

## ABOUT OUR SYSTEM

**Sources of Water** — The source of our water is a natural underground reservoir known regionally as the Miocene Aquifer that underlies large portions of southwest Alabama and western Florida. This aquifer is recharged primarily through precipitation and discharge is primarily to streams, rivers, bays, sounds, and wells. Operating under permit by the Alabama Department of Environmental Management (ADEM), Belforest Water System pumps water from this aquifer through a series of three (3) wells that range in depth from 140-220 feet below the ground surface. In compliance with ADEM, Belforest Water System has developed a *Source Water Assessment Plan* to assist in protecting our water sources and to provide information about potential sources of contamination. The plan is available for review at our main office.

**Water Treatment Process** — In our water treatment process, raw water is pumped from the underground aquifers to an Aeration chamber. Aeration quickly adds Oxygen to the water and helps eliminate certain naturally-occurring contaminants such as Iron. After Aeration, Lime is added to adjust the water's pH to within an optimum range and a Disinfectant (Chlorine) is added to inactivate potentially harmful pathogens and to keep the water safe in the water lines all the way to each customer's home. The water and additives are then given ample time to thoroughly mix inside a large tank called a Clearwell before entering the distribution system. Once the treated water meets all quality standards, large pumps move the water into Elevated Storage Tanks, where the water then moves through the distribution system to the customer. BWS utilizes a Bacteriological Monitoring Plan, and has a Cross Connection Policy in place to help ensure that safe, healthy water is delivered to customers.

## GENERAL INFORMATION

**Total Coliform Rule**—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. 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 (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The 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>.

### PUBLIC NOTICE TEMPLATE: Belforest Water System Failed to Perform Activities Required

Belforest Water System is required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During August 2022, we did not complete all required monitoring for fecal indicators and therefore cannot be sure of the quality of your drinking water during that time.

Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Please share this information with all the other people who drink this water, especially those who may have not received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public notice or distributing copies by hand or mail.

The above verbiage is required by the Alabama Department of Environmental Management. The occurrence triggering this notice was not a water quality issue, but an issue only with the number of samples tested. The Board of Directors and Staff of Belforest Water stress that the water quality meets all state guidelines for monitoring. Preventative measures have been put in to place to prevent sampling errors from occurring in the future. All tests were negative for fecal indicators and tests are continuing on schedule weekly with no further testing complications.

Should you have any questions concerning this violation or monitoring requirements, please contact Belforest Water System, 9080 Co Rd 64, Daphne at 251-626-5554.

## 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.

**Variances & 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.

**Variances 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.

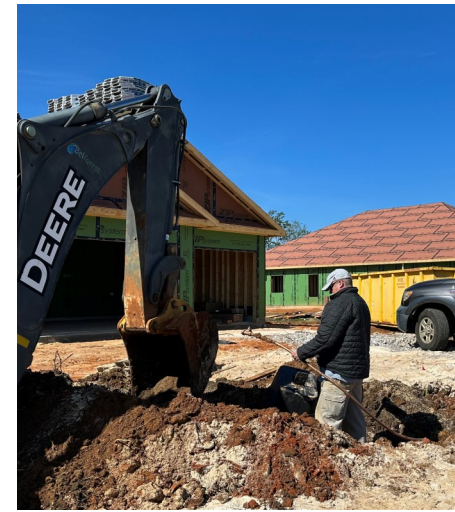
**Action Level** - The concentration of a contaminant that triggers treatment or other requirement a water system shall follow.

**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.



pure • abundant • water

# BELFOREST WATER SYSTEM ANNUAL DRINKING WATER QUALITY REPORT JANUARY—DECEMBER 2022



The Belforest Water System Annual Drinking Water Quality Report for the 2022 Monitoring Year explains where your drinking water comes from, the steps we take to protect our valuable natural resources, the basics of our water treatment process, and how your drinking water is tested and continually monitored. This report also contains information determined from hundreds of water quality tests that were performed over the last monitoring year at numerous sampling locations throughout our service area. It is through these efforts, and the exceptional efforts of our dedicated team of employees, that we can meet our goal of providing you and your family **Pure Abundant Water**.

Last year, as in years past, your tap water met all applicable U.S. Environmental Protection Agency (EPA) and the Alabama Department of Environmental Management (ADEM) drinking water health standards.

We are committed to safeguarding our water supplies and providing our customers with reliable, safe, and high-quality utility service, and we are once again proud to report that our system did not exceed a maximum contaminant level or violate other water quality standards in the 2022 Monitoring Year.

Board of Directors' meetings are held on the fourth Monday of every month at 6 pm unless published otherwise. Meetings are held at 9080 County Road 64, Daphne. All meetings are open to the public. A full Board of Directors' meeting schedule can be found at our website.

[www.belforestwater.com](http://www.belforestwater.com)

### BOARD OF DIRECTORS:

CHARLES DUBE, President

JAMES MCFALL, Vice President

DARYL CLEWORTH, Secretary

PATRICK HEITER, Board Member

DON JOFFE, Board Member





**TABLE OF PRIMARY CONTAMINANTS**

At high levels, some primary contaminants pose a health risk to humans. This table provides a quick glance at any primary contaminant detections.

CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED
Bacteriological			Selenium (ppb)	50	ND	Epichlorohydrin	TT	ND
Total Coliform	<5%	2	Thallium (ppb)	2	ND	Ethylbenzene (ppb)	700	ND
Turbidity	TT	ND	Organic Chemicals			Ethylene dibromide (ppt)	50	ND
Fecal Coliform & E. coli	0	ND	Acrylamide	TT	ND	Glyphosate (ppb)	700	ND
Radiological			Alachlor (ppb)	2	ND	Haloacetic Acides (ppb)	60	ND
Beta/ photon emitters (mrem/yr)	4	ND	Atrazine (ppb)	3	0.06	Heptachlor (ppt)	400	ND
Alpha emitters (pci/l)	15	5.99	Benzene (ppb)	5	ND	Heptachlor epoxide (ppt)	200	ND
Combined radium (pci/l)	5	3.91	Benzo(a)pyrene[PHAs] (ppt)	200	ND	Hexachlorobenzene (ppb)	1	ND
Uranium (pci/l)	30	ND	Carbofuran (ppb)	40	ND	Hexachlorocyclopentadiene (ppb)	50	ND
Inorganic			Carbon Tetrachloride (ppb)	5	ND	Lindane (ppt)	200	ND
Antimony (ppb)	6	ND	Chlordane (ppb)	2	ND	Methoxychlor (ppb)	40	ND
Arsenic (ppb)	10	ND	Chlorobenzene (ppb)	100	ND	Oxamyl [Vydate] (ppb)	200	ND
Asbestos (MFL)	7	ND	2, 4-D	70	ND	Pentachloropheno1 (ppb)	1	ND
Barium (ppm)	2	0.1	Dalapon (ppb)	200	ND	Picloram (ppb)	500	ND
Beryllium (ppb)	4	ND	Dibromochloropropane (ppt)	200	ND	PCBs (ppt)	500	ND
Bromate (ppb)	10	ND	0-Dichlorobenzene (ppb)	600	ND	Simazine (ppb)	4	ND
Cadmium (ppb)	5	ND	p-Dichlorobenzene (ppb)	75	ND	Styrene (ppb)	100	ND
Chloramines (ppm)	4	ND	1,2-Dichloroethane (ppb)	5	ND	Tetrachloroethylene (ppb)	5	ND
Chlorine (ppb)	4	1.6	1,1-Dichloroethylene (ppb)	7	ND	Toluene (ppm)	1	ND
Chloine dioxide (ppb)	800	ND	Cis-1,2-Dichloroethylene (ppb)	70	ND	TOC	TT	ND
Chlorite (ppm)	1	ND	trans-1,2-Dichloroethylene (ppb)	100	ND	TTHM (ppb)	80	0.00
Chromium (ppb)	100	0.63	Dichloromethane (ppb)	5	ND	Toxaphene (ppb)	3	ND
Copper (ppm)	AL=1.3	0	1,2-Dichloropropane (ppb)	5	ND	2,4,5-TP (Silvex) (ppb)	50	ND
Cyanide (ppb)	200	0	Di-(2-ethylhexyl)adipate (ppb)	400	ND	1,2,4-Trichlorobenzene (ppb)	70	ND
Fluoride (ppm)	4	0.02	Di(2-ethylhexyl)phthlates (ppb)	6	ND	1,1,1-Trichloroethane (ppb)	200	ND
Lead (ppb)	AL=15	0	Dinoseb (ppb)	7	ND	1,1,2-Trichloroethane (ppb)	5	ND
Mercury (ppb)	2	0.02	Dioxin[2,3,7,8-TCDD] (ppq)	30	ND	Trichloroethylene (ppb)	5	ND
Nitrate (ppm)	10	4.66	Diquat (ppb)	20	ND	Vinyl Chloride (ppb)	2	ND
Nitrite (ppm)	1	ND	Endothall (ppb)	100	ND	Xylenes (ppm)	10	0
Total Nitrate & Nitrite	10	4.94	Endrin (ppb)	2	ND			

**TABLE OF SECONDARY & UNREGULATED CONTAMINANTS**

**Secondary Drinking Water Standards** are guidelines regulating contaminants that may cause cosmetic effects (such as skin and 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 the EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED
<b>SECONDARY</b>								
Aluminum	0.2	0.04	Foaming Agents	0.5	ND	Silver	7	ND
Chloride	250	13.9	Iron	0.3	0.01	Sulfate	70	0.567
Color (PCU)	15	5	Magnesium	75	3.13	Total Dissolved Solids	500	66
Copper	1	0.0006	Odor (T.O.N.)	5	ND	Zinc	5	0.000452
<b>SPECIAL</b>								
Calcium	N/A	7.01	pH (SU)	N/A	9.9	Temperature (°C)	N/A	ND
Carbon Dioxide	N/A	2	Sodium	N/A	7.53	Total Alkalinity	N/A	10.7
Manganese	0.05	0.02	Specific Conductance (umhos)	<500	93.4	Total Hardness (as CaCO3)	N/A	28.8
<b>UNREGULATED</b>								
1,1 - Dichloropropene	N/A	ND	Bromobenzene	N/A	ND	Hexachlorobutadiene	N/A	ND
1,1,2,2 - Tetrachloroethane	N/A	ND	Bromochloromethane	N/A	ND	Isopropylbenzene	N/A	ND
1,1 - Dichloroethane	N/A	ND	Bromodichloromethane	N/A	0	M-Dichlorobenzene	N/A	ND
1,2,3 - Trichlorobenzene	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 - Trimethylbenzene	N/A	ND	Butachlor	N/A	ND	Metribuzin	N/A	ND
1,2,4 - Trichlorobenzene	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 - Dichloropropene	N/A	ND	Chlorodibromomethane	N/A	ND	Naphthalene	N/A	ND
1,3,5 - Trimethylbenzene	N/A	ND	Chloroform	N/A	ND	N-Propylbenzene	N/A	ND
2,2 - Dichloropropane	N/A	ND	Chloromethane	N/A	0.11	O-Chlorotoluene	N/A	ND
3 - Hydroxycarbofuran	N/A	ND	Dibromochloromethane	N/A	0	P-Chlorotoluene	N/A	ND
Aldicarb	N/A	ND	Dibromomethane	N/A	ND	P-Isopropyltoluene	N/A	ND
Aldicarb Sulfone	N/A	ND	Dichlorodifluoromethane	N/A	ND	Propachlor	N/A	ND
Aldicarb Sulfoxide	N/A	ND	Dieldrin	N/A	ND	Sec - Butylbenzene	N/A	ND
Aldrin	N/A	ND	Fluorotrichloromethane	N/A	ND	Tert - Butylbenzene	N/A	ND
<b>PFA'S COMPOUNDS</b>								
11C1-PF3OUd2	ND	ug/L	Perfluorodecanoic Acid	ND	ug/L	Perfluorooctanoic Acid	ND	ug/L
9C1-PF3ONS	ND	ug/L	Perfluorohexanoic Acid	ND	ug/L	Perfluorotetradecanoic Acid	ND	ug/L
ADONA	ND	ug/L	Perfluorododecanoic Acid	ND	ug/L	Perfluorotridecanoic Acid	ND	ug/L
HFO-DA	ND	ug/L	Perfluoroheptanoic Acid	ND	ug/L	Perfluoroundecanoic Acid	ND	ug/L
NEFOSAA	ND	ug/L	Perfluorohexanesulfonic Acid	ND	ug/L	Total PFAs	ND	ug/L
NMFOSAA	ND	ug/L	Perfluorononanoic Acid	ND	ug/L			
Perfluorobutanesulfonic acid	ND	ug/L	Perfluorooctanesulfonic Acid	ND	ug/L			

**TABLE OF DETECTED DRINKING WATER CONTAMINANTS**

Belfast Water System routinely monitors for contaminants in your drinking water according to Federal and State laws. The table below lists all of the drinking water contaminants that we detected during the monitoring 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.

CONTAMINANT	MCLG	MCL	RANGE	AMOUNT DETECTED	LIKELY SOURCE OF CONTAMINATION
<b>Bacteriological Contaminants January - December 2022</b>					
Total Coliform Bacteria	0.00	<5%		ND Present or Absent	Naturally present in environment
Turbidity	0.00	TT		ND NTU	Soil runoff
Fecal Coliform & E.Coli	0.00	0		ND Present or Absent	Human and animal fecal waste
Viruses, Giardia	0.00	TT		0 Present or Absent	Human and animal fecal waste
Legionella	0.00	TT		0 Present or Absent	Found naturally in water, multiples in heating systems
<b>Radiological Contaminants January - December 2021</b>					
Alpha emitters	0.00	15		5.99 pCi/L	Erosion of natural deposits
Combined Radium 226 & 228	0.00	5		3.91 pCi/L	Erosion of natural deposits
<b>Inorganic Contaminants January - December 2022</b>					
Barium	2.00	2	0.06 - 0.1	0.1 ppm	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chlorine	MRDLG 4	MRDL 4	1.2 - 1.6	1.6 ppm	Water additive used to control microbes
Fluoride	4.00	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)	10.00	10	4.09 - 4.66	4.66 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Total Nitrate & Nitrite	10.00	10	3.35 - 4.94	4.94 ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Organic Contaminants January - December 2020-2022</b>					
Atrazine	3.00	3	0.02 - 0.03	0.03 ppb	Runoff from herbicides used on row crops
Di(2-ethylhexyl)phthlates	0.00	6	ND		
Haloacetic Acids (HAA5)	0.00	60	ND - 2.6	2.6 ppb	By-product of drinking water chlorination
Total trihalomethanes (TTHM)	0.00	80	1.43 - 0	0 ppb	By-product of drinking water chlorination
Xylene (total)	10.00	10	ND - ND	0 ppb	Discharge from petroleum factories; discharge from chemical factories
<b>Secondary Contaminants January - December 2020-2022</b>					
Chloride	N/A	250	11.8 - 13.9	13.9 ppm	Naturally occurring in the environment or as a result of agricultural runoff
Copper	N/A	1	ND - 0.0000	0.0000 ppm	Erosion of natural deposits; leaching from pipes
Magnesium	N/A	0.05	2.39 - 3.13	3.13 ppm	Erosion of natural deposits
Sulfate	N/A	250	0.22 - 0.57	0.57 ppm	Naturally occurring in the environment
Total Dissolved Solids	N/A	500	54 - 66.00	66.00 ppm	Erosion of natural deposits
Zinc	N/A	5	0 - 0	0.0000 ppm	Erosion of natural deposits
<b>Special Contaminants January - December 2022</b>					
Calcium	N/A	N/A	4.25 - 7.01	7.01 ppm	Erosion of natural deposits
Manganese	N/A	N/A	0.00 - 0.02	0.02 ppm	Erosion of natural deposits
pH	N/A	N/A	6.35 - 9.90	9.90 SU	Naturally occurring in the environment or as a result of treatment with water additives
Specific Conductance	N/A	<500	81.4 - 93.40	93.40 umhos	Naturally occurring in the environment or as a result of treatment with water additives
Total Alkalinity	N/A	N/A	3.67 - 10.70	10.70 ppm	Erosion of natural deposits
Total Hardness (asCaCO3)	N/A	N/A	22.4 - 28.80	28.80 ppm	Naturally occurring in the environment or as a result of treatment with water additives
<b>Unregulated Contaminants January - December 2022</b>					
Chloroform	N/A	N/A	ND - ND	ND ppb	Naturally occurring in the environment as a result of industrial discharge or agricultural runoff; by-product of chlorination

