

About our System

Sources of Water

Our water source 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 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

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.



Definitions

- **Action Level** - The concentration of a contaminant that triggers treatment or other requirement a water system shall follow.
- **Disinfection Byproducts** - contaminants formed when chlorine is used as a disinfectant.
- **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 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 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.
- **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.
- **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 billion (ppb) or Micrograms per liter (ug/l)** - one part per billion 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)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- **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.
- **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.
- **Picocuries per liter (pCi/L)** - picocuries per liter is a measure of the radioactivity in water.
- **Treatment Technique** - A required process intended to reduce the level of a contaminant in drinking water.
- **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.
- **Variances and Exemptions** - ADEM or EPA permission not to meet an MCL or a treatment technique under certain conditions.



Our goal is to provide **Pure, Abundant Water** to you and your family. The Belforest Water System Annual Drinking Water Quality Report for the 2023 Monitoring Year explains where your drinking water comes from, the steps we take to protect our natural resources, the basics of our water treatment process, and how your drinking water is tested and continually monitored.

We have performed hundreds of water quality tests at various sampling locations



BELFOREST WATER SYSTEM ANNUAL DRINKING WATER QUALITY REPORT JANUARY—DECEMBER 2023

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throughout our service area over the last monitoring year, the results of which are reflected in this report.

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 proud to report that our system did not exceed a maximum contaminant level or violate other water quality standards in the 2023 Monitoring Year.

BOARD OF DIRECTORS

CHARLES DUBE, President PATRICK HEITER, Vice President MICHAEL METZ, Secretary
DON JOFFE, Board Member ANTHONY PIERCE, Board Member

Board of Directors' meetings are held on the fourth Monday of every month at 5 pm unless published otherwise. Meetings are held at 9080 County Road 64, Daphne.

www.belforestwater.com

General Information

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).



Other Contaminants Tested and Not Detected

e. Coli	Dieldrin	Picloram	1,3-Dichloropropane	Naphthalene
1,2-Dibromo-3-chloropropane	Dinoseb	Propachlor	1,3-Dichloropropene	N-Butylbenzene
2,4,5-TP	Diquat	Simazine	2,2-Dichloropropane	N-Propylbenzene
2,4-D	Endothall	Total Polychlorinated Biphenyls (PCB)	Benzene	O-Chlorotoluene
3-Hydroxycarbofuran	Endrin	Toxaphene	Bromobenzene	O-Dichlorobenzene
Alachor ESA	Ethylene Dibromide	1,1,1,2-Tetrachloroethane	Bromomethane	P-Chlorotoluene
Aldicarb	Glyphosate	1,1,1-Trichloroethane	Carbon Tetrachloride	P-Dichlorobenzene
Aldicarb Sulfone	Heptachlor	1,1,2,2-Tetrachloroethane	Chlorobenzene	P-Isopropyltoluene
Aldicarb Sulfoxide	Heptachlor Epoxide	1,1,2-Trichloroethane	Chloroethane	Sec-butlybenzene
Aldrin	Hexachlorobenzene	1,1-Dichloroethane	Chloromethane	Styrene
Benzo(a)pyrene	Hexachlorocyclopentadiene	1,1-Dichloroethylene	CIS-1,2-Dichloroethylene	Tert-Butylbenzene
BHC-gamma	Lasso	1,1-Dichloropropene	Dibromomethane	Tetrachloroethylene
Butachlor	Methomyl	1,2,3-Trichlorobenzene	Dichlorodifluoromethane	Toluene
Carbaryl	Methoxychlor	1,2,3-Trichloropopane	Dichloromethane	Trans-1,2-Dichloroethylene
Carbofuran	Metolachlor	1,2,4-Trichlorobenzene	Ethylbenzene	Trichloroethylene
Chlordane	Metribuzin	1,2,4-Trimethylbenzene	Hexachlorobutadiene	Trichlorofluoromethane
Dalapon	Nitrite	1,2-Dichloroethane	Isopropylbenzene	Vinyl Chloride
Di(2-ethylhexyl)adipate	Oxamyl	1,2-Dichloropropane	M-Dichlorobenzene	Xylenes
Dicamba	Pentachlorophenol	1,3,5-Trimethylbenzene	Methyl Tert-Butyl Ether	
Non-Detected PFAS Compounds				
11C1-PF3OUd2	Perfluorodecanoic Acid	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 .		
9C1-PF3ONS	Perfluorododecanoic Acid			
ADONA	Perfluorononanoic Acid			
HFPO-DA	Perfluorotetradecanoic Acid			
NEIFOSAA	Perfluorotridecanoic Acid			
NMeFOSAA	Perfluoroundecanoic Acid			

Table of Detected Drinking Water Contaminants

CONTAMINANT	MCLG	MCL	RANGE			AMOUNT DETECTED		LIKELY SOURCE OF CONTAMINATION	
Bacteriological Contaminants					January - December 2023				
Total Coliform Bacteria	0.00	1 positive sample per month			1 positive sample 8/3/2023		Naturally present in environment		
Radiological Contaminants					January - December 2023				
Alpha emitters	0.00	15				3.4	pCi/L	Erosion of natural deposits	
Combined Radium 226 & 228	0.00	5				4.2	pCi/L		
Inorganic Contaminants					January - December 2023				
Chlorine	MRDLG 4	MRDL 4	1.38	-	1.6	1.6	ppm	Water additive used to control microbes	
Nitrate (as N)	10.00	10	3.29	-	4.37	4.37	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	
Total Nitrate & Nitrite	10.00	10	3.29	-	4.37	4.37	ppm		
Organic Contaminants					January - December 2023				
Atrazine	3.00	3	0.02	-	0.0329	0.0329	ppb	Runoff from herbicides used on row crops	
Di(2-ethylhexyl)phthalates	0.00	6	0.0333		0.07	0.07	ppb	Discharge from rubber and chemical factories	
Haloacetic Acids (HAA5)	0.00	60	ND	-	0.34	0.34	ppb	By-product of drinking water chlorination	
Total trihalomethanes (TTHM)	0.00	80	1.1	-	1.1	1.1	ppb		
Special Contaminants					January - December 2023				
pH	N/A	N/A	1.38	-	1.6	1.6	SU	Naturally occurring in the environment or as a result of treatment with water additives	
Unregulated Contaminants					January - December 2023				
Chloroform	N/A	N/A	ND	-	0.57	0.57	ppb	Naturally occurring in the environment as a result of industrial discharge or agricultural runoff; by-product of chlorination	
Bromodichloromethane	N/A	N/A	0	-	0.0327	0.0327	ppb	By-product of drinking water chlorination	
Dibromochloromethane	N/A	N/A	0	-	0.0327	0.0327	ppb		
PFAS Compounds					January - December 2023				
Perfluorobutanesulfonic Acid	N/A	N/A	0	-	0.0055	0.0055	ppb	Manufactured chemicals and associated products	
Perfluorohexanoic Acid	N/A	N/A	0	-	0.0043	0.0043	ppb		
Perfluoroheptanoic Acid	N/A	N/A	0	-	0.0029	0.0029	ppb		
Perfluorohexanesulfonic Acid	N/A	N/A	0	-	0.0043	0.0043	ppb		
Perfluorooctanesulfonic Acid	N/A	N/A	0	-	0.0047	0.0047	ppb		
Perfluorooctanoic Acid	N/A	N/A	0	-	0.0053	0.0053	ppb		
Total PFAS	N/A	N/A				0.027	ppb		

