

ANNUAL WATER QUALITY REPORT

Reporting Year 2022



Presented By
Oconee County BOC



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.

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 online at: <http://water.epa.gov/drink/> hotline.



Where Does Our Water Come From?

Oconee County imports 98 percent of its water from the Upper Oconee Basin Water Authority's Bear Creek Water Treatment Plant (WTP). The Bear Creek WTP draws raw water into the Bear Creek Reservoir from the Middle Oconee River and Bear Creek. Oconee County also imports small amounts of drinking water from neighboring communities, Barrow County, and Athens Clarke County Unified Government. We operate groundwater wells permitted by the State of Georgia, and we hold an additional seven permits to withdraw groundwater at reserve locations.

Information on the Internet

The U.S. EPA (<https://goo.gl/TFAMKc>) and the Centers for Disease Control and Prevention (www.cdc.gov) Web sites provide a substantial amount of information on many issues relating to water resources, water conservation and public health. Also, the Georgia Environmental Protection Division has a Web site (epd.georgia.gov) that provides complete and current information on water issues in Georgia, including valuable information about our watershed.

Substances That Could Be in Water

To ensure that tap water is safe to drink, the U.S. EPA prescribes regulations limiting 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.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Adam Layfield, Utility Director, at (706) 769-3960 or email alayfield@oconee.ga.us.

Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent to an aeration tank, which allows for oxidation of the high iron levels present. The water then goes to a mixing tank where polyaluminum chloride and soda ash are added. The addition of these substances causes small particles (called floc) to adhere to one another, making them heavy enough to settle into a basin from which sediment is removed. Chlorine is then added for disinfection. At this point, the water is filtered through layers of fine coal and silicate sand. As smaller suspended particles are removed, turbidity disappears, and clear water emerges.

Chlorine is added again as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water without compromising taste.) Finally, soda ash (to adjust the final pH and alkalinity), fluoride (to prevent tooth decay), and a corrosion inhibitor (to protect distribution system pipes) are added before the water is pumped to sanitized underground reservoirs and water towers and into your home or business.

Source Water Assessment

A Wellhead Protection Plan/Source Water Assessment Plan (SWAP) is available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources.

Oconee County has seven permitted well sites that are maintained as water sources. There are no potential hazards within the 15-foot control zone of these well sites. Items that are listed in the 250-foot inner management zone are as follows: secondary roads, electrical transformers, utility poles, gravity sewer, and vehicle parking. According to the SWAP, the Oconee County Water System had a susceptibility rating of medium. The Bear Creek Source Water Protection Plan is rated as low on the watershed itself and medium on the intakes located at the Middle Oconee River. If you would like a copy of either SWAP, please feel free to contact our office during regular business hours.

How Long Can I Store Drinking Water?

The disinfectant in drinking water will eventually dissipate even in a closed container. If that container housed bacteria prior to filling up with the tap water the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water could be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

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 online at: www.epa.gov/safewater/lead.

“

Thousands have lived without love, not one without water.”

—W.H. Auden

Think Before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit <https://bit.ly/3IeRyXy>.



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										
				Oconee County BOC		Bear Creek WTP				
SUBSTANCE (UNIT OF MEASURE)		YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chlorine (ppm)		2022	[4]	[4]	1.01	0.25–1.81	1.79	1.5–2.2	No	Water additive used to control microbes
Fluoride (ppm)		2022	4	4	0.71	0.50–1.00	0.78	0.75–0.82	No	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Haloacetic Acids [HAAs]–Stage 2 (ppb)		2022	60	NA	41.38	23–67.00	34.6	18–67	No	By-product of drinking water disinfection
Nitrate (ppm)		2022	10	10	0.08	ND–0.26	ND	NA	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm)		2022	TT ¹	NA	NA	NA	1.6	1.4–1.9	No	Naturally present in the environment
TTHMs [total trihalomethanes]–Stage 2 (ppb)		2022	80 ²	NA	63.26	24.7–104.2	38.3	19–57	No	By-product of drinking water disinfection
Turbidity ³ (NTU)		2022	TT	NA	NA	NA	0.11	0.02–0.11	No	Soil runoff
Turbidity (lowest monthly percent of samples meeting limit)		2022	TT = 95% of samples meet the limit	NA	NA	NA	0.3	NA	No	Soil runoff

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

				Oconee County BOC		Bear Creek WTP			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	1.3	0.028	0/30	NA	NA	No	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	2022	15	0	ND	0/30	NA	NA	No	Lead service lines; corrosion of household plumbing systems, including fittings and fixtures; erosion of natural deposits

UNREGULATED SUBSTANCES

				Oconee County BOC		Bear Creek WTP			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE			
Bromodichloromethane (ppb)	2022	NA	NA	4.2	ND–4.2	Disinfection by-product			
Chlorodibromomethane (ppb)	2022	NA	NA	0.26	ND–0.26	Disinfection by-product			
Chloroform (ppb)	2022	53.5	20.00–89.00	32.6	ND–32.6	Disinfection by-product			
Dibromochloromethane (ppb)	2022	0.92	ND–2.2	NA	NA	Disinfection by-product			
Sodium (ppm)	10/25/2022	NA	NA	11	ND–11	Erosion of natural deposits			

OTHER UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Oconee County BOC		Bear Creek WTP		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
1-Butanol (ppb)	02/26/2019	7.3	7.3–7.3	NA	NA	NA
Dichloroacetic Acid (ppb)	2021	15.00	4.00–30.00	NA	NA	Disinfection by-product
Germanium (ppb)	2019	0.36	0.36–0.36	NA	NA	Naturally present in water
HAA6Br (ppb)	2019	7.05	4.60–8.54	NA	NA	Disinfection by-product
HAA9 (ppb)	2019	47.80	30.70–74.64	NA	NA	Disinfection by-product
Manganese (ppb)	2019	375.84	13–947	NA	NA	Naturally occurring in water
Monochloroacetic Acid (ppb)	2020	2.2	2.4–17.0	NA	NA	Disinfection by-product
Trichloroacetic Acid (ppb)	2021	19.00	13.00–28.00	NA	NA	Disinfection by-product

¹The value reported under Amount Detected for TOC is the lowest ratio of percentage of TOC actually removed and percentage of TOC required to be removed. A value of greater than 1 indicates that the water system is in compliance with TOC removal requirements. A value of less than 1 indicates a violation of the TOC removal requirements.

²Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system and may have an increased risk of getting cancer.

³Turbidity 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.

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.

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.

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.

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.

