



Belforest Water System  
9080 County Road 64  
Daphne, AL 36526

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.

### A MESSAGE FROM THE BOARD

*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 Belforest*

*Water System 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.*

Mr. Charles Dube

President of the Board

Consumer Confidence Report Prepared By The Alabama Rural Water Association

### General Information

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.

**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.

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.

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).

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 Belforest Water System 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>.

# Annual Drinking Water Quality Report January—December 2017

## BOARD OF DIRECTORS

**Charles Dube, President**  
**James McFall, Vice-President**  
**Daryl Cleworth, Secretary**  
**James Garrett, Director**  
**Patrick Heiter, Director**

Last year, as in years past, your tap water met all U.S. Environmental Protection Agency (EPA) 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.

The Belforest Water System utilizes groundwater pumped from 3 wells located in the Miocene Aquifer. The groundwater supplied to our customers is treated with chlorine as disinfectant and the required residual is maintained to protect your drinking water from any possible outside contaminants within the distribution system.

## Important Drinking Water Definitions:

**Disinfection Byproducts** – contaminants formed when chlorine is used as a disinfectant.

**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** - 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 (nanograms/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 (picograms/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.

**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.

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

**Maximum Contaminant Level Goal or 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 Contaminant Level or 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 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.

**Variations and Exemptions** - The Department or EPA permission not to meet an MCL or a treatment technique under certain conditions

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

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

**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.

Belforest Water System

**The Belforest Water System routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2017. 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).**

### Any Questions?

Please attend our regularly scheduled meetings!

Every 4th Monday of each month at 6:00 p.m. at the Belforest Water Office located at 9080 County Road 64.

Hope to See You There!

Please check our website for changes in meeting times. ([bwsinc.us](http://bwsinc.us))

Belforest Water System utilizes a Bacteriological Monitoring Plan, and a Cross Connection Policy is in place to insure good safe drinking water for our customers. The Belforest Water System has completed a Source Water Assessment Plan which is available for review at their office. A Source Water Assessment Plan provides information about potential sources of contamination and is set up to help protect our source.

### Table of Primary Contaminants

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 | CONTAMINANT                    | MCL | AMOUNT DETECTED |
|--------------------------------|--------|-----------------|---------------------------------|-----|-----------------|--------------------------------|-----|-----------------|
| <b>Bacteriological</b>         |        |                 | Selenium(ppb)                   | 50  | ND              | Epichlorohydrin                | TT  | ND              |
| Total Coliform                 | < 5%   | ND              | Thallium(ppb)                   | 2   | ND              | Ethylbenzene(ppb)              | 700 | ND              |
| Turbidity                      | TT     | ND              | <b>Organic Chemicals</b>        |     |                 | Ethylene dibromide(ppb)        | 50  | ND              |
| Fecal Coliform & Radiological  | 0      | ND              | Acrylamide                      | TT  | ND              | Glyphosate(ppb)                | 700 | ND              |
| Beta/Photon emitters (mrem/yr) | 4      | ND              | Alachlor(ppb)                   | 2   | ND              | Haloacetic Acids(ppb)          | 60  | 1.59            |
| Alpha emitters (pci/l)         | 15     | ND              | Atrazine(ppb)                   | 3   | 0.02            | Heptachlor(ppt)                | 400 | ND              |
| Combined radium (pci/l)        | 5      | 1.60            | Benzene(ppb)                    | 5   | ND              | Heptachlor epoxide(ppb)        | 200 | ND              |
| Uranium (pci/l)                | 30     | ND              | Benzo(a)pyrene[PHAs](ppt)       | 200 | ND              | Hexachlorobenzene(ppb)         | 1   | ND              |
| <b>Inorganic</b>               |        |                 | Carbofuran(ppb)                 | 40  | ND              | Hexachlorocyclopentadiene(ppb) | 50  | ND              |
| Antimony (ppb)                 | 6      | ND              | Carbon Tetrachloride(ppb)       | 5   | ND              | Lindane(ppt)                   | 200 | ND              |
| Arsenic (ppb)                  | 10     | ND              | Chlordane(ppb)                  | 2   | ND              | Methoxychlor(ppb)              | 40  | ND              |
| Asbestos (MFL)                 | 7      | ND              | Chlorobenzene(ppb)              | 100 | ND              | Oxamyl [Vydate](ppb)           | 200 | ND              |
| Barium (ppm)                   | 2      | 0.14            | 2,4-D                           | 70  | ND              | Pentachlorophenol(ppb)         | 1   | ND              |
| Beryllium (ppb)                | 4      | ND              | Dalapon(ppb)                    | 200 | ND              | Picloram(ppb)                  | 500 | ND              |
| Bromate(ppb)                   | 10     | ND              | Dibromochloropropane(ppb)       | 200 | ND              | PCBs(ppb)                      | 500 | ND              |
| Cadmium (ppb)                  | 5      | ND              | p-Dichlorobenzene(ppb)          | 600 | ND              | Simazine(ppb)                  | 4   | ND              |
| Chloramines (ppm)              | 4      | ND              | p-Dichlorobenzene(ppb)          | 75  | ND              | Styrene(ppb)                   | 100 | ND              |
| Chlorine(ppm)                  | 4      | 1.90            | 1,2-Dichloroethane(ppb)         | 5   | ND              | Tetrachloroethylene(ppb)       | 5   | ND              |
| Chlorine dioxide (ppb)         | 800    | ND              | 1,1-Dichloroethylene(ppb)       | 7   | ND              | Toluene(ppm)                   | 1   | ND              |
| Chlorite(ppm)                  | 1      | ND              | Cis-1,2-Dichloroethylene(ppb)   | 70  | ND              | TOC                            | TT  | ND              |
| Chromium (ppb)                 | 100    | ND              | trans-1,2-Dichloroethylene(ppb) | 100 | ND              | TTHM(ppb)                      | 80  | 0.00            |
| Copper (ppm)                   | AL=1.3 | ND              | Dichloromethane(ppb)            | 5   | ND              | Toxaphene(ppb)                 | 3   | ND              |
| Cyanide (ppb)                  | 200    | ND              | 1,2-Dichloropropane(ppb)        | 5   | ND              | 2,4,5-TP (Silvex)(ppb)         | 50  | ND              |
| Fluoride (ppm)                 | 4      | 0.02            | Di-(2-ethylhexyl)adipate(ppb)   | 400 | ND              | 1,2,4-Trichlorobenzene(ppb)    | 70  | ND              |
| Lead (ppb)                     | AL=15  | ND              | Di(2-ethylhexyl)phthalates(ppb) | 6   | 0.06            | 1,1,1-Trichloroethane(ppb)     | 200 | ND              |
| Mercury (ppb)                  | 2      | ND              | Dinoseb(ppb)                    | 7   | ND              | 1,1,2-Trichloroethane(ppb)     | 5   | ND              |
| Nitrate (ppm)                  | 10     | 5.58            | Dioxin[2,3,7,8-TCDD](ppq)       | 30  | ND              | Trichloroethylene(ppb)         | 5   | ND              |
| Nitrite (ppm)                  | 1      | ND              | Diquat(ppb)                     | 20  | ND              | Vinyl Chloride(ppb)            | 2   | ND              |
| Total Nitrate & Nitrite        | 10     | 5.58            | Endrin(ppb)                     | 100 | ND              | Xylenes(ppm)                   | 10  | ND              |

### Table of Secondary and Unregulated Contaminants

**Secondary Drinking Water Standards** are guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. ADEM has Secondary Drinking Water Standards established in state regulations applicable to water systems required to monitor for the various components. **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.

| CONTAMINANT             | MCL  | DETECT | CONTAMINANT                  | MCL  | DETECT | CONTAMINANT               | MCL | DETECT |
|-------------------------|------|--------|------------------------------|------|--------|---------------------------|-----|--------|
| <b>Secondary</b>        |      |        |                              |      |        |                           |     |        |
| Aluminum                | 0.2  | ND     | Foaming Agents               | 0.5  | ND     | Silver                    | 7   | ND     |
| Chloride                | 250  | 12.80  | Iron                         | 0.3  | ND     | Sulfate                   | 70  | 0.445  |
| Color (PCU)             | 15   | ND     | Magnesium                    | 75   | 3.66   | Total Dissolved Solids    | 500 | 58     |
| Copper                  | 1    | 0.003  | Odor (T.O.N.)                | 5    | ND     | Zinc                      | 5   | 13.58  |
| <b>Special</b>          |      |        |                              |      |        |                           |     |        |
| Calcium                 | N/A  | 6.03   | pH (SU)                      | N/A  | 8.90   | Temperature (*C)          | N/A | ND     |
| Carbon Dioxide          | N/A  | ND     | Sodium                       | N/A  | ND     | Total Alkalinity          | N/A | 9.4    |
| Manganese               | 0.05 | 17.50  | Specific Conductance (umhos) | <500 | 110.60 | Total Hardness (as CaCO3) | N/A | 29.7   |
| <b>Unregulated</b>      |      |        |                              |      |        |                           |     |        |
| 1,1-Dichloropropene     | N/A  | ND     | Bromobenzene                 | N/A  | ND     | Hexachlorobutadiene       | N/A | ND     |
| 1,1,2,2-Dichloropropane | N/A  | ND     | Bromochloromethane           | N/A  | ND     | Isopropylbenzene          | N/A | ND     |
| 1,1-Dichloroethane      | N/A  | ND     | Bromodichloromethane         | N/A  | ND     | M-Dichlorobenzene         | N/A | ND     |
| 1,2,3-Trichloropropane  | N/A  | ND     | Bromoform                    | N/A  | ND     | Methomyl                  | N/A | ND     |
| 1,2,3-Trichloropropane  | N/A  | ND     | Bromomethane                 | N/A  | ND     | Metolachlor               | N/A | ND     |
| 1,2,4-Trichloropropane  | N/A  | ND     | Butachlor                    | N/A  | ND     | Metribuzin                | N/A | ND     |
| 1,3-Dichloropropane     | N/A  | ND     | Carbaryl                     | N/A  | ND     | MTBE                      | N/A | ND     |
| 1,3-Dichloropropane     | N/A  | ND     | Chloroethane                 | N/A  | ND     | N-Butylbenzene            | N/A | ND     |
| 1,3,5-Trichloropropane  | N/A  | ND     | Chlorodibromomethane         | N/A  | ND     | Naphthalene               | N/A | ND     |
| 2,2-Dichloropropane     | N/A  | ND     | Chloroform                   | N/A  | 0.27   | N-Propylbenzene           | N/A | ND     |
| 3-Hydroxycarbofura      | N/A  | ND     | Chloromethane                | N/A  | ND     | O-Chlorotoluene           | N/A | ND     |
| Aldicarb                | N/A  | ND     | Dibromochloromethane         | N/A  | ND     | P-Chlorotoluene           | N/A | ND     |
| Aldicarb Sulfone        | N/A  | ND     | Dibromomethane               | N/A  | ND     | P-Isopropyltoluene        | N/A | ND     |
| Aldicarb                | N/A  | ND     | Dichlorodifluoromethane      | N/A  | ND     | Propachlor                | N/A | ND     |
| Aldrin                  | N/A  | ND     | Dieldrin                     | N/A  | ND     | Sec-Butylbenzene          | N/A | ND     |
|                         |      |        | Fluorotrichloromethane       | N/A  | ND     | Tert-Butylbenzene         | N/A | ND     |

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. 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.

### Table of Detected Drinking Water Contaminants

| CONTAMINANT   | MCLG    | MCL    | Range       | Amount Detected | Likely Source of Contamination |  |
|---|---------|--------|-------------|-----------------|--------------------------------|--|
| <b>Bacteriological Contaminants January - December 2017</b> |         |        |             |                 |                                |  |
| Total Coliform Bacteria                                     | 0       | < 5%   |             | ND              | Present or Absent              | Naturally present in the environment   |
| Turbidity   | 0       | TT     |             | ND              | NTU                            | Soil runoff  |
| Fecal Coliform & E. coli                                    | 0       | 0      |             | ND              | Present or Absent              | Human and animal fecal waste   |
| Viruses, Giardia  | 0       | TT     |             | 0               | Present or Absent              | Human and animal fecal waste   |
| Legionella  | 0       | TT     |             | 0               | Present or Absent              | Found naturally in water, multiplies in heating systems  |
| <b>Radiological Contaminants January - December 2013</b>    |         |        |             |                 |                                |  |
| Alpha emitters  | 0       | 15     |             | 3.75            | pCi/L                          | Erosion of natural deposits  |
| Combined Radium 226 & 228                                   | 0       | 5      |             | 1.60            | pCi/L                          | Erosion of natural deposits  |
| <b>Inorganic Contaminants January - December 2017</b>       |         |        |             |                 |                                |  |
| Barium  | 2       | 2      | ND - 0.14   | 0.14            | ppm                            | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits                                       |
| Chlorine  | MRDLG 4 | MRDL 4 | 1.20 - 1.90 | 1.90            | ppm                            | Water additive used to control microbes  |
| Fluoride  | 4       | 4      | ND - 0.02   | 0.02            | ppm                            | Water additive which promotes strong teeth; erosion of natural deposits; discharge from fertilizer and aluminum factories        |
| Nitrate (as N)  | 10      | 10     | 0.00 - 5.58 | 5.58            | ppm                            | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                                      |
| Total Nitrate & Nitrite                                     | 10      | 10     | ND - 5.58   | 5.58            | ppm                            | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                                      |
| <b>Organic Contaminants January - December 2017</b>         |         |        |             |                 |                                |  |
| Atrazine  | 3       | 3      | 0.02 - 0.02 | 0.02            | ppb                            | Runoff from herbicide used on row crops  |
| Di(2-ethylhexyl)phthalates                                  | 0       | 6      | ND - 0.06   | 0.06            | ppb                            | Discharge from rubber and chemical factories   |
| Haloacetic Acids (HAA5)                                     | 0       | 60     | ND - 1.59   | 1.59            | ppb                            | By-product of drinking water chlorination  |
| Total trihalomethanes (TTHM)                                | 0       | 80     | ND - 0.00   | 0.00            | ppb                            | By-product of drinking water chlorination  |
| <b>Secondary Contaminants January - December 2017</b>       |         |        |             |                 |                                |  |
| Chloride  | N/A     | 250    | ND - 12.80  | 12.80           | ppm                            | Naturally occurring in the environment or as a result of agricultural runoff   |
| Copper  | N/A     | 1      | ND - 0.00   | 0.00            | ppm                            | Erosion of natural deposits; leaching from pipes   |
| Magnesium   | N/A     | 0.05   | ND - 3.66   | 3.66            | ppm                            | Erosion of natural deposits  |
| Sulfate   | N/A     | 250    | ND - 0.45   | 0.45            | ppm                            | Naturally occurring in the environment   |
| Total Dissolved Solids                                      | N/A     | 500    | ND - 58.00  | 58.00           | ppm                            | Erosion of natural deposits  |
| Zinc  | N/A     | 5      | ND - 13.58  | 13.58           | ppm                            | Erosion of natural deposits  |
| <b>Special Contaminants January - December 2017</b>         |         |        |             |                 |                                |  |
| Calcium   | N/A     | N/A    | ND - 6.03   | 6.03            | ppm                            | Erosion of natural deposits  |
| Manganese   | N/A     | N/A    | ND - 17.50  | 17.50           | ppm                            | Erosion of natural deposits  |
| pH  | N/A     | N/A    | ND - 8.90   | 8.90            | SU                             | Naturally occurring in the environment or as a result of treatment with water additives  |
| Specific Conductance  | N/A     | <500   | ND - 110.60 | 110.60          | umhos                          | Naturally occurring in the environment or as a result of treatment with water additives  |
| Total Alkalinity  | N/A     | N/A    | ND - 9.40   | 9.40            | ppm                            | Erosion of natural deposits  |
| Total Hardness (as CaCO3)                                   | N/A     | N/A    | ND - 29.70  | 29.70           | ppm                            | Naturally occurring in the environment or as a result of treatment with water additives  |
| <b>Unregulated Contaminants January - December 2017</b>     |         |        |             |                 |                                |  |
| Chloroform  | N/A     | N/A    | ND - 0.54   | 0.27            | ppb                            | Naturally occurring in the environment or as a result of industrial discharge or agricultural runoff; by-product of chlorination |