

**Annual Water Quality Report**  
**EAST LAUDERDALE COUNTY WATER & FIRE PROTECTION AUTHORITY**  
 January - December 2016

We're 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. 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. Our water sources are purchased water from the **Limestone County Water & Sewer Authority, Pluris LLC and we have an emergency connection with Florence Water.** Florence water is supplied by surface water from the Tennessee River and Cypress Creek. In addition, Florence Water Department pumps ground water from two wells in the Killen and Center Star areas in Lauderdale County, which is blended with the treated surface water sources. **Limestone County** water is obtained from the Elk River; groundwater is pumped from Lawson and Newby Wells and treated in modern treatment plants. In the water provided to our customers (from Limestone County), chlorine is added for disinfection purposes. Poly Aluminum Chloride is added for turbidity removal and Caustic Soda for corrosion control. This insures the quality of water throughout the distribution system. In the water provided to our customers (from Florence), Chlorine is added for disinfection purposes, Fluoride for the prevention of tooth decay, lime to produce a desirable water quality by raising the pH level to reduce corrosion and acidic conditions, Potassium Permanganate to oxidize iron, and aid in taste and odor control, Poly Aluminum Chloride for turbidity removal and Alum for coagulation. Also, **Pluris LLC** has a ground water well in Center Star, Alabama. Florence Water & Sewer Department, the Limestone Water & Sewer Authority and Pluris LLC have implemented Source Water Protection Plans. These plans provide more information such as potential sources of contaminations, which may affect our water source. We are pleased to report that our drinking water is safe and meets federal and state requirements.

If you have any questions about this report or concerning your water utility, please contact Ronald Woodard, Manager, (256) 247-1606. We want our valued customers to be informed about their water utility. If you want to learn more, please attend our monthly scheduled meetings. The board meets sometime during the second week of each month. Interested parties may obtain the exact time of each meeting by calling the office beforehand. The water board office is located on State Hwy 101 in Elgin (phone # 247-1606).

**BOARD OF DIRECTORS**

**Thomas W. Howard, Chairman**

**Hulon Newton, Vice-Chairman**

**Bruce Springer, Secretary/Treasurer**

East Lauderdale County Water & Fire Protection Authority, Florence Water & Sewer Department and the Limestone Water & Sewer Authority routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2016. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk.

**PLAIN LANGUAGE DEFINITION**

- **Not Required (NR)** – Laboratory analysis not required due to waiver granted by the Environmental Protection Agency for the State of Alabama.
- **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 (V&E)** - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
- **Action Level – (AL)** the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Treatment Technique (TT)** - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- **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.
- **Maximum Residual Disinfectant Level Goal – (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 – (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.

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 run-off, and septic systems.
- **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

<b>Table of Primary Contaminants</b>					
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>					
Total Coliform Bacteria (Florence)	< 5%	ND	Turbidity (Limestone County)	TT	0.14
Total Coliform Bacteria (East Lauderdale)	< 5%	ND	Fecal Coliform & E. coli	0	ND
Turbidity (Florence)	TT	0.24	Fecal Indicators (enterococci or coliohage)	TT	ND
Turbidity (Pluris)	TT	0.08			
<b>Radiological</b>					
Beta/photon emitters (mrem/yr)	4	ND	Combined radium (pci/l) (Florence)	5	ND
Alpha emitters (pci/l)(Florence)	15	ND	Combined radium (pci/l) (Pluris)	6	0.30
Alpha emitters (pci/l) (Pluris)	16	0.70	Uranium(ppm)	30	ND
<b>Inorganic</b>					
Antimony (ppb)	6	ND	Copper (ppm)	AL=1.3	1.78
Arsenic (ppb)	10	ND	Cyanide (ppb)	200	ND
Asbestos (MFL)	7	ND	Fluoride (ppm) Florence	4	1.16

Barium (ppm)	2	ND	Lead (ppb)	AL=15	.046
Beryllium (ppb)	4	ND	Mercury (ppb)	2	ND
Bromate(ppb)	10	ND	Nitrate (ppm) Florence	10	0.65
Cadmium (ppb)	5	ND	Nitrate (ppm) Pluris	11	1.86
Chloramines(ppm)	4	ND	Nitrate (ppm) Limestone County	10	0.92
Chlorine(ppm) (Florence)	4	2.2	Nitrite (ppm)	1	ND
Chlorine(ppm) (East Lauderdale 2016)	4	1.34	Total Nitrate & Nitrite	10	ND
Chlorine dioxide(ppb)	800	ND	Selenium(ppb)	50	ND
Chlotite(ppm) (Florence)	1	0.62	Thallium(ppb)	2	ND
Chromium (ppb)	100	ND			
<b>Organic Chemicals</b>					
Acrylamide	TT	ND	Ethylene dibromide(ppb)	50	ND
Alachlor(ppb)	2	ND	Glyphosate(ppb)	700	ND
Atrazine(ppb)	3	ND	Haloacetic Acids(ppb) East Lauderdale	60	1.18
Benzene(ppbv)	5	ND	Heptachlor(ppt)	400	ND
Benzo(a)pyrene[PHAs](ppt)	200	ND	Heptachlor epoxide(ppt)	200	ND
Carbofuran(ppb)	40	ND	Hexachlorobenzene(ppb)	1	ND
Carbon Tetrachloride(ppb)	5	ND	Hexachlorocyclopentadiene(ppm)	50	ND
Chlordane(ppb)	2	ND	Lindane(ppt)	200	ND
Chlorobenzene(ppb)	100	ND	Methoxychlor(ppb)	40	ND
2,4-D	70	ND	Oxamyl [Vydate](ppb)	200	ND
Dalapon(ppb)	200	ND	Pentachlorophenol(ppb)	1	ND
Dibromochloropropane(ppt)	200	ND	Picloram(ppb)	500	ND
0-Dichlorobenzene(ppb)	600	ND	PCBs(ppt)	500	ND
p-Dichlorobenzene(ppb)	75	ND	Simazine(ppb)	4	ND
1,2-Dichloroethane(ppb)	5	ND	Styrene(ppb)	100	ND
1,1-Dichloroethylene(ppb)	7	ND	Tetrachloroethylene(ppb)	5	ND
Cis-1,2-Dichloroethylene(ppb)	70	ND	Toluene(ppm)	1	ND
trans-1,2-Dichloroethylene(ppb)	100	ND	TOC (Florence)	TT	1.50
Dichloromethane(ppb)	5	ND	TOC (Limestone County)	TT	2.05
1,2-Dichloropropane(ppb)	5	ND	TTHM(ppb) East Lauderdale	80	ND
Di-(2-ethylhexyl)adipate(ppb)	400	ND	Toxaphene(ppb)	3	ND
Di(2-ethylhexyl)phthlates(ppb)	6	ND	2,4,5-TP (Silvex)(ppb)	50	ND
Dinoseb(ppb)	7	ND	1,2,4-Trichlorobenzene(ppb)	70	ND
Dioxin[2,3,7,8-TCDD](ppq)	30	ND	1,1,1-Trichloroethane(ppb)	200	ND
Diquat(ppb)	20	ND	1,1,2-Trichloroethane(ppb)	5	ND
Endothall(ppb)	100	ND	Trichloroethylene(ppb)	5	ND
Endrin(ppb)	2	ND	Vinyl Chloride(ppb)	2	ND
Epichlorohydrin	TT	ND	Xylenes(ppm)	10	ND
Ethylbenzene(ppb)	700	ND			

<b>Table of Detected Drinking Water Contaminants</b>								
CONTAMINANT	MCLG	MCL	Range			Amount Detected		Likely Source of Contamination
<b>Bacteriological Contaminants January - December 2016</b>								
Turbidity (Pluris 2016)	1	TT				0.08	NTU	Soil runoff
Turbidity (Limestone County)	0	TT				0.09	NTU	Soil runoff
Turbidity (Florence)	0	TT				0.24	NTU	Soil runoff
<b>Radiological Contaminants January - December 2016</b>								
Alpha emitters (Pluris 2014)	0	15				0.70	pCi/L	Erosion of natural deposits
Combined Radium 226 & 228 (Pluris)	0	5				0.30	pCi/L	Erosion of natural deposits
<b>Inorganic Contaminants January - December 2016</b>								
Chlorine (East Lauderdale 2016)	MRDLG 4	MRDL 4	1.04	-	1.34	1.34	ppm	Water additive used to control microbes
Nitrate (as N) Pluris	10	10	.84	-	.84	.84	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate (as N) Florence	10	10	.55	-	.65	.65	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrate (as N) Limestone County	10	10	0.84	-	0.84	0.84	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Turbidity (Pluris 2016)	N/A	TT				0.08	NTU	Soil runoff

Turbidity (Limestone County)	N/A	TT	-	-	0.09	NTU	Soil runoff	
Turbidity (Florence)	N/A	TT	-	-	0.24	NTU	Soil runoff	
<b>Organic Contaminants January - December 2016</b>								
Haloacetic Acids (HAA5)	N/A	60	ND	-	1.18	ND	Ppb	By-product of drinking water chlorination
Total Organic Carbon (TOC) Limestone County	N/A	TT	1.09	-	2.05	2.05	ppb	Naturally present in the environment
Total Organic Carbon (TOC) Florence	N/A	TT	.5	-	1.5	1.5	ppb	Naturally present in the environment
<b>Secondary Contaminants January - December 2016</b>								
Chloride (Pluris)	N/A	251	4.44	-	4.44	4.44	ppm	Naturally occurring in the environment or as a result of agricultural runoff
Chloride (Limestone County)	N/A	250	11.4	-	11.4	11.4	ppm	Naturally occurring in the environment or as a result of agricultural runoff
Chloride (Florence)	N/A	250	29.1	-	29.1	29.1	ppm	Naturally occurring in the environment or as a result of agricultural runoff
Sulfate (Pluris 2016)	N/A	251	0.79	-	0.79	0.79	ppm	Naturally occurring in the environment
Sulfate (Florence 2016)	N/A	251	10.9	-	10.9	10.9	ppm	Naturally occurring in the environment
Sulfate (Limestone County)	N/A	250	8.01	-	8.01	8.01	ppm	Naturally occurring in the environment
Total Dissolved Solids (Pluris 2016)	N/A	501	68.00	-	68.00	68.00	ppm	Erosion of natural deposits
Total Dissolved Solids (Florence 2016)	N/A	501	112	-	112	112	ppm	Erosion of natural deposits
Total Dissolved Solids (Limestone County)	N/A	500	172	-	172	172	ppm	Erosion of natural deposits
Zinc (Limestone County 2016)	N/A	5	.06	-	.06	.06	ppm	Erosion of natural deposits
Zinc (Pluris 2016)	N/A	5	0.13	-	0.13	0.13	ppm	Erosion of natural deposits
<b>Special Contaminants January - December 2016</b>								
Calcium (Pluris 2016)	N/A	N/A	11.00	-	11.00	11.00	ppm	Erosion of natural deposits
Calcium (Florence 2016)	N/A	N/A	26.2	-	26.2	26.2	ppm	Erosion of natural deposits
Calcium (Limestone County)	N/A	N/A	44.2	-	44.2	44.2	ppm	Erosion of natural deposits
Carbon Dioxide (Pluris 2016)	N/A	N/A	11.00	-	11.00	11.00	ppm	Erosion of natural deposits
Carbon Dioxide (Florence 2016)	N/A	N/A	1.6	-	1.6	1.6	ppm	Erosion of natural deposits
Carbon Dioxide (Limestone County)	N/A	N/A	1.4	-	1.4	1.4	ppm	Erosion of natural deposits
Magnesium (Pluris 2016)	N/A	N/A	3.14	-	3.14	3.14	ppm	Erosion of natural deposits
Magnesium (Florence 2016)	N/A	N/A	5.22	-	5.22	5.22	ppm	Erosion of natural deposits
Magnesium (Limestone County)	N/A	N/A	4.51	-	4.51	4.51	ppm	Erosion of natural deposits
pH (Pluris 2016)	N/A	N/A	7.31	-	7.31	7.31	SU	Naturally occurring in the environment or as a result of treatment with water additives
pH (Florence 2016)	N/A	N/A	6.53	-	6.53	6.53	SU	Naturally occurring in the environment or as a result of treatment with water additives
pH (Limestone County)	N/A	N/A	7.99	-	7.99	7.99	SU	Naturally occurring in the environment or as a result of treatment with water additives
Sodium (Pluris 2016)	N/A	N/A	2.19	-	2.19	2.19	ppm	Naturally occurring in the environment
Sodium (Florence 2016)	N/A	N/A	10.8	-	10.8	10.8	ppm	Naturally occurring in the environment
Sodium (Limestone County)	N/A	N/A	1.73	-	1.73	1.73	ppm	Naturally occurring in the environment

Specific Conductance (Pluris 2016)	N/A	<501	102.00	-	102.00	102.00	umhos	Naturally occurring in the environment or as a result of treatment with water additives
Specific Conductance (Florence 2016)	N/A	<501	250.00	-	250.00	250.00	umhos	Naturally occurring in the environment or as a result of treatment with water additives
Total Alkalinity (Pluris 2016)	N/A	N/A	34.10	-	34.10	34.10	ppm	Erosion of natural deposits
Total Alkalinity (Florence 2016)	N/A	N/A	68.6	-	68.6	68.6	ppm	Erosion of natural deposits
Total Alkalinity (Limestone County)	N/A	N/A	102	-	102	102	ppm	Erosion of natural deposits
Total Hardness (as CaCO3) (Pluris 2016)	N/A	N/A	40.40	-	40.40	40.40	ppm	Naturally occurring in the environment or as a result of treatment with water additives
Total Hardness (as CaCO3) (Florence 2016)	N/A	N/A	87.0	-	87.0	87.0	ppm	Naturally occurring in the environment or as a result of treatment with water additives
Total Hardness (as CaCO3) (Limestone County)	N/A	N/A	129	-	129	129	ppm	Naturally occurring in the environment or as a result of treatment with water additives
<b>Unregulated Contaminants January - December 2016</b>								
Bromodichloromethane (East Lauderdale)	N/A	N/A	ND	-	6.27	3.14	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Chloroform (East Lauderdale)	N/A	N/A	ND	-	25.70	12.85	ppb	Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination
Dibromochloromethane (East Lauderdale)	N/A	N/A	ND	-	1.57	0.79	ppm	Naturally occurring in the environment

Secondary Drinking Water Standards are guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. ADEM has Secondary Drinking Water Standards established in state regulations applicable to water systems required to monitor for the various components

Unregulated contaminants are those 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

### Minor Hill Violation

Even though our testing and charts show no violations, there was a violation in the Minor Hill area from which we purchase water from and provide to a small amount of customers near that area. Enclosed is a copy of a letter from Minor Hill Utility District with important information about your drinking water. Due to the fact that the water provided to you in this area by East Lauderdale Water is purchased from Minor Hill Utility District, we are required to pass on this information about a monitoring violation that occurred in their district.

Please see enclosed letter for details pertaining to this issue.

If there are any questions pertaining to this matter, you may call Tracy Harris, Manager, Minor Hill Utility District, or myself at 256-627-6476 or 256-247-1606.

### Important Information about your Drinking Water

Minor Hill Utility District recently violated a Federal drinking water standard. Although this situation does not require that you take immediate action, you as a customer, have a right to know what happened, what you should do, and what was done to correct this situation.

During the July 1, 2015 through June 30, 2016 compliance period the water system's Locational Running Annual Average (LRAA) at site #203, 934 Turner Road, for total haloacetic acids (HAAs) has been calculated to be 0.063 mg/L. This value exceeds the maximum contaminant level of 0.060 mg/L set for this parameter. Some people who drink water containing haloacetic acids in excess of the MCL over many years may see an increase risk of getting cancer. You do not need to boil your water or take other actions. However, if you have specific health concerns, consult your doctor. Haloacetic acids are disinfection byproducts resulting from our chlorination of the water to risk of microbial life in the drinking water. The EPA considers microbial contaminants as the greatest risk to the public. We are evaluating the results of the required disinfection and will continue making an effort to reduce the disinfection byproducts without increasing the microbial risks. For more information, please contact Tracy Harris at 931-565-3436 Minor Hill Utility District. *Please* share this information with everyone who may "drink water, including those who may not ever receive this notice directly (for example, people in apartments, nursing homes, school, and businesses,) can do this posting this notice in a public place or distributing copies

hand or mail. This notice is being sent to you by the Minor Hill Utility District, PWSID#TN0000469.

### **GENERAL INFORMATION**

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 activities.

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 (Environmental Protection Agency)/CDC (Center of 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). All Drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk

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 (1-800-426-4791).

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, a person would have to drink two 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.

Based on a study conducted by the 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. East Lauderdale County Water & Fire Protection Authority 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>.

We at the East Lauderdale Water & Fire Protection Authority work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources which are the heart of our community, way of life and our children's future.