

Unregulated Contaminant Monitoring Rule 4 (UCMR 4) - AL0001786

Under the directive of the 1996 Safe Drinking Water Act (SDWA), every five years the EPA issues a new list of unregulated contaminants to be monitored by some public water systems (PWSs). The monitoring results may provide a basis for future regulatory actions to protect public health. The Fourth Unregulated Contaminant Monitoring Rule (UCMR4) required PWSs serving more than 10,000 people to monitor for 30 unregulated contaminants during January 2018 through December 2020, with each PWS assigned a monitoring period. Under UCMR 4, public water systems will conduct sampling for 10 cyanotoxins and 20 additional contaminants as listed below.

10 Cyanotoxins

Anatoxin-A	Microcystin-LY
Cylindrospermopsin	Microcystin-RR
Microcystin-LA	Microcystin-YR
Microcystin-LF	Nodularin
Microcystin-LR	Total Microcystins

20 Other Unregulated Contaminants

Germanium	1-butanol	
Manganese	2-methoxyethanol	
Alpha-hexachlorocyclohexne	2-propen-1-ol	
Chlorpyrifos	Butylated hydroxyanisole	
Dimethipin	O-toluidine	
Ethoprop	Quinoline	
Oxyfluorfen	Total organic carbon (TOC)	
Profenofos	Bromide	
Tebuconazole	HAA5 ¹	
Total permethrin (cis- & trans-)	HAA6 ²	
Tribufos	HAA9 ³	
¹ HAA5	² HAA6Br	³ HAA9
dibromoacetic	bromochloroacetic	bromochloroacetic
dichloroacetic	bromodichloroacetic	bromodichloroacetic
monobromoaetic	dibromoacetic	chlorodibromoacetic
monochloroacetic	dibromochloroacetic	Dibromoacetic
trichloroacetic	monobromoacetic	Dichloroacetic
	tribromoacetic	monobromoacetic
		monochloroacetic
		Tribromoacetic
		Trichloroacetic

Assigned monitoring periods for the City of Cullman Water and Sewer were June 2018, September 2018, December 2018, and March 2019. The following table shows the monitoring results on those UCMR4 contaminants for which there was some level of detection during our 2018-2019 monitoring.

Detected Unregulated Contaminant Monitoring Rule 4 (UCMR4) Contaminants

Contaminants	Level Detected	Unit	Msmt
Bromochloroacetic acid	2.04-4.16	µg/L	
Disinfection byproduct (HAA6Br)			
Bromodichloroacetic acid	ND-1.97	µg/L	
Disinfection byproduct (HAA6Br)			
Chlorodibromoacetic acid	ND-0.35	µg/L	
Disinfection byproduct (HAA6Br)			
Dibromoacetic acid	ND-0.42	µg/L	
Disinfection byproduct (HAA9)			
Dichloroacetic acid	8.87-28.6	µg/L	
Disinfection byproduct (HAA5)			
Monobromoacetic acid	ND-0.416	µg/L	
Disinfection byproduct (HAA5)			
Monochloroacetic acid	ND-6.60	µg/L	
Disinfection byproduct (HAA5)			
Trichloroacetic acid	6.53-17.0	µg/L	
Disinfection byproduct (HAA5)			

Assigned monitoring periods for Cullman Utilities Board were June 2018, September 2018, December 2018, and March 2019. Assigned monitoring periods were May 2020, June 2020, July 2020, and August 2020 for cyanotoxins. The following table shows the monitoring results on those UCMR4 contaminants for which there was some level of detection during our 2018-2019 monitoring.

Detected Unregulated Contaminant Monitoring Rule 4 (UCMR4) Contaminants

Contaminants	Level Detected	Unit Msmst
Manganese	3.05-5.28	µg/L
	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient.	
Quinoline	ND-0.03	µg/L
	Used as a pharmaceutical (anti-malarial) and flavoring agent; produced as a chemical intermediate; component of coal.	



Quality Water Is Our Goal

In February, 2020, during our monthly bacteriological testing, we had four (4) sites test positive for Coliform. Coliforms are bacteria that are naturally present in the environment and are used as indicators that other potentially harmful waterborne pathogens may be present. We retested those sites, in addition to upstream and downstream sites as required. All retested sites were negative for coliform. A Level 2 assessment was completed and submitted as required by ADEM.

In November, 2020, during our monthly bacteriological testing, we had three (3) sites test positive for Coliform. Coliforms are bacteria that are naturally present in the environment and are used as indicators that other potentially harmful waterborne pathogens may be present. We retested those sites, in addition to upstream and downstream sites as required. All retested sites were negative for coliform. A Level 1 assessment was completed and submitted as required by ADEM.



PWSID Number 001786
Annual Water Quality Report

City of Cullman Water Department

January - December 2020

We are pleased to bring you this year's Annual Water Quality Report. This report is designed to keep you informed about the quality of water and services we deliver to you every day. We want you to understand the efforts we make to improve treatment processes and protect our supply. We are committed to the quality of your drinking water.

All information provided in this report has been collected and reported in accordance with the water quality standards established by the United States Environmental Protection Agency (USEPA) and the Alabama Department of Environmental Management (ADEM). ***We are proud to report that the water provided by the Utilities Board of the City of Cullman meets or exceeds established water quality standards.***

As you can see by the tables, our system had no violations of allowable limits of contaminants in drinking water. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

(1) Check your faucet's inside and outside your home.

This document contains material that has been prepared by or for the (DSE) Digital Distribution System Evaluation.

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. **City of Gunnison** is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When you buy water has been stored in plumbing components. When materials used in plumbing components. You can minimize your risk by leading exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are worried about lead in your water, test your water for lead. 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>.

Jeff Adams, Superintendent
256-739-2410
1437 West Road
Wastewater Treatment Plant
David Freeman, Manager
256-739-0266
1740 Third Street, S.E.
Water Treatment Plant
Chris Freeman, Superintendent
256-775-7210
1717 Eva Road, N.E.

Customer service locations

The Culmann City Council meets every second and fourth Monday. Meetings are scheduled for 7 PM in the Lucille Galin conference room, 100 Culmann Avenue, Culmann, AL. Meetings are scheduled for 7 PM in the Lucille Galin conference room, 100 Culmann Avenue, Culmann, AL.

Physical Address
Cullinan, AL 35056
P.O. Box 278
F.C. 100-100
Customer Service
1717 Eva Road NE
Cullinan
Water Department
Customer Service
1717 Eva Road NE
Cullinan, AL 35055

May of a Quantum Hard Separator

(1) Check your faucets inside and outside your home. Just a slow drip can waste 15 to 20 gallons of water a day.

(2) Check your toilets. Look for hidden leaks. A leaking toilet can waste 15 to 60 gallons of water a day.

(3) Reduce your shower time. Most showers pour out between 5 to 7 gallons of water each flush.

(4) While brushing your teeth or shaving, don't leave the water running. It adds up quickly.

(5) Fully loadded before you turn it on.

(6) Washing machines use 40 or more gallons a load whether it's full or just a part of socks. Save up for a full load and make your work efficient.

(7) Reduce water usage your lawn to 1 or 2 times a week. A garden hose can pour out 600 gallons of water in only a few hours.

(8) Think about the amount of water it will take to wash your vehicle. Don't let the water run. Shut it off between washing and rinsing.

(9) Locate your cutoff valves. Lots of water can be lost if you have a leak and have to search for your cutoff valve.

(10) If you see a leak, notify the water department immediately. We will check the leak and prioritize the problem.

The Utilities Board owns and operates one treatment plant receiving water from Lake Catawba and Duke Kerr, the treatment plant has a total capacity of 24MGD. The City owns and operates the distribution network within the city. Water quality samples are collected regularly, sample sites throughout service area, and at customers' homes. The Source Water Assessment has been completed and updated to current status. The assessment is available for your review. Please contact David Freeman at 739-0266. The Cullinan Water Treatment Plant at (256) 739-0266.

To provide a safe drinking water system and chlorine as our primary disinfectant, providing a minimum of 1.0 ppm entering the distribution system and maintaining at least 2 ppm throughout the system.

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 radionactive materials, 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. People who are immunocompromised 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 should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate measures to lessen the risk of infection by Cryptosporidium and other microorganisms are available from the Safe Drinking Water Hotline (800-426-4791).

The Water Treatment Plant is owned and operated by the Utilities Board of the City of Culmina. The Utilities Board has only one customer, The City of Culmina. The Water Treatment Plant has provided water for many years and is recognized as an industry leader. Over the years the Water Treatment Plant has received numerous awards for excellence in management, operations, and employee achievement. The Water Treatment Plant is a three-time recipient of the Outstanding Plant Award for 11 out of 12 years. The plant award is given by ADEM. The Water Treatment Plant is also a three-time recipient of the Outstanding Plant Award for 11 out of 12 years. The training session that ADEM provides to Surface Water Treatment Plants to help optimize the plant. The training is a 3 year long training session that ADEM provides to Surface Water Treatment Plants to help optimize the plant. The training session that ADEM provides to Surface Water Treatment Plants to help optimize the plant. The training is a 3 year long training session that ADEM provides to Surface Water Treatment Plants to help optimize the plant. The training is a 3 year long training session that ADEM provides to Surface Water Treatment Plants to help optimize the plant.

How do I read this Chart?

It's easy! The column labeled "MCL (mg/L)" provides you with the maximum Contaminant Level as established by USEPA and/or ADEM for each compound. The testing parameters are categorized as primary or secondary, with the required MCL. These are the standards all drinking water supplies must meet.

Where does my water come from?

The Utilities Board of the City of Cullman owns and operates one treatment plant receiving water from Lake Catoma. The treatment is a conventional surface treatment process with a total capacity of 24 MGD. Cullman County purchases water from the City of Cullman. A copy of the Source Water Assessment is available at the Cullman Water Plant. Please call David Freeman at (256) 739-0266 to view.

Definitions

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 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 Residual Disinfectant Level Goad 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.

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

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

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

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

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

90th Percentile: 90% of samples are equal to or less than the number in the chart.

NTU (or Nephelometric Trubidity Units): A measure of clarity.

HARA: Highest Annual Rolling Average; based on seven quarters of testing.

NA: Not applicable.

SU: Standard Unit.

ND: Not detectable at testing limits.

PPB (or parts per billion): micrograms per liter (ug/L).

PPM (or parts per million): milligrams per liter (mg/l).

pC/L (or picuries per liter): a measure of radioactivity.

FDA: Food and Drug Administration.

EPA: Environmental Protection Agency.

ADEM: Alabama Department of Environmental Management.

CDC: Center for Disease Control.

(umhos) Numerical expression (expressed in micromhos per centimeter). The ability of water to conduct an electric current.

Table of Primary Contaminants

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

Contaminant	MCL	2020 Amount Detected
Bacteriological		
Total Coliform Bacteria	<5%	0
Turbidity	TT	0.10
Radiological		
Beta/photon emitters (mrem/yr)	4	ND
Alpha emitters (pci/l)	15	ND
Gross Beta in Liquids (pci/l)	15	ND
Inorganic		
Antimony (ppb)	6	ND
Arsenic (ppb)	10	ND
Asbestos (MFL)	7	ND
Barium (ppm)	2	0.0248
Beryllium (ppb)	4	ND
Cadmium (ppb)	5	ND
Chromium (ppb)	100	ND
Copper (ppm)	AL=1.3	0.220
Cyanide (ppb)	200	ND
Fluoride (ppm)	4	0.72
Lead (ppb)	AL=15	0.00288
Mercury (ppb)	2	ND
Nitrate (ppm)	10	0.125
Nitrite (ppm)	1	ND
Selenium	50	ND
Thallium	2	ND
Organic Chemicals		
2,4-D	70	ND
2,4,5-TP (Silvex)	50	ND
Acrylamide	TT	ND
Alachlor	2	ND
Atrazine	3	ND
Benzo(a)pyrene [PHAs]	200	ND
Carbofuran	40	ND
Chlordane	2	ND
Chlorite (ppm)	1	0.61
Chlorine Dioxide (ppm)	0.80	0.139
Dalapon	200	ND
Di-(2-ethylhexyl)adipate	400	ND
Di-(2-ethylhexyl)phthalates	6	1.20
Dinoseb	7	ND
Diquat	20	ND
Dioxin [2,3,7,8-TCDD]	30	ND
Endothall	100	ND

Contaminant	MCL	2020 Amount Detected
Endrin	2	ND
Epichlorohydrin	TT	ND
Glyphosate	700	ND
HAA5 (ppb)	60	34.3
Heptachlor	400	ND
Heptachlor epoxide	200	ND
Hexachlorobenzene	1	ND
Hexachloropentadiene	1	ND
Lindane	200	ND
Methoxychlor	40	ND
Oxamyl [Vydate]	200	ND
PCBs	500	ND
Pentachlorophenol	1	ND
Picloram	500	ND
Simazine	4	ND
Toxaphene	3	ND
Benzene	5	ND
Carbon Tetrachloride	5	ND
Chlorobenzene	100	ND
Dibromochloropropane	200	ND
0-Dichlorobenzene	600	ND
p-Dichlorobenzene	75	ND
1,2-Dichloroethane	5	ND
1,1-Dichloroethylene	7	ND
Cis-1,2-Dichloroethylene	70	ND
trans-1,2-Dichloroethylene	100	ND
Dichloromethane	5	ND
1,2-Dichloropropane	5	ND
Ethylbenzene	700	ND
Ethylene dibromide	50	ND
Styrene	100	ND
Tetrachloroethylene	5	ND
1,2,4-Trichlorobenzene	70	ND
1,1,1-Trichloroethane	200	ND
1,1,2-Trichloroethane	5	ND
Trichloroethylene	5	ND
TTHM (ppb)	80	43.2
Toluene	1	ND
Vinyl Chloride	2	ND
Xylenes	10	ND

Table of Detected Contaminants

CONTAMINANT	MCLG	MCL	Range		City of Cullman Amount Detected	Likely Source of Contamination
Bacteriological						
Turbidity	0	TT			0.10	NTU
Radiological						
Beta/photon emitters	0	4			ND	mrem/yr
Gross Beta in Liquids	0	15			ND	pci/l
Radium-228 (2019)	0	5			0.0926	pci/l
Inorganic Chemicals						
Barium	2.0	2.0	ND	-	0.0248	0.0248 ppm Discharge of drilling wastes; discharge from metals refineries; erosion of natural deposits
Copper (2019)	1.3	AL=1.3	All 30 samples below action level. Last tested in 2019. Tested every 3 years.		0.220	ppm Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	0.7	4.0	0.50	-	0.72	0.72 ppm Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead (2019)	0	AL=15	All 30 samples below action level. Last tested in 2019. Tested every 3 years.		0.00288	ppb Corrosion of household plumbing systems; erosion of natural deposits
Nitrate	1	10	0.00	-	0.1250	0.1250 ppm Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Organic Chemicals						
TTHM	0	80	25.6	-	76.8	43.2 ppb By-product of drinking water chlorination
Haloacetic Acids (HAA5)	0	60	21.7	-	44.9	34.3 ppb By-product of drinking water chlorination
Total Organic Carbon	0	TT	0.72	-	2.27	2.27 ppm Naturally present in the environment
Chlorine	MRDLG=4	MRDL=4	1.60	-	3.00	3.00 ppm Water additive used to control microbes

Secondary Contaminant Standards - 2020

Substance	Cullman Water	MCL
Chloride	7.16 PPM	250
Sodium	5.79 PPM	Corrosivity
Sulfate	14.2 PPM	250
Total Dissolved Solids	73 PPM	500
Calcium	13.3 PPM	Corrosivity
Magnesium	1.67 PPM	Corrosivity
Aluminum	ND PPM	0.2
Manganese	ND PPM	0.05
Iron	ND PPM	0.3
Nickel	ND PPM	0.1
Carbon Dioxide	ND PPM	Corrosivity
Hardness	40 PPM	Corrosivity

NOTE: The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old.

Secondary Contaminant Standards - 2020 (Continued)

Substance	Cullman Water	MCL
Color	ND Color Units	15
Silver	ND PPM	0.1
Zinc	ND PPM	5
pH	7.31 PPM	Corrosivity
Total Alkalinity	27.9 PPM	Corrosivity
Specific Conductance	121 umhos	Corrosivity
MBAS	ND PPM	500

"CULLMAN WATER"

Unregulated Contaminants Table - 2020		
Contaminant	Average	Range

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