

# 2017 WATER QUALITY REPORT

## CONSUMER CONFIDENCE REPORT

Sampling Schedule Jan. 1 - Dec. 31, 2016



**NORTH BALDWIN UTILITIES**

NATURAL GAS | WATER | WASTEWATER

**W**e are pleased to bring you this year's Annual Drinking Water Quality Report. In 1974, the Safe Drinking Water Act (SDWA) was signed into law requiring all water systems that serve the public to meet national standards for water quality. These standards set the limits for certain contaminants and require all public water systems to monitor for these contaminants. NBU routinely tests for these constituents in your drinking water according to Federal and State laws. The tables in this report show the monitoring results of the Calendar Year 2016 Sampling Schedule beginning January 1 through December 31 of 2016 unless otherwise noted. This report is designed to

keep you informed about the quality of water and services we deliver to you every day. We want you to understand the efforts we make to improve treatment processes and protect our supply. We are committed to the quality of your drinking water. As in the past, your drinking water has been and remains safe to drink with no monitoring violations in 2016. Please take a few moments to look over this important report concerning your drinking water. We have tried to assemble a report that paints a brief but accurate picture of the quality of water you get every day from your tap. If you have any questions regarding this report, feel free to contact us at **(251) 580-1626**.

### SECTION 1 - SOURCES OF WATER

NBU obtains its drinking water through the use of ten public water supply wells. Each well produces groundwater from sand units of the regional aquifer known as the Pliocene-Miocene Aquifer System.

In the Bay Minette area, the sands are identified as the Bay Minette Middle Aquifer supplying groundwater to Wells #2, #3, #4 and #5; and the Bay Minette Lower Aquifer supplying groundwater to Wells #5 and #6. Well #8 is supplied by a deep Miocene sand aquifer identified as the North Baldwin Rabun Aquifer. Well #9A and #9B is supplied by a Miocene Undifferentiated aquifer. Well #11 is supplied by a deep Miocene sand aquifer identified as the Tensaw Aquifer. Well #12 is supplied by the Stapleton 275-foot Aquifer.

The source of recharge to the aquifers is precipitation. The produced groundwater is treated with aeration, chlorination, fluoridation and corrosion control prior to distribution. NBU implements and maintains a Source Water Assessment Program in compliance with the Alabama Department of Environmental Management. The Program is a pro-active measure taken by the system to protect its sources of drinking water.

### SECTION 2 - DEFINITIONS

In this report you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms, the following definitions are provided.

- **Not Detected (ND):** Laboratory analysis indicates that the constituent is not present.
- **Parts per million (ppm)/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.

- **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 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.
- **Action Level:** The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.
- **Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.
- **Nephelometric Turbidity Unit (NTU):** A measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

#### Results of Radon Monitoring:

Radon is a radioactive gas that you can't see, taste or smell. It is found throughout the United States. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your state radon program or call EPA's Radon Hotline (800-SOS-RADON).

#### Dioxin and Asbestos:

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 is not required.

### SECTIONS 3 & 4:

Refer to tables on following / back page.

### SECTION 5 - ADDITIONAL INFO

**Subsection A: Drinking Water Contaminants**  
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. All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man-made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. 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).

#### Subsection B: Water System Contacts:

NBU meets in the T.W. Mitchell Board Room at 25 Hand Avenue on the Wednesday before the last Friday of each month at 8:30 a.m.

#### Board Members and Contact Personnel:

- Board of Directors:  
Benjamin Bailey, Richard Gaines, James Robertson, Larry Taylor and Mayor Robert Wills
- General Manager / CEO Jason Padgett (jpadgett@nbuemail.com)

### Section 3 - Table of Primary Contaminants 2017 (Covering 2016)

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

CONTAMINANT	MCL	DETECTED*	CONTAMINANT	MCL	DETECTED
<b>Bacteriological</b>			Endrin	2	ND
Total Coliform Bacteria	< 5%	Absent	Glyphosate	700	ND
Turbidity	TT	ND	Heptachlor (ppt)	400	ND
<b>Radiological</b>			Heptachlor epoxide (ppt)	200	ND
Beta/Photon emitters (mrem/yr)	4	1.04	Hexachlorobenzene (HCB)	1	ND
Gross Alpha (pCi/l)	15	0.02	Hexachloropentadiene	1	ND
Radium-228 (pCi/l)	5	0.3 to 2.9	Lindane	200	ND
<b>Inorganic</b>			Methoxychlor	40	ND
Antimony (ppb)	6	ND	Oxamyl [Vydate]	200	ND
Arsenic (ppb)	50	ND	PCBs (ppt)	500	ND
Asbestos (Million fibers/Liter)	7	Waived	Pentachlorophenol	1	ND
Barium (ppm)	2	ND	Picloram	500	ND
Beryllium (ppb)	4	ND	Simazine	4	ND
Cadmium (ppb)	5	ND	Toxaphene	3	ND
Chromium (ppb)	100	ND to 0.4	Benzene	5	ND
Copper (ppm)	1.3	ND to .55	Carbon Tetrachloride	5	ND
Cyanide (ppb)	200	ND	Chlorobenzene	100	ND
Fluoride (ppm)	4	ND to 0.6	1,2-Dibromo-3-chloropropane (ppt)	200	ND
Lead (ppb)	15	ND to 10	o-Dichlorobenzene	600	ND
Mercury (ppb)	2	ND	p-Dichlorobenzene	75	ND
Nitrate as N (ppm)	10	ND to 0.9	1,2-Dichloroethane	5	ND
Nitrite (ppm)	1	ND	1,1-Dichloroethylene	7	ND
Selenium (ppb)	50	ND	cis-1,2-Dichloroethylene	70	ND
Thallium (ppb)	2	ND	trans-1,2-Dichloroethylene	100	ND
<b>Organic Chemicals (ppb unless noted)</b>			Methylene chloride	5	ND
2,4-D	70	ND	1,2-Dichloropropane	5	ND
2,4,5-TP (Silvex)	50	ND	Ethylbenzene	700	ND to 0.6
Alachlor (Lasso)	2	ND	Ethylene dibromide (EDB) (ppt)	50	ND
Atrazine	3	ND	Styrene	100	ND
Benzo(a)pyrene(PHAs) (ppt)	200	ND	Tetrachloroethylene	5	ND
Carbofuran	40	ND	1,2,4-Trichlorobenzene	70	ND
Chlordane	2	ND	1,1,1-Trichloroethane	200	ND
Dalapon	200	ND	1,1,2-Trichloroethane	5	ND
Di-(2-ethylhexyl)adipate	400	ND	Trichloroethylene	5	ND
Di(2-ethylhexyl)phthalates	6	ND	TTHM	80	1.4 to 38.8
Dinoseb	7	ND	Toluene	1	ND
Diquat	20	ND	Vinyl Chloride	2	ND
Dioxin[2,3,7,8-TCDD] (ppq)	30	Waived	Xylenes (ppm)	10	ND to 0.001
Endothal	100	ND			

Notes: \* longer than 10 micrometers, t=trillion; q=quadrillion; Waived = Statewide waiver; ND=Non-detect

### Section 4 - Table of Detected Contaminants 2017 (Covering 2016)

Parameter	MCL	Results	Average	Units	Source	Date	Likely source of contamination	Listing
1,1-Dichloroethane	-	ND to 0.1	<0.1	ppb	Treatment Plant-Well 5	Jul-15	Intermediate in chemical synthesis	UCMR Assessment Monitoring
1,4-Dioxane	-	ND to 0.28	<0.28	ppb	Treatment Plant-Well 5	Jul-15	Used as a solvent and laboratory reagent; trace concentrations in shampoo, cosmetics & detergents	UCMR Assessment Monitoring
Bromodichloromethane	-	ND to 6.2	<2.25	ppb	Site 1 & Wells 8, Tensaw & 12	Jan & Jul 2016	By-product of drinking water chlorination	UR
Bromoforn	-	ND to 15.4	<15.4	ppb	Tensaw Well	Jul-16	By-product of drinking water chlorination	UR
Calcium	-	4.07 to 9.03	6.93	ppm	Wells 2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	UR
Carbon dioxide, free	-	ND to 9	<5.2	ppm	Wells #3, 6 & 12	Jul-16	Naturally occurring	SDWS
Chlorate	-	ND to 63	<63	ppb	Well #5	Jul-15	Oxidizer; formerly heavily used in pyrotechnics	UCMR Assessment Monitoring
Chloride	250	ND to 154	<31.83	ppm	Wells 2, 3, 5, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Chloroform	-	ND to 2.3	<1.38	ppm	Site 1 & Wells 8, Tensaw & 12	Jan & Jul 2016	By-product of drinking water chlorination	UR
Chromium	100	ND to 0.4	<0.29	ppb	DSMRT 2, 3, 6, 9 & Wells 2, 3, 5, 6, 8, 9	Jul-15	Discharge from steel and pulp mills; Erosion of natural deposits	UCMR Assessment Monitoring
Chromium-Hexavalent	-	.06 to 0.36	<0.21	ppb	DSMRT 2, 3, 6, 9 & Rabun & Wells 2, 3, 5, 6, 9 & Rabun	Jul-15	Textile dyes, wood preservation and stainless steel welding	UCMR Assessment Monitoring
Cobalt	-	ND to 0.1	< 0.1	ppb	Well 9	Jul-15	Naturally occurring	UCMR Assessment Monitoring
Corrosivity (Langlier Index)	-	-1.59 to -2.45	<2.06	-	Wells #2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Dibromochloromethane	-	ND to 15.6	<5.67	ppb	Wells 8, Tensaw & 12	Jul-16	By-product of drinking water chlorination	UR
Ethylbenzene	700	ND to 0.6	<0.6	ppb	Tensaw Well	Jul-16	Discharge from petroleum refineries/chemical factories/gas station releases	PDWS
Fluoride	4	ND to 0.6	<0.4	ppm	Wells 3 & Tensaw	Jul-16	Naturally occurring	SDWS
Gross Alpha	15	0.02	0.02	pCi/l	Well 12	Jul-16	Naturally occurring	PDWS
Gross Beta	50	1.04	1.04	pCi/l	Well 12	Jul-16	Naturally occurring	PDWS
Hardness	-	16.4 to 26.4	22.16	ppm	Wells 2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	UR
Iron	0.3	ND to .237	<.237	ppm	Well 8	Jul-16	Naturally occurring	SDWS
Magnesium	-	0.57 to 2.74	<1.18	ppm	Wells 2, 3, 5, 6, 8 Tensaw & 12	Jul-16	Naturally occurring	UR
MTBE	-	ND to 1.2	<1.2	ppb	Well 5	Jul-16	Oxygenate added to gasoline to boost octane; No MCL, Advisory level of 20 ppb based on taste and smell threshold	UR
Nitrate as N	10	ND to 0.9	<0.66	ppm	Wells 2, 3, 5, 6 & 12	Jul-16	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits	PDWS
pH (standard units)	-	6.7 to 7.1	7.09	su	Wells 2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Sodium	-	2.29 to 143	25.27	ppm	Wells 2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Specific Conductance	-	52 to 716	165.57	umhos/cm	Wells 2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Strontium	-	7.2 To 170	36.31	ppb	Wells 2, 3, 5, 6, 9 & Rabun & DSMRT 2, 3, 6, 9 & Rabun	Jul-15	Cathode ray tube glass	UCMR Assessment Monitoring
Sulfate (as SO4)	250	ND to 4	<2.5	ppm	Wells 3, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Total Alkalinity	-	33 to 189	61.86	ppm	Wells 2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Total Dissolved Solids	500	21 to 359	84.71	ppm	Wells 2, 3, 5, 6, 8, Tensaw & 12	Jul-16	Naturally occurring	SDWS
Total Trihalomethanes	80	1.4 to 38.8	<11.73	ppb	Site 1 & Wells 8, Tensaw & 12	Jan & Jul 2016	By-product of drinking water chlorination	PDWS
Vanadium	-	ND to 0.4	<0.33	ppb	Wells 2 & 6; DSMRT Well 3	Jul-15	Manufacture of steel alloys; production of sulfuric acid	UCMR Assessment Monitoring
Xylenes (o-xylene)	10	ND to 1.1	<1.1	ppb	Tensaw Well	Jul-16	Discharge from petroleum refineries/chemical factories/gas station releases	PDWS

UR = unregulated; Dist = distribution; PDWS = Primary Drinking Water Standard; SDWS = Secondary Drinking Water Standard; TT = treatment technique

**Subsection C: Sourcewater & Vulnerability Assessment:**  
NBU is in regulatory compliance with respect to sourcewater and vulnerability assessments for each well. Documents associated with sourcewater and vulnerability assessments are housed at NBU's office.

### Subsection D:

As part of NBU's UCMR2 Assessment Monitoring, Wells #2, 3, 5, 6, 8 (Rabun), 9A, 9B and 10 were sampled for the presence of 1,3-dinitrobenzene, RDX (Hexahydro; 1,3,5-trinitro; 1,3,5-triazine), TNT (2,4,6-trinitrotoluene), HBB (2,2',4,4',5,5'-Hexabromobiphenyl), BDE-100 (2,2',4,4',6-Pentabromodiphenyl ether), BDE-153 (2,2',4,4',5,5'-Hexabromodiphenyl ether), BDE-47 (2,2',4,4'-Tetrabromodiphenyl ether), BDE-99 (2,2',4,4',5-Pentabromodiphenyl ether), Dimethoate and Terbufos-sulfone with all samples reported as being non detected for these compounds.

## SECTION 6: EDUCATIONAL INFORMATION

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 (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 (800-426-4791). All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that the presence of these constituents does not necessarily pose a health risk.

## SECTION 7: LEAD NOTICE

Every report shall contain the following lead-specific 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. NBU 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're 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>.

## FREQUENTLY ASKED QUESTIONS

### Is my water safe?

We are proud 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, Section 4, Table of Detected Contaminants. The EPA has determined that your water IS SAFE at these levels.

### Do I need to take special precautions?

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. DPA / Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Water Drinking Hotline 800-426-4791.

### What customers can do to protect our water supply?

There are several things you can do to help protect your water system's source of supply. Here are two:

1. Properly dispose of all chemicals in accordance with the procedures outlined on their containers.
2. Be vigilant of our system's wells, water towers and hydrants. Report all suspicious activity at these facilities to the police.