ENDANGERED SPECIES PROTECTION

All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, pursue, harass, or otherwise harm any protected federally listed species (sea turtles, whales, manatee, shortnose sturgeon, and piping plover).

The Contractor is hereby advised to avoid any incidental take in that such take may trigger the cessation of hopper dredging for the remainder of that Fiscal Year.

Incidental take by the Contractor may require suspension of the permit by the Corps.

The Contractor shall immediately notify the Project Engineer and the Corps Regulatory Project Manager that an incidental take has occurred. Contact Mr. Raleigh Bland, Washington Regulatory Field Office, PO Box 1000, Washington, NC 27889, (910) 251-4564, Raleigh.w.bland@usace.army.mil

Dredging operations shall immediately cease upon incidental take of any sea turtle species.

All dredges shall have an Observer on board who meets the guidelines as established at http://el.erdc.usace.army.mil/seaturtles under the heading Turtle Information

Observers approved by the NMFS sea turtles, sturgeon and whales shall be aboard to monitor for the presence of the species, covering 100 percent (24 hr/day) of dredging operations.

Details of procedures for dead turtles are found in the USACE permit conditions, # 11.a(1).

Details of procedures for live turtles are found in the USACE permit conditions # 11.a(2).

If a sea turtle is observed in the project area beach during the project, all work shall immediately be stopped within 500 ft of the turtle.

If recently emerged hatchlings from an unmarked nest are observed, all work shall immediately stop within 100 ft of the hatchlings, and all artificial lights shall be extinguished within 500 feet of the hatchling.

REPORTING

Forms for reporting are available at http://el.erdc.usace.army.mil/seaturtles

The Sea Turtle Mortality Report will be filled out by the Observer within 6 hours of the take event and emailed in pdf format to takereport.nmfsser@noaa.gov, the Regulatory Project Manager, and the Project Engineer.

Observer monitoring results shall be recorded on the appropriate observation sheets. There is a sheet for each load, a daily summary sheet, a weekly summary sheet, and a post-dredging summary sheet. Dredging of subsequent loads shall not commence until all appropriate reports are completed from the previous load.

The Contractor shall provide a digital camera with a resolution of at least 300 dpi in order to photographically report all incidental takes, without regard to species.

Any take concerning a manatee, sea turtle, sturgeon, or whale; or sighting of any injured or incapacitated manatees, sea turtles, or whales shall be reported immediately to the Corps and Project Engineer.

ENVIRONMENTAL PROTECTION MEASURES

The Contractor is responsible for implementing the environmental protection measures applicable to offshore operations and beach fill activities. Protection measures include open-net trawling for turtles ahead of the dredge(s), use of deflectors and specific equipment modification onboard hopper dredges, specific operations requirements and use of silent inspectors onboard dredges, and use of certified endangered species monitors onboard dredges.

HOPPER DREDGE MODIFICATIONS

http://el.erdc.usace.army.mil/seaturtles provides design requirements and other information

pertinent to dredge modifications.

No dredging shall be performed by a hopper dredge without the inclusion of a rigid sea turtle deflector device.

Hopper dredge drag heads shall be equipped with rigid sea turtle deflectors which are solidly attached. Details of the deflector are given in the USACE permit conditions #5.a.

Screening and lighting shall be installed in accordance with USACE permit condition #5.b.

The dredge may not use a drag head grating system that would prevent turtle remains from entering the hopper inflow screening. No dredging shall begin until the District has approved all grating and screening.

All hopper dredges shall be equipped with the Silent Inspector (SI) system for hopper dredge monitoring. The SI system must have been certified by the US Army Corps of Engineers (ERDC) within the last year.

The turtle deflector device and inflow screens shall be maintained in operational condition for the entire dredging operation.

PRE-DREDGING SUBMITTALS

The Contractor shall electronically submit drawings showing the sea turtle deflector device and its attachment to the Regulatory Project Manager and Project Engineer.

The Contractor shall electronically submit detailed drawings showing the proposed drag head grating system(s) and drag head(s), and documentation that supports grate sizing such as dredge pump manufacturer's recommended maximum particle size dimension(s), etc.

The Contractor shall electronically submit an operational plan to achieve protection of sea turtles during the hopper operation. These operational procedures are intended to stress the importance of balancing the suction pipe densities and velocities in order to keep from taking sea turtles.

A pre-dredging inspection of the hopper dredge(s) shall be performed by the Wilmington District inspector in accordance with the protocol Sea Turtle Compliance Inspection Checklist located on http://el.erdc.usace.army.mil/seaturtles.

HOPPER DREDGE OPERATION

The Contractor shall operate the hopper dredge to minimize the possibility of taking sea turtles.

During turning operations the pumps must either be shut off or reduced in speed to the point where negligible suction velocity or vacuum exists.

When initiating dredging, suction through the drag heads shall be allowed just long enough to prime the pumps, and then the drag heads must be placed firmly on the bottom. When lifting the drag heads from the bottom, suction through the drag heads shall be allowed just long enough to clear the lines, and then must cease.

Pipe plugging cannot be corrected by raising the drag head off the bottom.

Raising the drag head off the bottom to increase suction velocities is not acceptable.

Water port openings on top of the drag head or on raised standpipes above the drag head shall be screened before they are utilized.

The drag head shall be buried a minimum of 6 inches in the sediment at all times.

During turning operations the pumps must either be shut off or reduced in speed to the point where negligible suction velocity or vacuum exists.

If submerged cultural resources are encountered during the operation, the Contractor shall immediately notify the Corps and Project Engineer so that coordination can be initiated with the Underwater Archeology Unit (UAU) of the NC Department of Cultural Resources.

Dredge pipes must be routinely inspected for leaks.

Should dredging operations encounter sand deemed non-compatible, the dredge operator shall immediately cease operation and contact the engineer.

NON-CAPTURE TRAWLING

Sea Turtle Non-Capture Trawl Sweeping Requirement is specified in the federal or state permits. In the event of contradictory or ambiguous special conditions of the federal or state permits for the project in regard to turtle trawling requirements, the following requirements shall take precedence:

A. Non-capture trawl sweeping is required at all times hopper dredges are conducting dredging operations, regardless of time of year.
B. One operating trawler is required per hopper dredge during dredging operations.
C. No trawling is required in connection with operations by a cutterhead suction dredge.
D. Trawling is not required during periods when a hopper dredge is pumping out or otherwise not dredging.
E. If a trawler breaks down or can otherwise not accomplish non-capture trawling during hopper dredge operations, a backup trawler must be available for immediate deployment to the project site. Dredging operations may continue at the Contractor's risk of a turtle take for no more than 48 hours after a trawler breakdown before a replacement trawler is deployed to the project site, subject to the discretion of the USACE Regulatory Project Manager.
F. Should there be dangerously high seas that would cause the trawler to leave the dredging area when non-capture trawl sweeping is required, the dredge may continue to operate, as long as no turtles are taken, subject to the discretion of the USACE Regulatory Project Manager.
G. It is the intent of the regulatory agencies and special conditions of the federal and state permits for the project that no-capture trawling be accomplished at all times that hopper dredges are conducting dredging operations in the project area.

A daily log must be kept for each non-capture trawl sweeping operation, including: (1) GIS coordinate of trawl locations and the start and end of each sweep; (2) Times recorded for the duration of each trawl sweep; (3) Description of dredge proximity during each sweep; (4) General notes as appropriate; (5) Water quality and physical measurements including water temperature (recorded via laboratory thermometer at the water surface every day), weather conditions, air temperature, wind velocity and direction, high and low tides, sea state-wave height, and precipitation. Records shall be kept on the trawling forms found on the website http://el.erdc.usace.army.mil/seaturtles.

BEACH FILL OPERATIONS

Daily monitoring of escarpments within the immediate vicinity (±1,000 feet) of the discharge shall be conducted. Any escarpments greater than 18 inches that are present between May 1 and August 30 shall be leveled.

Construction impacts should be reduced to the maximum extent possible by storing equipment and materials off the beach, perpendicular to the beach, or at the landwardmost area of the beach that does not compromise dune integrity.

Nighttime lighting associated with nourishment activities shall be minimized by shielding, lowering, and appropriate placement; and restricted to the immediate construction area.

No sand shall be placed on any sand bags that have been determined by the Division of Coastal Management to be subject to removal under 15A NCAC.0308(a)(2).

[In order to ensure compliance with this condition, the Division of Coastal Management shall be contacted at (252) 264-3901 prior to project initiation so that Division staff may meet on site with the Contractor.]

Should work result in any damage to existing beach accesses, the accesses shall be restored (by the Contractor) to pre-project conditions immediately upon project completion in that specific area.

Where oceanfront development exists at elevations nearly equal to that of the native beach, a low protective dune shall be pushed up along the backbeach to prevent slurry from draining towards the development. This condition applies to reach 3.

Temporary dikes shall be used to retain and direct flow of material parallel to the shoreline to minimize surf zone turbidities.

All mechanized equipment will be regularly inspected and maintained to prevent contamination of waters and wetlands from fuels, lubricants, hydraulic fluids, or other toxic materials.

The Contractor shall employ appropriate sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area.

No dredge material will be placed at any time in waters outside the permitted beach nourishment disposal area.

The Contractor shall conduct routine beach surveillance around the active work area during construction to prevent unintentional damage to sea turtles and their nesting areas. If a nest or turtle crawl is identified in the project area, beach disposal activities will stop until the Corps determines an action.

The Contractor is not permitted to perform any work on exposed sandbags, landward of houses or directly under houses which may be within the nourishment berm.

MISCELLANEOUS

Relevant forms are found at http://el.erdc.usace.army.mil/seaturtles

Dredging activities for the project will not interfere with operations of the Wilmington District Civil Works dredging and navigation projects.

The Contractor will comply with all U.S. Coast Guard regulations for dredging operations and contact Mr. Tom Flynn, United States Coast Guard, District 5 Waterways at telephone, (757) 398-6229, at least thirty (30) days prior to construction to initiate Local Notice for Mariners procedures.

ATTENTION

These notes are provided for convenience. Detailed requirements are given in section 01060 [Regulatory Requirements] in the Project Manual, and in the federal and state permits for the Project.

KEYNOTE

1. **STORM WATER OUTFALLS**
Existing stormwater outfalls maintained by NC-DOT are visible on sheet 05. The Contractor shall exercise extreme caution working in the vicinity of existing outfalls and avoid burying the seaward ends of the structures or damaging the structures in any way. Lengthening of outfalls is not included in the present scope of work.

2. **PIERS**
Piers are shown on sheets 05-06 in plan view. Piepline may be placed under piers. Equipment ingress and egress is allowed where feasible under piers. The Contractor should fill under piers to the extent practicable, without risking damage to the structures. (ground pictures shown taken November 2010).

3. **ACCESS AREAS (POTENTIAL STAGING AREAS)**
Access areas are identified on sheets 05-07. Potential staging areas include the Bonnett St access (~STA 497+00), Forrest St. (~STA 722+00) and Juncos St. ~(STA 936+00)

4. **CULTURAL RESOURCE**
Two wrecks have been identified near the northern end of the beach fill area near stationing 510+00 and 520+00. In the event the Contractor elects to submerge the pipeline, the corridor(s) of the submerged pipeline shall not go through the wreck preserve areas. These areas should not be impacted by beach fill; however, if cultural resources are observed during operations, Contractor should avoid the immediate area unless directed otherwise by the engineer.

NO ANCHOR ZONE
Two groups of magnetic anomolies were observed ~1.0 mi. north of borrow area 2. These areas are identified on sheet 02 (SPCS coordinates shown). The Contractor should maintain a 400 ft diameter no-anchor zone centered on these two locations.

STA 523+50 (Nags Head Pier)

STA 776+50 (Jennett's Pier)

STA 865+00 (Outer Banks Pier)

STA 875+00 (Outer Banks Pier)

NO.	REVISION	BY	DATE

CSE
Coastal Science & Engineering
PO Box 8056
Columbia South Carolina 29202
Phone 803-799-8949
www.coastalscience.com

CLIENT:
TOWN OF NAGS HEAD
5401 SOUTH CROATAN HWY
NAGS HEAD NC 27959

PROJECT:
TOWN OF NAGS HEAD
BEACH NOURISHMENT PROJECT

DRAWING TITLE:
GENERAL & SPECIAL CONDITION NOTES

Preliminary Drawing Not For Construction

SCALE:	AS SHOWN
DATE:	Jan 2011
DRAWN BY:	JJH
APPROVED BY:	TWK/HLK
PROJECT #:	2203-CD

SHEET NO: 03
OF: 21