

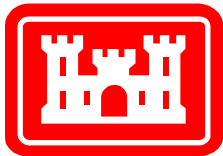
**FEASIBILITY REPORT  
AND  
ENVIRONMENTAL ASSESSMENT**

**WILMINGTON HARBOR NAVIGATION  
IMPROVEMENTS  
Appendix K - Environmental Commitments**



**June 2014**

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**US Army Corps  
of Engineers**

**Wilmington District**

## Appendix K

### ENVIRONMENTAL COMMITMENTS

The table below includes a list of environmental commitments associated with construction and maintenance of the proposed project.

<b>Species, habitat, other</b>	<b>Commitments to reduce environmental impacts and other impacts</b>
<i>Sediment Compatibility</i>	(1) Only beach compatible sediment will be placed on the beaches as a component of this project.
<i>Piping Plover and Other Shorebirds</i>	(2) There is no designated critical habitat for the wintering piping plover in the project area, but the Corps will adhere to appropriate environmental windows to minimize the impacts on shorebird nesting to the maximum extent practicable.
<i>Manatee</i>	(3) The Corps will implement precautionary measures for avoiding impacts to manatees during construction activities as detailed in the <i>Guidelines for Avoiding Impacts to the West Indian Manatee in North Carolina Waters</i> established by the USFWS.
<i>Large Whales</i>	(4) During transit to and from the ODMDS an observer shall serve as a lookout to alert the dredge operator and/or vessel pilot of the occurrence of large whales and will record all large whale sightings and note any potential behavioral effects. If any marine mammals are observed during dredging operations, including vessel movements and transit to the dredged material disposal site, collisions will be avoided either through reduced vessel speed, course alteration, or both.
<i>Sea Turtles</i>	(5) No hopper dredges are planned to be used for the project.  (6) The Corps will attempt to avoid the sea turtle nesting season during beach placement of dredged material. If, because of unforeseen circumstances, construction extends into the nesting season, the Corps will implement a sea turtle nest monitoring and avoidance/relocation plan through coordination with USFWS and NCWRC.

<b>Species, habitat, other</b>	<b>Commitments to reduce environmental impacts and other impacts</b>
<i>Sea Turtles</i> <i>(continued)</i>	<p>(7) The beach will be monitored for escarpment formation by the contractor before completion of beach disposal activities. The local governments will monitor the beach for escarpment formation after the initial turtle nesting season. Escarpments that exceed 18 inches in height for a distance of 100 ft. will be leveled by the contractor or the local sponsor accordingly. If it is determined that escarpment leveling is required during the nesting or hatching season, leveling actions will be coordinated with the USFWS.</p> <p>(8) The Corps will, in coordination with the NCWRC and USFWS, evaluate post-placement beach compaction (hardness) using qualitative assessment techniques to assure that impacts to nesting and incubating sea turtles are minimized and, if necessary, identify appropriate mitigation responses, which may include tilling.</p> <p>(9) If dredging and disposal occurs after May 1, the dredge and associated vessels and equipment will have lighting restrictions to preclude impacts to sea turtles. Local lighting ordinances are in place to reduce lighting impacts to nesting females and hatchlings.</p>
<i>Seabeach Amaranth</i>	<p>(10) The seabeach amaranth monitoring will be conducted for 5 years following the initial placement of sand on the beaches. The commitment is intended to survey and document presence/absence of plants in order to quantify the number of plants before/after placement. Subsequent monitoring will be dependent on results of this 5 year monitoring period.</p>
<i>Fishes &amp; Benthic Invertebrates</i>	<p>(11) The anticipated construction time frame for the beach placement event will avoid peak recruitment and abundance time period for surf zone fishes and benthic invertebrates.</p>
<i>Water Quality</i>	<p>(12) Before construction, the Corps will obtain a Section 401 Water Quality Certification from the NCDWQ for the proposed project and will comply with the requirements therein.</p> <p>(13) Temporary dikes will be used to retain and direct flow of material parallel to the shoreline to minimize surf zone turbidities. The temporary dikes will be removed and the beach graded in accordance with approved profiles on completion of pumping activities in that section of beach.</p>

<b>Species, habitat, other</b>	<b>Commitments to reduce environmental impacts and other impacts</b>
<i>Terrestrial Habitat</i>	<p>(14) Land-based equipment necessary for beach placement work will be brought to the site through existing accesses. If the work results in any damage to existing accesses, the accesses will be restored to pre-project conditions immediately on project completion.</p> <p>(15) Dune disturbance will be kept to a minimum. All disturbed areas will be restored to original contours and configuration with reference to the surveyed normal high water line and will be revegetated immediately after project completion in that area.</p> <p>(16) To prevent leakage, dredge pipes will be routinely inspected. If leakage is found and repairs cannot be made immediately, pumping of material must stop until such leaks are fixed.</p> <p>(17) Before beach placement, the existing MHW line will be surveyed, and a copy provided to the NCDCM. If construction is not initiated within 60 days or there is a major shoreline change before beginning beach placement (or both), a new survey will be conducted.</p> <p>(18) Before initiating any placement activity, the Corps will coordinate with NCDCM to determine the static vegetation line to be used as the reference point for measuring future oceanfront setbacks. That static vegetation line will then be marked, and a survey depicting the static vegetation line will be submitted to NCDCM before any beach placement activities.</p>
<i>Cultural Resources</i>	<p>(19) To avoid potential impacts to cultural resources, no anchoring or storage of any dredging related equipment shall occur within cultural resources areas of potential effects indicated in section 7.9 of the main report.</p>