

Water System Information

The Limestone County Water and Sewer Authority (LCWSA) serves approximately 30,000 customers and provides water to the City of Ardmore, Harvest-Monrovia Water, the City of Huntsville, Minor Hill, TN, and Giles County, TN. LCWSA is governed by a 5-member board of directors who include Mr. Richard Robinson (chairman), Mr. Grady Congo (co-chairman), Mr. Bobby Jackson (secretary-treasurer), Mr. Kyle Bridgeforth, and Mr. Lakin Collins. Board of director meetings are held monthly on the fourth Thursday of the month in our board room located at 17218 Highway 72 W, Athens, AL 35611 at 10:00 am CST, with November & December held on the third Thursday due to the holidays. In the event you have any questions on the information contained within the CCR you can contact Amanda McMurray, P.E., Water Resources Engineer, at 256 -233-6445, Ext. 101 or at amcmurray@lcwsa.com.

Source Water Information

For our northwest and northeast pressure zones, surface water is pumped from the Elk River at the North Limestone Treatment Facility (NLTF) located approximately five miles north of Elkmont. This facility uses a coagulation-sedimentation-filtration-disinfection treatment process. A source water assessment, or SWA (a tool used to generate information about potential contaminant sources and the potential for a water system to be impacted by those sources), was completed in 2009. The SWA found that the Elk River is overall considered to be a clean river. Typical pollutants are from point sources such as municipalities and industries upstream, and non-point sources such as runoff from agricultural lands and urban areas. A copy of the SWA can be found on our website at www.limestonecountywater.com. Additional water is purchased from Athens Utilities (AU) and the Madison County Water Department (MCWD) daily to meet demands in excess of what the NLTF produces within our northern pressure zones.

For our southern and eastern pressure zones, groundwater is pumped from our Lawson and Newby Wells to the Binford Turner Water Treatment Facility (BTTF), all located on or within proximity to Highway 31 South in Tanner. This facility utilizes ultrafiltration membranes for contaminant removal followed by disinfection. LCWSA has not completed a Wellhead Protection Plan to date due to the treatment processes we utilize. LCWSA purchases water from AU, Decatur Utilities (DU), and Huntsville Utilities (HU) to meet demand in excess of what BTTF produces in our southern and eastern pressure zones. Detected contaminants from waters purchased from other utilities is included in our CCR. For information on their treatment processes you can find digital copies of their CCR's on their websites.

Drinking Water Information

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). 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. 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) or on EPA's website <https://epa.gov/safewater>.

Contaminants that may be present in source water include the following:

- (i) Microbiological contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (ii) Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (iii) Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- (iv) 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.

(v) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water.

Lead and Copper

Corrosion of pipes, plumbing fittings and fixtures may cause metals, including lead and copper, to enter drinking water. To assess corrosion of lead and copper, LCWSA conducts tap sampling for lead and copper at selected sites every three years with the last round of sampling conducted in 2023. LCWSA is currently conducting a study of corrosion control to determine if any changes to treatment methods are needed to minimize the corrosivity of the 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. LCWSA 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>. LCWSA is required to sample for lead in schools and licensed child care facilities as requested by the facility. Contact the school or child care facility that your child attends for further information about any sampling results. Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney, or nervous system problems.

A complete inventory of LCWSA's service lines material inventory can be found on our website at: <https://lcwsagis.maps.arcgis.com/apps/mapviewer/index.html?webmap=61b624b5b3df48eca388cbeaef5177d9>. Lead tap sampling data is available for review by reaching out to our listed contact in the information section of this CCR.

Monitoring Schedule & Results

The EPA or ADEM requires LCWSA to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

TABLE OF DETECTED CONTAMINANTS										
Contaminant	Violation	Unit	MCL	MCLG	LCWSA	Athens Utilities	Decatur Utilities	Huntsville Utilities	Madison County Water Department	Likely Source of Contaminant
					Detected Level	Detected Level	Detected Level	Detected Level	Detected Level	
Total Coliform Bacteria	NO	Present/Absent	<5%	0	1 ¹	NR ²	NR ²	NR ²	NR ²	Naturally present in the environment.
Gross Alpha	NO	pCi/L	15	0	0.605	-0.533	0.114	0.927	1.04	Erosion of natural deposits
Radium-226	NO	pCi/L	5	0	-0.192	0.276	0.62	1.234	0.3	Erosion of natural deposits
Chlorine	NO	ppm	MRLG=4	MRLG=4	2.25 R = 0.41-2.25	NR	3.61	3.6	NR	Water additive used to control microbes
Total Dissolved Solids	NO	ppm	500	N/A	75.0	NR	75.0	137	108	Naturally occurring in the environment or from runoff.
Color Units	NO	units	15	N/A	6.0	NR	6.0	NR	NR	Leaching from vegetation
Turbidity*	NO	NTU	N/A	TT	R=0.01-0.62	NR	0.198	0.22	1.590	Soil runoff. Turbidity is a measure of the cloudiness of water. It is used to indicate water quality and filtration effectiveness (such as whether disease-causing organisms are present).
Aluminum	NO	ppm	200	N/A	0.0322	0.138	0.020	0.064	0.013	Erosion of natural deposits
Arsenic	NO	ppm	0.01	0	ND	0.000639	ND	ND	ND	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	NO	ppm	2.0	2.0	0.0146	0.0198	0.019	0.025	0.017	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits
Chloride	NO	ppm	250	N/A	7.60	10.4	13.2	10.7	6.9	Erosion of natural deposits
Chromium	NO	ppm	0.100	0.10	0.000612	0.00502	ND	ND	ND	Discharge from steel and pulp mills; erosion of natural deposits
Copper	NO	ppm	1.3	N/A	0.669 ³ R=0.00479-1.33	ND	0.24	0.19	0.15	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	NO	ppm	4	4	ND	0.663	0.91	0.55	0.65	Water additive which promotes strong teeth; Erosion of natural deposits; Discharge from fertilizer and aluminum factories
Iron	NO	ppm	0.30	N/A	ND	ND	0.075	ND	ND	Erosion of natural deposits; leaching from pipes
Lead	NO	ppm	0.015	0	0.00195 ⁴ R=ND-0.0055	ND	ND	1.0	0.0024	Corrosion of household plumbing systems; erosion of natural deposits
Manganese	NO	ppm	0.05	N/A	0.0189	0.0008	0.035	ND	0.0063	Erosion of natural deposits
Nickel	NO	ppm	0.1	N/A	ND	0.000604	ND	ND	ND	Erosion of natural deposits
Nitrate	NO	ppm	10	10	4.47 R=1.07-4.47	1.44	0.54	2.0	3.1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	NO	ppm	0.050	0.05	0.000991	0.000996	ND	ND	ND	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sulfate, as SO ₄	NO	ppm	500	N/A	6.84	6.93	8.3	26.4	NR	Erosion of natural deposits
Tetrachloroethylene	NO	ppm	0.005	0.0005	ND	ND	ND	0.0011	ND	Leaching from PVC pipes; Discharge from factories and dry cleaners
Zinc	NO	ppm	5.0	N/A	0.0104	ND	ND	ND	ND	Erosion of natural deposits; discharge from refineries and factories; run-off from landfills
Disinfectant By-Products (DBPs)										
Violation	Units	MCL	MDL	Detected Level	Detected Level	Detected Level	Detected Level	Detected Level	Detected Level	Likely Source of Contaminant
TTMH (total trihalomethanes)	NO	ppb	80	5.00	53.6 LRAA R=4.3 - 82.4	32.3 LRAA	31.6 HRAA	43.2 LRAA	34.8	By-product of drinking water chlorination.
Chloroform	NO	ppm	N/A	0.0005	0.034 R=0.0088-0.034	0.018	0.0042	0.039	ND	
Bromodichloromethane	NO	ppm	N/A	0.0005	0.0062 R=0.002-0.0062	0.0032	0.0026	0.0069	ND	
Dibromochloromethane	NO	ppm	N/A	0.0005	0.0075 R=0.00054-0.00075	ND	ND	0.0010	ND	
HAA5 (total haloacetic acids)	NO	ppb	60	1.00	42.5 LRAA R=ND - 55.9	29.4 LRAA	26.0 HRAA	30.2 LRAA	38.1	
Unregulated Contaminates										
Violation	Units	MCL	MDL	Detected Level	Detected Level	Detected Level	Detected Level	Detected Level	Detected Level	Likely Source of Contaminant
Specific Conductance	NO	umhos/cm	N/A	N/A	NR	NR	167	NR	NR	Measure of how well water can conduct an electrical current
pH	NO	S.U.	N/A	N/A	7.6 R=6.80-8.60	NR	6.99	7.7	6.9	Erosion of natural deposits
Total Alkalinity	NO	ppm	N/A	N/A	132 R=82-132	NR	60	NR	82	A property of water used to determine the ability to neutralize acidic pollution from rainfall or wastewater.
Hardness as CaCO ₃	NO	ppm	N/A	N/A	126	NR	65.8	82.4	54.8	Erosion of natural deposits
CO ₂	NO	ppm	N/A	N/A	1.76	2.64	ND	ND	19.0	Naturally present in the environment
Calcium	NO	ppm	-	N/A	42.4	42.5	19.5	ND	16.1	Erosion of natural deposits
Magnesium	NO	ppm	-	N/A	4.71	4.52	4.2	ND	3.5	Erosion of natural deposits
Sodium	NO	ppm	-	N/A	2.06	2.3	4.2	14.3	17.1	Erosion of natural deposits
Chloromethane	NO	ppm	N/A	0.0005	0.0021 R=0.00061-0.0021	ND	ND	ND	ND	Polystyrene insulation; aerosol propellants; home burning of wood, coal, or certain plastics; and chlorinated swimming pools.
Total Organic Carbon (TOC)	NO	ppm	N/A	0.50	2.44 R=ND-2.44	NR	1.4 RAA	1.84	NR	Naturally present in the environment.
UCMRS / PFAS										
Violation (Yes/No)	Units	MCL	MDL	Detected Level	Detected Level	Detected Level	Detected Level	Detected Level	Detected Level	Likely Source of Contaminant
Perfluorooctanesulfonic Acid (PFOS)	NO	ppt	N/A	4	14.0 R=8.4-14.0	ND	2.93	2.8	ND	Fire training/response sites, industrial facilities, landfills, and wastewater treatment plants.
Perfluorooctanoic Acid (PFOA)	NO	ppt	N/A	1	9.3 R=5.1-9.3	ND	2.84	1.3	ND	
Perfluorobutanesulfonic Acid (PFBS)	NO	ppt	N/A	3	16.0 R=8.4-16.0	ND	3.87	3.3	ND	
Perfluorohexanoic Acid (PFHxA)	NO	ppt	N/A	3	8.0 R=4.4-8.0	ND	2.18	1.6	ND	
Perfluorohexanesulfonic Acid (PFHxS)	NO	ppt	N/A	3	7.3 R=5.1-7.3	ND	0.75	0.4	ND	
Perfluorobutanoic Acid (PFBA)	NO	ppt	N/A	5	24.9 R=9.2-24.9	ND	ND	4.6	ND	
Perfluoropentanoic Acid (PFPeA)	NO	ppt	N/A	3	7.2 R=5.4-7.2	ND	ND	1.7	ND	
Perfluoroheptanoic Acid (PFHpA)	NO	ppt	N/A	3	ND	ND	1.10	0.2	ND	

Notes:

- ¹Three positive samples detected in 2024: one in June, July, & August. These were not MCL violations due to the presence in Total Coliform samples was less than 5%. All follow up samples tested negative.
- ²These are specific to the location within the reporting distribution system for each reporting utility.
- ³Level shown is the calculated 90th percentile. Only one residential site exceeded the AL for copper while no sites exceeded the AL for lead.
- ⁴Turbidity measurements are post filtration at each facility. NLTF & TTF. NLTF (surface water) is required to meet a maximum turbidity of 0.3 ppm while TTF (groundwater) is required to meet 5.0 ppm. All samples met required turbidity limits.

Key

- AL = Action Level
- GWR = Ground Water Rule
- LCWSA = Limestone County Water & Sewer Authority
- LRAA = Locational Running Annual Average
- MCL = Maximum Contaminant Level
- MCLG = Maximum Contaminant Level Goal
- MFL = million fibers per liter
- mg/l = milligrams per liter, or parts per million

- mrem/year = millirems per year (a measure of radiation absorbed by the body)
- N/A = Not Applicable
- ND = Non-Detect
- NR = Not Reported
- NTU = Nephelometric Turbidity Unit
- pCi/L = picocuries per liter (a measure of radioactivity)
- PFAS = Per- and Polyfluoroalkyl Substances
- 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
- R = Range
- TT = Treatment Technique
- UNK = unknown

Treatment Facility Specific Turbidity Values		
Treatment Plant	Highest Average Monthly Value (PPM)	Range (PPM)
NLTF	0.052	0.017-0.090
TTF	0.318	0.096-0.620

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS					
Bacteriological			Organic Chemicals (cont.)		
Contaminant	MCL	Amount Detected	Contaminant	MCL	Amount Detected
Total Coliform Bacteria	<5%	3	o-Dichlorobenzene	600 ppb	ND
Turbidity	TT	0.62	p-Dichlorobenzene	75 ppb	ND
Fecal coliform and <i>E. coli</i>	0	0	1,2-Dichloroethane	5 ppb	ND
Fecal Indicators (enterococci or coliphage)	TT	0	1,1-Dichloroethylene	7ppb	ND
Radiological			cis-1,2-Dichloroethylene	70 ppb	ND
Beta/photon emitters (mrem/yr)	4	ND	trans-1,2-Dichloroethylene	100 ppb	ND
Alpha emitters (pCi/l)	15	0.605	Dichloromethane	5 ppb	ND
Combined radium (pCi/l)	5	-0.192	1,2-Dichloropropane	5 ppb	ND
Uranium (ppb)	30	ND	Di (2-ethylhexyl) adipate	400 ppb	ND
Inorganic Chemicals			Di (2-ethylhexyl) phthalates	6ppb	ND
Antimony	6 ppb	ND	Dinoseb	7ppb	ND
Arsenic	10 ppb	ND	Dioxin [2,3,7,8-TCDD]	30 ppq	ND
Asbestos (MFL)	7	ND	Diquat	20 ppb	ND
Barium	2 ppm	0.0146	Endothal	100 ppb	ND
Beryllium	4 ppb	ND	Endrin	2 ppb	ND
Bromate	10 ppb	ND	Epichlorohydrin	TT	ND
Cadmium	5 ppb	ND	Ethylbenzene	700 ppb	ND
Chloramines	4 ppm	ND	Ethylene dibromide	50 ppt	ND
Chlorine	4 ppm	ND	Glyphosate	700 ppb	ND
Chlorine dioxide	800 ppb	ND	HAAS (haloacetic acids 5)	60ppb	42.5 LRAA
Chlorite	1 ppm	ND	Heptachlor	400 ppt	ND
Chromium	100 ppb	0.612	Heptachlor epoxide	200 ppt	ND
Copper	AL=1.3 ppm	0.669	Hexachlorobenzene	1 ppb	ND
Cyanide	200 ppb	ND	Hexachlorocyclopentadiene	50 ppb	ND
Fluoride	4 ppm	ND	Lindane	200 ppt	ND
Lead	AL=15 ppb	1.95	Methoxychlor	40 ppb	ND
Mercury	2 ppb	ND	Oxamyl [Vydate]	200 ppb	ND
Nitrate	10 ppm	4.47	Pentachlorophenol	1 ppb	ND
Nitrite	1 ppm	ND	Picloram	500 ppb	ND
Total Nitrate and Nitrite	10 ppm	4.47	Polychlorinated biphenyls (PCBs)	500 ppt	ND
Selenium	50 ppb	0.991	Simazine	4 ppb	ND
Thallium	2 ppb	ND	Styrene	100 ppb	ND
Organic Chemicals			Tetrachloroethylene	5 ppb	ND
Acrylamide	TT	ND	Toluene	1 ppm	ND
Alachlor	2ppb	ND	TOC (Total Organic Carbon)	TT	2.44
Atrazine	3 ppb	ND	TTHMs (Total trihalomethanes)	80 ppb	53.6 LRAA
Benzene	5 ppb	ND	Toxaphene	3 ppb	ND
Benzo(a)pyrene [PAHs]	200 ppt	ND	2,4,5-TP (Silvex)	50 ppb	ND
Carbofuran	40ppb	ND	1,2,4-Trichlorobenzene	70 ppb	ND
Carbon tetrachloride	5 ppb	ND	1,1,1-Trichloroethane	200 ppb	ND
Chlordane	2ppb	ND	1,1,2-Trichloroethane	5 ppb	ND
Chlorobenzene	100 ppb	ND	Trichloroethylene	5 ppb	ND
2,4-D	70 ppb	ND	Vinyl Chloride	2 ppb	ND
Dalapon	200 ppb	ND	Xylenes	10 ppm	ND
Dibromochloropropane	200 ppt	ND			

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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
TT = Treatment Technique

Variances or Exemptions

LCWSA has been granted a waiver from ADEM to reduce lead and copper monitoring to once every 3 years. See the table “Years Constituents Last Required to be Reported” table for the last time constituents were required to be tested. 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.

Definitions

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

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

Disinfection Byproducts (DBP’s) - produced when the chlorine in water reacts with natural organic matter present in the source water.

EPA - Environmental Protection Agency

Locational Running Annual Average (LRAA) - the average of the four most recent quarterly results for a specific monitoring location, used to determine compliance with drinking water standards.

Maximum Contaminant Level (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 (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 (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.

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.

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

Not Applicable (N/A) - not required to be reported or tested by water system.

Not Detected (ND) - laboratory analysis indicated that the contaminant was not present at a detectable level.

Not Reported (NR) - LCWSA was not provided data from the utility for the constituent or parameter within this report. The utility may not be required to test or report on it.

Running Annual Average (RAA) - the arithmetic average of analytical results for samples taken at a specific monitoring location during the previous four calendar quarters.

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

UCMR5 - Unregulated Contaminant Monitoring Rule 5.

Variances and Exemptions - The Department or EPA permission not to meet an MCL or a treatment technique under certain conditions

YEARS CONSTITUENTS LAST REQUIRED TO BE REPORTED					
Constituents	LCWSA	DU	HU	AU	MCWD
Bacteriological Contaminants	2024	2024	2024	2024	2024
Radiological Contaminants	2022 ²	2021	2024	2021	2019
Inorganic Chemicals	2024	2024	2024	2024	2024
Synthetic Organic Chemicals	2021 ³	2023	2023	2024	2024
Volatile Organic Chemicals (VOC’s)	2024	2024	2024	2024	2023
Lead and Copper	2023 ⁴	2024	2023	2019	2023
Disinfection By-Products (DBP’s)	2024	2024	2024	2024	2024
Nitrates	2024	2024	2024	2024	2024
Cryptosporidium ¹	2024	2024	2024	2024	2024
PFAS Contaminants	2024	2024	2024	2024	2024
UCMR5 Contaminants	2024	2024	2023	2024	2024

¹Testing for Cryptosporidium was conducted Oct—Dec 2024 with no detections.
²Tested next in 2025.
³Tested next in 2025.
⁴Tested next in 2026.



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Office Hours:
Monday - Friday
8:00 a.m. to 4:30 p.m.

www.limestonecountywater.com



2025 Consumer Confidence Report (CCR)



Limestone County Water & Sewer Authority

“Limestone County Water & Sewer Authority is committed to being a reliable and efficient provider of clean and potable water and treator of wastewater for our customers.”

For a digital version of our CCR you may go to our website at www.limestonecountywater.com.

Data is from testing performed in calendar year 2024.