



THE WATER WORKS BOARD OF THE CITY OF AUBURN 2017 CONSUMER CONFIDENCE REPORT

OUR WATER RESOURCES

The Water Works Board of the City of Auburn (AWWB) is proud to present its 2017 Consumer Confidence Report (CCR). In compliance with Federal and State laws, the AWWB routinely monitors for numerous constituents in the drinking water. The tables in this report illustrate the results of water quality monitoring for the calendar year 2017. This is the 21st 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 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 2017, water from Lake Ogletree was utilized to produce approximately 50% of AWWB's drinking water. In an effort to meet increasing demand and to improve resiliency in its source waters, 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 concluded that the well has a low susceptibility to contamination. This well contributed approximately 17% of AWWB's drinking water during 2017. 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 33% of AWWB's drinking water in 2017.

Most contaminants originate from surface runoff associated with natural deposits, automobiles, industry, construction, and animals. 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 regulating development density within its jurisdiction, and working with property owners to encourage good on-site methods to manage pollutant runoff. Information on 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: A snow-covered Lake Ogletree.

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 2017, 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)	0.28	Carbofuran	40 ppb	ND
Inorganic Chemicals	MCL	Highest Detected Level	Chlordane	2 ppb	ND
Antimony	6 ppb	1 †	Dalapon	200 ppb	ND
Arsenic	10 ppb	0.71	1,2 Dibromo-3-Chloropropane (DBCP)	200 ppt	ND
Barium	2 ppm	0.027	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	1.32****	Diquat	20 ppb	ND
Chromium	100 ppb	ND	Endothall	100 ppb	ND
Copper	AL = 1.3 ppm	0.175***	Ethylene Dibromide (EDB)	50 ppt	ND
Cyanide	200 ppb	ND	Endrin	2 ppb	ND
Fluoride	4 ppm	1.2	Glyphosate	700 ppb	ND
Lead	AL = 15 ppb	1.2*** †	Heptachlor	400 ppt	ND
Mercury	2 ppb	ND	Heptachlor Epoxide	200 ppt	ND
Nitrate	10 ppm	0.098 †	Hexachlorobenzene (HCB)	1 ppb	ND
Nitrite	1 ppm	ND	Hexachlorocyclopentadiene	50 ppb	ND
Selenium	50 ppb	0.78	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	69.4**	Polychlorinated Biphenyls (PCB)	500 ppt	ND
Haloacetic acids (HAA5)	60 ppb	54.8**	Pentachlorophenol	1 ppb	ND
Organic Chemicals	MCL	Highest Detected Level	Picloram	500 ppb	ND
Total Organic Carbon	TT (ppm)	1.83*****	Simazine	4 ppb	ND
			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
***	90th percentile of samples collected		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

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.

Turbidity	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Date	Likely Sources
Turbidity	NTU	TT	N/A	0.28	0.02 - 0.28	Daily	Soil runoff
Inorganic Chemicals	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Date	Likely Sources
Antimony	ppb	6	6	1 †	0 - 1	5/31/2017, 7/19/2017	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	ppb	10	0	0.71	Single Sample	5/31/2017	Runoff from orchards; Runoff from glass and electronics production wastes; Erosion of natural deposits
Barium	ppm	2	2	0.027	Single Sample	5/31/2017	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chlorine	ppm	MRDL = 4	MRDLG = 4	1.32****	1.1 - 1.6	Daily	Water additive used to control microbes
Copper	ppm	AL = 1.3	1.3	0.175***	Zero sites above action level	Jun. - Aug. 2016	Corrosion of household plumbing systems; Erosion of natural deposits
Fluoride	ppm	4	4	1.2	0.5 - 1.2	Daily	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Lead	ppb	AL = 15	0	1.2*** †	Zero sites above action level	Jun. - Sep. 2016	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrate	ppm	10	10	0.098 †	0.073 - 0.098	5/31/2017, 7/19/2017	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Selenium	ppb	50	50	0.78	Single Sample	5/31/2017	Discharge from petroleum refineries; Discharge from mines; Erosion of natural deposits
Disinfection By-products	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Date	Likely Sources
Total Trihalomethanes (TTHMs)	ppb	80	N/A	69.4**	30.5 - 69.4	Quarterly	By-product of drinking water disinfection
Haloacetic acids (HAA5)	ppb	60	N/A	54.8**	27.9 - 54.8	Quarterly	By-product of drinking water disinfection

- **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 2016 in accordance with applicable regulations.

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>.

MONITORING NON-COMPLIANCE NOTICE

AWWB is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring is an indicator of whether or not your drinking water meets health standards. A water sample to monitor for nitrates is required to be taken annually at Well 3. During 2017, we did not monitor for nitrates for Well 3, and therefore cannot be sure of the quality of your drinking water during that time.

Upon notification of this absent sample, in January 2018 our system sampled for nitrates for Well 3 and the result was 0.561 mg nitrate per liter, which is within standards and well below the maximum standard limit of 10 mg nitrate per liter. Furthermore, since the activation of this well, all nitrate samples have been within drinking water standards.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Should you have any questions concerning this non-compliance or monitoring requirements, please contact the AWWB (Tim Johnson; 1501 West Samford Avenue, Auburn, AL 36830; phone 334-501-3060).

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 Date	Likely Sources
Aluminum	ppb	200	N/A	41 †	ND - 41	5/31/2017, 7/19/2017	Natural deposits
Chloride	ppm	250	N/A	15 †	10 - 15	5/31/2017, 7/19/2017	By-product of drinking water disinfection
Iron	ppb	300	N/A	30.7 †	ND - 30.7	Daily	Erosion of natural deposits
Manganese	ppb	50	N/A	20	ND - 20	Daily	Erosion of natural deposits; runoff from landfills
Sulfate	ppm	500	N/A	38.7 †	27.6 - 38.7	5/31/2017, 7/19/2017	Erosion of natural deposits
Total Dissolved Solids (TDS)	ppm	500	N/A	111 †	97 - 111	5/31/2017, 7/19/2017	Erosion of natural deposits
Zinc	ppm	5	N/A	0.21	Single Sample	5/31/2017	Corrosion inhibitor
pH	standard units	6.5-8.5	N/A	7.41* †	6.70 - 7.70	Daily	Natural deposits; treatment at water plant
Color	ADMI CU	15	N/A	6 †	ND - 6	5/31/2017, 7/19/2017	Natural deposits; treatment at water plant
Unregulated Inorganic Chemicals	Units	MCL	MCLG	Highest Detected Level or Annual Average (*)	Range of Detected Levels	Test Date	Likely Sources
Calcium	ppm	N/A	N/A	11.7	Single Sample	5/31/2017	Natural deposits; treatment at water plant
Specific Conductance	µS/cm	N/A	N/A	152	Single Sample	5/31/2017	Natural deposits
Carbon Dioxide	ppm	N/A	N/A	38.3*†	4 - 38.3	Daily	Natural deposits
Magnesium	ppm	N/A	N/A	3.8	Single Sample	5/31/2017	Natural deposits
Sodium	ppm	N/A	N/A	26.9 †	15.5 - 26.9	5/31/2017, 7/19/2017	Natural deposits
Alkalinity	ppm	N/A	N/A	43.5*†	26 - 69	Daily	Natural deposits
Total Hardness	ppm	N/A	N/A	46.8	Single Sample	5/31/2017	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	1.83*****	1.67 - 1.83	Monthly	Naturally present in the environment
Unregulated Contaminant Monitoring Rule-3	Units	MCL	MCLG	Highest Detected Level	Range of Detected Levels	Test Date	Likely Sources
Chlorate	ppb	N/A	N/A	100	Single Sample	1/7/2014	Agricultural defoliant or desiccant; By-product of drinking water disinfection
Hexavalent Chromium	ppb	N/A	N/A	0.075	Single Sample	1/7/2014	Naturally-occurring element; used in making steel and other alloys
Strontium	ppb	N/A	N/A	21	Single Sample	1/7/2014	Naturally-occurring element
Vanadium	ppb	N/A	N/A	0.26	Single Sample	1/7/2014	Naturally-occurring elemental metal

The AWWB continuously strives to provide the highest quality drinking water services for the City's increasing population of 63,118 (2016 U.S. Census Estimate). As part of a multi-year capital improvement and modernization effort, the AWWB has engaged in several major improvement projects over the past few years. Well 3 was completed in 2012 and provides another high quality drinking water source for the City. The new raw water pump station at Lake Ogletree was completed in 2014, and increases our maximum pumping capacity to 12 million gallons per day at Lake Ogletree. Construction of the new spillway at Lake Ogletree was completed in 2017, and increases the capacity of Lake Ogletree by approximately 50 million gallons. These enhancements will allow the AWWB to sustain a high level of quality and service to its customers for years to come. The AWWB encourages all customers to use our water resources wisely, and take measures to conserve water when possible. The Water Resource Management Department provides helpful information about water conservation and tips on how to conserve water on its website at <https://www.auburnalabama.org/water-resource-management/water-operations/conservation>.

The AWWB has taken proactive steps to ensure that the quality and quantity of water delivered to its customers is reliable and will be for many years to come. For over 40 years, the AWWB has funded numerous research studies on Lake Ogletree and its surrounding watershed. One of the most important of these projects is the Source Water Monitoring Program. This includes monitoring within Lake Ogletree and its contributing watershed for numerous physical, chemical, and bacteriological parameters. These data provide advanced knowledge of potential changes within the watershed, and allow for dynamic management decisions should an issue arise. Programs like this are an integral part of the ongoing effort and responsibility of the AWWB to ensure the delivery of safe and clean water.

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.

