



VILLAGE OF BALD HEAD ISLAND

2016 Wastewater Report

House Bill 1160, the Clean Water Act of 1999, was ratified by the North Carolina General Assembly on July 20 and signed into law by the Governor on July 21, 1999. This legislation placed significant reporting requirements on those entities that own or operate wastewater treatment and collection systems. In compliance with this Act, the Village Utilities Department provides an annual report to its users and the NC Department of Environment & Natural Resources. This report will be made available to the public each year. To reach all of our customers, we are mailing a copy of this 2016 report. Additional copies can be obtained in person or by contacting the Village Utilities Department at 910-457-7350.

This report summarizes the waste treatment works, collection system and their performances from January 1, 2015 until December 31, 2016. The report details the extent to which any terms of its permits, federal laws, state laws, regulations or rules related to the protection of water quality have been violated.

The Village of Bald Head Island wastewater treatment facility operates in accordance with permit number WQ0000193 based on provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended and other applicable Laws, Rules, and Regulations. This wastewater treatment facility is monitored by David A. Suther, (ORC) Operator in Responsible Charge.

The wastewater treatment facility began its initial operation November 1996 and was capable of processing 200,000 gallons per day of domestic waste. This facility was designed by McKim & Creed Engineers Inc. with all process equipment provided by Aqua-Aerobic Systems Inc.

By 2002 plans were underway to expand treatment capacity to 400,000 gallons per day. This capacity upgrade would be achieved by the addition of a pre-equalization basin, batch reactor and improving tertiary treatment.

The most recent improvements were to the wastewater treatment "process" to achieve reuse quality effluent. This project was completed in phases over several years. Upgrades consist of piping that conveys the reuse effluent to the Club Irrigation lagoon, equipment for chemical additions, monitoring, pH / DO control and an increase in blower capacity to meet higher dissolved oxygen requirements. Unfortunately, treatment capacity was decreased to 300,000 gallons per day to achieve this process improvement.

Please be assured that our Utilities Department is committed to exploring for new and innovative ideas to improve the treatment process for both performance and capacity. The following chart represents wastewater effluent monitoring during 2016, no limits were exceeded:

	Limit	WQ0000193 (Monthly Avg.)
Fecal Coliform	Daily 43 CFU/100 mL	2.12/100 mL
Ammonia as Nitrogen (NH3)	Monthly 4 mg/L	.34 mg/L
Total Suspended Solids	20 mg/L	1.56 mg/L
Biological Oxygen Demand (BOD)	Monthly 10 mg/L	2.3 mg/L

mg/l - milligram per liter CFU/100 mL – Colony Forming Units/100mL

Our water treatment facility consists of three (3) reverse osmosis water purifying systems that produces a waste called "reject". This reject water is discharged to the Bald Head Island Marina under permit number NC0085553 and operates in compliance with North Carolina General Statute 143-215.1. The water treatment facility and reject produced is monitored by David A. Suther, (ORC) Operator in Responsible Charge. The waste (reject) from water treatment is monitored for certain contaminants.

As shown on the chart below, some limits can be exceeded from time to time, Arsenic is a natural accruing contaminate that enters our water supplies from natural deposits within the earth. The Village Utilities staff will perform sampling of our ground water source to identify the location(s) of this contaminate and try to manage it in the future.

	Limit	NC0085553 Limits Exceeded	
Arsenic	Daily 10 ug/L	Feb 2016	14 ug/L

ug/l - microgram per liter

The Village wastewater collection system has approximately 180,000 feet of sewer mains, size ranging from 1.5" to 10" in diameters and (38) various sized lift stations, which collect and convey domestic waste to our treatment facility for processing. This collection system operates in accordance with permit number WQCS00276 and it is monitored by Kenneth D. Bowling ORC, we are happy to report no reportable spills during 2016.

Our staff is committed to protecting the environment and providing excellent customer service. We look forward to meeting your wastewater needs in the future.

The information supplied in this report is complete and accurate to the best of my knowledge.

Kenneth D. Bowling, VBHI Utilities Director

5/1/2017

Date