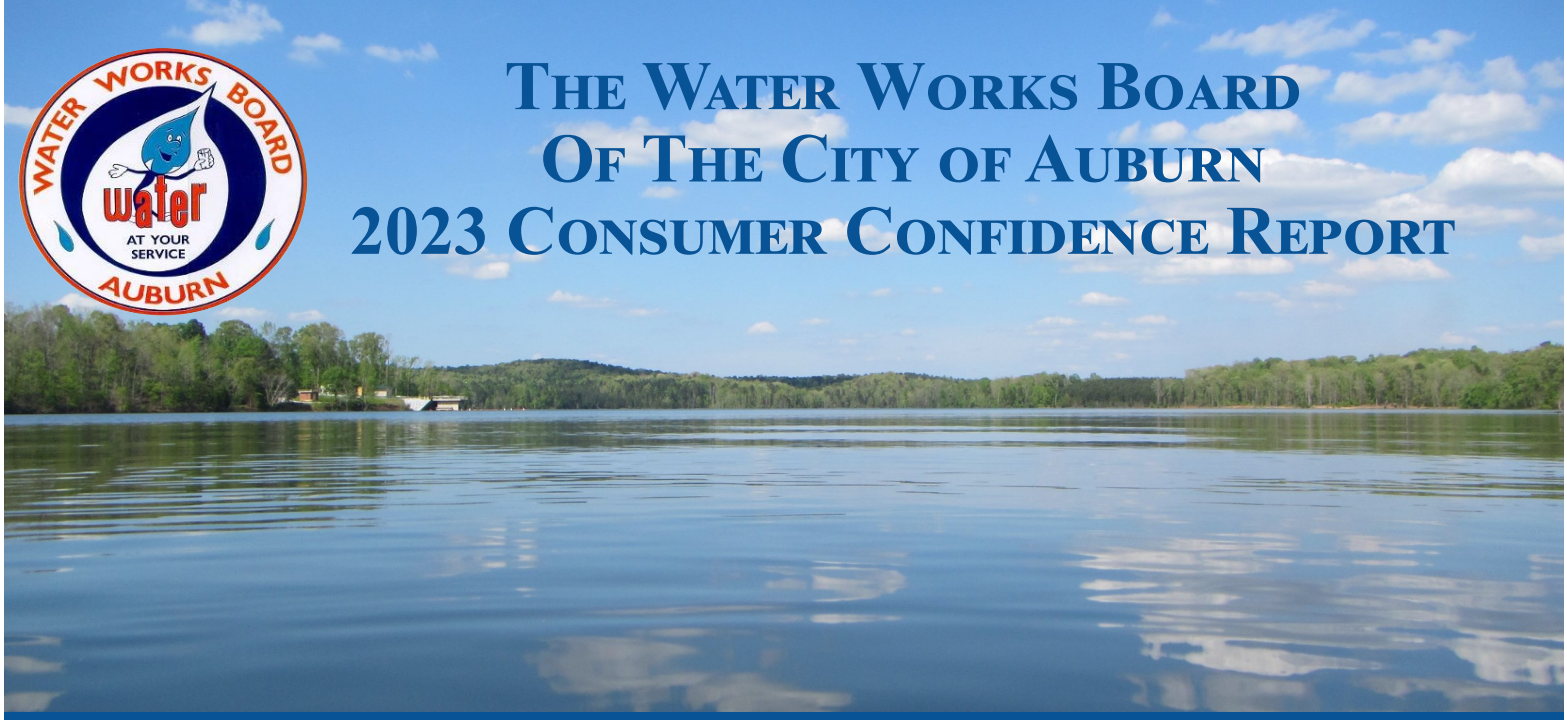

# The Water Works Board Of The City of Auburn 2023 Consumer Confidence Report

## OUR WATER RESOURCES

The Water Works Board of the City of Auburn (AWWB) is proud to present the 2023 Consumer Confidence Report. In compliance with Federal and State laws, the AWWB routinely monitors for numerous contaminants in your drinking water. The tables in this report present the results of water quality monitoring for the calendar year 2023. Your drinking water met all water quality standards in 2023. This is the 27th issue in a series of water quality reports made available to customers annually, as required by the United States Environmental Protection Agency (EPA). Reports are published mid-year for the previous year's monitoring results.

The AWWB's main water supply comes from Lake Ogletree (pictured above), which is located just southeast of Auburn. Lake Ogletree is approximately 300 acres and is fed primarily by Chewacla and Nash Creeks. The total watershed area contributing to the lake is 33 square miles. Lake Ogletree was used to produce 43.18% of your drinking water in 2023. The AWWB also operates two groundwater wells to meet increasing water demand. These wells draw water from the Chewacla Marble and Hollis Quartzite aquifers. Well #4 contributed 28.37% of your drinking water, and Well #3 provided 14.48% of your drinking water in 2023. 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 Water to supplement seasonal high demand. Purchases from Opelika Water accounted for 13.97% of your drinking water in 2023. Total water use from all sources was 2.89 billion gallons (7.92 million gallons per day), which is the 2nd highest on record for the AWWB.

Most drinking water contaminants originate from surface water runoff from natural deposits, vehicles, industry, construction, farming, and wildlife. 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 best management practices 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 experienced an extreme drought in 1954. Alabama Polytechnic Institute (later Auburn University) cancelled classes during a week in October due to the water shortage.
*Photo credit: Pictorial History of the Loveliest Village by Mickey Logue and Jack Simms, 3rd edition, 2013.*

***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 2023, and the results of monitoring if contaminants were detected.**

| Bacteriological | MCL | Highest Detected Level |
|---|---|---|
| Total Coliform Bacteria | 5% | < 5% |
| **Radiological** | **MCL** | **Highest Detected Level** |
| Gross Alpha | 15 pCi/L | 0.353 |
| Radium-228 | 5 pCi/L | 0.674 |
| **Turbidity** | **MCL** | **Highest Detected Level** |
| Turbidity | TT (NTU) | 0.28 |
| **Inorganic Chemicals** | **MCL** | **Highest Detected Level** |
| Antimony | 6 ppb | 0.16 |
| Arsenic | 10 ppb | ND |
| Barium | 2 ppm | 0.0214† |
| Beryllium | 4 ppb | ND |
| Cadmium | 5 ppb | ND |
| Chlorine | 4 ppm MRDL | 1.56**** |
| Chromium | 100 ppb | 0.86 |
| Copper | AL = 1.3 ppm | 90th percentile value = 0.21 |
| Cyanide | 200 ppb | ND |
| Fluoride | 4 ppm | 1.4 |
| Lead | AL = 15 ppb | 90th percentile value = 0.865 |
| Mercury | 2 ppb | ND |
| Nickel | 100 ppb | 0.77† |
| Nitrate | 10 ppm | 0.532 |
| Nitrite | 1 ppm | ND |
| Selenium | 50 ppb | ND |
| Thallium | 2 ppb | ND |
| **Disinfection By-products** | **MCL** | **Highest Detected Level** |
| Total Trihalomethanes (TTHMs) | 80 ppb | 61.00** |
| Haloacetic acids (HAA5) | 60 ppb | 31.28** |
| Chlorite | 1 ppm | 0.733*** † |
| **Organic Chemicals** | **MCL** | **Highest Detected Level** |
| Total Organic Carbon | TT (ppm) | 1.74***** |

| Synthetic Organic Chemicals | MCL | Highest Detected |
|---|---|---|
| 2,4,5-TP (Silvex) | 50 ppb | ND |
| 2,4-D | 70 ppb | ND |
| Alachlor (Lasso) | 2 ppb | ND |
| Atrazine | 3 ppb | ND |
| Benzo(A)Pyrene | 200 ppt | ND |
| Carbofuran | 40 ppb | ND |
| Chlordane | 2 ppb | ND |
| Dalapon | 200 ppb | ND |
| 1,2 Dibromo-3-Chloropropane (DBCP) | 200 ppt | ND |
| Di(2-Ethylhexl)Adipate | 400 ppb | ND |
| Di(2-Ethylhexl)Phthalate | 6 ppb | ND |
| Dinoseb | 7 ppb | ND |
| Diquat | 20 ppb | ND |
| Endothall | 100 ppb | ND |
| Ethylene Dibromide (EDB) | 50 ppt | ND |
| Endrin | 2 ppb | ND |
| Glyphosate | 700 ppb | ND |
| Heptachlor | 400 ppt | ND |
| Heptachlor Epoxide | 200 ppt | ND |
| Hexachlorobenzene (HCB) | 1 ppb | ND |
| Hexachlorocyclopentadiene | 50 ppb | ND |
| Lindane | 200 ppt | ND |
| Methoxychlor | 40 ppb | ND |
| Oxamyl (Vydate) | 200 ppb | ND |
| Polychlorinated Biphenyls (PCB) | 500 ppt | ND |
| Pentachlorphenol | 1 ppb | ND |
| Picloram | 500 ppb | ND |
| Simazine | 4 ppb | ND |
| Toxaphene | 3 ppb | ND |

| Volatile Organic Chemicals | MCL | Highest Detected |
|---|---|---|
| 1,1,1-trichloroethane | 200 ppb | ND |
| 1,1,2-trichloroethane | 5 ppb | ND |
| 1,2-dichloroethane | 5 ppb | ND |
| 1,1-dichloroethylene | 7 ppb | ND |
| 1,2,4-trichlorobenzene | 70 ppb | ND |
| 1,2-dichloropropane | 5 ppb | ND |
| O-Dichlorobenzene | 600 ppb | ND |
| P-Dichlorobenzene | 75 ppb | ND |
| Benzene | 5 ppb | ND |
| Carbon Tetrachloride | 5 ppb | ND |
| Chlorobenzene | 100 ppb | ND |
| Cis-1,2-dichloroethene | 70 ppb | ND |
| Ethylbenzene | 700 ppb | ND |
| Styrene | 100 ppb | ND |
| Tetrachloroethylene | 5 ppb | ND |
| Toluene | 1 ppm | ND |
| Trans-1,2 Dichloroethylene | 100 ppb | ND |
| Vinyl chloride | 2 ppb | ND |
| Xylenes | 10 ppm | ND |
| Dichloromethane | 5 ppb | ND |

## LEGEND FOR TABLES

**AL** **Action Level** - The concentration of a contaminant that triggers treatment or other requirement a water system shall follow.

**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.

**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.

**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.

**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.

**TT** **Treatment Technique** - A required process intended to reduce the level of a contaminant in drinking water.

**ND** Not detected.

**N/A** Not applicable.

**NTU** Nephelometric Turbidity Unit.

**pCi/L** picocuries per liter.

**ppt** parts per trillion.

**ppb** parts per billion.

**ppm** parts per million.

**µS/cm** microsiemens per centimeter.

* Annual average.

** Local running annual average of quarterly samples.

*** Highest average of sample sets.

**** Compliance is based on a running annual average, computed quarterly from monthly samples.

***** Running annual average of monthly samples.

† Amount detected in water purchased from Opelika Water before entering the Auburn Water Works Board distribution system.

**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 2022. These samples are conducted every 3 years. The next round of required sampling is currently scheduled for 2025.

# 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 | 0.28 | 0.01 - 0.28 | Daily | Soil runoff. |
| **Inorganic Chemicals** | **Units** | **MCL** | **MCLG** | **Highest Detected Level** | **Range of Detected Levels** | **Test Dates** | **Likely Sources** |
| Antimony | ppb | 6 | 6 | 0.16 | ND† - 0.16 | 3/15, 8/15/2023 | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder |
| Barium | ppm | 2 | 2 | 0.0214† | 0.0132† - 0.0214† | 3/15, 8/15/2023 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. |
| Chromium | ppb | 100 | 100 | 0.86 | 0.60† - 0.86 | 3/15, 8/15/2023 | Erosion of natural deposits; discharge from steel and pulp mills. |
| Chlorine | ppm | MRDL=4 | MRDLG=4 | 1.56**** | (Monthly Average) 1.4 - 1.7 | 70 samples per month | Water additive used to control microbes. |
| Copper | ppm | AL = 1.3 | 1.3 | 90th percentile value = 0.21 | 0.0078 - 0.395 | July - August | Corrosion of household plumbing systems; erosion of natural deposits. |
| Fluoride | ppm | 4 | 4 | 1.4 | ND - 1.4 | 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 = 0.865 | ND - 1.1 | July - August | Corrosion of household plumbing systems; erosion of natural deposits. |
| Nitrate | ppm | 10 | 10 | 0.532 | ND† - 0.532 | 3/15, 8/15/2023 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |
| Nickel | ppb | 100 | 100 | 0.77† | 0.24† - 0.77† | 3/15, 8/15/2023 | Corrosion of household plumbing systems; erosion of natural deposits. |
| **Disinfection Byproducts** | **Units** | **MCL** | **MCLG** | **Highest Detected Level** | **Range of Detected Levels** | **Test Dates** | **Likely Sources** |
| Total Trihalomethanes (TTHMs) | ppb | 80 | N/A | 61.00** | 27.73** - 61.00** | Quarterly | By-product of drinking water disinfection. |
| Haloacetic acids (HAA5) | ppb | 60 | N/A | 31.28** | 18.70** - 31.28** | Quarterly | By-product of drinking water disinfection. |
| Chlorite | ppm | 1 | 0.8 | 0.733*** † | 0.33† - 0.92† | Monthly | By-product of drinking water disinfection. |
| **Radiological** | **Units** | **MCL** | **MCLG** | **Highest Detected Level** | **Range of Detected Levels** | **Test Dates** | **Likely Sources** |
| Gross Alpha | pCi/L | 15 | 0 | 0.353 | -0.599 - 0.353 | 3/15, 5/16, 8/16, 10/18/2023 | Erosion of natural deposits. |
| Radium 228 | pCi/L | 5 | 0 | 0.674 | 0.0752 - 0.674 | 3/15, 5/16, 8/16, 10/18/2023 | Erosion of natural deposits. |

# AWWB NEWS AND PUBLIC INFORMATION

The AWWB continuously strives to provide the highest quality drinking water services for the City's increasing population of 80,006 (2022 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 Brad Wilson (Chair), Bernard Hill, Ph. D. (Vice Chair), David Reaves (Secretary), Thomas Sparrow, and Celeste Norris. 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.

# 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 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*.

# 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 | 12.8† | 5.75 - 12.8† | 3/15, 8/15/2023 | By-product of drinking water disinfection. |
| Iron | ppb | 300 | N/A | 70 | ND - 70 | Daily | Erosion of natural deposits. |
| Manganese | ppb | 50 | N/A | 40 | 0.37† - 40 | Daily | Erosion of natural deposits; runoff from landfills. |
| Sulfate | ppm | 500 | N/A | 26.2† | ND† - 26.2† | 3/15, 8/15/2023 | Erosion of natural deposits. |
| Total Dissolved Solids | ppm | 500 | N/A | 110† | 75.6 - 110† | 3/15, 8/15/2023 | Erosion of natural deposits. |
| Zinc | ppm | 5 | N/A | 0.137 | 0.005† - 0.137 | 3/15, 8/15/2023 | Corrosion inhibitor. |
| pH | units | 6.5-8.5 | N/A | 7.27* | 6.60 - 7.50 | Daily | Natural deposits; treatment at water plant. |
| Aluminum (see note below) | ppm | 0.2 | N/A | 0.214† | ND - 0.214† | 3/15, 8/15/2023 | Erosion of natural deposits. |

**Opelika Water had a Secondary MCL exceedance for Aluminum in August, 2023. Aluminum was retested in September, 2023, and the result was below the MCL (0.132 ppm).**

| 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 | 11.7 | 3.48† - 11.7 | 3/15, 8/15/2023 | Natural deposits; treatment at water plant. |
| Specific Conductance | µS/cm | N/A | N/A | 176† | 118 - 176† | 3/15, 8/15/2023 | Natural deposits. |
| Carbon Dioxide | ppm | N/A | N/A | 13.12* | 7 - 28.2† | Daily | Natural deposits. |
| Magnesium | ppm | N/A | N/A | 4.75 | 1.95† - 4.75 | 3/15, 8/15/2023 | Natural deposits. |
| Sodium | ppm | N/A | N/A | 28.1† | 4.7 - 28.1† | 3/15, 8/15/2023 | Natural deposits. |
| Alkalinity | ppm | N/A | N/A | 57.58* | 28† - 88 | Daily | Natural deposits. |
| Total Hardness | ppm | N/A | N/A | 48.8 | 16.7† - 48.8 | 3/15, 8/15/2023 | Natural deposits. |
| **Unregulated Organic Chemicals** | **Units** | **MCL** | **MCLG** | **Highest Detected Level** | **Range of Detected Levels** | **Test Dates** | **Likely Sources** |
| Total Organic Carbon | ppm | TT | N/A | 1.74***** | 1.49***** - 1.74***** | Monthly | Naturally present in the environment. |

**PER & POLYFLUOROALKYL COMPOUNDS (PFAS) - a group of manufactured chemicals used in a variety of industries and products since the 1940s. PFAS compounds are found in a wide range of consumer goods, and there is evidence that exposure to high levels of PFAS may lead to adverse health outcomes. The EPA recently announced new MCL's and MCLG's for PFAS compounds in drinking water. More information is available from the EPA at *https://www.epa.gov/pfas*.**

| PFAS Compound | Units | Highest Detected Level | Range of Detected Levels | Test Dates |
|---|---|---|---|---|
| 11 Cl-PF3OUdS | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| 9Cl-PF3ONS | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| 4,8-dioxa-3H-perfluorononanoic acid (ADONA) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| Hexafluoropropylene oxide dimer acid (HFPO-DA) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| N-EtFOSAA | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| N-MeFOSAA | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorobutanesulfonic acid (PFBS) | ppt | 2.9 | ND - 2.9 | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorodecanoic acid (PFDA) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorohexanoic acid (PFHxA) | ppt | 6.4† | ND - 6.4† | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorododecanoic acid (PFDoDa) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluoroheptanoic acid (PFHpA) | ppt | 3.29 | ND - 3.29 | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorohexanesulfonic acid (PFHxS) | ppt | 2.41 | ND - 2.41 | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorononanoic acid (PFNA) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorooctanesulfonic acid (PFOS) | ppt | 8.4† | 1.4 - 8.4† | 3/15, 4/19, 8/2, 7/18, 10/18/2023 |
| Perfluorooctanoic acid (PFOA) | ppt | 9.8† | ND† - 9.8† | 3/15, 4/19, 8/2, 7/18, 10/18/2023 |
| Perflourotetradecanoic acid (PFTeDA) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluorotridecanoic acid (PFTrDA) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |
| Perfluoroundecanoic acid (PFUnA) | ppt | ND | ND | 3/15, 4/19, 8/2, 10/18/2023 |

**UNREGULATED CONTAMINANTS - EPA uses the Unregulated Contaminant Monitoring Rule (UCMR-5) 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. The results below were collected in 2023 in water purchased from Opelika Water before entering the AWWB distribution system. The AWWB is scheduled to collect UCMR-5 data from its own distribution system in 2025.**

| UCMR-5 Contaminant | Units | Highest Detected Level | Range of Detected Levels | Test Dates | UCMR-5 Contaminants Tested For, But Not Detected | | |
|---|---|---|---|---|---|---|---|
| PFBS | ppt | 2.4† | ND† - 2.4† | Quarterly | 11Cl-PF3OUdS | PFDA | PFUnA |
| PFHxA | ppt | 5.6† | ND† - 5.6† | Quarterly | 4:2 FTS | PFEESA | NEtFOSAA |
| PFBA | ppt | 3.3† | ND† - 3.3† | Quarterly | 6:2 FTS | PFHps | NMeFOSAA |
| PFPeA | ppt | 6.4† | ND† - 6.4† | Quarterly | 8:2 FTS | PFMBA | PFTA |
| PFHpA | ppt | 2.8† | ND† - 2.8† | Quarterly | 9Cl-PF3ONS | PFMPA | PFTrDA |
| PFHxS | ppt | 1.7† | ND† - 1.7† | Quarterly | ADONA | PFPeS | Lithium |
| PFOS | ppt | 6.4† | ND† - 6.4† | Quarterly | HFPO-DA | PFDoA | |
| PFOA | ppt | 11.0† | ND† - 11.0† | Quarterly | NFDHA | PFNA | |

# 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.