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Nantucket Conservation Commission
2 Bathing Beach Rd.
Nantucket, MA 02554

May 9, 2014

Dear Chairman Steinaur,

As you are aware, the initial NOI application was for 4-tiers of geotubes and associated erosion protection for about 1,500 linear feet. The Applicant then received Emergency Certification to build a 3-tier geotube system of about 900 lineal feet. The NOI is not being amended to alter the original system applied for, but information has been provided that would provide for the Commission to issue an Order that permits a 3-tier geotube system, as-built, with associated returns, plantings, monitoring, maintenance, mitigation, and plantings, as submitted. The Applicant still seeks a temporary Order of Conditions that would be for three years, as it may be extended by the Commission, with the understanding that a long-term solution for erosion protection will be sought separately.

Applicant believes that the information currently filed with the Commission in the matter of Notice of Intent for the Baxter Road Temporary Stabilization Project (DEP File No. SE 048-2610) is responsive to all of the concerns raised by the Commission. This filing seeks to clarify the some final points before the Commission, as below.

- 1) Planting: The plant list is revised to remove all Juniper. Therefore it is proposed as American Beach Grass to start and Bearberry, Beach Heather, Bayberry, Beach Plum, as woody species to follow. Based on information discussed at the last hearing, the use of fertilizer is requested.
- 2) 100-year runup height: The 100-year runup calculation of 24.2 MLW does not include the sand cover. As explained at the hearing, the sand cover would be expected to be sacrificial and therefore be washed away during the 100-year storm event, so the wave runup would be as calculated for the exposed geotextile tubes with their stair-stepped design. However, when the sand cover is included in the runup calculation, it will not have a significant impact on the runup height. Inclusion of the sand cover may lead to a *higher* runup, since the sand cover has a straight slope and including it would negate the positive influence (slightly reducing runup) that the "berm" effect of the stair-stepped geotubes has on the runup calculation.

- 3) Monitoring and Failure Criteria: Concerns were raised about unknown or speculative environmental and biological impacts. The Applicant proposes that a positive Order of Conditions could require appropriate monitoring of impacts on ecological or biological systems, which could involve the use of diver observations with photography or video for cobble habitat monitoring. Specifically, concerns were raised about the potential impact of sacrificial sand released into the system on the cobble bottom and habitat. The Applicant proposes to do annual under-water video monitoring of selected transects to measure potential impact. A positive order could provide that a determination of significant negative impacts would be a Failure Criteria. However, it should be noted that the sand mitigation sand in the water column during and after a storm is similar the sand released in a significant collapse of a portion of the bluff, and therefore would have a substantially similar impact on the environment as sand released in the natural process of bluff erosion that occurs when a large amount of consolidated material is converted to loose unconsolidated material during a storm or other large collapse. Concerns were also raised about the loss of beach height in front of the geotubes and the narrowing of nearby the barrier beaches. These could also be monitored and negative impacts of the CES could be listed as failure criteria as well. For example, failure could be deemed to occur if the beach width in the project area is reduced where the long-term position of the high tide line [defined for this purpose as the most seaward high tide location within any two consecutive semi-annual surveys] migrates landward to the location of the seaward edge of the second tier of geotextile tubes.
- 4) Shore Bird Monitoring: Concerns were raised about the shore bird monitoring protocol. The Applicant proposes that if the Commission issues a positive Order, it could require the Applicant to comply with Federal, state and local regulations, upon consultation with the Nantucket Beach Manager or Natural Resources Director, and upon other terms provided for in the Order.
- 5) Regulatory Waivers: Section 2.05 B(3) of the Nantucket Wetlands Bylaw includes consideration of the impact the use of the bank as a sediment source. The Applicant proposes that the bank will continue to contribute sand through the mitigation sand provided at the Project location and otherwise, but in the alternative, the Applicant seeks a waiver based on the mitigation through the proposed sand contributions and substantial monitoring program.

Sincerely,

A handwritten signature in black ink, appearing to read "Steven Cohen". The signature is fluid and cursive, with the first name "Steven" and last name "Cohen" clearly distinguishable.

Steven Cohen