

**2013 Annual Water Quality Report**  
(Testing Performed January through December 2012)

**WEST LAUDERDALE WATER & FIRE  
PROTECTION AUTHORITY**

PWSID# AL0000794  
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The West Lauderdale Water Authority is pleased to provide you, our customer, our annual Water Quality Report. The West Lauderdale Water Authority is committed to providing the residents of West Lauderdale County with the safest and highest quality drinking water possible. Our water quality meets or exceeds federal and state drinking water standards.

<b>Water Sources</b>	Purchased surface water from the City of Florence Water Department (Surface water from the Tennessee River and Cypress Creek)
<b>Water Treatment</b>	Mixing, flocculation, sedimentation, filtration, chlorination, fluoridation, and lime for pH
<b>Storage Capacity</b>	6 tanks with total capacity 1,500,000 gallons
<b>Number of Customers</b>	Approximately 5000
<b>Interconnections</b>	Sell to Southwest Wayne County, TN Emergency connection with Chisholm Heights
<b>Board Members</b>	Leonard Holcomb, Chairman Bobby McCormick, Vice Chairman Bobby Jones, Secretary

**Source Water Assessment**

In compliance with the Alabama Department of Environmental Management (ADEM), The City of Florence Water Department developed a Source Water Assessment plan that assists in protecting our water sources. It includes a susceptibility analysis, which classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. You may request to review a copy during regular business hours, or you may purchase a copy upon request for a nominal reproduction fee.

**West Lauderdale WFPA** utilizes a Bacteriological Monitoring Plan. The required chlorine residual is maintained throughout our distribution system to protect your drinking water from possible outside contaminants. We have also established a Cross-Connection Policy to insure safe drinking water for our customers.

Please help us make these efforts 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. We ask that all our customers help us protect our valuable water sources, which are the heart of our community, our way of life, and our children's futures.

**Monitoring Schedule**

West Lauderdale WFPA and Florence Water Department *routinely* monitor 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.

<b>Constituents Monitored</b>	<b>West Lauderdale</b>	<b>Florence</b>
Inorganic Contaminants	N/A	2012
Lead/Copper	2011	N/A
Microbiological Contaminants	current	current
Nitrates	N/A	2012
Radioactive Contaminants	N/A	2012
Synthetic Organic Contaminants (including herbicides and pesticides)	N/A	Partial 2012
Volatile Organic Contaminants	N/A	2012
Disinfection By-products	2012	2012
Cryptosporidium	N/A	2008
Unregulated Contaminants Monitoring Rule 2 (UCMR2)	N/A	2009
I.D.S.E. (Initial Distribution System Evaluation) DBPs	2009	2009

## 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. 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. People at risk should seek advice about drinking water from their health care providers.

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.

Your source water is tested for pathogens, such as *Cryptosporidium* and *Giardia* with no detects. These pathogens can enter the water from animal or human waste. For people who may be immuno-compromised, a guidance document developed jointly by the Environmental Protection Agency and the Center for Disease Control is available online at [www.epa.gov/safewater/crypto.html](http://www.epa.gov/safewater/crypto.html) or from the Safe Drinking Water Hotline at 800-426-4791. This language does not indicate the presence of cryptosporidium in our 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. 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](http://www.epa.gov/safewater/lead).

## Questions?

We will be pleased to answer any questions about this report or our water quality. Call our office at (256) 766-8787 Monday through Friday between the hours of 8:00 a.m. and 4:30 p.m. The Authority Board meets **the second Tuesday of each month at 8: 30 a.m. at the water board office.**

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).

We have learned through our monitoring and testing that some constituents have been detected. We are pleased to report that our drinking water meets federal and state requirements.

**TABLE OF DETECTED DRINKING WATER CONTAMINANTS**

Contaminants	Violation Y/N	Detects		Unit Msmt	MCLG	MCL	Likely Source of Contamination
		W.Lauderdale	Florence				
Chlorine	NO		0.22-2.20	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
Chlorite	NO		0.15-0.69	ppm	0	1.00	By-product of drinking water disinfection
Total Organic Carbon	NO		ND-2.40	ppm	n/a	TT	Soil runoff and naturally present in the environment
Turbidity	NO		0.17 100%<0.5	NTU	n/a	TT	Soil runoff
Total Coliform Bacteria	NO		3.70%	Present or Absent	0	5% of monthly samples	Naturally present in the environment
Alpha emitters	NO	2.5 ± 1.0		PCi/l	0	15	Erosion of natural deposits
Copper	NO	0.055* 0 > AL		ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Fluoride	NO		0.81-1.04	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate (as Nitrogen)	NO		0.60-1.51	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM [Total trihalomethanes]	NO	RAA 44.2 24.3-72.8	10.0-92.7	ppb	0	80	By-product of drinking water chlorination
HAA5 [Total haloacetic acids]	NO	RAA 38.7 20.8-98.3	5.60-72.0	ppb	0	60	By-product of drinking water chlorination
<b>Unregulated Contaminants</b>							
Chloroform	NO		7.70-18.3	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Bromodichloromethane	NO		4.59-7.35	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Chlorodibromomethane	NO		0.61-3.08	ppb	n/a	n/a	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
<b>Secondary Contaminants</b>							
Aluminum	NO		ND-0.08	ppm	n/a	0.2	Erosion of natural deposits or as a result of treatment with water additives
Chloride	NO		4.33-12.1	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Hardness	NO		52.2-81.7	ppm	n/a		Naturally occurring in the environment or as a result of treatment with water additives
Manganese	NO		ND-0.02	ppm	n/a	0.05	Erosion of natural deposits; leaching from pipes
pH	NO		7.73-7.88	S.U.	n/a	n/a	Naturally occurring in the environment or as a result of treatment with water additives
Sodium	NO		1.29-5.82	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO		10.3-16.3	ppm	n/a	250	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff
Total Dissolved Solids	NO		100-132	ppm	n/a	500	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff

\* Figure shown is 90<sup>th</sup> percentile and # of sites above action level (1.3 ppm) = 0

**Monitoring Non-compliance 2012**

**West Lauderdale WFPA** is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether your drinking water meets health standards. During March 2012, we did not complete all required monitoring for total Coliform bacteria and therefore cannot be sure of the quality of your drinking water during that time.

The bacteriological monitoring non-compliance occurred because only fourteen satisfactory bacteriological distribution compliance samples were submitted during March 2012. Fifteen total Coliform bacteria compliance samples are required monthly. This non-compliance event does not directly affect the quality of your drinking water. The fourteen samples tested correctly were all negative for coliform bacteria. During the following month we performed all required monitoring for total Coliform bacteria, and all samples came back Coliform absent. We will continue to monitor for total Coliform bacteria as required.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail. If you have any questions about this violation or monitoring requirements, please call **Linda Lack** at 256-766-8787 or visit the office at 3353 County Road 200, Florence.

### Definitions

Action Level (AL)- the concentration of a contaminant that, if exceeded, triggers some follow-up action

ADEM - Alabama Department of Environmental Management - Alabama's environmental regulatory agency.

Coliform Absent (ca) - Laboratory analysis indicates coliform bacteria not present.

Disinfection byproducts are formed when disinfectants used in water treatment plants react with natural organic matter present in the source water and produce byproducts.

EPA - Environmental Protection Agency - the nation's environmental regulatory agency.

Initial Distribution System Evaluation (IDSE) - a one-time study conducted by water systems to monitor disinfection byproducts.

LRAA – Locational Running Annual Average

Maximum Contaminant Level (MCL)- highest level of contaminant allowed in drinking water.

Maximum Contaminant Level Goal (MCLG) -the level of a contaminant in drinking water below which there is no known or expected risk to health.

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

Nephelometric Turbidity Unit (NTU) - a measure of the clarity of water.

Not Applicable (NA) Not applicable to water system because not required

Non-Detects (ND) - laboratory analysis indicates that the contaminant is not present at a detectable level.

Not Required (NR) - laboratory analysis not required due to waiver.

Parts per billion (ppb) or Micrograms per liter ( $\mu\text{g}/\text{l}$ )-corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Parts per million (ppm) or Milligrams per liter ( $\text{mg}/\text{l}$ )-corresponds to one minute in two years or a single penny in \$10,000.

Parts per quadrillion (ppq) or Picograms per liter (picograms/l)-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)-corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

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

Running annual average (RAA)-the required method of calculating compliance on disinfection byproducts, TTHM and HAA5.

Threshold Odor Number (TON) The greatest dilution of a sample with odor-free water that yields a barely detectable odor.

Treatment Technique (TT)-a required process to reduce a contaminant

Variations & 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
<b>Bacteriological</b>			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
<b>Radiological Contaminants</b>			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	<b>Organic Contaminants</b>		
Uranium	30	pCi/l	2,4-D	70	ppb
<b>Inorganic Chemicals</b>			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
<b>UNREGULATED CONTAMINANTS</b>					
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	Isopropylbenzene	Sec - Butylbenzene		
1,3,5 - Trimethylbenzene	Carbaryl	M-Dichlorobenzene	Tert - Butylbenzene		
2,2 – Dichloropropane	Chloroethane	Methomyl	Trichlorofluoromethane		
3-Hydroxycarbofuran	Chloroform	MTBE			
Aldicarb	Chloromethane	Metolachlor			