The Town of Manteo 2014 Annual Wastewater Consumer Quality Report

We are pleased to present to you this year’s Annual Wastewater Consumer Quality Report. This report is a snapshot of last year’s sanitary sewer collection system and the wastewater treatment plant. This report covers the used water and sewer collection system and the wastewater treatment plant. Your connection discharges into the maze of wastewater collection system pipes. Over 30% of North Carolina Department of Water Quality (DWQ) mandates that municipalities take measures to reduce Sanitary Sewer Overflows (SSOs)—a violation of the EPA Clean Water Act. FOG discharged into public sewer systems is the leading cause of SSOs. Grease buildup occurs when Fats, Oils, and Grease (FOG) are not properly managed and added to cooking and water systems. Whether you’re a Food Service Establishment, business, or home resident of the Town of Manteo who generates FOG, you play an important role in preventing Sanitary Sewer Overflows. Sanitary sewer systems are neither designed nor equipped to handle the FOG that accumulates on the interior of the municipal sewer collection system pipes. Over 30% of North Carolina’s 1999 sanitary sewer overflows were the result of pipe blockages from FOG accumulation from residential, institutional and commercial sources. The best way to manage FOG is to keep the material out of the plumbing systems.

Sewer Cleanout Cap Replacement Program

If your cap is broken or missing please contact us, and we will replace it for free.

If you have any questions about this report or concerning your water or sewer utilities, please contact Nathan Pharr (Utilities Superintendent) at (252) 473-2133.

2014 WWT System Annual Report
Town of Manteo Wastewater Treatment Plant
NPDIES Permit No. NCW07987

The Town of Manteo’s Wastewater Treatment Plant is a grit chamber activated sludge tertiary treatment facility receiving wastewater from the Town’s sanitary sewer collection system. This plant treats wastewater utilizing preliminary screening and grit removal, secondary biological treatment and a final biological treatment in a stepwise or as an oxidation ditch and secondary clarifiers, tertiary clarification and post aeration followed by disinfection, dechlorination prior to discharge effluent to Shallowbag bay. Wastewater entering the plant is directed to a mechanically cleared screen and grit removal system. The bar screen removes beneficial settling objects from the wastewater flow that could damage downstream process equipment. Wastewater then flows through a grit removal system that removes the inorganic solids (grit) which will not break down in the biological system while allowing the organic solids to continue through the treatment process.

Effluent wastewater from the grit removal system and drainage from various treatment processes are pumped by the influent pumps to the oxidation ditch where the extraction of organic matter and nitrogen are reduced during the extended aeration of the biological process by the heterotrophic and microorganisms. The organisms convert the organic matter into biomass and release nitrogen as gas. The oxidation ditch provides the oxygen needed by microbes in the system for biological oxidation of organic materials and for the conversion of ammonia to nitrate and the anoxic conditions needed for denitrification. Effluent wastewater from the oxidation ditch flows to the final clarifiers which provide an undisturbed environment for the separation of solids from the water. After the solids settle in the clarifiers, the active solids are recycled to the oxidation ditch to maintain the microbial population at a level which provides optimum remaining of nutrients. Excess activated sludge from the system to the aerobic digester to maintain healthy levels of microbes in the treatment process.

Wastewater discharged from the final clarifiers flows by gravity to the effluent filters. Wastewater percolates down through the automatically backwashed filters to remove a major portion of the suspended solids in the water. After water flows through the filters it flows into the chlorination contact tank. Sodium Hypochlorite is added at the head of the tank. The wastewater is dechlorinated at the tail end of the tank by the addition of Sodium Bisulfate. Effluent flows from the contact chamber to the post aeration structure where the water is subjected to the action of a floating aerator to bring the dissolved oxygen concentration to appropriate levels before it is pumped via a force main to Shallowbag Bay for disposal.

2014 Collection System Annual Report
Town of Manteo Collection System
Permit No. WQCS00063

The Town of Manteo’s sanitary sewer collection system connects residents and business to the Town’s wastewater treatment system. Your connection discharges into the main of pipes underground that further connect to lift stations through out the town. Lift stations help propel the wastewater to the Wastewater Treatment Plant where gravity flow is prevented. Wastewater flow that has been modified through these lift stations to further protect your system and the safety of citizens. Utility contact and emergency response information is posted on signs located on the outside of each lift station.

Your connection to the collection system is a responsibility of you as an owner of expanded and grow. The Town of Manteo has developed a public education program in order to help reduce the presence of Fats, Oils, and Grease (FOG) in our sanitary sewer collection system. Regulatory requirements from the State of North Carolina Department of Water Quality (DQW) mandates that municipalities take measures to reduce Sanitary Sewer Overflows (SSOs)—a violation of the EPA Clean Water Act. FOG discharged into public sewer systems is the leading cause of SSOs.

Any one of these items in combination with other factors can damage downstream equipment or lead to a pipe blockage which in turn increases the cost of operation.

Help keep our sewer lines functioning properly.

FATS, OILS and GREASE

- Meat Juices
- Cooking Oils
- Salad Dressings
- Sandwich Spreads
- Lard
- Butter, Margarine
- Shortening
- Dairy Products

DO NOT FLUSH IT!

- Prevents sewage backups in your home.
- Prevents costly repairs to your system.
- Reduces the need for lift stations.
- Prevents the contamination of our natural waters.

DO NOT WASH IT DOWN THE DRAIN!

- Prevents sewage backups in your home.
- Prevents costly repairs to your system.
- Prevents contamination of our natural waters.

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At www.townofmanteo.com you will be able to download the 2014 Annual Wastewater Consumer Quality Report.