## General Information

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. MCL's, defined in a List of Definitions in this report, are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

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 and radioactive material, and it can pick up substances resulting from the presence of animals or from human activity.

Contaminants 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, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water run-off, 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, storm water run-off, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

*Cryptosporidium* and *Giardia* are microscopic organisms that are relatively widespread in the environment. Surface waters, such as lakes and rivers that contain a high amount of sewage contamination or animal wastes are more susceptible to increased numbers of these parasites. Your source water systems are taking steps to make sure these organisms do not pose a problem in your drinking water. Current protection measures include chlorination, filtration, and monitoring turbidity levels and particle sizes. Additionally, routine back-washing of the filters helps to eliminate the chances of finding these organisms in treated water. Occasionally, these organisms have been found in the raw (untreated) water, but neither *Cryptosporidium* nor *Giardia* have been found in the finished (treated) water.

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

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the levels of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water.

## Information about Lead

Lead in drinking water is rarely found in source water but is primarily from materials and components associated with service lines and home plumbing. Your water system is responsible for providing high quality drinking water but cannot control the variety of materials used in plumbing components. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Use only water from the cold-water tap for drinking, cooking, and especially for making baby formula. Hot water is more likely to cause leaching of lead from plumbing materials. 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. These recommended actions are very important to the health of your family.

Lead levels in your drinking water are likely to be higher if your home or water system has lead pipes, or your home has brass fittings which contain some lead, or your home has copper pipes with lead solder and you have soft water, and water often sits in the pipes for several hours.

If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water and steps you can take to minimize exposure is available from the Safe Drinking Water hotline (1-800-426-4791) or from the EPA's website, www.epa.gov/safewater/lead.

## Monitoring Schedule and Results

Our source water is monitored for contaminants according to a schedule assigned by the ADEM, using EPA approved methods and a state certified laboratory. The ADEM allows us to monitor for some contaminants less than once per year because the concentrations do not change frequently. 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.

| Constituent Monitored | Wetumpka | CEWA | Five Star |
|---|---|---|---|
| Inorganic Contaminants | -- | 2021 | 2021 |
| Lead and Copper | 2019 | 2019 | 2019 |
| Microbiological Contaminants | Monthly | Monthly | Monthly |
| Nitrates | -- | 2021 | 2021 |
| Radiological Contaminants | -- | 2021 | 2016 |
| Synthetic Organic Contaminants | -- | 2019 | 2019 |
| Volatile Organic Contaminants | -- | 2021 | 2019 |
| Disinfection By-products | 2021 | 2021 | 2021 |
| Cryptosporidium and Giardia | -- | 2017 | 2017 |
| UCMR4 Contaminants | 2018 | 2020 | -- |

## Definitions

**Action Level**: the concentration of a contaminant that, if exceeded, triggers treatment or other requirements.
**Coliform Absent (ca)**: laboratory analysis indicates that the contaminant is not present.
**Detected contaminant**: any regulated or unregulated contaminant detected at or above its method detection limit (or reportable limit)
**Disinfection byproducts (DBPs)**: formed when disinfectants react with bromide and/or natural organic matter (i.e., decaying vegetation) present in the source water.
**Distribution System Evaluation (DSE)**: 4-quarter study conducted by water systems to identify locations with high concentrations of THMs and HAAs.
**Locational Running Annual Average (LRAA)** – yearly average of all the DPB results at each specific sampling site
**Maximum Contaminant Level (MCL)**: highest level of a contaminant that is allowed in drinking water.
**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.
**Maximum Residual Disinfectant Level (MRDL)**: highest level of a disinfectant allowed in drinking water
**Micrograms per liter (ug/L)**: equivalent to parts per billion (ppb) since one liter of water is equal in weight to one billion micrograms.
**Microsiemens per centimeter (µs/cm)**: unit of measurement for Specific Conductance.
**Milligrams per liter (mg/L)**: equivalent to parts per million
**Millirems per year (mrem/yr)**: a measure of radiation absorbed by the body.
**Nephelometric Turbidity Unit (NTU)**: a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
**90th Percentile**: The values reported for lead and copper represent the 90th percentile. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system.
**Not Detected (ND)**: laboratory analysis indicates that the constituent is not present above detection limits of lab equipment.
**NR (Not Reported)**: laboratory analysis, usually Secondary Contaminants, not reported by water system.
**Parts per billion (ppb) or Micrograms per liter (µg/l)**: corresponds to one minute in 2,000 years, or a single penny in $10,000,000.
**Parts per million (ppm) or Milligrams per liter (mg/l)**: corresponds to one minute in two years or a single penny in $10,000.
**Parts per quadrillion (ppq) or Picograms per liter (picograms/l)**: corresponds to one minute in 2,000,000,000 years, or a single penny in $10,000,000,000,000.
**Parts per trillion (ppt) or Nanograms per liter (nanograms/l)**: corresponds to one minute in 2,000,000 years, or a single penny in $10,000,000,000.
**Picocuries per liter (pCi/L)**: a measure of the radioactivity in water.
**Standard Units (S.U.)**: pH of water measures the water's balances of acids and bases and is affected by temperature and carbon dioxide gas.
**Treatment Technique (TT)**: a required process intended to reduce the level of a contaminant in drinking water.
**Unregulated Contaminant**s: contaminants for which the EPA has not established MCLs.
**Variances & Exemptions (V&E)**: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

# 2022 Annual Water Quality Report
**(Testing Performed January through December 2021)**


## WETUMPKA WATER WORKS AND SEWER BOARD
PWSID AL0000551
2909 Elmore Road
P.O. Box 69
Wetumpka, AL 36092
Phone 334-567-8404
Fax 334-567-8410
*www.wetumpkawater.com*


We are pleased to present to you this year's Annual Water Quality Report, covering water quality data from January through December 2021. Our drinking water supply met or surpassed the strict regulations of the Alabama Department of Environmental Management (ADEM) and the U. S. Environmental Protection Agency (EPA), which requires all public water suppliers to prepare and distribute reports like this once every year.

| | |
|---|---|
| **Water Sources** | Central Elmore Water Authority (Lake Martin) |
| | Five Star Water Supply District (Lake Jordan) |
| | Montgomery Water Works (Tallapoosa River) * |
| **Treatment** | Filtration and chlorination for disinfection |
| **Storage** | 2 tanks with a total capacity of 2,750,000 gallons |
| **Customers** | Approximately 3600 |
| **Water Board Staff** | Ronnie Windham, General Manager |
| | Michael Digmon, Water Superintendent |
| | Chris Bowar, Wastewater Superintendent |
| | Pam Hines, Board Secretary |
| **Water Board Members** | John Strickland, Chairman |
| | Jason Mattox, Vice-Chairman |
| | Robert Hankins, Treasurer |

* Did not purchase from Montgomery Water Works (MWW) in 2021; therefore, MWW data not necessary for this report.

## Source Water Assessment

In compliance with the Alabama Department of Environmental Management (ADEM), Source Water Assessment Plans have been developed by each of the water systems that supply your drinking water. These plans assist in protecting our water sources. The plans provide additional information such as potential sources of contamination and a Susceptibility Analysis, which classifies potential contaminants as high, moderate, or non-susceptible to contaminating the water source. Please call our office to find out how to review a copy of any of these Plans.

Please help us make this effort worthwhile by protecting our source waters. Carefully follow instructions on pesticides and herbicides you use for your lawn and garden, and properly dispose of household chemicals, paints and waste oil.

## Questions?

We are pleased to report that our drinking water meets federal and state requirements. If you have any questions about this report or concerning your water utility, please contact Ronnie Windham, General Manager, at 334-567-8404. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the fourth Tuesday of each month at 1:00 p.m. in the Water Works Office at 2909 Elmore Road.

More information about contaminants to drinking water and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).

## Detected Drinking Water Contaminants: Wetumpka Water Works and Sewer Board

| Contaminants | Violation | Level Detected | Msmt | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|
| Copper | NO | 0.036 * | ppm | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Total trihalomethanes (TTHM) | NO | Range 23.6-80.9 | ppb | 0 | 80 | By-product of drinking water chlorination |
| Total haloacetic acids (HAA5) | NO | Range 18.3-29.4 | ppb | 0 | 60 | By-product of drinking water chlorination |

## UCMR 4 Contaminants: Wetumpka Water Works and Sewer Board

| Contaminant | Unit Msmt | Level Detected | Contaminant | Unit Msmt | Level Detected | Haloacetic Acids | Unit Msmt | Level Detected |
|---|---|---|---|---|---|---|---|---|
| Germanium | ppb | ND | Tribufos | ppb | ND | HAA5 | ppb | 8.2-77.1 |
| Manganese | ppb | 0.61-6.4 | 1-butanol | ppb | ND | HAA6Br | ppb | 2.7-6.62 |
| Alpha-hexachlorocyclohexane | ppb | ND | 2-methoxyethanol | ppb | ND | HAA9 | ppb | 11.0-83.5 |
| Chlorpyrifos | ppb | ND | 2-propen-1-ol | ppb | ND | | | |
| Dimethipin | ppb | ND | Butylated hydroxyanisole | ppb | ND | | | |
| Ethoprop | ppb | ND | O-toluidine | ppb | ND | | | |
| Oxyfluorfen | ppb | ND | Quinoline | ppb | ND | | | |
| Profenofos | ppb | ND | Total organic carbon (TOC) | ppb | ND | | | |
| Tebuconazole | ppb | ND | Bromide | ppb | ND | | | |
| Total permethrin (cis- & trans-) | ppb | ND | | | | | | |

## Detected Drinking Water Contaminants: Central Elmore Water Authority (CEWA) & Five Star Water Supply District

| Contaminants | Violation | CEWA Level Detected | Five Star Level Detected | Unit of Msmt | MCLG | MCL | Likely Source of Contamination |
|---|---|---|---|---|---|---|---|
| Turbidity | NO | 0.07 | 0. 09 | NTU | none | TT | Soil runoff (Measure of cloudiness of the water) |
| Total Organic Carbon | NO | 0.93-1.22 | 1.0-1.61 | ppm | none | TT | Soil runoff |
| Alpha Emitters | NO | ND | 2.69 | PCi/l | 0 | 15 | Erosion of natural deposits |
| Arsenic | NO | ND | 0.04 | ppb | n/a | 50 | Erosion; runoff from orchards and glass & electronics production |
| Barium | NO | 0.011 | 0.03 | ppm | 2 | 2 | Drilling wastes; metal refineries discharge; erosion |
| Chromium | NO | ND | 0.67 | ppb | 100 | 100 | Discharge from steel and pulp mills; erosion |
| Fluoride | NO | 0.52-0.99 | 0.9 | ppm | 4 | 4 | Erosion; water additive for tooth health; factory waste |
| Nitrate (as Nitrogen) | NO | ND | 0.32 | ppm | 10 | 10 | Fertilizer run-off; septic tank leaching; sewage; erosion |
| Total trihalomethanes (TTHM) | NO | 10.0-35.0 | 15.1-63.6 | ppb | 0 | 80 | By-product of drinking water chlorination |
| Haloacetic acids (HAA5) | NO | 7.0-16.0 | 8.15-35.2 | ppb | 0 | 60 | By-product of drinking water chlorination |
| **Unregulated Contaminants** | | | | | | | |
| Chloroform | NO | 4.0-28.0 | 12.2-53.6 | ppb | 70 | none | Naturally occurring or from runoff or industrial discharge |
| Bromodichloromethane | NO | 2.0-6.0 | 2.86-7.83 | ppb | none | none | Naturally occurring or from runoff or industrial discharge |
| Chlorodibromomethane | NO | 1.0-8.0 | 0.32-1.36 | ppb | 60 | none | Naturally occurring or from runoff or industrial discharge |
| **Secondary Contaminants** | | | | | (Secondary Standards) | | |
| Aluminum | NO | 0.02 | 0.085 | ppm | none | 0.2 | Erosion of natural deposits or from water treatment |
| Chloride | NO | 13.5 | 8.02 | ppm | none | 250 | Naturally occurring or from runoff |
| Hardness | NO | 10.2 | 47.6 | ppm | none | none | Naturally occurring or from water treatment |
| Iron | NO | ND-0.06 | 0.02 | ppm | n/a | 0.30 | Naturally occurring in the environment; erosion |
| Manganese | NO | ND-0.01 | ND | ppm | n/a | 0.05 | Erosion of natural deposits; leaching from pipes |
| pH | NO | 6.9-8.6 | 7.2-7.9 | S.U. | none | 8.5 | Naturally occurring or from water treatment |
| Sodium | NO | 17.9 | 1.95 | ppm | none | none | Naturally occurring in the environment |
| Sulfate | NO | 11.9 | 13.2 | ppm | none | 250 | Naturally occurring in the environment; erosion |
| Total Dissolved Solids | NO | 77 | 106 | ppm | none | 500 | Naturally occurring or from runoff |

## UCMR 4 Contaminants - CEWA

| Contaminant | Unit Msmt | Level Detected | Contaminant | Unit Msmt | Level Detected | Haloacetic Acids | Unit Msmt | Level Detected |
|---|---|---|---|---|---|---|---|---|
| Germanium | ppb | ND | Tribufos | ppb | ND | HAA5 | ppb | 17.0-36.0 |
| Manganese | ppb | 0.001-0.003 | 1-butanol | ppb | ND | HAA6Br | ppb | 3.00-5.00 |
| Alpha-hexachlorocyclohexane | ppb | ND | 2-methoxyethanol | ppb | ND | HAA9 | ppb | 19.0-37.0 |
| Chlorpyrifos | ppb | ND | 2-propen-1-ol | ppb | ND | | | |
| Dimethipin | ppb | ND | Butylated hydroxyanisole | ppb | ND | | | |
| Ethoprop | ppb | ND | O-toluidine | ppb | ND | | | |
| Oxyfluorfen | ppb | ND | Quinoline | ppb | ND | | | |
| Profenofos | ppb | ND | Total organic carbon (TOC) | ppm | 1.85-2.58 | | | |
| Tebuconazole | ppb | ND | Bromide | ppb | ND | | | |
| Total permethrin (cis- & trans-) | ppb | ND | | | | | | |

* Level Detected is 90th percentile and number of sites above the Action Level (AL) = 0

Below is a table of contaminants for which the Environmental Protection Agency and the Alabama Department of Environmental Management require testing. These contaminants were not detected in your drinking water unless they are also listed in the Detected Drinking Water Contaminants table elsewhere in this report.

## STANDARD LIST OF PRIMARY DRINKING WATER CONTAMINANTS

| Contaminant | MCL | Unit of Msmt | Contaminant | MCL | Unit of Msmt |
|---|---|---|---|---|---|
| **Bacteriological Contaminants** | | | trans-1,2-Dichloroethylene | 100 | ppb |
| Total Coliform Bacteria | <5% | present/absent | Dichloromethane | 5 | ppb |
| Fecal Coliform and E. coli | 0 | present/absent | 1,2-Dichloropropane | 5 | ppb |
| Turbidity | TT | NTU | Di (2-ethylhexyl)adipate | 400 | ppb |
| Cryptosporidium | TT | Calc.organisms/l | Di (2-ethylhexyl)phthalate | 6 | ppb |
| **Radiological Contaminants** | | | Dinoseb | 7 | ppb |
| Beta/photon emitters | 4 | mrem/yr | Dioxin [2,3,7,8-TCDD] | 30 | ppq |
| Alpha emitters | 15 | pCi/l | Diquat | 20 | ppb |
| Combined radium | 5 | pCi/l | Endothall | 100 | ppb |
| Uranium | 30 | pCi/l | Endrin | 2 | ppb |
| **Inorganic Chemicals** | | | Epichlorohydrin | TT | TT |
| Antimony | 6 | ppb | Ethylbenzene | 700 | ppb |
| Arsenic | 10 | ppb | Ethylene dibromide | 50 | ppt |
| Asbestos | 7 | MFL | Glyphosate | 700 | ppb |
| Barium | 2 | ppm | Heptachlor | 400 | ppt |
| Beryllium | 4 | ppb | Heptachlor epoxide | 200 | ppt |
| Cadmium | 5 | ppb | Hexachlorobenzene | 1 | ppb |
| Chromium | 100 | ppb | Hexachlorocyclopentadiene | 50 | ppb |
| Copper | AL=1.3 | ppm | Lindane | 200 | ppt |
| Cyanide | 200 | ppb | Methoxychlor | 40 | ppb |
| Fluoride | 4 | ppm | Oxamyl [Vydate] | 200 | ppb |
| Lead | AL=15 | ppb | Polychlorinated biphenyls | 0.5 | ppb |
| Mercury | 2 | ppb | Pentachlorophenol | 1 | ppb |
| Nitrate | 10 | ppm | Picloram | 500 | ppb |
| Nitrite | 1 | ppm | Simazine | 4 | ppb |
| Selenium | .05 | ppm | Styrene | 100 | ppb |
| Thallium | .002 | ppm | Tetrachloroethylene | 5 | ppb |
| **Organic Contaminants** | | | Toluene | 1 | ppm |
| 2,4-D | 70 | ppb | Toxaphene | 3 | ppb |
| Acrylamide | TT | TT | 2,4,5-TP(Silvex) | 50 | ppb |
| Alachlor | 2 | ppb | 1,2,4-Trichlorobenzene | .07 | ppm |
| Benzene | 5 | ppb | 1,1,1-Trichloroethane | 200 | ppb |
| Benzo(a)pyrene [PAHs] | 200 | ppt | 1,1,2-Trichloroethane | 5 | ppb |
| Carbofuran | 40 | ppb | Trichloroethylene | 5 | ppb |
| Carbon tetrachloride | 5 | ppb | Vinyl Chloride | 2 | ppb |
| Chlordane | 2 | ppb | Xylenes | 10 | ppm |
| Chlorobenzene | 100 | ppb | **Disinfectants & Disinfection Byproducts** | | |
| Dalapon | 200 | ppb | Chlorine | 4 | ppm |
| Dibromochloropropane | 200 | ppt | Chlorine Dioxide | 800 | ppb |
| 1,2-Dichlorobenzene | 1000 | ppb | Chloramines | 4 | ppm |
| 1,4-Dichlorobenzene (para) | 75 | ppb | Bromate | 10 | ppb |
| o-Dichlorobenzene | 600 | ppb | Chlorite | 1 | ppm |
| 1,2-Dichloroethane | 5 | ppb | HAA5 [Total haloacetic acids] | 60 | ppb |
| 1,1-Dichloroethylene | 7 | ppb | TTHM [Total trihalomethanes] | 80 | ppb |
| cis-1,2-Dichloroethylene | 70 | ppb | Total organic carbon | TT | ppm |

## LIST OF SECONDARY CONTAMINANTS

| | | | |
|---|---|---|---|
| Alkalinity, Total (as CA, $Co_3$) | Alkalinity, Total (as CA, $Co_3$) | Alkalinity, Total (as CA, $Co_3$) | Alkalinity, Total (as CA, $Co_3$) |
| Aluminum | Aluminum | Aluminum | Aluminum |
| Calcium, as Ca | Calcium, as Ca | Calcium, as Ca | Calcium, as Ca |
| Chloride | Chloride | Chloride | Chloride |
| Color | Color | Color | Color |

## LIST OF UNREGULATED CONTAMINANTS

| | | | |
|---|---|---|---|
| Aldicarb | Chloroethane | Hexachlorobutadiene | Propachlor |
| Aldicarb Sulfone | Chloroform | 3-Hydroxycarbofuran | N-Propylbenzene |
| Aldicarb Sulfoxide | Chloromethane | Isoprpylbenzene | Propachlor |
| Aldrin | O-Chlorotoluene | p-Isopropyltoluene | 1,1,1,2-Tetrachloroethane |
| Bromoacetic Acid | P-Chlorotoluene | M-Dichlorobenzene | 1,1,2,2-Tetrachloroethane |
| Bromobenzene | Dibromochloromethane | Methomyl | Tetrachloroethene |
| Bromochloromethane | Dibromomethane | Methomyl | Trichloroacetic Acid |
| Bromodichloromethane | 1,1-Dichloroethane | Methylene chloride | 1,2,3-Trichlorobenzene |
| Bromoform | 1,3-Dichloropropane | Methyl tert-butyl ether | Trichloroethene |
| Bromomethane | 2,2-Dichloropropane | Metolachlor | Trichlorofluoromethane |
| Butachlor | 1,1-Dichloropropene | Metribuzin | 1,2,3-Trichloropropane |
| N-Butylbenzene | 1,3-Dichloropropene | MTBE | 1,2,4-Trimethylbenzene |
| Sec-Butylbenzene | Dicamba | Naphthalene | 1,3,5-Trimethylbenzene |
| Tert - Butylbenzene | Dichlorodifluoromethane | 1-Naphthol | |
| Carbaryl | Dieldrin | Paraquat | |