



August 31, 2010

Mr. Cliff Ogburn, Town Manager  
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RE: Nags Head Beach Nourishment Project (CSE 2203-01)  
**Progress Update (Mid to Late August)**

Dear Cliff:

This letter summarizes CSE's progress on the Nags Head beach nourishment project over the past approximately two weeks.

**Permitting/EIS (Task 4A/4B)**

Federal Permit – The draft Record of Decision (ROD) was completed by Raleigh Bland (Washington Regulatory Office) about ten days ago and was submitted to USACE–Wilmington for their in-house legal-staff review. Justin McCorkle (legal counsel) and staff were reviewing it last week and making minor editing changes. The in-house edits are expected to be completed this week. USACE sent a courtesy letter to NMFS (St. Petersburg) on 5 August informing the Protected Species Division (PSD) of the Corps' plan to utilize the existing Biological Opinion and Take Statement for sea turtles. The PSD of NMFS is a separate division. Most of the correspondence and concern has originated in the Habitat Section (c/o Ron Sechler).

It appears that the ROD will be issued within the next few weeks. The exact schedule depends on the time for the Division Engineer to review and approve. CSE has been providing working files from the EIS to the Corps to facilitate preparation of the ROD. As final correspondence is generated, CSE incorporates it into the final EIS (Appendix L). The final hurdle will be a notice to NMFS–Habitat Section that the ROD is to be issued. NMFS will have ten days to review and appeal it. If no appeal is forthcoming, Nags Head will have its federal permit for the project.



### **Engineering Analyses (Task 3)**

Engineering Report – CSE is continuing to prepare the final design report. Key findings of the report include:

- Selection of subareas 2 and 3 in borrow area S1 for the project based on logistics and sediment quality conditions. Areas 1, 2, and 3 (combined) would potentially yield over 10 million cubic yards. The chosen borrow areas will provide up to ~6 million cubic yards if dredged to ~7.5 feet (ft). This excess offers a generous surplus volume to the dredger to cover handling losses (which are not expected to be great given the lack of mud in the deposits).
- Determination that the background volumetric erosion rate for Nags Head for 2005–2009 was significantly lower than the rate for 1994–2005, thus lowering the “long-term” average erosion rate. The most important implication of this finding is that the rate of nourishment loss is likely to be no greater than projected in 2005 (ie – 275,000 cubic yards per year loss rate) and is likely to be lower.
- Determination that net longshore transport downcoast of Nags Head will remain relatively constant after the project. This has implications for Oregon Inlet dredging because the results indicate the project will not materially impact shoaling of the channel.

Additional field data on offshore waves is in process of being collected via an in-situ gauge in the borrow area. CSE field staff retrieved our RDI instrument between the 18<sup>th</sup> and 20<sup>th</sup> of August, downloaded the data successfully, and re-deployed the gauge for another month.

### **Environmental Monitoring (Task 10)**

The second pre-nourishment benthic sampling event occurred between 18 and 20 August by CZR Incorporated, with some sampling support by CSE. Sixty (60) samples for benthic monitoring (numbers and species of bottom-dwelling organisms present) and 60 sediment samples were collected and processed for analysis in the lab. CSE completed the sediment grain-size testing last week. CZR Incorporated is in the process of sorting, counting, and identifying the organisms in each sample for comparison with previous and future samples. The purpose of this work is to establish baseline conditions in each season prior to dredging.



**Other Activities**

CSE has been assisting the town manager in preparing an RFP for future benthic monitoring events per request of the Board. The RFP must include specific technical language to which potential consultants can respond.

We also prepared the attached memo discussing the longevity of beach nourishment projects.

Please call if you have any questions about our progress.

Yours truly,

Coastal Science & Engineering (CSE)

A handwritten signature in black ink that reads 'Timothy W Kana'. The signature is written in a cursive style with a long, sweeping underline.

Timothy W Kana PhD PG  
Project Director

cc: D Dusini PE  
H Kaczowski PE  
S Traynum  
T Hair