

The Ragland Water Works Board
220 Fredia Street, Suite 101
Ragland, Alabama 35131
PWS ID #AL0001208

2018 Annual Drinking Water Quality Report

The U.S. Environmental Protection Agency (EPA) wants you to know:

In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amounts of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water that must provide the same protection for public health. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791). 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 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, storm water runoff, 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.

Important Information About Lead:

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. Ragland Water Works Board 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 <http://www.epa.gov/safewater/lead>.

Notes:

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people 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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.

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.

Definitions

Maximum Contaminant Level (MCL): 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.

Maximum Contaminant Level Goal (MCLG): 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 Goal or MRDLG: 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.

Maximum Residual Disinfectant Level or MRDL: 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.

Initial Distribution System Evaluation (IDSE): A study conducted by water systems to identify distribution system locations with high concentrations of TTHM and HAA5.

Locational Running Average (LRAA): Annual average of all Disinfection By-products (DBP) results at each IDSE sampling site.

Action Level (or AL): The concentration of a contaminant that triggers treatment or other requirement, a water system shall follow.

Treatment Technique (or TT): A required process intended to reduce the level of a contaminant in drinking water.

Nephelometric Turbidity Units (NTU): A measure of clarity.

Non-Detect (ND): Not detectable at testing limits.

Parts per Million (PPM): milligrams per liter (mg/l). One part per million corresponds to a single penny in \$10,000.

Parts per Billion (PPB): micrograms per liter (ug/l). One part per billion corresponds to a single penny in \$10,000,000.

Parts per Trillion (PPT): nanograms per liter (nanograms/l). One part per trillion corresponds to a single penny in \$10,000,000,000.

Picocuries per Liter (pCi/L): A measure of radioactivity.

Millirems per Year (mrem/yr): Measure of radiation absorbed by the body.

Standard Units (S.U.): pH of water measures the water's balances of acids and bases. Water with less than 6.5 could be acidic, soft and corrosive. A pH greater than 8.5 could indicate that the water is hard.

N/A: Not applicable

Table of Primary Drinking Water Contaminants

| CONTAMINANT | MCL | Amount Detected | CONTAMINANT | MCL | Amount Detected |
|--|------------|-----------------|----------------------------|---------|-----------------|
| Bacteriological | | | Endothall | 100 ppb | ND |
| Total Coliform Bacteria | < 5% | ND | Endrin | 2 ppb | ND |
| Turbidity | TT | 4.5 | Epichlorohydrin | TT | ND |
| Radiological | | | Glyphosate | 700 ppb | ND |
| Beta/photon emitters (mrem/yr) | 4 | ND | Heptachlor | 400 ppt | ND |
| Alpha emitters (pCi/L) | 15 | 1.7 | Heptachlor epoxide | 200 ppt | ND |
| Combined radium (pCi/L) | 5 | ND | Hexachlorobenzene | 1 ppb | ND |
| Inorganic | | | Lindane | 200 ppt | ND |
| Antimony (ppb) | 6 ppb | ND | Methoxychlor | 40 ppb | ND |
| Arsenic (ppb) | 10 ppb | ND | Oxamyl [Vydate] | 200 ppb | ND |
| Barium (ppm) | 2 ppm | 1.2 | PCBs | 500 ppt | ND |
| Beryllium (ppb) | 4 ppb | ND | Pentachlorophenol | 1 ppb | ND |
| Cadmium | 5 ppb | ND | Picloram | 500 ppb | ND |
| Chromium | 100 ppb | ND | Simazine | 4 ppb | ND |
| Copper * | AL=1.3 ppm | 1.07 | Toxaphene | 3 ppb | ND |
| Cyanide | 200 ppb | ND | Benzene | 5 ppb | ND |
| Fluoride | 4 ppm | ND | Carbon Tetrachloride | 5 ppb | ND |
| Lead (ppb) * | AL=15 | 1 | Chlorobenzene | 100 ppb | ND |
| Mercury | 2 ppb | ND | Dibromochloropropane | 200 ppt | ND |
| Nitrate | 10 ppm | 0.46 | o-Dichlorobenzene | 600 ppb | ND |
| Nitrite | 1 ppm | ND | p-Dichlorobenzene | 75 ppb | ND |
| Selenium | 50 ppb | ND | 1,2-Dichloroethane | 5 ppb | ND |
| Thallium | 2 ppb | ND | 1,1-Dichloroethylene | 7 ppb | ND |
| *90th percentile of the most recent sampling event. | | | Cis-1,2-Dichloroethylene | 70 ppb | ND |
| Organic Chemicals | | | trans-1,2-Dichloroethylene | 100 ppb | ND |
| 2,4-D | 70 ppb | ND | Dichloromethane | 5 ppb | ND |
| 2,4,5-TP (Silvex) | 50 ppb | ND | 1,2-Dichloropropane | 5 ppb | ND |
| Acrylamide | TT | ND | Ethylbenzene | 700 ppb | ND |
| Alachlor | 2 ppb | ND | Ethylene dibromide | 50 ppt | ND |
| Atrazine | 3 ppb | ND | Styrene | 100 ppb | ND |
| Benzo(a)pyrene[PAHs] | 200 ppt | ND | Tetrachloroethylene | 5 ppb | ND |
| Carbofuran | 40 ppb | ND | 1,2,4-Trichlorobenzene | 70 ppb | ND |
| Chlordane | 2 ppb | ND | 1,1,1-Trichloroethane | 200 ppb | ND |
| Dalapon | 200 ppb | ND | 1,1,2-Trichloroethane | 5 ppb | ND |
| Di-(2-ethylhexyl)adipate | 400 ppb | ND | Trichloroethylene | 5 ppb | ND |
| Di-(2-ethylhexyl)phthalates | 6 ppb | ND | TTHM | 80 ppb | 29.7 |
| Dinoseb | 7 ppb | ND | Toluene | 1 ppm | ND |
| Diquat | 20 ppb | ND | Vinyl Chloride | 2 ppb | ND |
| Chloramines | 4 ppm | ND | Xylenes | 10 ppm | ND |
| Chlorite | 1 ppm | ND | TOC | TT | 0.9 |
| HAA5(ppb) | 60 ppb | 24 | Chlorine | 4 ppm | 1.93 |

Table of Unregulated Drinking Water Contaminants

| CONTAMINANT | Low Result, PPM | High Result, PPM | CONTAMINANT, PPM | Low Result, PPM | High Result, PPM |
|---------------------------|-----------------|------------------|-------------------------|-----------------|------------------|
| 1,1 - Dichloropropene | ND | ND | Chloroform | ND | 0.0221 |
| 1,1,1,2-Tetrachloroethane | ND | ND | Chloromethane | ND | ND |
| 1,1,2,2-Tetrachloroethane | ND | ND | Dibromochloromethane | ND | 0.0015 |
| 1,1-Dichloroethane | ND | ND | Dibromomethane | ND | ND |
| 1,2,3 - Trichlorobenzene | ND | ND | Dicamba | ND | ND |
| 1,2,3 - Trichloropropane | ND | ND | Dichlorodifluoromethane | ND | ND |
| 1,2,4 - Trimethylbenzene | ND | ND | Dieldrin | ND | ND |
| 1,3 - Dichloropropane | ND | ND | Hexachlorobutadiene | ND | ND |
| 1,3 - Dichloropropene | ND | ND | p-Isopropylbenzene | ND | ND |
| 1,3,5 - Trimethylbenzene | ND | ND | M-Dichlorobenzene | ND | ND |
| 2,2 - Dichloropropane | ND | ND | Methomyl | ND | ND |
| 3-Hydroxycarbofuran | ND | ND | MTBE | ND | ND |
| Aldicarb | ND | ND | Metolachlor | ND | ND |
| Aldicarb Sulfone | ND | ND | Metribuzin | ND | ND |
| Aldicarb Sulfoxide | ND | ND | N - Butylbenzene | ND | ND |
| Aldrin | ND | ND | Naphthalene | ND | ND |
| Bromobenzene | ND | ND | N-Propylbenzene | ND | ND |
| Bromochloromethane | ND | ND | O-Chlorotoluene | ND | ND |
| Bromodichloromethane | ND | 0.0061 | P-Chlorotoluene | ND | ND |
| Bromoform | ND | ND | P-Isopropyltoluene | ND | ND |
| Bromomethane | ND | ND | Propachlor | ND | ND |
| Butachlor | ND | ND | Sec - Butylbenzene | ND | ND |
| Carbaryl | ND | ND | Tert - Butylbenzene | ND | ND |
| Chloroethane | ND | ND | Trichlorofluoromethane | ND | ND |

Table of Secondary Drinking Water Contaminants

| Parameters (mg/L) | MCLG | MCL | Low Result | High Result | Parameters (mg/L) | MCLG | MCL | Low Result | High Result |
|---------------------|------|-----------|------------|-------------|-------------------|------|-----------|---------------|---------------|
| pH | 7 | Monitored | 7.0 | 7.9 | Aluminum | 0 | 0.2 | ND | ND |
| Color, APHA (units) | N/A | 15 | ND | ND | Copper | N/A | 1 | ND | 0.004 |
| Odor | N/A | 3 | ND | ND | Iron | 0 | 0.3 | ND | 0.08 |
| Foaming Agents | N/A | 0.5 | ND | ND | Manganese | 0 | 0.05 | ND | ND |
| TDS | 0 | 500 | 170 | 172 | Silver | 0 | 0.1 | ND | ND |
| Fluoride | N/A | 2.0 | ND | ND | Zinc | 0 | 5 | ND | ND |
| Sulfate | 0 | 250 | 5.71 | 6.35 | Total Hardness | 0 | Monitored | 136 | 143 |
| Chloride | N/A | 250 | 4.11 | 5.13 | Corrosivity | N/A | N/A | Non Corrosive | Non Corrosive |

Table of Detected Primary Drinking Water Contaminants

| CONTAMINANT | MCLG | MCL | Range Detected | | | Likely Source of Contamination and Health Affects |
|----------------|---------|-------------|----------------|---|------|--|
| | | | | | | |
| Turbidity | N/A | TT | 0.49 | - | 4.5 | Soil Runoff. |
| Alpha Emitters | 0 | 15 pCi/L | 1.1 | - | 1.7 | Erosion of natural deposits |
| Barium | 2 | 2 ppm | 1.0 | - | 1.2 | Discharge of drilling wastes; discharge of metal refineries; erosion of natural deposits. |
| Nitrate | 10 | 10 ppm | 0.19 | - | 0.46 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Copper | 1.3 | AL= 1.3 ppm | 0.03 | - | 1.66 | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives (90 th Percentile Value) |
| Lead | 0 | AL= 1.5 ppb | ND | - | 2 | Corrosion of household plumbing systems; erosion of natural deposits |
| HAA5 | N/A | 60 ppb | ND | - | 24 | By-product of drinking water chlorination |
| TTHM | N/A | 80 ppb | 4.2 | - | 29.7 | By-product of drinking water chlorination |
| TOC | N/A | TT | 0.3 | - | 0.9 | Runoff from industrial, urban and natural soils; Decomposition of plant material in surface water |
| Chlorine | MRDLG=4 | MRDL =4 ppm | 1.88 | - | 1.93 | Drinking water additive for bacterial disinfection |

The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though accurate, are more than one year old. This report contains results from the most recent monitoring which was performed in accordance with the regulatory schedule.

| Contaminants Monitored | Date Monitored |
|--|----------------|
| Inorganic Compounds | 2016 |
| Lead and Copper | 2017 |
| Microbiological Contaminants | Current |
| Nitrates | 2018 |
| Radioactive Contaminants | 2017 |
| Synthetic Organic Contaminants (including herbicides and pesticides) | 2018 |
| Volatile Organic Contaminants | 2018 |
| Disinfection By-products (TTHM and HAA5) | 2018 |

Ragland Water Works Board

220 Fredia Street, Suite 101

Ragland, Alabama 35131

PWS ID #AL0001208

205-472-0409

2018 Annual Drinking Water Quality Report

What's the Quality of My Water?

We are pleased to present to you this Consumer Confidence Report (CCR) for 2018. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process, protect our water resources, and to ensure the quality of your water. This report provides background information on your water system and presents water quality data for the year 2018.

The Ragland Water Works Board was first formed in 1941 to ensure a safe, dependable source of water to every home in the area. As of the end of 2018, we were serving approximately 1,087 homes and businesses. Our system is governed by a Board of Directors, which consists of two elected town officials and a resident. The Board Members are:

Board Members:

Carlton Byers: Chairman of the Board

Richard Bunt

Tony Soles

If you have any questions about this report or concerns about your water utility, please contact Tim McKinney, Superintendent, at (205) 472-0409, or by email at waterworks@ragland.net. 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 that are held on the second Monday of every month at 4:30PM at the Town Hall council room.

Our operators are certified by the Alabama Department of Environmental Management (ADEM), which means they have the adequate training to safely operate and maintain your water supply system. Each operator must also take continuing education classes each year to maintain their certification.

We produce water from the ground from a layer of rock called the Little Oak Limestone. We draw water from two wells installed in this aquifer, which are located approximately two miles from town. After disinfection and treatment, the water is pumped to a water storage system consisting of four ground-level tanks and one elevated tank totaling 1,100,000 gallons of storage. From storage, the water is then pumped through approximately 60 miles of piping before being distributed to your tap.

We are pleased to report that our drinking water is safe and meets all federal and state requirements. This section describes our water quality and what it means.

Ragland Water Works Board routinely monitors for constituents in your drinking water according to Federal and State laws. A table is provided with this report that indicates the results of our monitoring period of January 1 to December 31, 2018, or from the most recent sampling prior to 2018 (ADEM does not require us to monitor for all constituents every year). Although we are only required to report those constituents that were detected, we are including a list of all the tests that we ran to give you an idea of the extensive testing that is done to ensure that your water is safe. The Table of Detected Primary Drinking Water Contaminants indicate constituents that were detected, although they are all below the regulatory levels. Please note that all drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It is important to remember that the presence of these constituents does not necessarily pose a health risk.

As you can see by the enclosed table, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The Environmental Protection Agency (EPA) has determined that your water **IS SAFE** at these levels.

To keep Ragland's water safe, we disinfect the water with chlorine gas, which is injected into the water when it leaves the Ragland wells. Ragland maintains and monitors free chlorine residual of 1.93 ppm at Well number 1 and 1.88 ppm at Well number 3. Although this is sufficient to cleanse our water of bacteria, we conduct monthly bacterial testing, the results of which have all been within the state guidelines. We constantly monitor turbidity, or the cloudiness of the water. Turbid or cloudy water is not safe, and Ragland's water has consistently tested well below the turbidity limits set by the EPA of the United States and administered by ADEM.

The Ragland Water Works Board has also conducted a Source Water Assessment (SWA), which is a study to define the recharge areas to our water sources. The study was completed in 2002 and allows us to better protect your drinking water. The SWA Report can be viewed at the Ragland Water Works office. The SWA is updated every six years to keep it current.

Thank you for allowing us to continue providing your family with clean, quality water this year. Drought conditions in prior years continue to remind us how precious a commodity our water is. We still must use our water wisely and always encourage you to be prudent in the use of your water.

In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

Our monitoring results are shown in the table on the following pages. Please call our office if you have any questions.