

# Annual Drinking Water Quality Report

## City of Jemison

January-December 2014

### Is my water safe?

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (USEPA) and the Alabama Department of Environmental Management (ADEM) drinking water health standards. Your local water officials vigilantly safeguard its water supplies and once again we are proud to report that our system has not violated a maximum contaminant level or any other water quality standards. We're pleased to present to you this year's Annual Drinking Water Quality Report. 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 and protect our water resources. We are committed to ensuring the quality of your water. We purchase our water from the Town of Thorsby where groundwater wells provide source water for our system. Well #5 draws from the Hillabee Greenstone Aquifer. Well#6 and #7 draw from the Jemison Chert Aquifer. The water we supply to our customers requires no specialized treatment. However, Chlorine is added to the water as disinfectant and the required residual is maintained to protect your drinking water from any possible outside contaminants.

The City of Jemison routinely completes a water storage facility inspection plan, and utilizes a Bacteriological Monitoring Plan and a Cross Connection Policy is in place to insure good safe drinking water for our customers. We have completed a Source Water Assessment Plan, which is available at our office for review. This report provides information about potential sources of contamination and is set up to help protect our source.

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 Board meetings. They are held on the 1<sup>st</sup> and 3<sup>rd</sup> Monday of the month at the Jemison City Hall that is located at 14 Padgett Lane and begin at 6:00 p.m.

### The members of the Board of Directors are:

|                           |                         |                      |
|---------------------------|-------------------------|----------------------|
| <b>Mayor - Eddie Reed</b> | <b>Council Members:</b> | <b>Donnie Lane</b>   |
| <b>George Brasher</b>     | <b>Rex Bittle</b>       | <b>Sam Reed</b>      |
|                           |                         | <b>Robert Morris</b> |

### Important Drinking Water Definitions:

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

**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 (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.

**Maximum Residual Disinfectant Level Goal (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.

**Millirems per year (mrem/yr)** - Measure of radiation absorbed by the body.

**Nephelometric Turbidity Unit (NTU)** - Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

**Non-Detects (ND)** - Laboratory analysis indicates that the constituent is not present.

**Parts per million (ppm) or Milligrams per liter (mg/L)** - One part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb) or Micrograms per liter (µg/L)** - One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Parts per trillion (ppt) or Nanograms per liter (ng/L)** - One part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

**Parts per quadrillion (ppq) or Picograms per liter (pg/L)** - One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

**Picocuries per liter (pCi/L)** - Picocuries per liter is a measure of the radioactivity in water.

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

**Threshold Odor Number (T.O.N.)** - The greatest dilution of a sample with odor-free water that still yields a just-detectable odor.

**Variances & Exemptions** - ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.

### Explanation of reasons for variance/exemptions

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.

The City of Jemison routinely monitors for contaminants in your drinking water according to Federal and State laws. Unless otherwise noted, the data presented in the following tables show the results of our monitoring period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2014.

|   |
|---|
| <b>Table of Primary Drinking Water Contaminants</b> |
|---|

At high levels some primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detections.

| CONTAMINANT                        | MCL    | AMOUNT DETECTED | CONTAMINANT                           | MCL | AMOUNT DETECTED |
|------------------------------------|--------|-----------------|---------------------------------------|-----|-----------------|
| <b>Bacteriological</b>             |        |                 | Chloramines (ppm)                     | 4   | ND              |
| Total Coliform Bacteria            | < 5%   | ND              | Chlorite (ppm)                        | 1   | ND              |
| Turbidity (NTU)                    | TT     | ND              | Endothall (ppb)                       | 100 | ND              |
| Fecal Coliform & E. coli           | 0      | ND              | Endrin (ppb)                          | 2   | ND              |
| <b>Radiological</b>                |        |                 | Epichlorohydrin (ppb)                 | TT  | ND              |
| Beta particle and photon (mrem/yr) | 4      | ND              | Glyphosate (ppb)                      | 700 | ND              |
| Gross Alpha particle (pCi/L)       | 15     | ND              | Heptachlor (ppt)                      | 400 | ND              |
| Combined radium 226 & 228 (pCi/L)  | 5      | ND              | Heptachlor Epoxide (ppt)              | 200 | ND              |
| Tritium (pCi/L)                    | 20,000 | ND              | Hexachlorobenzene (ppb)               | 1   | ND              |
| Strontium 90 (pCi/L)               | 8      | ND              | Hexachlorocyclopentadiene (ppb)       | 50  | ND              |
| Uranium (ppb)                      | 30     | ND              | Lindane (ppt)                         | 200 | ND              |
| <b>Inorganic</b>                   |        |                 | Methoxychlor (ppb)                    | 40  | ND              |
| Antimony (ppb)                     | 6      | ND              | Oxamyl [Vydate] (ppb)                 | 200 | ND              |
| Arsenic (ppb)                      | 10     | ND              | Polychlorinated Biphenyls (PCBs)(ppt) | 500 | ND              |
| Asbestos (MFL)                     | 7      | ND              | Pentachlorophenol (ppb)               | 1   | ND              |
| Barium (ppm)                       | 2      | 0.06            | Picloram (ppb)                        | 500 | ND              |
| Beryllium (ppb)                    | 4      | ND              | Simazine (ppb)                        | 4   | ND              |
| Cadmium (ppb)                      | 5      | ND              | Toxaphene (ppb)                       | 3   | ND              |
| Chromium (ppb)                     | 100    | ND              | Benzene (ppb)                         | 5   | ND              |
| Copper (ppm)                       | AL=1.3 | 0.105           | Carbon Tetrachloride (ppb)            | 5   | ND              |
| Cyanide (ppb)                      | 200    | ND              | Monochlorobenzene (ppb)               | 100 | ND              |
| Fluoride (ppm)                     | 4      | ND              | Dibromochloropropane (ppt)            | 200 | ND              |
| Lead (ppb)                         | AL=15  | 0.003           | 0-Dichlorobenzene (ppb)               | 600 | ND              |
| Mercury (ppb)                      | 2      | ND              | Para-dichlorobenzene (ppb)            | 75  | ND              |
| Nickel (ppb)                       | 100    | ND              | 1,2-Dichloroethane (ppb)              | 5   | ND              |
| Nitrate (as N)(ppm)                | 10     | 0.28            | 1,1-Dichloroethylene (ppb)            | 7   | ND              |
| Nitrite (as N)(ppm)                | 1      | ND              | Cis-1,2-Dichloroethylene (ppb)        | 70  | ND              |
| Total Nitrate/Nitrite (ppm)        | 10     | 0.28            | Trans-1,2-Dichloroethylene (ppb)      | 100 | ND              |
| Selenium (ppb)                     | 50     | ND              | Dichloromethane (ppb)                 | 5   | ND              |
| Sulfate (ppm)                      | 500    | 6.48            | 1,2-Dichloropropane (ppb)             | 5   | ND              |
| Thallium (ppb)                     | 2      | ND              | Ethylbenzene (ppb)                    | 700 | ND              |
| <b>Organic Chemicals</b>           |        |                 | Ethylene Dibromide (EDB)(ppt)         | 50  | ND              |
| 2,4-D (ppb)                        | 70     | ND              | Styrene (ppb)                         | 100 | ND              |
| 2,4,5-TP (Silvex) (ppb)            | 50     | ND              | Tetrachloroethylene (ppb)             | 5   | ND              |
| Acrylamide (ppm)                   | TT     | ND              | 1,2,4-Trichlorobenzene (ppb)          | 70  | ND              |
| Alachlor (ppb)                     | 2      | ND              | 1,1,1-Trichloroethane (ppb)           | 200 | ND              |
| Atrazine (ppb)                     | 3      | ND              | 1,1,2-Trichloroethane (ppb)           | 5   | ND              |
| Benzo(a)pyrene[PHAs] (ppt)         | 200    | ND              | Trichloroethylene (TCE)(ppb)          | 5   | ND              |
| Carbofuran (ppb)                   | 40     | ND              | Total trihalomethanes (TTHM)(ppb)     | 80  | 3.03 avg.       |
| Chlordane (ppb)                    | 2      | ND              | Toluene (ppm)                         | 1   | ND              |
| Dalapon (ppb)                      | 200    | ND              | Vinyl Chloride (ppb)                  | 2   | ND              |
| Di-(2-ethylhexyl)adipate (ppb)     | 400    | ND              | Chlorine (ppm)                        | 4   | 2.10            |
| Di(2-ethylhexyl)phthalates (ppb)   | 6      | ND              | Chlorine dioxide (ppb)                | 800 | ND              |
| Dinoseb (ppb)                      | 7      | ND              | Bromate (ppb)                         | 10  | ND              |
| Diquat (ppb)                       | 20     | ND              | Total Organic Carbon (TOC)            | TT  | ND              |
| Dioxin[2,3,7,8-TCDD] (ppq)         | 30     | ND              | Xylenes (Total)(ppm)                  | 10  | ND              |
|                                    |        |                 | Haloacetic Acids (HAA5)(ppb)          | 60  | 0 avg.          |

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to

assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

**Table of Secondary Contaminants**

| Contaminants   | Range | Average | MCL      | Contaminants           | Range | Average | MCL      |
|----------------|-------|---------|----------|------------------------|-------|---------|----------|
| Aluminum       | 0.33  |         | PPM 0.2  | Manganese              | ND    |         | PPM 0.05 |
| Chloride       | 2.98  |         | PPM 250  | Silver                 | ND    |         | PPM 0.1  |
| Iron           | 0.13  |         | PPM 0.3  | Total Dissolved Solids | 56.0  |         | PPM 500  |
| Color          | ND    |         | PPM 15.0 | Zinc                   | ND    |         | PPM 5    |
| Foaming Agents | ND    |         | PPB 500  | Copper                 | 0.105 |         | PPM 1    |
| Odor           | ND    |         | T.O.N. 3 | Lead                   | 0.003 |         | PPB .015 |

**Table of Special Contaminants**

| Contaminants     | Range | Average | MCL     | Contaminants              | Range | Average | MCL     |
|------------------|-------|---------|---------|---------------------------|-------|---------|---------|
| Calcium          | ND    |         | PPM N/A | Sodium                    | 1.14  |         | PPM N/A |
| Carbon Dioxide   | ND    |         | PPM N/A | Sulfate                   | 6.48  |         | PPM 250 |
| Magnesium        | ND    |         | PPM N/A | Specific Conductance      | ND    |         | PPM N/A |
| pH               | 7.24  |         | PPM N/A | Total Hardness (as CaCO3) | 23.8  |         | PPM N/A |
| Total Alkalinity | ND    |         | PPM N/A | Temperature               | ND    |         | °C N/A  |

**Table of Unregulated Drinking Water Contaminants**

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

All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some contaminants. It's important to remember that the presence of these contaminants does not necessarily pose a health risk. The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

The table below lists all of the drinking water contaminants that we detected.

**Table of Detected Drinking Water Contaminants**

| CONTAMINANT   | MCLG | MCL | Range |   |      | Amount Detected | Likely Source of Contamination |   |
|---|------|-----|-------|---|------|-----------------|--------------------------------|---|
| <b>Inorganic Contaminants (Sampling Date 2014)</b>      |      |     |       |   |      |                 |                                |   |
| Nitrate (as N)  | 10   | 10  | ND    | - | 0.28 | 0.28            | ppm                            | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Total Nitrate & Nitrite                                 | 10   | 10  | ND    | - | 0.28 | 0.28            | ppm                            | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| TTHM (Total trihalomethanes)                            | 80   | 80  | 2.0   | - | 3.90 | 3.03avg         | ppm                            | By-product of drinking water chlorination   |
| HAA5 (Total haloacetic acids)                           | 60   | 60  | ND    | - | ND   | 0 avg.          | Ppm                            | By-product of drinking water chlorination   |
| Sulfate   | N/A  | 500 | ND    | - | 6.48 | 6.48            | ppm                            | Naturally occurring in the environment  |
| <b>Secondary Contaminants (Sampling Date 2011-2014)</b> |      |     |       |   |      |                 |                                |   |
| Aluminum  | N/A  | 0.2 | ND    | - | 0.33 | ND              | ppm                            | Erosion of natural deposits or as a result of treatment with water additives                |

|  |     |     |           |   |           |       |     |   |
|--|-----|-----|-----------|---|-----------|-------|-----|---|
| Chloride   | N/A | 250 | ND        | - | 2.98      | 2.98  | ppm | Naturally occurring in the environment or as a result of agricultural runoff            |
| Copper(2012)   | N/A | 1.0 | 0.00<br>6 | - | 0.21<br>3 | 0.105 | ppm | Erosion of natural deposits; leaching from pipes  |
| Iron   | N/A | 0.3 | ND        | - | 0.13      | ND    | ppm | Erosion of natural deposits   |
| Sulfate  | N/A | 250 | ND        | - | 6.48      | 6.48  | ppm | Naturally occurring in the environment  |
| Total Dissolved Solids                                 | N/A | 500 | ND        | - | 56.0      | 56.0  | ppm | Erosion of natural deposits   |
| <b>Special Contaminants (Sampling Date 2011- 2014)</b> |     |     |           |   |           |       |     |   |
| pH   | N/A | N/A | ND        | - | 7.24      | 7.24  | SU  | Naturally occurring in the environment or as a result of treatment with water additives |
| Sulfate  | N/A | N/A | ND        | - | 6.48      | 6.48  | ppm | Naturally occurring in the environment  |
| Total Hardness (as CaCO3)                              | N/A | N/A | ND        | - | 23.8      | 23.8  | ppm | Naturally occurring in the environment or as a result of treatment with water additives |

### General Information

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 City of Jemison** 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>.

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 activities.

As you can see by the tables, our system had no monitoring violations of allowable limits of contaminants in drinking water. 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 contaminants have been detected. The EPA has determined that your water IS SAFE at these levels. MCL's are set at very stringent levels. To understand the possible health effects described for many regulated contaminants, 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.

**Total Coliform:** The Total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

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 (Environmental Protection Agency)/CDC (Center of Disease Control) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline. All Drinking water, including bottled drinking water, may reasonably be expected to contain at least small amounts of some contaminants. 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).

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

We at the **City of Jemison** work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.

**For more information contact:**

**Mr. Daniel Avery, Water Superintendent**  
**City of Jemison**  
**14 Padgett Lane**  
**Jemison, Alabama 35085**  
**Telephone: 205-688-4492**  
**8:00 a.m. to 4:30 p.m. Monday – Friday**