

Town of Nags Head
Shoreline Management Committee
Meeting Minutes

August 9, 2016, 3 pm
Board of Commissioners Meeting Room

1. Agenda

- Quick review of minutes & previous meeting.
- Staff updates.
- Discussion:
 - Preliminary options for the 2018 project.
 - Define the long-range target beach condition in terms of:
 - Storm damage protection.
 - Recreational beach.
- Closing.

2. Attendees

Andy Garman – town staff, David Ryan – town staff, Commissioner John Ratzenberger, Cliff Ogburn – town staff, Tim Kana, PhD PG – CSE, Haiqing Kaczowski (HK), PhD PE – CSE, Lin Callis, Bob Oakes, Garry Oliver, Mike Pfaff, Jim Morris, Bill Magann, Randy Blanton, Ken Termini, Perry White, Keith Sawyer.

3. Discussion

The purpose of the meeting was to give direction to CSE on how the next project should be designed according to a ‘target’ beach condition.

The group began by discussing artificial reef balls and other alternative management uses in parallel with beach nourishment. All agreed on the need to continue to explore options and alternatives for the next project but that the focus at this time is on designing the next nourishment maintenance project. Alternatives will be discussed as part of the long-term approach to beach nourishment.

HK presented a slide show in order to help group define the target beach condition. From the current project, 25% of sand is in the dune and has blown landward. For a typical nourishment project, sand is placed on recreational dry sand beach in a way that it sloughs off into wading area. This much sand blowing into the dunes was unanticipated. It is a result of the wind conditions unique to the Outer Banks combined with a wide initial dry sand beach. Through 2015, the present project has lost approximately 700,000 cu/yd. In response to a question by a committee member, Dr. Kana explained that CSE had overestimated the loss of sand in the original design. It was designed for 275,000 cu/yd loss per year and actually is closer to 180,000 cu/yd per year through 2015. One member suggested keeping trucked in sand in mind when designing projects especially when it might be more cost effective in regards to mobilization/de-mobilization. The original project was not built with a dune in place and the project was designed to equilibrate over time – which it did faster than projected. HK explained that high wind and wide beach generates dune growth.

Dr. Kana explained the FEMA 540 rule and its intent for shoreline protection. It was realized that, at present, nowhere in Nags Head does a beach meet the 540 rule. (The FEMA 540 rule suggests that the dune must have a cross section equal to 540 square feet or greater above 10' msl in order to provide protection from the 100 year storm). The group agreed that dunes alone don't provide the full protection we need and that the beach profile and width are as important to consider to accomplish our storm damage reduction goals.

In response to an inquiry as to if funds for dune building are well spent, Dr. Kana explained that it is more wise to build the berm as a sand supply and let mother nature to build the dunes.

The average loss of sand for South Nags Head is 10 cu/yd per linear foot of beach per year.

The group agreed that wider dune is better as a taller dune leads to greater escarpment and needs to be mitigated with stabilization with sand fence and beach grass.

The group acknowledged that at present the Town does not have a continuous dune line and we need to consider how to create this over time.

Parameters of width acknowledged as 1.18 NAVD and MHW.

Many felt Jennette's Pier at present is the target beach condition and next project(s) should be designed to meet that standard. It is yet to be determined if the next project will be able to achieve this since cost will be a significant factor. The target beach condition will likely only be accomplished over several nourishment cycles.

The group agreed that houses sitting in the dune line are problematic with respect to developing a target beach and dune condition and creating a continuous dune line. The group agreed that project should be viewed as a town wide project that impacts all. If one area suffers – we all suffer.

Dr. Kana stated that, generally speaking, we should need to fill less with each project to get to the desired width. Caveat being the last 7,500 feet in south Nags Head will be difficult to stabilize due to the high rate of erosion and shoreline conditions in this area. It was noted that sand quality is very important in the design of a successful nourishment project.

Summary of meeting conclusion:

- Dunes are important; the next project(s) will focus greater on dune building and stabilization.
- Fill amount of the next project will be between 1 m and 2.2 m cu/yd.
- The next project and the long-term plan will evaluate how to adequately address south Nags Head and anchor the nourishment to stabilize erosion rate.
- The long-term goal is to build dunes to the FEMA 540 rule and incorporate alternative stabilization options.
- CSE will bring back more information on what a 540 dune and target beach condition would look like.
- A committee recommendation/presentation on project progress will be provided to the Nags Head BOC at its October regular meeting.

Next meeting, September 13th, 3:00 pm.