

ANNUAL WATER QUALITY REPORT

Reporting Year 2022

CPWS



Columbia Power & Water Systems

Presented By

**Columbia Power &
Water Systems**



Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2022. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users. Please remember that we are always available should you ever have any questions or concerns about your water.

Source Water Assessment

TDEC has prepared a Source Water Assessment Program (SWAP) Report for the water sources serving this water system. The SWAP Report assesses the susceptibility of public water supplies to potential contamination. Water sources have been rated as reasonably susceptible (high), moderately susceptible (moderate), or slightly susceptible (low) based on geological factors and human activities in the vicinity of the water source. The Columbia Water Systems water source was rated as slightly susceptible to potential contamination.

CPWS submitted a Source Water and Wellhead Protection Plan (SWPP) in November 2022, and it was approved by TDEC. The plan includes a listing of potential discharges within the critical zone that encompasses an area beginning 0.5 mile downstream of the intake and extending 5 miles upstream of the intake based on a 1,000-foot corridor parallel to the designated stream banks. The list also includes facilities in the protection zone that extend 15 miles upstream of the intake.

For an explanation of the SWAP Report, a copy of the SWPP, the source water summaries, susceptibility scorings, or TDEC's overall report to the U.S. EPA, please visit www.tn.gov/environment, or call TDEC at (888) 891-TDEC or CPWS at (931) 388-4833 to obtain copies of specific assessments.

“Thousands have lived without love, not one without water.”
—W.H. Auden

Substances That Could Be in Water

In order to ensure that tap water is safe to drink, U.S. EPA and the Tennessee Department of Environment and Conservation (TDEC) prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration 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 small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases radioactive material, and substances resulting from the presence of

animals or from human activity. Substances 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may result from urban stormwater runoff, 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, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

For more information about contaminants and potential health effects, call the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Important Health Information

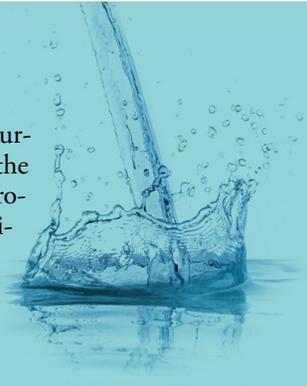
Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



QUESTIONS? For more information about this report, or for questions related to your drinking water, please call Jonathan Hardin, Vice President of Water Operations, at (931) 375-7646.

What Is the Source of My Water?

Your water comes from a surface water source called the Duck River. Our goal is to protect our water from contaminants, and we work with the State of Tennessee to determine the vulnerability of our water source to potential contamination.



Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 two 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 (800) 426-4791 or at www.epa.gov/safewater/lead.



How Can I Get Involved?

Columbia Power & Water Systems board meetings are held at 3:30 p.m. on the fourth Wednesday of each month in the CPWS boardroom, located at 201 Pickens Lane. Dates are subject to change; please call (931) 388-4833 for more information.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

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

MCL (Maximum Contaminant Level): 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.

MCLG (Maximum Contaminant Level Goal): 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.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): 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.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

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

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2021	15	0	0.823	NA	No	Erosion of natural deposits
Barium (ppm)	2020	2	2	0.0197	NA	No	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine (ppm)	2022	[4]	[4]	1.7	1.00–2.7	No	Water additive used to control microbes
Chlorite (ppm)	2022	1	0.8	0.256	0.07–0.655	No	By-product of drinking water disinfection
Haloacetic Acids [HAAs]–Stage 2 (ppb)	2022	60	NA	51.08	9.50–57.9	No	By-product of drinking water disinfection
Nitrate (ppm)	2022	10	10	0.713	NA	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (% removal)	2022	TT	NA	54	25% removal required	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2022	80	NA	54.10	12.2–77.2	No	By-product of drinking water disinfection
Turbidity ¹ (NTU)	2022	TT	NA	0.130	0.010–0.130	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)	2022	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.0694	0/30	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2022	15	0	ND	0/30	No	Lead service lines; corrosion of household plumbing systems, including fittings and fixtures; erosion of natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
2-Methoxyethanol (ppb)	2018	0.13	0.13–0.13	NA
2-Propen-1-ol (ppb)	2018	0.17	0.17–0.17	NA
Alpha-BHC (ppb)	2018-2019	0.0032	0.0032–0.0032	NA
Anatoxin-a (ppb)	2019	0.01	0.01–0.01	NA
Bromide (ppb)	2018	16.75	6.5–18.7	NA
Butylated Hydroxyl Anisole (ppb)	2018	0.0096	0.0096–0.0096	NA
Chlorpyrifos (ppb)	2018	0.00975	0.0096–0.0098	NA
Cylindrospermopsin (ppb)	2019	0.03	0.03–0.03	NA
Dimethipin (ppb)	2018	0.0655	0.064–0.066	NA
Ethoprop (ppb)	2018	0.00975	0.0096–0.0098	NA
Germanium (ppb)	2018	0.1	0.1–0.1	NA
HAA9 (ppb)	2020	20.5	19.3–20.5	NA
Manganese (ppb)	2018	0.675	0.41–0.77	NA
Merphos-oxone (ppb)	2018-2019	0.0225	0.022–0.023	NA
Microcystin, Total (ppb)	2019	0.1	0.1–0.1	NA
n-Butanol (ppb)	2018-2019	0.67	0.67–0.67	NA
o-Toluidine (ppb)	2018	0.0022	0.0022–0.0022	NA
Oxyfluorfen (ppb)	2018	0.017	0.016–0.017	NA
Permethrins, Total (ppb)	2018	0.013	0.012–0.013	NA
Profenofos (ppm)	2018-2019	0.0975	0.096–0.098	NA
Quinoline (ppb)	2018	0.0064	0.0064–0.0064	NA
Sodium (ppm)	2022	7.10	NA	NA
Tebuconazole (ppb)	2018	0.0655	0.064–0.066	NA
Total Organic Carbon [TOC] (ppb)	2018	2,530	2,060–6,090	NA

¹ Turbidity is a measure of the cloudiness of the water. It is monitored because it is a good indicator of the effectiveness of the filtration system.

Water Conservation Tips

You can play a role in conserving water and saving yourself money in the process by becoming conscious of the amount of water your household is using and by looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:



- Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

