

“2015” Annual Drinking Water Quality Report
“Bogue Banks Water Corporation”
Water System Number: “04-16-028”

We are pleased to present to you this year's Annual Drinking Water Quality Report. This report is a snapshot of last year's water quality. Included are details about your source(s) of water, what it contains, and how it compares to standards set by regulatory agencies. 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 and to providing you with this information because informed customers are our best allies.

If you have any questions about this report or concerning your water, please contact either Seola Hill or Ty Cannon at (252) 354-3307. We want our valued customers to be informed about their water utility. If you would like to learn more about Bogue Banks Water Corporation, please visit our website at www.boguebankswater.com or attend the Annual Meeting. It will be held on Friday, June 3, 2016, at 5:00pm in the Emerald Isle Commissioners' Room, located in the police department building.

What EPA Wants You to Know

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).

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/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial 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. Bogue Banks Water Corporation 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include *microbial contaminants*, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife; *inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming; *pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; *organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and *radioactive contaminants*, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

When You Turn on Your Tap, Consider the Source

The water that is used by Bogue Banks Water is ground water pumped from twelve wells in our service area that were drilled into the Castle Hayne aquifer to a depth ranging between 200 feet – 300 feet. This significant depth saves the water from being vulnerable to pollution from seepage or spills.

There are seven entry points into the main line from those wells. The distribution system is tested monthly for coliform bacteria. As our results show, the few contaminants that were detected through regular testing are significantly below the Federal and State Maximum Contaminant Levels.

What does BBWC do to the water? After it is pumped from the wells, we treat it with chlorine to disinfect it. We also add orthophosphosphate to prevent possible lead in customer pipes from leaching into the water.

Our water is safe and meets federal and state requirements! Bottoms up!



Source Water Assessment Program (SWAP) Results

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section, Source Water Assessment Program (SWAP) conducted assessments for all drinking water sources across North Carolina. The purpose of the assessments was to determine the susceptibility of each drinking water source (well or surface water intake) to Potential Contaminant Sources (PCSs). The results of the assessment are available in SWAP Assessment Reports that include maps, background information and a relative susceptibility rating of Higher, Moderate or Lower.

The relative susceptibility rating of each source for Bogue Banks Water Corporation was determined by combining the contaminant rating (number and location of PCSs within the assessment area) and the inherent vulnerability rating (i.e., characteristics or existing conditions of the well or watershed and its delineated assessment area). The assessment findings are summarized in the table below:

Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	SWAP Report Date
Well # 1	Lower	July 2015
Well # 2	Moderate	July 2015
Well # 3A	Lower	July 2015
Well # 4A	Moderate	July 2015
Well # 5A	Moderate	July 2015
Well # 6	Lower	July 2015
Well # 7A	Moderate	July 2015
Well # 9	Moderate	July 2015
Well # 10	Moderate	July 2015
Well # 11	Moderate	July 2015
Well # 12	Moderate	July 2015

The complete SWAP Assessment report for Bogue Banks Water Corporation may be viewed on the Web at: www.ncwater.org/pws/swap. Note that because SWAP results and reports are periodically updated by the PWS Section, the results available on this web site may differ from the results that were available at the time this CCR was prepared. If you are unable to access your SWAP report on the web, you may mail a written request for a printed copy to: Source Water Assessment Program – Report Request, 1634 Mail Service Center, Raleigh, NC 27699-1634, or email requests to swap@ncdenr.gov. Please indicate your system name, number, and provide your name, mailing address and phone number. If you have any questions about the SWAP report please contact the Source Water Assessment staff by phone at 919-707-9098.

It is important to understand that a susceptibility rating of “higher” ***does not*** imply poor water quality, only the system’s potential to become contaminated by PCSs in the assessment area.

NOTICE TO THE PUBLIC

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

BOGUE BANKS WATER CORPORATION HAS NOT MET MONITORING REQUIREMENTS

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During the compliance period specified in the table below, we [‘did not monitor or test’ or ‘did not complete all monitoring or testing’] for the contaminants listed and therefore cannot be sure of the quality of your drinking water during that time.

CONTAMINANT GROUP**	FACILITY ID NO./ SAMPLE POINT ID	COMPLIANCE PERIOD BEGIN DATE	NUMBER OF SAMPLES/ SAMPLING FREQUENCY	WHEN SAMPLES WERE OR WILL BE TAKEN (Water System to Complete)
SYNTHETIC ORGANIC CHEMICALS	P06/WH6	JANUARY 1, 2015	1 / ANNUAL (4 TH QUARTER REQUIRED)	January 11 th 2016

** See back of this notice for further information on contaminants.

What should I do? There is nothing you need to do at this time.

What is being done? BBWC Personnel missed taking the quarterly sample at P06/WH6 during the 4th quarter of 2015. The sample was for Hexachlorocyclopentadiene, a contaminate in the Synthetic Organic Chemicals (SOC) group. Due to a miss-communication, BBWC staff took the sample on January 11th, 2016 which was out of the sampling timeframe. However, the results came back as ‘not detected’ above required reporting limit. The required reporting limit is 0.0001 mg/L and the maximum contaminant level is 0.050.

Please share this information with all the other people who drink this water, especially those who may not have 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 place or distributing copies by hand or mail.

For more information, please contact:

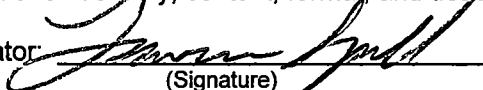
Responsible Person Roy T. Cannon	System Name Bogue Banks Water Corporation	System Address (Street) 7412 Emerald Dr
Phone Number (252)515-6353	System Number 04-16-028	System Address (City/State/Zip) Emerald Isle, NC 28594

Violation Awareness Date: February 10, 2016

Date Notice Distributed: April 29, 2016 Method of Distribution: Consumer Confidence Report

Public Notification Certification:

The public water system named above hereby affirms that public notification has been provided to its consumers in accordance with all delivery, content, format, and deadline requirements specified in 15A NCAC 18C .1523.

Owner/Operator 
(Signature)

Lawrence Spell
(Print Name)

April 29, 2016
(Date)

Contaminant Group List

(AS) Asbestos - includes testing for Chrysotile, Amphibole and Total Asbestos.

(BA) Total Coliform Bacteria - includes testing for Total Coliform bacteria and Fecal/*E.coli* bacteria. Testing for Fecal/*E.coli* bacteria is required if total coliform is present in the sample.

(BB) Bromate/Bromide - includes testing for Bromate and/or Bromide.

(CD) Chlorine Dioxide/Chlorite - includes testing for Chlorine Dioxide and/or Chlorite.

(DI) Disinfectant Residual must be tested with the collection of each compliance bacteriological sample, at the same time and site.

Fecal Indicators - includes *E.coli*, enterococci or coliphage.

(HAA5)- Haloacetic Acids - include Monochloroacetic Acid, Dichloroacetic Acid, Trichloroacetic Acid, Monobromoacetic Acid, Dibromoacetic Acid.

(IOC) Inorganic chemicals - include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Iron, Manganese, Mercury, Nickel, pH, Selenium, Sodium, Sulfate, and Thallium.

(LC) Lead and Copper are tested by collecting the required number of samples and testing each of the samples for both lead and copper.

(NT) Nitrate/ (NI) Nitrite - includes testing for nitrate and/or nitrite.

(RA) Radionuclides - includes Gross Alpha, Radon, Uranium, Combined Radium, Radium 226, Radium 228, Potassium 40 (Total), Gross Beta, Tritium, Strontium 89, Strontium 90, Iodine 131, and Cesium 134.

(SOC) - Synthetic Organic Chemicals/Pesticides - include 2,4-D, 2,4,5-TP (Silvex), Alachlor, Atrazine, Benzo(a)pyrene, Carbofuran, Chlordane, Dalapon, Di(2-ethylhexyl)adipate, Di(2-ethylhexyl)phthalate, Dibromochloropropane (DBCP), Dinoseb, Endrin, Ethylene dibromide (EDB), Heptachlor, Heptachlor Epoxide, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl(vydate), PCBs, Pentachlorophenol, Picloram, Simazine, Toxaphene.

(TOC) - Total Organic Carbon - includes testing for Alkalinity, Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC) and Ultraviolet Absorption 254 (UV254). Source water samples must be tested for both TOC and Alkalinity. Treated water samples must be tested for TOC. Source water samples and treated water samples must be collected on the same day.

(TTHM) - Total Trihalomethanes - include Chloroform, Bromoform, Bromodichloromethane, and Dibromochloromethane.

(VOC) - Volatile Organic Chemicals - include 1,2,4-Trichlorobenzene, Cis-1,2-Dichloroethylene, Xylenes (Total), Dichloromethane, o-Dichlorobenzene, p-Dichlorobenzene, Vinyl Chloride, 1,1,-Dichloroethylene, Trans-1,2,-Dichloroethylene, 1,2-Dichloroethane, 1,1,1-Trichloroethane, Carbon Tetrachloride, 1,2-Dichloropropane, Trichloroethylene, 1,1,2-Trichloroethane, Tetrachloroethylene, Chlorobenzene, Benzene, Toluene, Ethylbenzene, and Styrene.

(WQP) Water Quality Parameters (for Lead and Copper Rule) - includes Calcium, Orthophosphate (as PO₄), Silica, Conductivity, pH, Alkalinity and Water Temperature.

Water Quality Data Tables of Detected Contaminants

We routinely monitor for over 150 contaminants in your drinking water according to Federal and State laws. The tables below list all the drinking water contaminants that we detected in the last round of sampling for each particular contaminant group. The presence of contaminants does not necessarily indicate that water poses a health risk. **Unless otherwise noted, the data presented in this table is from testing done January 1 through December 31, 2015.** The EPA and the State allow us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

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 regulations are warranted.

Important Drinking Water Definitions:

Not-Applicable (N/A) - Information not applicable/not required for that particular water system or for that particular rule.

Non-Detects (ND) - Laboratory analysis indicates that the contaminant is not present at the level of detection set for the particular methodology used.

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 (ug/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 (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.

Million Fibers per Liter (MFL) - Million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

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.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

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

Maximum Residual Disinfection 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 Disinfection 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.

Locational Running Annual Average (LRAA) - The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters under the Stage 2 Disinfectants and Disinfection Byproducts Rule.

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.

Tables of Detected Contaminants

Microbiological Contaminants in the Distribution System - For systems that collect *less than 40* samples per month

Contaminant (units)	MCL Violation Y/N	BBWC Water	MCLG	MCL	Likely Source of Contamination
Total Coliform Bacteria (presence or absence)	N	0 Absence	0	1 positive sample / month*	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (presence or absence)	N	0 Absence	0		Human and animal fecal waste

Inorganic Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Arsenic (ppb)	10/12/2010	N	7.0	ND	7.0	0	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Fluoride (ppm)	8/13/2014 8/14/2014	N	0.39	0.19	0.39	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

Nitrate/Nitrite Contaminants:

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Nitrate (as Nitrogen) (ppm)	Various in 2015	N	ND	N/A		10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

Unregulated Inorganic Contaminants

Contaminant (units)	Sample Date	Your Water (average)	Range	
			Low	High
Sulfate	8/13/2014	15.2	ND	15.2

Synthetic Organic Chemical (SOC) Contaminants Including Pesticides and Herbicides

Well 7A 0.00011

Well 3A ND

Contaminant (units)	Sample Date	MCL Violation Y/N	BBWC Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
Hexachlorocyclopentadiene (ppb)	10/16/2013	N	0.00011	ND	0.00011	50	50	Discharge from chemical factories

Volatile Organic Chemical (VOC) Contaminants

Contaminant (units)	Sample Date	MCL Violation Y/N	Your Water	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
1,2-Dichloropropane (ppb)	8/22/2012	N	1.0	ND	1.0	0	5	Discharge from industrial chemical factories

Lead and Copper Contaminants

Contaminant (units)	Sample Date	Your Water	Number of sites found above the AL	MCLG	AL	Likely Source of Contamination
Copper (ppm) (90 th percentile)	6/2015	0.878	0	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb) (90 th percentile)	6/2015	6	0	0	AL=15	Corrosion of household plumbing systems; erosion of natural deposits

Disinfectant Residuals

- Monitoring for Chlorine Residuals
- System Size: 4,995 people
- Samples: 6 times per month
- MRDL in CCR units: 4ppm

Samples (ppm)	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept	Oct.	Nov.	Dec.
Sample 1	1.63	0.75	1.53	1.79	1.83	2.20	0.95	2.30	0.50	1.24	0.80	1.50
Sample 2	1.52	1.25	1.14	0.76	1.73	3.40	1.69	2.20	0.85	1.21	0.91	2.10
Sample 3	1.35	1.04	1.70	0.62	0.76	1.80	1.08	1.20	1.50	1.35	0.75	1.80
Sample 4	1.44	1.15	1.60	0.67	1.26	2.30	1.31	2.10	1.45	1.33	0.85	1.50
Sample 5	1.41	0.96	0.47	1.30	1.17	0.60	1.35	1.30	1.60	1.37	1.10	1.50
Sample 6	1.36	0.86	1.53	1.51	1.28	0.94	1.63	1.10	1.50	1.42	0.71	2.00
Monthly Average	1.45	1.00	1.33	1.11	1.34	3.21	1.34	1.70	1.23	1.32	0.85	1.73
Quarterly RAA*	1.19			1.41			1.48			1.47		

Reported RAA for quarters 1-3 are based on results from previous quarters not reported on this table.

Disinfectant Residuals Summary

	Year Sampled	MRDL Violation Y/N	Your Water (highest RAA)	Range		MRDLG	MRDL	Likely Source of Contamination
				Low	High			
Chlorine (ppm)	2015	N	1.48	0.47	3.40	4	4.0	Water additive used to control microbes

Disinfection Byproducts (Stage 1 DBPs)

- Total Trihalomethane monitoring under Stage 1 DBPR
- TTHM MCL

Stage 1 Disinfection Byproduct Compliance - Based upon Running Annual Average (RAA)

Disinfection Byproduct	Year Sampled	MCL Violation Y/N	Your Water (highest RAA)	Range		MCLG	MCL	Likely Source of Contamination
				Low	High			
TTHM (ppb)	2010	N	51	4	55	N/A	80	Byproduct of drinking water disinfection
HAA5 (ppb)	2010	N	31	16	101	N/A	60	Byproduct of drinking water disinfection

The PWS Section requires monitoring for other misc. contaminants, some for which the EPA has set national secondary drinking water standards (SMCLs) because they may cause cosmetic effects or aesthetic effects (such as taste, odor, and/or color) in drinking water. The contaminants with SMCLs normally do not have any health effects and normally do not affect the safety of your water.

Other Miscellaneous Water Characteristics Contaminants

Contaminant (units)	Sample Date	Your Water	Range		SMCL
			Low	High	
Iron (ppm)	8/13/2014	ND	ND		0.3 mg/L
Manganese (ppm)	8/13/2014	ND	ND		0.05 mg/L
Flouride (ppm)	8/13/2014	0.39	NA		4.0 mg/L
Sodium (ppm)	8/13/2014	79.51	NA		N/A
pH	Daily	7.3	7.2 – 8.0		6.5 to 8.5