Village of Bald Head Island
Annual Drinking Water Quality Report 2019

There are a number of ways to save water, and they all start with you!

Volume 21, Issue 1
June 2020

VILLAGE OF BALD HEAD ISLAND UTILITIES

GENERAL INFORMATION

The Village of Bald Head Island offers **electronic bank draft** from your checking account to take away the worry of paying your utility account every month. Please contact us if you would like to take advantage of this service. Please be sure to reference the account number when remitting your payment. Your account number is located on your bill. The Village offers the option of paying your bill on line. Go to the Village website at **www.villagebhi.org**, click "Make a Payment" on the home page, click on "Water Bill Payment", and follow the instructions to get your account set up and pay your bill without having to write a check every month.

As most of you are aware, in an effort to be more cost effective, the Village decided to outsource the billing process. The format of your bill provides account privacy, it is easier to read and understand, plus provides you more information. If you have any questions or concerns regarding your bill, please call **910-457-9700 Ext 1000** between 8:30 and 3:30 Monday thru Friday.

When you have a Water or Sewer service issue, please call our Utilities office at **910-457-7350** and be prepared to leave your name, phone number, island address and a brief description of the issue you are experiencing, a technician will be sent to your location as soon as possible. If you feel your water or sewer issue is urgent you may contact our "on-call" technician directly at: **910-616-7716**.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

The Village of Bald Head Island samples quarterly for Total Trihalomemthanes. (TTHM's, a disinfection bi product.) The Maximum Contaminant Level (MCL) is .08 mg/L. In the 3rd quarter the MCL was exceeded. (.103 mg/L) All subsequent samples have been below MCL. Your Utilities Department is committed to providing you with safe and reliable drinking water.

Want to get the latest Island information?

The Village Voice is published by the Village Public Information Officer and you can sign up for that email by logging on to www.villagebhi.org, under the Residents & Owners tab, click on Village's Voice under Sign up for...

Have your bill "emailed"

In an effort to be more environmentally responsible, the Village Utilities Department is now offering the option of receiving your bill via email. Please notify Gina Troll at ghinson@villagebhi.org if you are interested.

WAYS TO SAVE WATER…

- Never pour water down the drain when there may be other uses for it, such as watering plants, or for cleaning around your home
- Operate washing machines and dishwashers only when they are fully loaded. Or when purchasing new appliances, consider those that offer cycle and load size adjustments
- Store drinking water in your refrigerator. Do not let the tap run while you are waiting for water to cool
- Insulate your hot water pipes, you'll get hot water faster and therefore reduce water wasted while waiting for it to heat up
- Avoid rinsing dishes before placing them in the dishwasher; just remove large particles of food. Most dishwashers can clean soiled dishes very well, so dishes do not have to be rinsed before washing
- In times of drought, water with a garden hose and only water your plant when they really need it
- Remember to have your irrigation system checked annually for proper operation
- Check your toilets for leaks, put a little food coloring in your toilet tank. If, without flushing, the color begins to appear in the bowl within 30 minutes, you have a leak that should be repaired. Replacement parts are available at the Island Hardware Store and fairly easy to install

WHERE DOES YOUR WATER COME FROM

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.

UTILITIES DIRECTOR

Ken Bowling, is responsible for the day-to-day operations of the Utilities Department. For questions concerning the Utilities Department you may contact:

Kennith D. Bowling
(Office) 910-457-7351
kbowling@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:

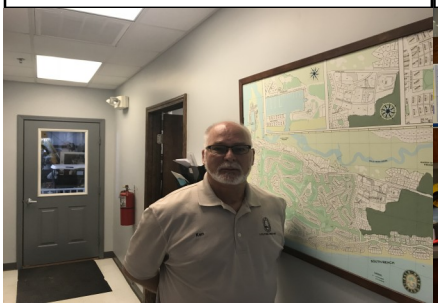
David A. Suther, Sr.
(Office) 910-457-7352
dsuther@villagebhi.org

UTILITIES STAFF

The Village Utilities Department is made up of very dedicated employees. L-R (zig-zag pattern) Lloyd Jackson, Charles Trott, David Morales, Nate Lindsay, David Suther, Ken Bowling, Wayne Ingram, Anthony Sinatra, David Mintz, Gina Henson and Kenneth Jr. Adkins. 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
"Departments & Services"
"Utilities"

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 Measure-ment	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 .039	ppm	N/A	.08	By-product of drinking water chlorination
17. HAA5 [Total Haloacetic Acids]	N	Avg .012	ppm	N/A	.06	By product of drinking water disinfections
18. Chloramines	N	Avg 2.25	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: Nov. 2019**		**(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.

(SWAP) Results Summary

Well Name	Susceptibility Rating	Well 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 Well # 1	Moderate	Central Well # 1,2	Moderate

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 to the left.

The complete SWAP Assessment report for The Village of Bald Head Island may be viewed on the Web at: www.ncwater.org to obtain a printed copy of this report, please mail a written request to: Source Water Assessment Program—Report Request, 1634 Mail Service Center, Raleigh NC 27699-1634. Email request to swap@ncmail.net. Please indicate The Village of Bald Head Island, PWS ID #04-10-130, and provide your name. address and phone number. If you have any questions about this the report please contact: Source Water Assessment staff by phone at 919-715-2633.

It is important to understand that a susceptibility rating of "higher" does not imply poor water quality, only the systems' potential to become contaminated.