007 Results)	AL=15	ND	Dibromochloropropane	200	ND
Mercury (ppb)	2	ND	o-Dichlorobenzene	600	ND
Nitrate (ppm)	10	0.99	p-Dichlorobenzene	75	0.5
Nitrite (ppm)	1	ND	1,2-Dichloroethane	5	0.6
Selenium	50	ND	1,1-Dichloroethylene	7	ND
Thallium	2	ND	Cis-1,2-Dichloroethylene	70	ND
<b>Organic Chemicals</b>			trans-1,2-Dichloroethylene	100	ND
2,4-D	70	ND	Dichloromethane	5	ND
2,4,5-TP (Silvex)	50	ND	1,2-Dichloropropane	5	ND
Acrylamide	TT	ND	Ethylbenzene	700	ND
Alachlor	2	ND	Ethylene dibromide	50	ND
Atrazine	3	ND	Styrene	100	ND
Benzo(a)pyrene[PHAs]	200	ND	Tetrachloroethylene	5	1.5
Carbofuran	40	ND	1,2,4-Trichlorobenzene	70	ND
Chlordane	2	ND	1,1,1-Trichloroethane	200	ND
Dalapon	200	ND	1,1,2-Trichloroethane	5	ND
Di-(2-ethylhexyl)adipate	400	ND	Trichloroethylene	5	0.7
Di(2-ethylhexyl)phthalates	6	ND	TTHM*	80	85.6
Dinoseb	7	0.4	Toluene	1	ND
Diquat	20	ND	Vinyl Chloride	2	ND
Dioxin[2,3,7,8-TCDD]	30	ND	Xylenes	10	ND
Chloramines (MRDLG)	4	ND	TOC	TT	1.70
Chlorite	800	ND	Chlorine (MRDLG)	4	2.80
Haloacetic Acids*	60	59.0	Bromate	0	ND
Chlorine Dioxide (MRDLG)	800	ND			

## Table of Detected Contaminants

CONTAMINANT	MCLG	MCL	Range			Amount Detected		Likely Source of Contamination
<b>Bacteriological</b>		<b>(January 2008 - December 2008)</b>						
Turbidity	0	TT				4.24	NTU	Soil runoff
<b>Radiological</b>		<b>(January 2008 - December 2008)</b>						
Alpha emitters	0	15				2.0	PCI/L	Erosion of natural deposits
Combined radium	0	5				0.9	PCI/YR	Erosion of natural deposits
<b>Inorganic Chemicals</b>		<b>(January 2008 - December 2008)</b>						
Copper (2007 Results)	1.3	AL=1.3	No. of Sites above action level 0			0.18	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	4	4	0.00	-	2.20	2.20	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	10	10	ND	-	0.99	0.99	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Organic Chemicals</b>		<b>(January 2008 - December 2008)</b>						
Dinoseb	7	7	ND	-	0.40	0.40	ppb	Runoff from herbicide used on soybeans and vegetables
HAA5*	N/A	60	5.00	-	59.0	59.0	ppb	By-product of drinking water chlorination
Carbon Tetrachloride	0	5	ND	-	0.50	0.50	ppb	Discharge from chemical plants and other industrial activities
Chlorobenzene	100	100	ND	-	1.00	1.00	ppb	Discharge from chemical and agricultural chemical factories
p-Dichlorobenzene	75	75	ND	-	0.50	0.50	ppb	Discharge from industrial chemical factories
1,2-Dichloroethane	0	5	ND	-	0.60	0.60	ppb	Discharge from industrial chemical factories
Tetrachloroethylene	0	5	ND	-	1.50	1.50	ppb	Leaching from PVC pipes; discharge from factories and dry cleaners
Trichloroethylene	0	5	ND	-	0.70	0.70	ppb	Discharge from metal degreasing sites and other factories
TTHM*	0	80	48.00	-	85.6	85.6	ppb	By-product of drinking water chlorination
Total organic carbon	N/A	TT	1.00	-	2.80	2.80	ppm	Naturally present in the environment
Chlorine	4	4	0.80	-	2.80	2.80	ppm	Water additive to control microbes

\* Compliance MCL values for the Organic Chemicals HAA5 and TTHM are produced by computing the running annual average of all compliance sites. The range of values shown above includes additional IDSE results that cannot be averaged with our Stage 1 compliance samples.

Secondary Contaminants			
<u>CONTAMINANT</u>	<u>AMOUNT DETECTED</u>	<u>MCL</u>	<u>UNIT MEASUREMENT</u>
Aluminum	ND	0.2	PPM
Chloride	5.47	250	PPM
Color	16	15	ADMI Color Units
Copper	0.02	1	PPM
Foaming Agents	ND	0.5	PPM
Iron	0.03	0.3	PPM
Manganese	ND	0.05	PPM
Odor	ND	3	Threshold Odor Number
Silver	ND	0.1	PPM
Sulfate	8.09	250	PPM
Total Dissolved Solids	286	500	PPM
Zinc	ND	5	PPM

Special Contaminants			
<u>CONTAMINANT</u>	<u>AMOUNT DETECTED</u>	<u>MCL</u>	<u>UNIT MEASUREMENT</u>
Calcium	55.6	N/A	PPM
Carbon Dioxide	22.9	N/A	PPM
Temperature	7 - 30	N/A	Degrees Centigrade
Magnesium	30.6	N/A	PPM
pH	7.0 - 10.2	N/A	Units
Sodium	1.95	N/A	PPM
Sulfate	8.09	250	PPM
Total Alkalinity	226	N/A	PPM
Total Hardness (as CaCO3)	265	N/A	PPM
Total Dissolved Solids	286	500	PPM

Detected Unregulated Contaminants					
<u>CONTAMINANT</u>	<u>Average</u>	<u>Range</u>	<u>CONTAMINANT</u>	<u>Average</u>	<u>Range</u>
Bromobenzene	0.0005	0.000 - 0.001	Chloroform	0.0331	0.000 - 0.066
Bromochloromethane	0.0001	0.000 - 0.002	Dibromochloromethane	0.0078	0.000 - 0.016
Bromoform	0.0009	0.000 - 0.002	Naphthalene	0.0004	0.000 - 0.001
Tert - Butylbenzene	0.0005	0.000 - 0.001	O-Chlorotoluene	0.0003	0.000 - 0.001
Trichlorfluoromethane	0.0003	0.000 - 0.001	Sec - Butylbenzene	0.0005	0.000 - 0.001

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

[If you have any questions about your water, please contact us for answers.....](#)

For further information about this report, or for any questions relating to your drinking water quality, please contact our Main Office at (256) 362-4439 or our Service Center at (256) 362-6211.

**En Español:**

**Este informe contiene la información importante sobre su agua potable. Tradúzcalo, o hable con alguien que lo entienda.**

**This report contains important information about your drinking water. Translate it, or speak with someone who understands it.**

### **Community Participation**

You are invited to attend and participate in the Talladega City Council meetings to voice your concerns about your drinking water. The Talladega City Council meets on the first and third Mondays of each month beginning at 5:00pm at Talladega City Hall, 203 West South Street, Talladega, Alabama.