

STORMWATER ISSUES ON THE NORTHERN CURRITUCK COUNTY OUTER BANKS

Background

In May of 2014, the Ocean Sands Property Owners Association (OSPOA) identified the need to address stormwater flooding on the Northern Outer Banks. Following that meeting, a committee to look at stormwater issues was formed with 14 property owners from both Ocean Sands and Crown Point, plus Currituck County Engineer Eric Weatherly and representatives from Coastland Corporation. Ed Pence, an Ocean Sands property owner and engineer agreed to chair this committee. After much discussion and research, the committee agreed to engage [Moffatt and Nichol](#), a nationally recognized expert in stormwater management, to do a preliminary study to determine causes and possible solutions to the issue. Current flooding adds urgency to the work of the committee.

Flooding from heavy rain events has been occurring in a large number of areas throughout the Northern Outer Banks since the beginning of development. The Whalehead Subdivision Property Owners proactively began to address the issues for their area in 2003. The Whalehead owners formed a stormwater service district to collect funds to pay for solutions to the issues. Flooding from Hurricane Ernesto in 2006 emphasized the need for solutions. Moffatt and Nichol developed a groundwater lowering system for that community in 2006 and construction was completed in phases over several years. It has proven to be a good solution to their flooding problems.

Geographic Considerations

The Northern Currituck Outer Banks area presents a number of unique challenges. The protective dune on the ocean side and the high dunes on the sound-side creates a bowl, with no place for the water to go. Once the ground is completely saturated after a heavy rain event, the dunes prevent the free flow of stormwater. This flooding has caused damage to numerous homes; affects rental activities including prices and property availability; presents adverse health impacts from standing water; results in reduced property values; and creates poor aesthetics.

Moffatt and Nichol Study

The study for the area designated by the committee was completed in the summer of 2015. In the study, three options were examined.

The first option (“Do Nothing”) examined the continued impact of flooding if little or nothing is done. In this option, there was a recommendation to maintain existing drainage channels and culverts. They have deteriorated over the years and have only been cleared once since their installation many years ago. No routine maintenance has occurred. Currently, the Ocean Sands Lake located adjacent to Section O overflows into the Ocean Sands Water and Sewer District’s wastewater treatment groundwater lowering system. Continuing to rely on the sewer system to maintain proper levels in this lake is not a viable long term solution.

The second option (“Groundwater Lowering”) examined the installation of a groundwater lowering system similar to the one installed in the Whalehead subdivision. This option would remedy the standing water issues and associated effects on property values, rentals, health effects and aesthetics. It requires use of current open space for installation of piping and disposal of stormwater. The golf club at the Currituck Club has voiced an interest in taking some of this stormwater for their irrigation needs.

The third option (“Ocean Outfall”) examined the installation of an ocean outfall pipe for disposal of stormwater. This option entailed exorbitant costs and would be extremely challenging from a regulatory

perspective as it would likely require permits from the Army Corps of Engineers and the North Carolina Department of Environment and Natural Resources. The chance of approval would be remote and, then, only after decades of negotiations.

Current Status

Technical options other than a groundwater lowering system are still being investigated. The committee is currently awaiting a critique of the Study from other engineering experts to determine whether there are any other fully acceptable solutions. We will let you know when we receive that input.

Note that, regardless of the engineering solution implemented, the committee has concluded that formation of a Storm Water Service District is the best approach for financing the project and for ongoing maintenance of the system. Other funding mechanisms were examined but were considered to be more costly, cumbersome to administer and were not tax advantageous for property owners.

The timing for formation of a stormwater service district is crucial. The Currituck County budget cycle requires presentation to and approval by the County Commissioners no later than early June 2016 to establish the new district by July 1 to commence collection of funds to address the issue.

The committee is requesting your support for formation of a stormwater service district, and time is crucial. If you have any questions, please email them to OceanSandsStormWater@gmail.com. Please share this letter with your Ocean Sands and Crown Point friends and neighbors and ask them to contact us so they will receive future communications.

You can click on this link https://www.dropbox.com/sh/g9fjge9u9uni8dn/AAAufdJtblDElKaY3_JAtv-9a?dl=0 to see a small sampling of the pictures the committee has taken of the flooding caused by the combination of the Nor'easters, and recently from Hurricane Joaquin.

In upcoming communications, we will tell you more about the effects of the recent storms, the stormwater committee & its work to date, and review the history of major flooding events (including pictures) here on the Northern Outer Banks. We will also provide more information on why the committee believes we need a stormwater service district and why it's the best funding mechanism.

From what we've seen so far, this current flooding is approaching what we saw with Ernesto – though some areas are better and some are worse. This is due to the differences in the events – Ernesto was an extremely heavy rain in a short period of time, where now, we've had back-to-back events on ground that has been wet for the past couple of weeks.

Thank you in advance for your understanding and cooperation,

The Ocean Sands Stormwater Committee