2024 Annual Water Quality Report

(Testing Performed January through December 2024)
PWSID AL0001432
Curry Water Authority
905 Brakefield Dairy Road
Jasper, Alabama 35503
205-221-4164

We are 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. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources.

Water Source: B.J. Thomas Water Treatment Plant	Curry Water Works is served from the Smith Lake Intake.	
Storage Capacity	Five tanks with a total capacity of 2,050,000 gallons, with a 336,000-gallon clear well at the plant.	
Number of Customers	Approximately 6,000 – Population 18,000	
Water Board Members	Greg Cordes, Chairman	Ellis Nicklaus, Director
	Steve Pruitt, Vice-Chairman	Doug Rice, Director
	Tommy Gay-Secretary/Treasurer	
Water Board Staff	Billy Bennett, General Manager	Dee Dee Freeman, Accountant Coordinator
	Justin Coe, Distribution Superintendent	Melissa Calloway, Office Manager
	Mike Walton, Plant Superintendent	

At B.J. Thomas Filtration Plant we are able to withdraw 4 MGD from Clear Creek, within the Sipsey fork, of the Lewis Smith Development of the Warrior River Hydroelectric Dam. Curry Water Authority has installed a 36" pipe with an attached 24" flexible intake pipe that enters the bottom of the lakebed, into the water column and extends 52' into the lake from the shoreline. Attached at the end of the 24" flexible intake pipe is a T-shaped barrel intake screen measuring 87" long by 24" in diameter. The screen consists of stainless-steel wire with a screen slot opening of .25" creating a 78% slot opening. This structure is attached to a floating buoy by an 8' length of chain. This allows the intake screen to remain submerged 8' under the surface at a consistent depth below the surface. The water then goes to the pumping station where it is connected to a 16" main to the treatment plant. That water is collected in a settling basin that can hold 86,540 gallons of raw water. It then flows into a rapid mix where it is treated with Polyaluminum Chloride, Sodium Permanganate. It then goes thru a slow mixing process to allow floc to form. This floc then settles out and goes over the plate settlers and into the building. Next, it goes into the 3 trains of membranes that filter the remaining impurities out and that water goes into a clear well where Sodium Hypochlorite is added. That water is then pumped by 3 finished water pumps capable of producing 2 MGD each to the Thach tank for distribution.

Fun Facts:

Water Level Operations: April 1st to July 1st elevation at normal full pool of 510'.
July 1st to December 1st drawdown begins until it reaches winter pool level 496'. Remains 496' until Jan. 31st when it is refilled to 510' by April 1st..
At all times the Smith Reservoir must be maintained at no lower than 486' for the protection of the lake and electrical system emergencies. This elevation allows Alabama Power to provide 12 hours of generation, as maybe needed, to provide stability or emergency response for critical systems needs before water can no longer physically pass thru the turbines.
3 racks of membranes holding 96 modules each; each module has 6,350 fibers inside.
Settling basin holds 86,540 gallons of raw water.
Clearwell hold 370,000 gallons of treated water.
CIP tank holds 2,500 gallons of cleaning solution.
Neutralization tank holds 12,000 gallons of solution.
There is 9,200 ft. of 16" pipe from the pumping station to the treatment plant
There is 27,000 ft. of 16" pipe from the treatment plant to Thach Tank.
B.J. Thomas Filtration Plant chemicals used for treatment:

1. Sodium Hypochlorite: disinfection of the water; kills viruses, germs, bacteria and microorganisms.
2. Polyaluminum Chloride: coagulant added to the raw water for settling purposes
3. Hydrated Lime: increases the PH in the finished water.
4. Soda Ash: increases the PH in the raw water for coagulation and settling of the raw water.
5. Sodium Permanganate: used in treating taste and odor and manganese removal.
6. Orthophosphate: corrosion inhibitor added to the finished water.

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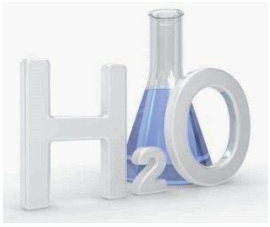
B.J. Thomas Filtration Plant

Source Water Assessment: We at Curry Water Authority, has developed a Source Water Assessment plan that assists in protecting our water sources. This plan provides additional information such as potential sources of contamination. No sites evaluated pose a significant risk to our customers. It includes a susceptibility analysis, which classified potential contaminants as high, moderate, or non-susceptible (low) to contaminating the water source. It has been determined by the assessment that the source water susceptibility ranking has a low-risk potential. The assessment has been performed, public notification has been completed, and the plan was approved by ADEM. Anyone wishing to view this report should contact our office at (205) 221-4164. Please help us make this effort 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.

Information about Lead: *Elevated levels of lead can cause serious health problems, especially for pregnant women, infants, and young children. NEVER make baby formula with warm or hot tap water.* Lead is rarely found in source water. If lead is present in tap water, it is primarily from corrosion of materials that were used in older plumbing, solder that connects pipes, or from pipes connecting a house to the main water pipe in the street. Lead is no longer used in manufacturing these products, but plumbing components containing lead may still remain in some older homes and buildings. When water sits for several hours in pipes containing these older materials, lead can leach into the water. Boiling will NOT reduce the amount of lead in your water. If you choose to have your tap water tested, be sure to use a properly certified laboratory. Information on lead in drinking water, testing methods, and steps you can take to minimize your family's exposure is available from the Safe Drinking Water hotline at 800-426-4791 and from http://www.cdc.gov/nceh/lead/tips/water.htm.

We use an independent laboratory to analyze samples from our distribution system for lead according to a monitoring schedule set by ADEM. Your water system is responsible for providing high quality drinking water but cannot control the variety of materials that were used in household plumbing. The EPA and the CDC make the following recommendations:

- Before using any tap water for drinking or cooking, flush your water system by running the kitchen tap (or any other tap you take drinking or cooking water from) on COLD for 1–2 minutes. Flushing can minimize the potential for lead exposure, especially if the water has been sitting undisturbed for several hours, as in overnight.
- In all situations, especially for making baby formula, drink or cook only with water that comes out of the cold tap. Warm or hot tap water is more likely to cause lead to leach from plumbing materials.
- Periodically remove the aerator on the tip of the faucet and wash out any debris such as metal particles.



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 number 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. 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).

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.

Our source water is also tested for pathogens, such as Cryptosporidium and Giardia. 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 or from the Safe Drinking Water Hotline at 800-426-4791. All test results were well within state and federal standards. *Cryptosporidium and Giardia have not been detected in our finished drinking water.*

LEAD SERVICE LINE INENTORY:

Our Lead Service Line Inventory was completed and submitted and a copy of it is in our office as required by EPA. If any would like to view it or has any questions, please feel free to contact our office.

Questions: If you have any questions about this report or concerning your water utility, please contact Billy Bennett, General Manager, at the water office at 205-221-4164. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the third Tuesday of each month at 4:00 pm at the Curry Water Authority Office 905 Brakefield Dairy Road, Jasper, Alabama 35503.

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).

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Monitoring Results

As you can see by the table below, our system had no violations. 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. The tables below show only those contaminants that were detected.

Curry Water Authority
Detected Drinking Water Contaminants

Contaminants	Violation Y/N	Level Detected	Unit Msmt	MCLG	MCL	Likely Source of Contamination
Chlorine	NO	0.66-2.14	ppm	MRDLG=4	MRDL=4	Water additive used to control microbes
Turbidity	NO	0.10	NTU	n/a	TT	Soil runoff
Total Coliform Bacteria	NO	0	Present/ Absent	0	5% of monthly samples	Naturally present in the environment
Total Organic Carbon	NO	1.2	ppm	n/a	TT	Soil runoff
Gross Alpha	NO	1.99	pCi/L	0	15	Erosion of Natural Deposits
Radium-226	NO	0.856	pCi/L	0	5	Erosion of Natural Deposits
Radium-228	NO	0.677	pCi/L	0	5	Erosion of Natural Deposits
Barium	NO	0.015	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Lead (March 2023)	NO	ND	ppm	0	AL=15	Corrosion of household plumbing systems: erosion of natural deposits
Lead (July 2023)	NO	ND	ppm	0	AL=15	Corrosion of household plumbing systems: erosion of natural deposits
Copper (March 2023)	NO	0.038 AL=0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching of preservatives
Copper (July 2023)	NO	0.055 AL=0	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching of preservatives
Nitrate (as Nitrogen)	NO	0.15	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
TTHM -Total trihalomethanes	NO	LRAA 43.83 (26.0-68.0)	ppb	0	80	By-product of drinking water chlorination
HAA5 -Total haloacetic acids	NO	LRAA 28.59 (21.0-36.0)	ppb	0	60	By-product of drinking water chlorination
Unregulated Contaminants						
Chloroform	NO	18.0	ppb	n/a	n/a	Naturally occurring; industrial discharge; agricultural runoff
Bromodichloromethane	NO	2.98	ppb	0	n/a	Naturally occurring; industrial discharge; agricultural runoff
PFA's	NO	ND	ppb	n/a	n/a	Manmade substance that resist both oil and water
Secondary Contaminants						
Aluminum	NO	0.074	ppm	n/a	0.2	Erosion; treatment with water additives
Calcium	NO	5.7	ppm	n/a	n/a	Naturally occurring in the environment
Chloride	NO	7.2	ppm	n/a	250	Naturally occurring; industrial discharge; agricultural runoff
Color	NO	ND	units	n/a	15	Naturally occurring; treatment with water additives
Hardness	NO	21.7	ppm	n/a	n/a	Naturally occurring; treatment with water additives
Iron	NO	0.044	ppm	n/a	0.30	Naturally occurring, erosion, leaching from pipes
Magnesium	NO	1.8	ppm	n/a	n/a	Naturally occurring in the environment
Manganese	NO	ND	ppb	n/a	0.05	Erosion of natural deposits
pH	NO	7.9	S.U.	n/a	n/a	Naturally occurring; treatment with water additives
Sodium	NO	6.1	ppm	n/a	n/a	Naturally occurring in the environment
Sulfate	NO	7.2	ppm	n/a	250	Naturally occurring; industrial discharge; agricultural runoff
Total Dissolved Solids	NO	58.0	ppm	n/a	500	Naturally occurring; industrial discharge; agricultural runoff
Zinc	NO	30.0	ppm	n/a	5	Erosion; refinery or factory discharge; landfill runoff

* Figure shown is 90th percentile and # of sites above Action Level (AL) = 0

UCMR5

The Safe Drinking Water Act (SDWA) requires that once every five years the EPA issues a list of unregulated contaminants to be monitored by public water systems (PWSs).

The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires sample collection for 30 chemical contaminants between 2023 and 2025 using analytical methods developed by the EPA and consensus organizations. This action provides the agency and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. Below is a list of the contaminants that are being tested for during the UCMR5 along with their results.

Curry Water Authority Unregulated Contaminant Rule 5 (UCMR5) Contaminants					
Contaminants	**Unit Msmt**	**Level Detected**	**Contaminant**	**Unit Msmt**	**Level Detected**
lithium	ppb	ND	PFHxA	ppb	ND
11Cl-PF3OUdS	ppb	ND	PFHxS	ppb	ND
4:2 FTS	ppb	ND	PFMBA	ppb	ND
6:2 FTS	ppb	ND	PFMPA	ppb	ND
8:2 FTS	ppb	ND	PFNA	ppb	ND
9Cl-PF3ONS	ppb	ND	PFOA	ppb	ND
ADONA	ppb	ND	PFOS	ppb	ND
HFPO-DA	ppb	ND	PFPeA	ppb	ND
NFDHA	ppb	ND	PFPeS	ppb	ND
PFBA	ppb	ND	PFUnA	ppb	ND
PFBS	ppb	ND	NEtFOSAA	ppb	ND
PFDA	ppb	ND	NMeFOSAA	ppb	ND
PFDoA	ppb	ND	PFTA	ppb	ND
PFEESA	ppb	ND	PFTrDA	ppb	ND
PFHpA	ppb	ND			
PFHpS	ppb	ND			

Definitions

Action Level- the concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.
Coliform Absent (ca)- Laboratory analysis indicates that the contaminant is not present.
Cryptosporidium- a microscopic parasite that can cause disease, mainly diarrhea, if swallowed.
Disinfection byproducts (DBPs)- are formed when disinfectants used in water treatment plants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water.
Distribution System Evaluation (DSE)-a 4-quarter study to identify distribution system locations with high concentrations of DBPs.
Maximum Contaminant Level (MCL) is the highest level of a contaminant that is 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. MCLGs allow for a margin of safety.
Maximum Residual Disinfectant Level (MRDL)- the highest level of a disinfectant allowed in drinking water
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.
Millirems per year (mrem/yr)-measure of radiation absorbed by the body.
Nephelometric Turbidity Unit (NTU)-a measure of the clarity of water.
Non-Detect (ND)- laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.
Parts per billion (ppb) or Micrograms per liter (µg/l)-one part per billion corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
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 quadrillion (ppq) or Picograms per liter (picograms/l)-one part per quadrillion 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)-one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.
Picocuries per liter (pCi/L)-picocuries per liter is a measure of the radioactivity in water.
Running Annual Average (LRAA)-yearly average of all the DPB results at each specific sampling site in the distribution system.
Standard Units (S.U.)-pH of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas.
Treatment Technique (TT)- a required process intended to reduce the level of a contaminant in drinking water.
Variances & Exemptions (V&E)-State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

Below is a table of contaminants for which the Environmental Protection Agency and the Alabama Department of Environmental Management require testing where applicable. These contaminants were not detected in your drinking water unless they are also listed in the Detected Drinking Water Contaminants table elsewhere in this report.

STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS

Contaminant	MCL	Unit of Msmt	Contaminant	MCL	Unit of Msmt
Bacteriological Contaminants			cis-1,2-Dichloroethylene	70	ppb
Total Coliform Bacteria	<5%	present/absent	trans-1,2-Dichloroethylene	100	ppb
Fecal Coliform and E. coli	0	present/absent	Dichloromethane	5	ppb
Turbidity	TT	NTU	1,2-Dichloropropane	5	ppb
Cryptosporidium	TT	Calc.organisms/l	Di (2-ethylhexyl)adipate	400	ppb
Radiological Contaminants			Di (2-ethylhexyl)phthalate	6	ppb
Beta/photon emitters	4	mrem/yr	Dinoseb	7	ppb
Alpha emitters	15	pCi/l	Dioxin [2,3,7,8-TCDD]	30	ppq
Combined radium	5	pCi/l	Diquat	20	ppb
Uranium	30	pCi/l	Endothall	100	ppb
Inorganic Chemicals			Endrin	2	ppb
Antimony	6	ppb	Epichlorohydrin	TT	TT
Arsenic	10	ppb	Ethylbenzene	700	ppb
Asbestos	7	MFL	Ethylene dibromide	50	ppt
Barium	2	ppm	Glyphosate	700	ppb
Beryllium	4	ppb	Heptachlor	400	ppt
Cadmium	5	ppb	Heptachlor epoxide	200	ppt
Chromium	100	ppb	Hexachlorobenzene	1	ppb
Copper	AL=1.3	ppm	Hexachlorocyclopentadiene	50	ppb
Cyanide	200	ppb	Lindane	200	ppt
Fluoride	4	ppm	Methoxychlor	40	ppb
Lead	AL=15	ppb	Oxamyl [Vydate]	200	ppb
Mercury	2	ppb	Polychlorinated biphenyls	0.5	ppb
Nitrate	10	ppm	Pentachlorophenol	1	ppb
Nitrite	1	ppm	Picloram	500	ppb
Selenium	.05	ppm	Simazine	4	ppb
Thallium	.002	ppm	Styrene	100	ppb
Organic Contaminants			Tetrachloroethylene	5	ppb
2,4-D	70	ppb	Toluene	1	ppm
Acrylamide	TT	TT	Toxaphene	3	ppb
Alachlor	2	ppb	2,4,5-TP(Silvex)	50	ppb
Atrazine	3	ppb	1,2,4-Trichlorobenzene	.07	ppm
Benzene	5	ppb	1,1,1-Trichloroethane	200	ppb
Benzo(a)pyrene [PAHs]	200	ppt	1,1,2-Trichloroethane	5	ppb
Carbofuran	40	ppb	Trichloroethylene	5	ppb
Carbon tetrachloride	5	ppb	Vinyl Chloride	2	ppb
Chlordane	2	ppb	Xylenes	10	ppm
Chlorobenzene	100	ppb	**Disinfectants & Disinfection Byproducts**		
Dalapon	200	ppb	Chlorine	4	ppm
Dibromochloropropane	200	ppt	Chlorine Dioxide	800	ppb
1,2-Dichlorobenzene	1000	ppb	Chloramines	4	ppm
1,4-Dichlorobenzene (para)	75	ppb	Bromate	10	ppb
o-Dichlorobenzene	600	ppb	Chlorite	1	ppm
1,2-Dichloroethane	5	ppb	HAA5 [Total haloacetic acids]	60	ppb
1,1-Dichloroethylene	7	ppb	TTHM [Total trihalomethanes]	80	ppb

LIST OF SECONDARY CONTAMINANTS

Alkalinity, Total (as CA, Co_3)	Copper	Manganese	Specific Conductance
Aluminum	Corrosivity	Odor	Sulfate
Calcium, as Ca	Foaming agents (MBAS)	Nickel	Total Dissolved Solids
Carbon Dioxide	Hardness	pH	Zinc
Chloride	Iron	Silver	
Color	Magnesium	Sodium	

LIST OF UNREGULATED CONTAMINANTS

Aldicarb	Chloroethane	Dieldrin	Propachlor
Aldicarb Sulfone	Chloroform	Hexachlorobutadiene	N-Propylbenzene
Aldicarb Sulfoxide	Chloromethane	3-Hydroxycarbofuran	Propachlor
Aldrin	O-Chlorotoluene	Isoprpylbenzene	1,1,1,2-Tetrachloroethane
Bromoacetic Acid	P-Chlorotoluene	p-Isopropyltoluene	1,1,2,2-Tetrachloroethane
Bromobenzene	Dibromochloromethane	M-Dichlorobenzene	Tetrachloroethene
Bromochloromethane	1,2-Dibromoethane	Methomyl	Trichloroacetic Acid
Bromodichloromethane	Dibromomethane	Methylene chloride	1,2,3-Trichlorobenzene
Bromoform	1,1-Dichloroethane	Methyl tert-butyl ether	Trichloroethene
Bromomethane	1,3-Dichloropropane	Metolachlor	Trichlorofluoromethane
Butachlor	2,2-Dichloropropane	Metribuzin	1,2,3-Trichloropropane
N-Butylbenzene	1,1-Dichloropropene	MTBE	1,2,4-Trimethylbenzene
Sec-Butylbenzene	1,3-Dichloropropene	Naphthalene	1,3,5-Trimethylbenzene
Tert - Butylbenzene	Dicamba	1-Naphthol	
Carbaryl	Dichlorodifluoromethane	Paraquat	

In case of an emergency after hours or on weekends and holidays, call Curry Water Authority at (250)221-4164