



THE WATER WORKS BOARD OF THE CITY OF AUBURN 2019 CONSUMER CONFIDENCE REPORT



OUR WATER RESOURCES

The Water Works Board of the City of Auburn (AWWB) is proud to present its 2019 Consumer Confidence Report. In compliance with Federal and State laws, the AWWB routinely monitors for numerous constituents in your drinking water. The tables in this report present the results of water quality monitoring for the calendar year 2019. This is the 23^d issue of a series of water quality reports made available to you annually, as required by the United States Environmental Protection Agency (EPA). Reports are published mid-year for the previous year's monitoring results.

AWWB's main water supply comes from Lake Ogletree, which is located just southeast of Auburn. Lake Ogletree (pictured above) is approximately 300 acres and is fed primarily by Chewacla Creek and Nash Creek. The total watershed area contributing to the lake is approximately 33 square miles. In 2019, water from Lake Ogletree was used to produce approximately 58% of your drinking water. In an effort to meet increasing demand, the AWWB constructed a groundwater well south of Interstate 85 in 2012. A Source Water Assessment was conducted for the well's source water protection area, and the report concluded that the well has a low susceptibility to contamination. This well contributed approximately 18% of your drinking water during 2019. In addition to these sources, the AWWB purchases drinking water from Opelika Utilities which receives its raw water from Saugahatchee Lake and the Halawakee Creek Embayment on Lake Harding. Drinking water is purchased from Opelika Utilities primarily to supplement growing-season peak demands. Water purchased from Opelika Utilities accounted for approximately 24% of your drinking water in 2019.

Most drinking water contaminants originate from surface water runoff from natural deposits, vehicles, industry, construction, farming, and wildlife. Therefore, in addition to mandatory monitoring of its treatment and distribution system, the AWWB voluntarily performs year-round source water monitoring within the Lake Ogletree watershed for nutrients, bacteria, and taste & odor causing compounds. The City of Auburn also helps protect and manage the Lake Ogletree watershed by both regulating development density within its jurisdiction, and working with property owners to encourage good on-site methods to manage pollutant runoff. Information on the AWWB's various monitoring programs and reports is available for review at the Bailey-Alexander Water and Sewer Complex, located at 1501 W. Samford Avenue, or online at <https://www.auburnalabama.org/water-resource-management>. Please call (334) 501-3060 for more information.



Above: Lake Ogletree, Auburn's principal water source.

Below: The Bailey-Alexander Water and Sewer Complex houses field operations, administration, and billing services.



TABLE OF PRIMARY CONTAMINANTS

At high levels some primary contaminants are known to pose health risks to humans. The table below provides a quick glance of primary contaminants monitored for in 2019, and the results of monitoring if contaminants were detected.

Bacteriological	MCL	Highest Detected Level	Synthetic Organic Chemicals	MCL	Highest Detected
Total Coliform Bacteria	5%	< 5%	2,4,5-TP (Silvex)	50 ppb	ND
Radiological	MCL	Highest Detected Level	2,4-D	70 ppb	ND
Gross Alpha	15 pCi/L	ND	Alachlor (Lasso)	2 ppb	ND
Radium 228	5 pCi/L	ND	Atrazine	3 ppb	ND
Turbidity	MCL	Highest Detected Level	Benzo(A)Pyrene	200 ppt	ND
Turbidity	TT (NTU)	0.29	Carbofuran	40 ppb	ND
Inorganic Chemicals	MCL	Highest Detected Level	Chlordane	2 ppb	ND
Antimony	6 ppb	ND	Dalapon	200 ppb	ND
Arsenic	10 ppb	0.67	1,2 Dibromo-3-Chloropropane (DBCP)	200 ppt	ND
Barium	2 ppm	0.0211†	Di(2-Ethylhexyl)Adipate	400 ppb	ND
Beryllium	4 ppb	ND	Di(2-Ethylhexyl)Phthalate	6 ppb	ND
Cadmium	5 ppb	ND	Dinoseb	7 ppb	ND
Chlorine	4 ppm MRDL	1.46****	Diquat	20 ppb	ND
Chromium	100 ppb	ND	Endothall	100 ppb	ND
Copper	AL = 1.3 ppm	90th percentile value = 0.1701	Ethylene Dibromide (EDB)	50 ppt	ND
Cyanide	200 ppb	ND	Endrin	2 ppb	ND
Fluoride	4 ppm	1.9	Glyphosate	700 ppb	ND
Lead	AL = 15 ppb	90th percentile value = 0.883	Heptachlor	400 ppt	ND
Mercury	2 ppb	ND	Heptachlor Epoxide	200 ppt	ND
Nitrate	10 ppm	0.623	Hexachlorobenzene (HCB)	1 ppb	ND
Nitrite	1 ppm	ND	Hexachlorocyclopentadiene	50 ppb	ND
Selenium	50 ppb	ND	Lindane	200 ppt	ND
Thallium	2 ppb	ND	Methoxychlor	40 ppb	ND
Disinfection By-products	MCL	Highest Detected Level	Oxamyl (Vydate)	200 ppb	ND
Total Trihalomethanes (TTHMs)	80 ppb	67.4 **	Polychlorinated Biphenyls (PCB)	500 ppt	ND
Haloacetic acids (HAA5)	60 ppb	37.48**	Pentachlorophenol	1 ppb	ND
Chlorite	1 ppm	0.852*** †	Picloram	500 ppb	ND
Organic Chemicals	MCL	Highest Detected Level	Simazine	4 ppb	ND
Total Organic Carbon	TT (ppm)	2.13*****	Toxaphene	3 ppb	ND
Legend for Tables			Volatile Organic Chemicals	MCL	Highest Detected
AL:	Action Level - The concentration of a contaminant that triggers treatment or other requirement a water system shall follow.		1,1,1-trichloroethane	200 ppb	ND
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.		1,1,2-trichloroethane	5 ppb	ND
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.		1,2-dichloroethane	5 ppb	ND
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.		1,1-dichloroethylene	7 ppb	ND
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.		1,2,4-trichlorobenzene	70 ppb	ND
TT:	Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.		1,2-dichloropropane	5 ppb	ND
ND:	Not detected		O-Dichlorobenzene	600 ppb	ND
N/A:	Not applicable		P-Dichlorobenzene	75 ppb	ND
NTU:	Nephelometric Turbidity Unit		Benzene	5 ppb	ND
pCi/L:	picocuries per liter		Carbon Tetrachloride	5 ppb	ND
ppt:	parts per trillion		Chlorobenzene	100 ppb	ND
ppb:	parts per billion		Cis-1,2-dichloroethene	70 ppb	ND
ppm:	parts per million		Ethylbenzene	700 ppb	ND
µS/cm:	microsiemens per centimeter		Styrene	100 ppb	ND
*	Annual average		Tetrachloroethylene	5 ppb	ND
**	Local running annual average of quarterly samples		Toluene	1 ppm	ND
***	Highest average of sample sets		Trans-1,2 Dichloroethylene	100 ppb	ND
****	Compliance is based on a running annual average, computed quarterly from monthly samples		Vinyl chloride	2 ppb	ND
*****	Running annual average of monthly samples		Xylenes	10 ppm	ND
†	Amount detected in water purchased from Opelika Utilities before entering the Auburn Water Works Board distribution system.		Dichloromethane	5 ppb	ND
			Dioxin and Asbestos Monitoring Statement: 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.		
			Copper and Lead results are from the most recent testing done in 2019 in accordance with applicable regulations.		

TABLE OF DETECTED CONTAMINANTS

PRIMARY STANDARDS - Mandatory standards set by the Safe Drinking Water Act used to protect public health. These apply to all public water systems.

Contaminant	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Dates	Likely Sources
Turbidity	NTU	TT	N/A	0.29	0.02 - 0.29	Daily	Soil runoff
Inorganic Chemicals	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Dates	Likely Sources
Arsenic	ppb	6	6	0.67	ND - 0.67	3/20/2019, 9/18/2019	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium	ppm	2	2	0.0211 †	0.0134 - 0.0211 †	3/20/2019, 9/18/2019	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine	ppm	MRDL = 4	MRDLG = 4	1.46****	1.2 - 1.7	Daily	Water additive used to control microbes
Copper	ppm	AL = 1.3	1.3	90th percentile value 0.1701	0.0109 - 0.265	July - Aug. 2019	Corrosion of household plumbing systems; Erosion of natural deposits
Fluoride	ppm	4	4	1.9	0.32 - 1.9	Daily	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead	ppb	AL = 15	0	90th percentile value 0.883	0.11 - 1.8	July - Aug. 2019	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate	ppm	10	10	0.623	ND - 0.623	3/20/2019, 9/18/2019	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Disinfection By-products	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Dates	Likely Sources
Total Trihalomethanes (TTHMs)	ppb	80	N/A	67.4**	36.0 - 67.4	Quarterly	By-product of drinking water disinfection
Haloacetic acids (HAA5)	ppb	60	N/A	37.48**	22.83 - 37.48	Quarterly	By-product of drinking water disinfection
Chlorite	ppm	1	0.8	0.852*** †	0.1 † - 0.980 †	Monthly	By-product of drinking water disinfection

UNREGULATED CONTAMINANTS - EPA uses the Unregulated Contaminant Monitoring Rule (UCMR 4) to collect data for contaminants that are suspected to be present in drinking water but do not have health-based standards set under the Safe Drinking Water Act.

UCMR 4 Contaminants	Units	Highest Detected Level	Range of Detected Levels	Test Date	Likely Sources
Manganese	ppb	5.2	0.15 - 5.2	4/23/2019	Erosion from natural deposits; Runoff from landfills
Bromochloroacetic acid	ppb	4.4	2.3 - 4.4	4/23/2019	By-product of drinking water disinfection
Bromodichloroacetic acid	ppb	3.0	2.4 - 3.0	4/23/2019	By-product of drinking water disinfection
Chlorodibromoacetic acid	ppb	0.70	0.38 - 0.70	4/23/2019	By-product of drinking water disinfection
Dibromoacetic acid	ppb	0.68	0.31 - 0.68	4/23/2019	By-product of drinking water disinfection
Dichloroacetic acid	ppb	149	12.9 - 149	4/23/2019	By-product of drinking water disinfection
HAA9 Group	ppb	42.0	31.1 - 42.0	4/23/2019	By-product of drinking water disinfection
Total Brominated HAAs	ppb	8.6	5.3 - 8.6	4/23/2019	By-product of drinking water disinfection
Haloacetic Acids	ppb	35.5	25.4 - 35.5	4/23/2019	By-product of drinking water disinfection
Monochloroacetic acid	ppb	3.0	ND - 3.0	4/23/2019	By-product of drinking water disinfection
Trichloroacetic acid	ppb	18.6	10.3 - 18.6	4/23/2019	By-product of drinking water disinfection
Bromide	ppb	18.7	Single Sample	4/23/2019	Naturally present in the environment
Total Organic Carbon	ppm	4.19	Single Sample	4/23/2019	Naturally present in the environment

UCMR 4 Contaminants Tested For, But Not Detected

Alpha-BHC	Chlorpyrifos	Dimethipin	Ethoprop
Merphos-Oxone (Tribufos)	Oxyfluorfen	Permethrin	Profenofos
Tebuconazole	Butylated Hydroxyanisole	Quinoline	O-Toluidine
n-Butanol	2-Methoxyethanol	2-Propen-1-ol	Monobromoacetic acid
Tribromoacetic acid	Anatoxin-a †	Cylindrospermopsin †	Total Microcystins & Nodularins †

Information on Cryptosporidium and Giardia: The AWWB routinely tests the raw source water for *Cryptosporidium* and *Giardia*. *Cryptosporidium* and *Giardia* are naturally occurring microbial parasites found in surface water throughout the United States. *Cryptosporidium* was not detected during 2019. *Giardia* was detected in the raw source water before treatment in the range of 0 - 0.1 cysts/Liter. Our filtering and treatment process is designed to remove these organisms from the raw source water and provide you with safe, high-quality drinking water.

TABLE OF DETECTED CONTAMINANTS

SECONDARY STANDARDS - Non-mandatory standards established as guidelines to assure good aesthetic qualities such as taste, color, and odor.

Inorganic Chemicals	Units	MCL	MCLG	Highest Detected Level or Annual Average (*)	Range of Detected Levels	Test Dates	Likely Sources
Chloride	ppm	250	N/A	9	6.5 † - 9	3/20/2019, 9/18/2019	By-product of drinking water disinfection
Iron	ppb	300	N/A	30	ND - 30	Daily	Erosion of natural deposits
Manganese	ppb	50	N/A	40	ND - 40	Daily	Erosion of natural deposits; runoff from landfills
Sulfate	ppm	500	N/A	18.9	ND - 18.9	3/20/2019, 9/18/2019	Erosion of natural deposits
Total Dissolved Solids (TDS)	ppm	500	N/A	110 †	54 † - 110 †	3/20/2019, 9/18/2019	Erosion of natural deposits
Zinc	ppm	5	N/A	0.214	ND - 0.214	3/20/2019, 9/18/2019	Corrosion inhibitor
pH	standard units	6.5-8.5	N/A	7.24*	6.90 - 7.50	Daily	Natural deposits; treatment at water plant
Unregulated Inorganic Chemicals	Units	MCL	MCLG	Highest Detected Level or Annual Average (*)	Range of Detected Levels	Test Dates	Likely Sources
Calcium	ppm	N/A	N/A	23.1	3.21 † - 23.1	3/20/2019, 9/18/2019	Natural deposits; treatment at water plant
Specific Conductance	µS/cm	N/A	N/A	222	54 † - 222	3/20/2019, 9/18/2019	Natural deposits
Carbon Dioxide	ppm	N/A	N/A	25.7*	0 - 106	Daily	Natural deposits
Magnesium	ppm	N/A	N/A	13.2	1.77 † - 13.2	3/20/2019, 9/18/2019	Natural deposits
Sodium	ppm	N/A	N/A	24.4 †	5.04 - 24.4 †	3/20/2019, 9/18/2019	Natural deposits
Alkalinity	ppm	N/A	N/A	40.62*	17 - 70	Daily	Natural deposits
Total Hardness	ppm	N/A	N/A	186	15.8 † - 186	3/20/2019, 9/18/2019	Natural deposits
Unregulated Organic Chemicals	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Date	Likely Sources
Total Organic Carbon	ppm	TT	N/A	2.13*****	1.72 - 2.13	Monthly	Naturally present in the environment

IMPORTANT HEALTH INFORMATION FROM EPA

All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the United States Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 1-800-426-4791. 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 land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or human activity.

Some people may be more vulnerable to contaminants in drinking water than the general population. Individuals with compromised immune systems such as cancer patients undergoing chemotherapy, organ transplant recipients, individuals who have AIDS or who are HIV-positive, individuals with immune system disorders, elderly persons and infants can be particularly at risk from infections. People at risk should seek advice about drinking water from their health care providers. EPA and the Centers for Disease Control (CDC) guidelines for the appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

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. The AWWB 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 or at <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>.

AWWB NEWS AND PUBLIC INFORMATION

The AWWB continuously strives to provide the highest quality drinking water services for the City's increasing population of 65,738 (2018 U.S. Census Estimate). The AWWB encourages the public to participate in the monthly Board meetings. Board meetings are typically held at 4:00 P.M. on the Thursday following the third Tuesday of each month in the AWWB Conference Room at the Bailey-Alexander Complex located at 1501 W. Samford Avenue. The Water Board members are Dr. Jeff Clary (Chairman), Butch Brock (Vice Chairman), Jennifer Chambliss, Esq. (Secretary), Brad Wilson (Member), and Dr. Bernard Hill (Member). If you have any questions concerning public participation or water quality, please call the Water Resource Management Office at (334) 501-3060. If you have questions about setting up an account, water service changes, or billing inquiries, please contact the Utility Billing Office at (334) 501-3050. For additional information, please visit us online at <https://www.auburnalabama.org/water-resource-management>.

THE NEW SPILLWAY AT LAKE OGLETREE

Lake Ogletree is the City of Auburn's primary drinking water source and was created in the early 1940's when the original dam and spillway were constructed on Chewacla Creek. The original spillway was over 75 years old and was in need of replacement. Construction of a new spillway began in late 2015. The new spillway is a 4-stage labyrinth weir with a total length of approximately 1,580 feet. The new spillway adds approximately 50 million gallons of storage capacity to Lake Ogletree. Construction was completed in the fall of 2017, and is another example of the AWWB's commitment to ensure the City of Auburn is supplied with safe, reliable drinking water.



WATER TREATMENT PROCESS

Water is pumped from Lake Ogletree to the James Estes Water Treatment Plant. At the plant, a staff of highly trained employees are responsible for the proper maintenance and operation of the various equipment and treatment infrastructure to ensure that your water is consistently treated to levels that meet or exceed Federal and State water quality standards. Below is a diagram outlining this process.

