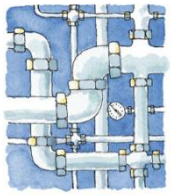

Clemson University Water System

System No, SC3910006

Clemson, SC

2025 Annual Water-Quality Report

Developed April 9, 2026

Clemson University is committed to providing students, faculty, and staff with a safe and reliable supply of high-quality drinking water. We test our water using sophisticated equipment and advanced procedures. The water supplied by Clemson University Water System meets state and federal standards for both appearance and safety. This annual "Consumer Confidence Report," required by the Safe Drinking Water Act (SDWA), tells you where your water comes from, what our tests show about it, and other things you should know about drinking water.

The U.S. Environmental Protection Agency (EPA) and the S.C. Department of Health and Environmental Control (DHEC) have strict standards for all drinking water. These standards are designed to protect consumers from bacteria and water-borne illnesses. To protect our customers, water samples are taken throughout the campus once a month and the lab results are reviewed by DHEC. Since we are only a distribution system, we do not actually filter or treat our water and therefore depend on our water supplier to furnish us with most of our test results that are listed in this report labeled **Anderson Regional Joint Water System** (ARJWS) Water Quality Table. In addition to continuously monitoring some parameters, the operators at the ARJWS Plant perform over 200 laboratory tests of the water daily.

Water Source

The Clemson University Water System is supplied by ARJWS Hartwell Lake Filter Plant which draws its water from the U.S. Army Corps of Engineers' Hartwell Lake Reservoir lying along the border of upstate South Carolina and Georgia. This water is piped into the CU Water System through three metering stations.

An Explanation of the Water Quality Data Table

The table shows the results of our water-quality analyses. Every regulated contaminant that was detected in the water, even the most minute trace, is listed here. The table contains the name of each substance, the highest level allowed by regulation (MCL), the ideal goals for public health, the amount detected, the usual sources of such contamination, footnotes explaining our findings, and a key to units of measurement. Definitions of MCL and MCLG are important.

Terms used in the Water Quality Tables and in other parts of this report are defined here.

Maximum Contaminant Level or 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 or MCLG: The level of contaminant in drinking water below which there is not known or expected risk to health. MCLGs allow for a margin of safety.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirement that a water system must follow.

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

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.

Maximum Residual Disinfectant Level Goal or (MRDLG): The level of drinking water disinfectant below which there is not known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contamination.

Total Organic Carbon (TOC): The measure of the total amount of organic matter within a water solution. For drinking water purposes, it is an indicator of the overall water quality prior to and after treatment.

The data presented in this report is based upon tests conducted in 2025 in accordance with regulations.

Key To Tables	
AL = Action Level	NTU = Nephelometric Turbidity Units
BDL = Below Detectible Level	pCi/L = picocuries per liter (a measure of radioactivity)
MCL = Maximum Contaminant Level	ppm = parts per million, or milligrams per liter (mg/L) (this compares to one penny in $10,000)
MCLG = Maximum Contaminant Level Goal	ppb = parts per billion, or micrograms per liter (µg/L) (this compares to one penny in $10,000,000)
MFL = Million Fibers per Liter	ppt = parts per trillion, or nanograms per liter (ng/L)
mrem/year = millirems per year— (a measure of radiation absorbed by the body)	ND = Non-detectable
MRDL = Maximum Residual Disinfectant Level	RAA = Running Annual Average
MRDLG = Maximum Residual Disinfectant Level Goal	TT = Treatment Technique

The Secondary Standards

Unlike **primary** drinking water regulations, **secondary** drinking water regulations are **not** designed to protect the public health. Instead, they are intended to protect "public welfare" by providing guidelines regarding the **taste, odor, color,** and other **aesthetic aspects** of drinking water, which do **not** present a health risk. Our water supplier, ARJWS analyzes the water for secondary drinking water standards on a regular basis. The following information is based on analyses conducted during calendar year 2025:

Constituent	Annual Average	MCL
pH	7.13 (Units)	6.5 – 8.5
Alkalinity	12.55 mg/L	N/A
Chlorine	1.79 mg/L	4.0 mg/L (MRDL)
Hardness	13.07 mg/L	N/A
Iron	BDL	0.30 mg/L
Manganese	BDL	0.05 mg/L
Sodium	6.4 mg/L	N/A
Sulfate	8.9 mg/L	250 mg/L
Fluoride	0.46 mg/L	4.0 mg/L

Source Water Assessments and Protection Plan

Source Water Assessment and Protection Plans (SWAPs) were completed for all public systems in South Carolina in May 2003. SWAPs identify potential sources of contamination to drinking water supplies. The SC Department of Environmental Services has completed the plans for all SC public water systems. A copy of this assessment report can be obtained by contacting the SC DES Bureau of Water in Columbia, South Carolina at (803) 898-4300.

Anderson Regional Joint Water System – Water Quality Table

Contaminant	Date Tested	Unit	MCL	MCLG	Results	Range	Major Sources	Violation
Microbiological Contaminants								
Total Coliform Bacteria	2025	# Per month	0	0	0		Coliforms are bacteria that are naturally present in the environment & are used as an indicator that other, potentially harmful, bacteria may be present. If coliforms were found in more samples than allowed, this was a warning of potential problems.	NO
Fecal Coliform And E. coli Bacteria	2025	# Per month	0	0	0		Fecal coliforms & E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose special health risk for infants, young children, and people with severely compromised immune systems.	NO
Turbidity								
Highest single measurement	2025	NTU	Treatment Technique, 1 NTU	N/A	0.05	0.05 – 0.05	Soil runoff. Turbidity is a measurement of the cloudiness of the water caused by suspended particles.	NO
Lowest monthly % Meeting limit	2025	NTU	Treatment Technique, 0.3 NTU	N/A	100%	100%	Soil runoff. Turbidity is a measurement of the cloudiness of the water caused by suspended particles.	NO
Inorganic Contaminants								
Lead**	2025	ppb	AL=15	0	90^{th} %= 4.000	ND - 7	Corrosion of household plumbing Erosion of natural deposits	NO
Copper	2025	ppm	AL=1.3	1.3	90^{th} %= 0.064	0.012 - 0.083	Corrosion of household plumbing Erosion of natural deposits	NO
Chlorine	2025	ppm	MRDL=4	MRDLG=4	1.79	1.71 – 1.90	Water additive used to control microbes	NO
Fluoride	2025	ppm	4	4	0.46	0.00 – 0.72	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.	NO
Nitrate	2025	ppm	10	10	0.18	0.18 – 0.18	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.	NO
Volatile Organic Contaminants								
Total Trihalomethanes (TTHMS)	2025	ppb	80	N/A	11.0	10.3 – 10.9	By-product of drinking water chlorination	NO
Haloacetic Acids (HAA)	2025	ppb	60	N/A	9.0	7.4 – 10.4	By-product of drinking water chlorination	NO

Also during 2025, ARJWS was monitored for PCBs/Toxaphene*. No detections were noted.

**Polychlorinated biphenyls (PCBs)* are man-made chemicals that belong to a family of chemicals known as chlorinated hydrocarbons. PCBs were manufactured in the U.S. from 1929 until 1979, when their manufacture was banned due to concerns about their persistence, bioaccumulation, and potential for adverse effects on human health and the environment. Because PCBs are chemically stable with a high boiling point, and non-flammable with excellent electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications including electrical, heat transfer and hydraulic equipment; as plasticizers in paints, plastics and rubber products (including caulk) and in many other industrial applications.

Toxaphene, a synthetic organic chemical, is an amber, waxy organic solid with a piney color. It was used as an insecticide for cotton and vegetables, and on livestock and poultry. In 1982, most of its uses were banned and in 1990, all uses were banned in the United States. EPA regulates toxaphene in drinking water to protect public health. Toxaphene may cause health problems if present in public or private water supplies in amounts greater than the drinking water standard set by EPA.

**Lead in Drinking Water: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. For 2025, ARJWS had no sites tested exceed the action level. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. ARJWS 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 at 1-800-426-4791 or at http://www.epa.gov/safewater/lead.

Water Quality Table Footnotes

As you can see from the above table, the ARJWS had no violations. The above table shows only the contaminants that had detections. The water supplied to Clemson University from ARJWS met or exceeded all Federal and State requirements.

Table of Total Organic Carbon (TOC) Removal

Anderson Regional Joint Water System -- 2024							
Contaminant	Sample Frequency	MCL	Results*	Average Source Water TOC	Source Water Range	Likely source of contamination	Violation
Total Organic Carbon (TOC)	Monthly	35% removal and Alternative Criteria	35 % removal and Alternative Criteria 1 and 2	1.63 mg/L	1.40 – 1.84 mg/L removal	Naturally present in the environment	No

*For source water TOC level **greater** than 2.0 mg/L, and alkalinity between 0 – 60 ppm, 35% TOC removal required, **or** the Alternative Criteria as specified in R 61-58.13F.
For source water TOC level **less** than 2.0 mg/L, an Alternative Criteria 1 is used.
For finished water TOC **less** than 2.0 mg/L, Alternative Criteria 2 is used.
Lake Hartwell Filter Plan routinely meets Alternative Criteria 2 and typically meets Alternative Criteria 1.

Clemson University Water System -- Water Quality Table

(Data collected during calendar year 2025)

Contaminant	Date Tested	Unit	MCL	MCLG	Total Positive Samples 2024	Highest No. of Positive Samples (during month)	Major Sources	Violation
Microbiological Contaminants								
Total Coliform	2025	# Per Month	1	0	2	1 (April 2025) 1 (Sept.2025)	Coliforms are bacteria that are naturally present in the environment & Are used as an indicator that other potentially harmful bacteria may be present. If coliforms were found in more samples than allowed, this was a warning of potential problems.	NO
Fecal Coliform and E. coli Bacteria	2025	# Per Month	0	0	0	0	Fecal coliforms & E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.	NO

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On April 6, 2016 SCDHEC required Public Water Systems to implement the Revised Total Coliform Rule (RTCR).
Under the RTCR, a Treatment Technique (TT) violation is defined as any of the following:

- E. coli positive repeat sample followed by a total coliform positive routine sample
- Total coliform positive repeat sample following an E. coli routine sample
- Failure to take all required repeat samples following an E. coli positive routine sample
- Failure to test for E. coli when any repeat sample test positive for total coliform

Contaminant	Date Tested	Units	Action Level	90TH Percentile Value	MCLG	Sampling Sites Exceeding Action Level	Range	Possible Sources	Violation
Inorganic Contaminants									
Lead**	2023	ppb	15	0.0	0	0	0 - 0	Corrosion of household plumbing systems; Erosion of natural deposits	NO
Copper	2023	ppm	1.3	0.22	1.3	0	0.029 – 0.251	Corrosion of household plumbing systems; Erosion of natural deposits	NO

Contaminant	Date Tested	Unit	MCL	MCLG	Running Annual Avg	Range	Major Sources	Violation
Volatile Organic Contaminants								
Total Trihalomethanes (TTHMS)	2025	ppb	80	No goal for total	59	20 – 83	By-product of drinking water chlorination	NO
Haloacetic Acids (HAA)	2025	ppb	60	No goal for total	18	11 – 27	By-product of drinking water chlorination	NO
Chlorine	2025	ppm	4	MRDLG =4	1.38	0.19 – 2.00	Water additive used to control microbes	NO

Water Quality Table Footnotes

**Lead in Drinking Water: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. For 2023, Clemson University had no sites tested exceed the action level. Clemson University is on reduced monitoring for lead and copper. Its next monitoring event will be in 2026. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Clemson University Utilities Department 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 (800-426-4791) or at http://www.epa.gov/safewater/lead

Contaminants not detected

ARJWS Water Treatment Plant was monitored for compliance sampling in 2025. No concerning detections were noted. If you have any questions regarding this list, please contact Brandon Good, ARJWS Operations Superintendent by phone at (864) 332-6534 or email at bgood@arjwater.com.

The following is a list of contaminants that were tested for **but not detected** in the drinking water:
Arsenic, Cadmium, Chromium, Mercury, Nickel, Selenium, Hexachlorocyclopentadiene, Propachlor, Hexachlorobenzene, Lindane, Heptachlor, Aldrin, Alachlor, Heptachlor Epoxide, Chloradane, Metolachlor, Butachlor, Dieldrin, Endrin, Methoxychlor, Toxaphene, Simazine, Atrazine, Metribuzin, DBCP, EDB,2,4,5-TP (Silvex), PCP, Methlyene Chloride, Di-2-(Ethylhexyl) Adipate, Di-2-(Ethylhexyl) Phthalate, Aldicarbsulfoxide, Aldicarbsulfone, Oxamyl (Vydate), Methomyl, 3-Hydroxycarbofuran, Aldicarb, Carbofuran, Carbaryl(Sevin), Dalapon, Dicamba, 2, 4-D, Glyphosphate, Dinoseb, Picloram, Benzo(a)Pyrene, p-Isopropyltoluene, Chloromethane, Dichlorodifluoromethane, Bromomethane, Chloroethane, Hexachlorobutadiene, Naphthalene, 1,2,3-Trichlorobenzene, Cis-1,2-Dichloroethene, Cis-1,3 Dichloropropene, Dibromomethane, Antimony, Diquat, 1,1-Dichloropropene, 1,2-Dichloropropane, 2,2 Dichloropropane, trans-1,3 Dichloropropene, 1,2,3-Trichloropropane, 1,3-Dichloroporpane, 1,2,4-Trimethylbenzene, 1,2,4-Trichlorobenzene, n-Butylbenzene, Beryllium, 1,3,5-Trimethylbenzene, Tert-Butylbenzene, Sec-Butylbenzene, Bromochloromethane, Xylenes (total),2-Chlorotoluene, 4-Chlorotoluene,1,2-Dichlorobenzene,1,3-Dichlorobenzene,1,4-Dichlorobenzene,Vinyl chloride,1,1-Dichloroethlyene, 1,1-Dichloroethane, Trans-1,2-Dichloroethene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Thallium, Carbon Tetrachloride, Trichloroethylene, 1,1,2-Trichloroethane, Tetrachloroethane, 1,1,1,2-Tetrachloroethane, 1,1,2,2-Tetrachloroethane, Chlorobenzene, Benzene, Toluene, Ethylbenzene, Bromobenzene, Isopropylbenzene, Styrene, MTBE, n-Propylbenzene, Barium, Trichlorofluoromethane, BCH-Gamma, M-Dichlorobenzene, O-Dichlorobenzene, P-Dichlorobenzene, and Tetrachloroethylene.

* DCPA degradates are not separately determined by these methods; therefore, they will be reported as the sum of both degradates.

Required Additional Health Information

To ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes limits on the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least a small amount of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. The MCL's 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. 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.

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 picks up naturally occurring minerals and, in some cases radioactive material, and substances resulting from the presence of animals or human activity.

Contaminants that may be present in source water include:

(A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

(B) Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, stormwater runoff, and residential uses.

(D) Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff and septic systems.

(E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining 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/Center for Disease Control guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Lead Service Line (LSL) Inventory Update:
The US Environmental Protection Agency (EPA) first established the Lead and Copper Rule in 1991 to reduce exposure to lead and copper in drinking water. EPA has revised this rule multiple times since 1991 and most recently enacted the Lead and Copper Rule Revisions (LCRR), which became effective in December 2021. The new LCRR requires, in part, that water systems complete a Lead Service Line (LSL) Inventory for all service lines within the water system. The deadline for completing the LSL Inventory and submitting the associated information to South Carolina Department of Environmental Services (SCDES) is October 16, 2024. Clemson University completed and submitted the LSL Inventory in August of 2024. **No lead service lines are present in the Clemson University Water System**. If you would like to review the results of the LSL inventory, contact Jarred Fleming at jarredf@clemson.edu.

National Primary Drinking Water Regulation Compliance

We will be happy to answer any questions about this report or the Clemson University Water System. If you have any questions, please call Jarred Fleming at (864) 364-4437 or e-mail Jarred at jarredf@clemson.edu.

Water quality data for community water systems throughout the United States is available on the web at https://echo.epa.gov/help/sdwa-faqs.

A copy of this report is posted on the internet at:

https://cufacilities.sites.clemson.edu/documents/utility/Annual%20Water-Quality%20Report.pdf