2021 Annual Drinking Water Quality Report
Village of Bald Head Island
Water System Number: NC0410130

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 Nate Lindsay at (910) 457-7353. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held in the multi-purpose room at the Public Safety Building every 3rd Friday at 10:00 a.m.**

PUBLIC SERVICES DIRECTOR

JP McCann, is responsible for the day-to-day operations of the Village's Public Services Department. For questions concerning the Village's Utilities Unit you may contact:

Joseph P. McCann
(Office) 910-457-7351
jmccann@villagebhi.org

OPERATOR in Responsible Charge

Pictured is (L) David Suther, ORC and his assistant (R) Nate Lindsay. David is responsible for the water operations for VBHI. Questions concerning your water quality contact:

Nate Lindsay
(Office) 910-457-7352
nlindsay@villagebhi.org

UTILITIES STAFF

The Village Utilities Department is made up of very dedicated employees. L-R (zig-zag pattern) David Morales, Charles Trott, JP McCann, David Mintz, Nate Lindsay, Kenneth Jr. Adkins, Wayne Ingram, Lloyd Jackson, David Suther, Anthony Sinatra. We look forward to working for you for many years to come.

For general questions or comments call:
910-457-7350

For billing questions or comments call:
910-457-9700 Ext 1000

Please visit our Village web site for additional helpful information at:

www.villagebhi.org
Click
"Departments
&
Services"
Then
"Utilities""

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. [Name of Utility] 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.

When You Turn on Your Tap, Consider the Source

Drinking water can come from surface water and groundwater aquifers. Surface water is pumped from rivers, lakes, and reservoirs. Ground water is pumped from wells that are drilled into aquifers. Aquifers are geologic formations that contain water. The quantity of water and produced rates within a well depends on the nature of the rock, sand or soil in the aquifer where the well screen is withdrawing water.

The water source for Bald Head Island is primarily Island groundwater and we are also supplemented with purchased water from Brunswick County Public Utilities. Our groundwater wells draw water from a semi-confined aquifer located at depths ranging from (55-65) feet below the surface. Our well system currently has (16) wells in inventory and each produces (38-40) GPM. All wells have been approved by the State of North Carolina Public Water Supply Section are known as production wells. The raw water from the production wells is piped to the water treatment facility located at 256 Edward Teach Extension, this facility forces raw water through Reverse Osmosis Units that highly filter and remove contaminates. Filtered water is then disinfected by a combination of chlorine and ammonia gas known as chloramines. The now treated water is aerated to remove remaining gases and then stored as potable water in our 400,000 gallon storage tank ready for distribution to our customers. The Village of Bald Head Island also purchases potable water from Brunswick County Public Utilities when needed to meet the Island's daily demand. The Brunswick County water supply consists of ground water from the Castle Hayne Aquifer and can be supplemented with surface water drawn from the Cape Fear River above Lock and Dam # 1. Brunswick County water is very compatible with Bald Head Island water therefore both supplies are stored and blended together until consumed.

Source Water Assessment Program (SWAP)

The North Carolina Department of Environment and Natural Resources (DENR), Public Water Supply (PWS) Section. Source Water Assessment Program (SWAT) 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 The Village of Bald Head Island Utilities Department 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 on Page 2 titled "Susceptibility of Sources to Potential Contaminant Sources (PCSs)".

The complete SWAP Assessment report for The Village of Bald Head Island may be viewed on the Web at: https://www.ncwater.org/?page=600.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.

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Susceptibility of Sources to Potential Contaminant Sources (PCSs)

Source Name	Susceptibility Rating	Source Name	Susceptibility Rating
Edward Teach #1,2	Moderate	Laughing Gull #1	Moderate
Cape Fear Station	Moderate	Federal Well # 1, 2, 3	Moderate
Office Well #1	Moderate	Muscadine #1,2	Higher
Royal James #1 Well	Moderate	Central Well #1,2	Moderate

Listed below are substances detected in Bald Head Island drinking water from 2015 and 2019. Not listed are the hundreds of other substances for which we tested but were not detected.

Contaminant	Violation Y/N	Level Detected	Unit Measurement	MCLG	MCL	Likely source of Contamination
Radioactive Contaminants		**Tested: *June 2015***				***(Required Every (6) Years)***
1. Combined Radium	N	<1	pCi/L	0	5	Decay of natural and man-made deposits
Inorganic Contaminants		**Tested: *Dec.. 2019***				***(Required Every (3) Years)***
2. Antimony	N	<.003	ppm	.006	.006	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
3. Arsenic	N	<.005	ppm	0	.01	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
4. Barium	N	<.4	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
5. Beryllium	N	<.002	ppm	.004	.004	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
6. Cadmium	N	<.001	ppm	.005	.005	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
7. Chromium	N	<.02	ppm	.1	.1	Discharge from steel and pulp mills; erosion of natural deposits
8. Cyanide	N	<.05	ppm	.2	.2	Discharge from steel/metal factories; discharge from plastic and fertilizer factories
9. Fluoride	N	0.2	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
10. Mercury (inorganic)	N	<.0004	ppm	.002	.002	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
11. Selenium	N	<.01	ppm	.05	.05	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
12. Thallium	N	<.001	ppm	.0005	.002	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Synthetic Organic Contaminants including Pesticides and Herbicides		**Tested: Nov. *2019***				***(Required Every (3) Years)***
13. Atrazine	N	<.0001	ppm	.003	.003	Runoff from herbicide used on row crops
14. Carbofuran	N	<.0009	ppm	.04	.04	Leaching of soil fumigant used on rice and alfalfa
15. Oxamyl [Vydate]	N	<.002	ppm	.2	.2	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
Volatile Organic Contaminants		**Tested: *Dec. 2019***				***(Required Every (3) Years)***
Non-Detect						
Disinfectants and Disinfection Byproducts Contaminants		**Tested: Quarterly**				
16. TTHM [Total Trihalomethanes]	Y	Avg .052	ppm	N/A	.08	By-product of drinking water chlorination
17. HAA5 [Total Haloacetic Acids]	N	Avg .026	ppm	N/A	.06	By product of drinking water disinfections
18. Chloramines	N	Avg 2.20	ppm	4	4	Water additive used to control microbes (Tested daily)
Lead and Copper Contaminants		**Tested: June - Sept. 2019**				**(Required Every (3) Years)**
19. Copper	N	.715	ppm	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
20. Lead	N	.004	ppm	0	.015	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as Nitrogen)		**Tested: July 2020**				**(Required Yearly)**
21. Nitrate (as Nitrogen)	N	<1	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits

MCLG - EPA's Maximum Contaminant Level Goal
MCL - EPA's Maximum Contaminant Level
ppm - Parts per million
pCi/L - Pico-curies

Non-Detect - Below reporting limits

CALCULATE HOW MUCH WATER YOU USE

1. Locate your Bald Head Island water statement and see how many units of water you are using. What is a unit? A unit is 1,000 gallons. Write the number of units here _____ unit.
2. _____units X 1,000 = _____ gallons per month.
3. _____ gallons per month divided by 30 (average days per month) = _____ gallons per day.
4. _____ gallons per day divided by _____ (number of people in your family) = _____ gallons per person per day.