

Special Conditions
Nags Head Beach Renourishment
Action ID SAW-2017-02098

In accordance with 33 U.S.C. 1341(d), all conditions of the North Carolina Division of Coastal Management Permit Major Modification 45-10, and the North Carolina Division of Water Resources 401 Water Quality Certification DWR 06-1275 v3, are incorporated as part of the Department of the Army permit. Therefore they are not listed as special conditions.

WORK LIMITS

1. All work authorized by this permit must be performed in strict compliance with the attached plans, which are a part of this permit. Any modification to these plans must be approved by the U.S. Army Corps of Engineers (USACE) prior to implementation.
2. Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.
3. Dredging activities authorized by this permit shall not in any way interfere with those operations of the USACE Civil Works dredging and navigation projects. Specifically, there shall not be any interference with the USACE maintenance dredging of Oregon Inlet or Federal channels in the vicinity of Oregon Inlet.
4. Except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within waters or wetlands or to reduce the reach of waters or wetlands.
5. The Permittee shall schedule a preconstruction meeting between its representatives, the contractor's representatives and the USACE prior to undertaking any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all terms and conditions contained within the Department of the Army permit. The Permittee shall contact the USACE a minimum of thirty (30) days in advance of the scheduled meeting in order to provide that individual with ample opportunity to schedule and participate in the required meeting. Meeting participants may include, but are not limited to, representatives from the U.S. Fish and Wildlife Service (USFWS), the National Park Service (NPS), National Marine Fisheries Service (NMFS), N.C. Division of Coastal Management (NCDCM), N.C. Division of Water Resources (NCDWR), N.C. Wildlife Resource Commission (NCWRC), and the U.S. Coast Guard (USCG).

6. This permit authorizes beach fill activities to be undertaken only one (1) time along the entire project area. Any request to undertake additional maintenance beach fill activities within the project area where nourishment activities have already been completed under this permit will require prior written authorization from the USACE.

RELATED LAWS

7. 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. In the event of a spill of petroleum products or any other hazardous waste, the Permittee shall immediately report it to the N.C. Division of Water Quality at (919) 733-3300 or (800) 858-0368 and provisions of the North Carolina Oil Pollution and Hazardous Substances Control Act will be followed.

CZMA

8. The Permittee shall fully abide by all conditions of the CAMA Major Modification #45-10, issued by the North Carolina Division of Coastal Management, which are incorporated herein by reference.

CULTURAL RESOURCES

9. The Permittee will follow any protocol set forth by the SHPO regarding avoidance of buffer areas (Buffer A, Buffer B, and Buffer C) identified in the Phase 1 Remote-Sensing Archaeological Survey dated January 20, 2018. In the event that any project activities expose prehistoric or historic cultural material not identified during the survey, the dredging company under contract to the Town of Nags Head should immediately cease operations in that vicinity and notify the respective Point of Contact for Dare County, and for the North Carolina SHPO. Notification should address the exact location, where possible, the nature of material exposed by the project activities, and options for immediate archaeological inspection and assessment of the site.
10. Prior to the commencement of sand placement, the Office of State Archaeology-Underwater Branch (910-458-9042) should be contacted for the last known locations and to determine the proper course of action (none, avoidance, documentation) at that time for sites 12BOB, 13BOB, 23BOB, 02BOB, 03BOB, 01BOB, 06BOB, 22BOB, 21BOB, and 09BOB.

PROJECT MAINTENANCE

11. The Permittee shall advise the Wilmington District, Regulatory Division in writing prior to beginning the work authorized by this permit. The contractors name, phone number, and address, including any inspectors contact name and phone number must be provided to the Wilmington District prior to any work.

12. The Permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation or turbidity within waters and wetlands outside the permit area. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statutes Chapter 113A Article 4).
13. The Permittee shall coordinate the placement of all dredge pipelines along the beach with the NCDCM, the USACE, the USFWS Raleigh Field Office, and the NCWRC.

ENFORCEMENT

14. Violations of these conditions or violations of Section 404 of the Clean Water Act or Section 10 of the Rivers and Harbors Act must be reported in writing to the Washington Regulatory Field Office, Attn: Mr. Josh Pelletier, Wilmington District U.S. Army Corps of Engineers within 24 hours of the Permittee's discovery of the violation.
15. The Permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the water or wetland to its pre-project condition
16. All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Regulatory Division, Washington Regulatory Field Office, c/o Mr. Josh Pelletier, 2407 W. Fifth Street, Washington, North Carolina, 27889, and by telephone at: (910) 251-4605. The Permittee shall reference the following permit number, SAW-2017-02098 on all submittals.
17. A representative of the USACE will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is resolved to the satisfaction of the USACE.

ENDANGERED SPECIES ACT (ESA)

18. The Permittee will comply with the USFWS Biological Opinion (BO) # 04EN2000-2018-F-0142 issued on December 20, 2017, and the NMFS South Atlantic Regional Biological Opinion (SARBO), which contains mandatory terms and conditions to implement the Reasonable and Prudent Measures (RPM) that are associated with "incidental take" that is also specified in the BOs. Your authorization under this USACE permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental takes of the attached Opinions, which terms and conditions are incorporated by reference in this permit. Failure to comply with the terms and conditions associated with incidental take of the BO, where a take of the listed

species occurs, would constitute an unauthorized take, and it would also constitute non-compliance with your USACE permit. The USFWS and NMFS are the appropriate authorities to determine compliance with the terms and conditions of their BOs, and with the ESA.

19. The Permittee shall immediately notify the USACE Regulatory Project Manager that an incidental take has occurred. The USACE Regulatory Project Manager responsible for this project is Mr. Josh Pelletier who may be contacted at the Washington Regulatory Field Office, 2407 W. 5th Street, Washington, North Carolina, 27889, by telephone at (910) 251-4605, or e-mail josh.r.pelletier@usace.army.mil. Dredging operations shall immediately cease upon incidental take of any sea turtle species or Atlantic Sturgeon until the Wilmington District Commander, or his designee, notifies the Permittee to resume dredging. The Sea Turtle or Atlantic sturgeon incidental take data form will be filled out by the Observer within 6 hours of the take event and e-mailed in pdf format to takereport.nmfsser@noaa.gov and the USACE Regulatory Project Manager.
20. All necessary precautions and measures will be implemented so that any activity will not kill, injure, capture, harass, or otherwise harm any protected federally listed species. (sea turtles, whales, manatee, Atlantic sturgeon, red knots and piping plover). While accomplishing the authorized work, if the Permittee discovers or observes a damaged or hurt listed endangered or threatened species, the USACE will be immediately notified so that required coordination can be initiated with the USFWS and/or the NMFS.
21. The Permittee shall conduct routine beach surveillance during construction to prevent unintentional damage to sea turtles and their nesting areas. If a nest or a turtle crawl is identified in the project area, the Permittee will immediately stop all beach disposal activities and contact the USACE to determine appropriate action. Specific night time and morning monitoring requirements are identified in the USFWS Biological Opinion.
22. All derelict concrete, metal, and coastal armoring geotextile material and other debris must be removed from the beach prior to any sand placement to the maximum extent possible. If debris removal activities take place during the sea turtle nesting season, the work must be conducted during daylight hours only and must not commence until completion of the sea turtle nesting survey each day.
23. Conservation Measures included in the permit application/project plans must be implemented in the proposed project. If a RPM and Term and Condition address the same requirement, the requirements of the RPM and Term and Condition take precedent over the Conservation Measure.
24. Information required to be sent to the USFWS should be submitted to:

Mr. Pete Benjamin, Supervisor
Raleigh Field Office
U.S. Fish and Wildlife Service
Post Office Box 33726
Raleigh, North Carolina 27636-3726

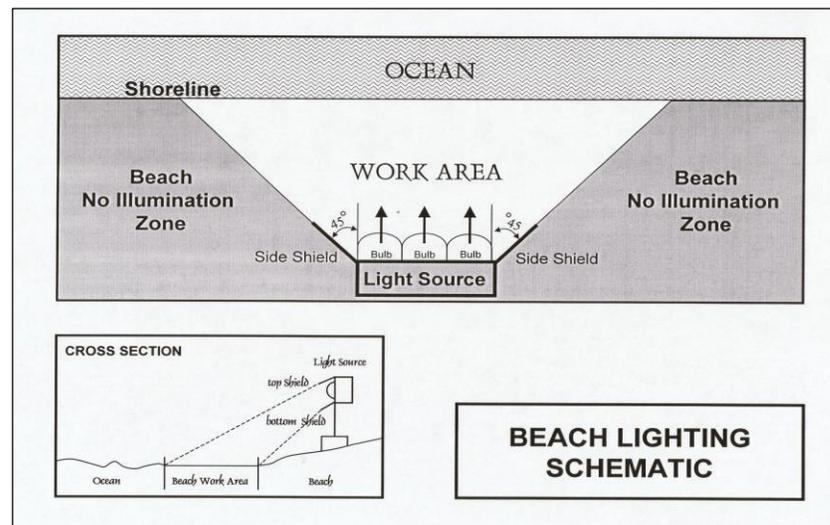
(919) 856-4520

25. Predator-proof trash receptacles must be installed and maintained at all beach access points used for the project construction, to minimize the potential for attracting predators of piping plovers, red knots, and sea turtles.
26. A meeting between representatives of the Permittee's contractor(s), USFWS, NCWRC, the permitted sea turtle surveyor, and other species surveyors, as appropriate, must be held prior to the commencement of work on this project. Notification of the meeting must be at least 10 business days in advance.
27. All personnel involved in the construction or sand placement process along the beach shall be trained to recognize the presence of piping plovers and red knots prior to initiation of work on the beach. Before start of work each morning, a visual survey must be conducted in the area of work for that day, to determine if piping plovers or red knots are present. If plovers or red knots are present in the work area, careful movement of equipment in the early morning hours should allow those individuals to move out of the area. Construction operations shall not begin until individual plovers or red knots have exited the work area for the day. If piping plovers or red knots are observed, the observer shall make a note on the Quality Assurance form for that day, and submit the information to the USACE and the USFWS's Raleigh Field Office the following day. See REPORTING REQUIREMENTS below.
28. Only beach compatible fill must be placed on the beach or in any associated dune system. Beach compatible fill must be sand that is similar to a native beach in the vicinity of the site that has not been affected by prior sand placement activity. Beach compatible fill must be sand solely of natural sediment and shell material, containing no construction debris, toxic material, or other foreign matter, or large amounts of granular material, gravel, or rock. The beach compatible fill must be similar in both color and grain size distribution (sand grain frequency, mean and median grain size and sorting coefficient) to the native material in the Action Area. Beach compatible fill is material that maintains the general character and functionality of the material occurring on the beach and in the adjacent dune and coastal system.
 - a) Beach compatible fill consisting predominantly of quartz, carbonate (i.e., shell, coral) or similar material with a particle size distribution ranging between 0.0625 millimeters (mm) and 2.76 mm, classified as sand by either the Unified Soils or Wentworth classification systems;
 - b) Beach compatible fill containing less than or equal to 2 % fine-grained sediment (< 0.0625 mm, considered silt, clay and colloids) by weight, unless sufficient sampling of the project area indicates that the native sediment grain size distribution contains > 2 % fine-grained material, in which case compatible material should be considered the percentage of fine-grained native

- material plus no more than an additional 2 % by weight;
- c) Beach compatible fill containing coarse gravel, cobbles or material retained on a ¾ inch sieve in a percentage or size not greater than found on the native beach.
 - d) Beach compatible fill that does not contain carbonate (i.e., shell) material that exceeds the average percentage of carbonate material on the native beach by more than 15 % by weight.
29. During dredging operations, material placed on the beach shall be inspected daily to ensure compatibility. If during the sampling process non-beach compatible material, including large amounts of shell or rock, is or has been placed on the beach all work shall stop immediately and the NCDCEM and the USACE will be notified by the Permittee and/or its contractors to determine the appropriate plan of action.
30. From May 1 through November 15, to the maximum extent practicable, excavations and temporary alteration of beach topography (outside of the active construction zone) will be filled or leveled to the natural beach profile prior to 9:00 pm each day.
31. If any nesting turtles are sighted on the beach during construction, construction activities must cease immediately until the turtle has returned to the water, and the sea turtle permit holder responsible for nest monitoring has marked for avoidance or relocated any nest(s) that may have been laid. If a nesting sea turtle is observed at night, all work on the beach will cease and all lights will be extinguished (except for those absolutely necessary for safety) until after the female has finished laying eggs and returned to the water.
32. During the sea turtle nesting season, the contractor must not extend the beach fill more than 750 feet along the shoreline and must confine work activities within this area between dusk and dawn of the following day until the daily nesting survey has been completed and the beach cleared for fill advancement. A permitted sea turtle surveyor must be present on-site to ensure no nesting and hatchling sea turtles are present within the work area. Once the beach has been cleared and the necessary nest relocations have been completed, the contractor will be allowed to proceed with the placement of fill and work activities during daylight hours until dusk at which time the 750-foot length limitation must apply. If a nesting sea turtle is sighted on the beach within the immediate construction area, activities must cease immediately until the turtle has returned to the water and the sea turtle permit holder responsible for nest monitoring has relocated the nest.
33. If movement of equipment up or down the beach (outside of the active nighttime construction area) is required between dusk and dawn, an additional nighttime monitor must accompany vehicles operating on the beach, watching for signs of turtle activity ahead of the vehicle. If activity is discovered, the vehicle must stop or reverse direction until the activity ceases and the monitor clears the forward progress of the vehicle. Movement of the equipment up or down the beach during nighttime operations would be conducted from the off-beach access point to the construction area and vice-versa.
34. If any work on the beach is conducted during the sea turtle nesting season (May 1 through November 15), the Permittee shall submit a lighting plan for the equipment and dredge that

will be used in the project. The plan shall include a description of each light source that will be visible on or from the beach and measures implemented to minimize this lighting. The plan shall be reviewed for approval by the USFWS.

35. Direct lighting of the beach and nearshore waters must be limited to the immediate construction area during the nesting season and must comply with safety requirements. Lighting on all equipment must be minimized through reduction, shielding, lowering, and appropriate placement to avoid excessive illumination of the water's surface and nesting beach while meeting all USCG, USACE EM 385-1-1, and OSHA requirements. Light intensity of lighting equipment must be reduced to the minimum standard required by OSHA for General Construction areas, in order to not misdirect sea turtles. Shields must be affixed to the light housing and be large enough to block light from all on-beach lamps from being transmitted outside the construction area or to the adjacent sea turtle nesting beach.



36. Daily (before 9:00 am) nesting surveys and egg relocation must be conducted if any portion of the sand placement occurs during the period from May 1 through November 15. If sand is placed on the beach at night, a nighttime monitor must survey the beach area that is affected that night, prior to the morning's normal nesting activity survey. No daytime movement of equipment up or down the beach (outside of the active nighttime construction area described in number 33, above) may commence until completion of the sea turtle nesting survey each morning. If nests are constructed in the project area, the nests must be marked and either avoided until completion of the project or relocated.

- a. Nesting surveys must be initiated by May 1 and must continue through the end of the project. If nests are constructed in areas where they may be affected by construction activities, the eggs must be relocated to minimize sea turtle nest burial, crushing of eggs, or nest excavation.
- b. Nesting surveys and nest marking will only be conducted by personnel with prior experience and training in these activities, and who are duly authorized to conduct

such activities through a valid permit issued by the USFWS or the NCWRC. Nesting surveys must be conducted daily between sunrise and 9:00 am.

c. Only those nest that may be affected by construction or sand placement activities will be relocated. Nest relocation must not occur upon completion of the project. For demobilization, nests will be marked and avoided. Nests requiring relocation must be moved no later than 9:00 am the morning following deposition to a nearby self-release beach site in a secure setting where artificial lighting will not interfere with hatchling orientation. Relocated nests must not be placed in organized groupings. Relocated nests must be randomly staggered along the length and width of the beach in settings that are not expected to experience daily inundation by high tides or known to routinely experience severe erosion and egg loss, predation, or subject to artificial lighting. Nest relocations in association with construction activities must cease when construction activities no longer threaten nests.

d. Nests deposited within areas where construction activities have ceased or will not occur for 65 days must be marked for avoidance and left in situ unless other factors threaten the success of the nest. Nests must be marked with four stakes at a 10-foot distance around the perimeter of the nest for the buffer zone. The turtle permit holder must install an on-beach marker at the nest site and a secondary marker at a point as far landward as possible to assure that future location of the nest will be possible should the on-beach marker be lost. No activities that could result in impacts to the nest will occur within the marked area. Nest sites must be inspected daily to assure nest markers remain in place and the nest has not been disturbed by the project activity.

37. From May 1 through November 15, staging areas for construction equipment must be located off the beach. Nighttime storage of construction equipment not in use must be off the beach to minimize disturbance to sea turtle nesting and hatching activities. In addition, all construction pipes placed on the beach must be located as far landward as possible without compromising the integrity of the dune system. Pipes placed parallel to the dune must be 5 to 10 feet away from the toe of the dune if the width of the beach allows. If pipes are stored on the beach, they must be placed in a manner that will minimize the impact to nesting habitat and must not compromise the integrity of the dune systems.

38. Demobilization of equipment from the beach must be conducted only during daylight hours, after the daily survey for sea turtle nests has been completed. Any nests that are identified must be marked for avoidance as described in number 35.d. above, and avoided during all demobilization activities.

39. Dune restoration or creation included in the profile design (or project) must have a slope of 4:1 on a low erosion beach or a slope of 1.5:1, followed by a gradual slope of 4:1 for approximately 20 feet seaward on a high erosion beach. If another slope is proposed for use in the creation or restoration of a dune, the Permittee must consult the USFWS.

40. Visual surveys for escarpments along the project area must be made immediately after

completion of sand placement, and within 30 days prior to May 1 for two subsequent years after any construction or sand placement event. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet must be leveled and the beach profile must be reconfigured to minimize scarp formation by the dates listed above. Any escarpment removal must be reported by location. If the sand placement activities are completed during the early part of the sea turtle nesting and hatching season (May 1 through May 30), escarpments must be leveled immediately, while protecting nests that have been relocated or left in place. The USFWS must be contacted immediately if subsequent reformation of escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet occurs during the nesting and hatching season to determine the appropriate action to be taken. If it is determined that escarpment leveling is required during the nesting or hatching season, the USFWS or NCWRC will provide a brief written authorization within 30 days that describes methods to be used to reduce the likelihood of impacting existing nests. An annual summary of escarpment surveys and actions taken must be submitted to the USFWS's Raleigh Field Office.

41. Sand compaction must be monitored at least twice after each sand placement event. Sand compaction must be monitored in the project area immediately after completion of any sand placement event and one time after project completion between October 1 and May

1. Out-year compaction monitoring and remediation are not required if the placed material no longer remains on the dry beach. Within 7 days of completion of sand placement and prior to any tilling (if needed), a field meeting shall be held with the USFWS, NCWRC and the USACE to inspect the project area for compaction and determine whether tilling is needed.

- a. If tilling is needed, the area must be tilled to a depth of 36 inches. All tilling activities shall be completed prior to May 1 of any year.
- b. Tilling must occur landward of the wrack line and avoid all vegetated areas that are 3 square feet or greater, with a 3 square foot buffer around all vegetation.
- c. If tilling occurs during the shorebird nesting season (after April 1, shorebird surveys are required prior to tilling per the Migratory Bird Treaty Act.
- d. A summary of the compaction assessments and the actions taken shall be included in the annual report to DCM, the USACE and the USFWS's Raleigh Field Office
- e. These conditions will be evaluated and may be modified if necessary to address and identify sand compaction problems.

42. Two surveys must be conducted of all lighting visible from the beach placement area by the Permittee, using standard techniques for such a survey (found in Appendix B of the BO) in the year following construction. The first survey must be conducted between May 1 and May 15, and a brief summary provided to USFWS. The second survey must be conducted between July 15 and August 1. A summary report of the surveys (including the following information: methodology of the survey, a map showing the position of lights visible from the beach, a description of each light source visible from the beach, recommendations for remediation, and any actions taken) must be submitted to the Raleigh Field Office within 3 months after the last survey is conducted. After the annual report is completed, a meeting must be set up with the Permittee, Dare County, the

USACE, NCWRC, and the USFWS to discuss the survey report, as well as any documented sea turtle disorientations in or adjacent to the project area. If the project is completed during the nesting season and prior to May 1, the contractor may conduct the lighting surveys during the year of construction.

43. Sea turtle nesting surveys must be conducted within the project area between May 1 and November 15 of each year, for at least two consecutive nesting seasons after completion of each sand placement activity (2 years post-construction monitoring after initial construction and each maintenance event). Acquisition of readily available sea turtle nesting data from qualified sources (volunteer organizations, other agencies, etc.) is acceptable. However, in the event that data from other sources cannot be acquired, the Permittee will be responsible to collect the data. Data collected by the Permittee for each nest should include, at a minimum, the information in the table below. This information will be provided to the Raleigh Field Office in the annual report, and will be used to periodically assess the cumulative effects of these projects on seas turtle nesting and hatchling production and monitor suitability of post construction beaches for nesting. Please see REPORTING REQUIREMENTS below.

Parameter	Measurement	Variable
Number of False Crawls	Visual Assessment of all false crawls	Number/location of false crawls in nourished areas; any interaction of turtles with obstructions, such as sand bags or scarps, should be noted.
Nests	Number	The number of sea turtle nests in nourished areas should be noted. If possible, the location of all sea turtle nests should be marked on a project map, and approximate distance to scarps or sandbags measured in meters. Any abnormal cavity morphologies should be reported as well as whether turtle touched sandbags or scarps during nest excavation.
Nests	Lost Nests	The number of nests lost to inundation or erosion or the number with lost markers.

Nests	Relocated nests	The number of nests relocated and a map of the relocation area(s). The number of successfully hatched eggs per relocated nest.
Lighting Impacts	Disoriented sea turtles	The number of disoriented hatchlings and adults.

44. A report describing any actions taken must be submitted to the Raleigh Field Office following completion of the proposed work for each year when a sand placement activity has occurred. The report must include the following information:
- a. Project location (latitude and longitude)
 - b. Project description (linear feet of beach, actual fill template, access points and borrow areas)
 - c. Date of actual construction activities
 - d. Name and qualifications of personnel involved in sea turtle nesting surveys and relocation activities (separate the nesting surveys for nourished and non- nourished areas)
 - e. Descriptions an locations of self-release beach sites
 - f. Sand compaction, escarpment formation, and lighting survey results.
45. Upon locating a dead, injured, or sick individual of an endangered or threatened species, initial notification must be made to the USFWS’s Law Enforcement Office below. Additional notification must be made to the USFWS’s Ecological Services Field Office identified above and to the NCWRC at (252) 241-7367. Care should be taken in handling sick or injured individuals and in the preservation of specimens in the best possible state for later analysis of cause of death or injury.

Mr. Jason Keith
U.S. Fish and Wildlife Service
551-F Pylon Drive
Raleigh, North Carolina 27606
919-856-4786, Extension 34

NAVIGATION

46. This permit does not authorize the interference with any existing or proposed Federal project, and the Permittee will not be entitled to compensation for damage or injury to the authorized structure or work which may be caused from existing or future operations undertaken by the United States in the public interest.

47. No attempt will be made by the Permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the authorized work. Use of the permitted activity must not interfere with the public's right to free navigation on all navigable waters of the United States.
48. The Permittee must install and maintain, at its expense, any signal lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, on all authorized facilities constructed within navigable waters of the United States.
49. The Permittee 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. Contact with the U.S. Coast Guard will initiate the Local Notice for Mariners procedures to ensure all safety precautions for aids to navigation are implemented. The Permittee shall notify the USACE when this coordination with the USCG has commenced and provide updates as requested.

SECTION 10

50. The Permittee, upon receipt of a notice of revocation of this permit or upon its expiration before completion of the work will, without expense to the United States and in such time and manner as the Secretary of the Army or his authorized representative may direct, restore the waterway to its former conditions. If the Permittee fails to comply with this direction, the Secretary or his representative may restore the waterway, by contract or otherwise, and recover the cost from the Permittee.
51. The Permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the Permittee will be required, upon due notice from the USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal, relocation, or alteration. The Permittee shall notify NOAA/NATIONAL OCEAN SERVICE Chief Source Data Unit NCS261, 1315 E West HWY- RM 7316, Silver Spring, MD 20910-3282 at least two weeks prior to beginning work and upon completion of work.

EXCAVATION/DREDGING

52. Hopper dredging is being approved under the NMFS South Atlantic Regional Biological Opinion (RBO) dated 1997, which can be viewed on the ERDC web site at the following link: <http://el.erdc.usace.army.mil/seaturtles/refs-bo.cfm>. The RBO includes an Incidental Take Statement (ITS) issued to the USACE. Under the RBO/ITS, incidental takes are authorized on a Fiscal Year (FY) (October 1 - September 30) basis to be metered out by the Division Commander, South Atlantic Division, U.S. Army Corps of

Engineers for the southeastern United States for Corps' Civil and Military projects. The Permittee is hereby advised to avoid any incidental take in that such take may trigger the cessation of hopper dredging for the remainder of that FY. The Permittee understands and agrees that, even where it is in full compliance with the terms and conditions of the RBO/ITS, incidental take by the Permittee may require suspension of the permit by the USACE. The amount of incidental take that will trigger suspension, and the need for any such suspension, shall be determined at the discretion of the USACE. The Permittee understands and agrees on behalf of itself, its agents, contractors, and other representatives, that no claim, legal action in equity or for damages, adjustment, or other entitlement against the USACE shall arise as a result of such suspension or related action.

53. The Permittee shall immediately notify the USACE Regulatory Project Manager that an incidental take has occurred. The USACE Regulatory Project Manager responsible for this project is Mr. Josh Pelletier who may be contacted at the Washington Regulatory Field Office, 2507 W. 5th Street, Washington, North Carolina, 27889, by telephone at (910) 251-4564, or e-mail raleigh.w.bland@usace.army.mil. Dredging operations shall immediately cease upon incidental take of any sea turtle species or Atlantic Sturgeon until the Wilmington District Commander, or his designee, notifies the Permittee to resume dredging. The Sea Turtle or Atlantic sturgeon incidental take data form will be filled out by the Observer within 6 hours of the take event and e-mailed in pdf format to takereport.nmfsser@noaa.gov and the USACE Regulatory Project Manager. In accordance with the RBO, all hopper dredges shall have an Observer on board who meets the guidelines as established on the website listed in Special Condition 65 below

54. Pre-Dredging Submittals.

- a. No dredging shall be performed by a hopper dredge without the inclusion of a rigid sea turtle deflector device. The Permittee shall electronically submit drawings to the USACE Regulatory Project Manager prior to commencement of dredging, showing the proposed device and its attachment. These drawings shall include the approach angle for any and all depths to be dredged during the dredging. The Permittee shall not commence hopper dredging until approval of the sea turtle deflector device has been granted by the USACE.
- b. The Permittee 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.
- c. The Permittee shall electronically submit an operational plan to achieve protection of sea turtles during the hopper dredging 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.
- d. During turning operations the pumps must either be shut off or reduced in speed to the point where no suction velocity or vacuum exists. No dredging work shall be allowed to commence until approval of the turtle deflector device has been granted by the USACE, Wilmington District. Sample Turtle Deflector Design Details are available on the website listed in Special Condition 65 below. A copy of the approved drawings and calculations shall be available on the vessel during dredging operations.

55. Within 10 days from the date of initiating the authorized work, the Permittee shall provide to the USACE, the completed Hopper Dredge Startup Inspection Checklist form with a written notification of the date of commencement of work authorized by this permit. An inspection of the hopper dredge will be scheduled and performed by the Wilmington District inspector after receipt of the notification of commencement. Inspection checklists are located on the website listed in Special Condition 65 below.

56. Hopper dredge drag heads shall be equipped with sea turtle deflectors which are rigidly attached. Deflectors shall be solid with no openings in the face. No dredging shall be

performed by a hopper dredge without an installed turtle deflector device approved by the Wilmington District inspector. Sample Turtle Deflector Design Details are on the web site indicated in Special Condition 65 below.

a. Deflector Design.

(1) The leading V-shaped portion of the deflector shall have an included angle of less than 90 degrees. Internal reinforcement shall be installed in the deflector to prevent structural failure of the device. The leading edge of the deflector shall be designed to have a plowing effect of at least 6 inches in depth when the drag head is being operated. Appropriate instrumentation or indicator shall be used and kept in proper calibration to insure the critical "approach angle." (Information Only Note: The design "approach angle", or the angle of lower drag head pipe relative to the average sediment plane, is very important to the proper operation of a deflector. If the lower drag head pipe angle in actual dredging conditions varies tremendously from the design angle of approach used in the development of the deflector, the 6-inch plowing effect does not occur. Therefore, every effort should be made to insure this design "approach angle" is maintained with the lower drag pipe.)

(2) If adjustable depth deflectors are installed, they shall be solidly attached to the drag head using either a hinged aft attachment point or an aft trunnion attachment point in association with an adjustable pin front attachment point or cable front attachment point with a stop set to obtain the 6-inch plowing effect. This arrangement allows fine-tuning the 6-inch plowing effect for varying depths. After the deflector is properly adjusted there shall be no openings between the deflector and the drag head that are more than 4-inches by 4-inches.

b. In-flow baskets and overflow screening.

(1) The Permittee shall ensure that baskets or screening are installed over the hopper inflow(s) and overflow (s) with no greater than 4-inch by 4-inch openings. The method selected shall depend on the construction of the dredge used and shall be approved by the Wilmington District inspector prior to commencement of dredging. The screening shall provide 100% screening of the hopper inflow(s) and overflow(s). The screens and/or baskets shall remain in place throughout the performance of the work. The turtle deflector device and inflow/overflow screens shall be maintained in operational condition for the entire dredging operation. If during dredging operations, the Permittee cannot meet the requirements of the inflow and overflow screening, the USACE Regulatory Project Manager shall be contacted immediately.

(2) The Permittee shall install and maintain floodlights suitable for illumination of the baskets or screening to allow the Observer to safely monitor the hopper baskets or screening during non-daylight hours or other periods of poor visibility. Safe access shall be provided to the inflow and overflow baskets or screens to allow the Observer to inspect for turtles and Atlantic sturgeon, or parts thereof, clean the

baskets or screens for the next loading cycle, and document any screening deficiencies. During periods of time when observers are performing inspections of inflow and overflow baskets or screening, proper lockout/tag out procedures and fall protection shall be implemented.

c. Drag head grating.

(1) Drag head grating may be used to prevent over-sized objects (relative to respective pump and distribution system designs) from reaching and becoming lodged or damaging, the dredge pump and/or slurry distribution system. The Permittee may not use a drag head grating system that would prevent turtle remains from entering the hopper inflow screening. 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.) shall be submitted. No dredging shall begin until the Wilmington District inspector has approved all grating and screening.

57. Hopper Dredge Operation.

- a. The Permittee shall operate the hopper dredge to minimize the possibility of taking sea turtles or sturgeon and to comply with the requirements stated in the Incidental Take Statement provided by the NMFS in its RBO.
- b. The turtle deflector device and inflow/overflow screens shall be maintained in operational condition for the entire dredging operation.
- c. 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. Pumping water through the drag heads shall cease while maneuvering or during travel to/from the disposal area. If the required dredging section includes compacted fine sands or stiff clays, a properly configured arrangement of teeth may enhance dredge efficiency, which reduces total dredging hours, and turtle takes. The operation of a drag head with teeth must be monitored for each dredged section to insure that excessive material is not forced into the suction line. When excess high-density material enters the suction line, suction velocities drop to extremely low levels causing conditions for plugging of the suction pipe. Dredge operators should configure and operate their equipment to eliminate all low-level suction velocities. Pipe plugging in the past was easily corrected, when low suction velocities occurred, by raising the drag head off the bottom until the suction velocities increased to an appropriate level. Pipe plugging cannot be corrected by raising the drag head off the bottom. Arrangements of teeth and/or the reconfiguration of teeth should be made during the dredging process to optimize the suction velocities.
- d. Raising the drag head off the bottom to increase suction velocities is not acceptable. The primary adjustment for providing additional mixing water to the

suction line should be through water ports. To insure that suction velocities do not drop below appropriate levels, the Permittee shall monitor production meters throughout the job and adjust primarily the number and opening sizes of water ports. Water port openings on top of the drag head or on raised standpipes above the drag head shall be screened before they are utilized on the dredging project. If a dredge section includes sandy shoals on one end of a tract line and mud sediments on the other end of the tract line, the equipment shall be adjusted to eliminate drag head pick-ups to clear the suction line.

- e. The drag head shall be buried a minimum of 6 inches in the sediment at all times to maintain drag head efficacy in reducing incidental takes. Maximum borrow area dredge depths identified in the attached plans shall not be exceeded to achieve this effective plowing depth.
 - f. During turning operations the pumps must either be shut off or reduced in speed to the point where no suction velocity or vacuum exists.
58. Dredging Quality Management. Dredging and dredged material disposal and monitoring of dredging projects using the Dredging Quality Management (DQM) system shall be implemented for this DA permit. The Permittee shall ensure that each hopper dredge assigned to the work authorized by this DA permit is equipped with DQM, previously known as ‘Silent Inspector’, for hopper dredge monitoring. The Permittee’s DQM system must have been certified by the DQM Support Team within one calendar year prior to the initiation of the dredging/disposal. Questions regarding certification should be addressed to the DQM Support Center at 251-690-3011. Additional information about the DQM System can be found at <http://dqm.usace.army.mil>. The Permittee is responsible for insuring that the DQM system is operational throughout the dredging and disposal project and that project data are submitted to the DQM National Support Center in accordance with the specifications provided at the aforementioned website. The Permittee shall contact the National Dredging Quality Management (DQM) program (<http://dqm.usace.army.mil/>) to assure that project information is loaded and data is being appropriately transferred prior to project commencement.
59. Sea Turtle Non-Capture Trawl Sweeping. In order to minimize or reduce taking of turtles during dredging, non-capture trawling may be required if the USACE determines that it is necessary to reduce entrainment risk. This type of trawling is designed to use non-capture type trawling equipment to sweep in the proximity of the dredging operations in order to stimulate sea turtles to move out of the dredge path. No sea turtles will be captured using this trawling technique. Non-capture trawl sweeping may be performed 48 hours prior to initiating dredging and may continue throughout dredging operations. Conduct non-capture trawl sweeping operations in the vicinity of dredge operations, but maintain a safe distance from the dredge. Trawl equipment used (e.g. trawling nets) and trawl sweeping operations shall be conducted such that no sea turtles or other marine organism by-catch are captured. As much as possible, non-capture trawl sweeping shall be conducted to maximize the amount of time during each 24-hour trawl day that the trawl equipment (e.g. trawling nets) sweeps the bottom sediment in the vicinity of the dredging operation (i.e. maximize the bottom time with the trawling

equipment). Such trawling in the vicinity of the dredge shall be conducted continuously, stopping after every 4 to 6 hours to check the condition of the trawl equipment and assure that no turtles have been captured.

a. Non-capture Trawl Sweeping Period. Non-capture trawl sweeping shall be conducted as described below:

(1) A day of non-capture trawl sweeping shall be defined as 24 hours of continuous trawling.

(2) Non-capture trawl sweeping may be conducted as 24-hours of trawling as a continuous trawl; however, two separate crews must be available on board to work two 12-hour shifts.

b. Turtle Handling and Endangered Species Permits. No sea turtles are to be intentionally captured during non-capture trawl sweeping operations. No endangered species permits to handle sea turtles are required for non-capture trawl sweeping. Should a sea turtle become entangled in the trawling nets; the nearest marine facility must be notified for arrangements to be made to transfer the animal as needed.

c. Reporting. A daily log will be kept for each non-capture trawl sweeping operations. The non-capture trawl sweeping log will be submitted to the USACE Regulatory Project Manager at the completion of the project. Data to be included with this log daily will include:

(1) GIS coordinate of trawl locations at 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 (e.g. condition of equipment at the end of each sweep, snags occurring during each sweep, incidental debris, etc.).

(5) Water Quality and Physical Measurements: Water temperature measurements shall be taken at the water surface each day using a laboratory thermometer. Weather conditions shall be recorded from visual observations and instruments on the trawler. Weather conditions, air temperature, wind velocity and direction, high and low tides, sea state-wave height, and precipitation shall be recorded on the Trawling Form on the web site indicated in Special Condition 65 below.

d. Non-Capture Trawl Sweeping Equipment:

(1) To reduce the chances of sea turtles becoming entangled and caught in the net webbing during non-capture trawl sweeping, the Contractor shall use standard flat-style shrimp trawling nets. Nets shall have one to two-inch

webbing holes, the webbing should be made of nylon material (preferably dipped.)

- (2) The bag end of these nets shall be completely cut out so that the nets remaining on the rigging are approximately 30 to 50-feet long. The nets shall be long enough to provide a trailing length of net in the water to “stimulate turtles” to move but not be long enough to be able to twist when: i) being pulled in the water; ii) being pulled up and onto the deck; iii) the vessel is stationary; or iv) the trawl vessel turns while trawling. This net length may be shorter or longer depending on the specific configurations of the trawler and its rigging, but must be set up to specifically prevent the twisting of the net. The nets should be installed and adjusted such that organisms are not being collected (turtles and other by-catch).
- (3) The bag end of the nets shall be cut away to create a large open end on the nets. The webbing shall be monitored so that tears and rips do not occur in the remaining webbing that might entangle and capture organisms (particularly turtles).
- (4) To ensure that the lead line and mouth of the trawl nets maintain contact with the seafloor as best as possible, the lead line of each net shall be rigged with weights, mud rollers, tickler chains and/or trawling cookies (as appropriate for the environmental conditions and sediment type).

For the first 48 hours after beginning non-capture trawling operations, pull and check the nets every hour to evaluate and document the:

- a. Status of the nets (particularly twisting of the tail end).
- b. Net contents (turtles and other by catch) and, after the first 48-hours and appropriate net configuration has been established, gradually increase trawling times to a maximum of 2-3-hours.
- c. Trawler Equipment Breakdown: Should there be a breakdown of trawler equipment that would cause the trawler to leave the area where dredging is underway during any period of time when non-capture trawl sweeping is required, the dredge may continue to operate for up to 48 hours, as long as no turtles are taken, and subject to the discretion of the USACE Regulatory Project Manager. 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.

60. Endangered Species Observers: During dredging operations, observers approved by the NMFS for sea turtles, Atlantic sturgeon and whales shall be aboard to monitor for the presence of the species. Observer coverage shall be 100 percent (24hr/day) and shall be conducted year round. During transit to and from the disposal area, the observer shall monitor from the bridge during daylight hours for the presence of endangered species,

especially the Northern right whale, during the period December through March. Records shall be kept of the date, time, and approximate location of all marine mammal sightings. Care shall be taken not to closely approach any whales or manatees observed during dredging. The observer shall serve as a lookout to alert the vessel pilot of the occurrence of these animals. If any are observed, collisions shall be avoided either through reduced vessel speed, course alteration, or both. During the evening hours, when there is limited visibility due to fog, or when there are sea states of greater than Beaufort 3, the dredge must slow down to 5 knots or less when transiting between areas if whales have been spotted within 15 nm of the vessel's path within 24 previous hours. If a right whale is sighted, the dredge operator shall maintain a 500-yard buffer between the vessel and any whale.

During dredging operations, while drag heads are submerged, the observer shall continuously monitor the inflow and/or overflow screening for turtles and/or turtle parts and Atlantic sturgeon and/or Atlantic sturgeon parts. Upon completion of each load cycle, drag heads should be monitored as the drag head is lifted from the sea surface and is placed on the saddle in order to assure that sea turtles that may be impinged within drag head are not lost and un-accounted for. Observers shall physically inspect drag heads and inflow and overflow screening/boxes for threatened and endangered species take. Other abiotic and biotic debris found in the screens during their examination for sea turtle or sturgeon parts shall be recorded and then disposed of so as not to impede the functioning of the screens during the next load cycle.

- a. **Monitoring Reports.** The results of the monitoring shall be recorded on the appropriate observation sheets. There is a sheet for each load, a daily summary sheet, and a weekly summary sheet. In addition, there will be a post dredging summary sheet. Observations sheets will be completed regardless of whether any takes of Atlantic sturgeon, whales, or sea turtles occur. In the event of any sea turtle or Atlantic Sturgeon take by the dredge, appropriate incident reporting forms shall be completed. Additionally, all specimens shall be photographed with a digital camera. These photographs shall be attached to respective reports for documentation. Dredging of subsequent loads shall not commence until all appropriate reports are completed from the previous dredging load to ensure completeness and thoroughness of documentation associated with the incidental take. Reports shall be submitted to the USACE within 24-hours of the take. Copies of the forms must be legible. Observer forms may be accessed on the web site indicated in Special Condition 65 below.
- b. **Endangered Species Observer(s).** A list of endangered species observer-biologists (ESOs) that have been NMFS-approved to monitor threatened/endangered species takes by hopper dredges can be obtained by contacting NOAA Fisheries' Northeast Region, Protected Resources Division. The main contact is Ms. Julie Crocker; she can be reached at julie.crocker@noaa.gov or 978-281-9300 ext.6530.

- c. Manatee, Sea Turtle, Atlantic Sturgeon and Whale Sighting Reports. Any take concerning a manatee, sea turtle, Atlantic sturgeon, or whale; or sighting of any injured or incapacitated manatees, sea turtles, or whales shall be reported immediately to the USACE by notifying the personnel indicated in the list in Special Condition 64 below. A copy of the incidental take report shall be provided within 24 hours of the incident. The Permittee shall also immediately report any collision with and/or injury to a manatee to the USFWS, the NMFS, and the NCWRC. If a sea turtle and/or Atlantic sturgeon is taken by the dredge (live or dead), the Permittee shall email a PDF version of the incidental take report to NOAA-Fisheries Southeast Region at the following email address within 24 hours of the take: takereport.nmfsser@noaa.gov, also providing a copy to the USACE Regulatory Project Manager.\

61. The contractor is required to participate in the Right Whale Early Warning System to protect North Atlantic right whales. If a right whale or any other species of whale is reported within the area, then the contractor will be required to follow the enclosed NMFS's Southeast Region Vessel Strike Avoidance Measures and Reporting for Mariners (revised February 2008) (Appendix B), except where specific measures below are in conflict, in which case the measures in this Opinion govern (e.g., a speed restriction to a maximum of 10 knots (kt) at all times in right whale calving areas [i.e., federally-protected areas off the southeastern U.S. coast designated and implemented for the protection of right whales and their calves during their calving/migration season] for vessels 65 ft in length or greater). By law, vessels shall maintain a 500-yd buffer between the vessel and any North Atlantic right whale [as required by federal regulation 50 CFR 224.103 (c)].

62. Turtles take by hopper dredge. Upon removal of sea turtle and/or parts from the drag head or screening, observers shall take photographs to sufficiently document major characteristics of the turtle or turtle parts including but not limited to dorsal, ventral, anterior, and posterior views. For all photographs taken, a backdrop shall be prepared to document the dredge name, observer company name, contract title, time, date, species, load number, location of dredging, and specific location taken (drag head, screening, etc.). Carcass/turtle parts shall also be scanned for flipper and Passive Integrated Transponder (PIT) tags. Any identified tags shall be recorded on the "Sea Turtle Incidental Take Form" that is included in the "Endangered Species Observer Program Forms" located on the web site indicated in Special Condition number 65 below. Turtle parts which cannot be positively identified to species shall be preserved by the observer(s) for later identification. A tissue sample shall be collected from any lethally taken sea turtle and submitted under the process stated in the Protocol for Collecting Tissue Samples from Turtles for Genetic Analysis found in the website listed in Special Condition 65 below. All genetic samples collected shall be submitted to NMFS within 30-days of collection and verification of submittal to NMFS shall be provided to the USACE Regulatory Project Manager. After all data collection is complete, the sea turtle parts shall be

placed in plastic bags, labeled as to the time, date, and dredged reach of collection, kept frozen and transported to the NMFS Laboratory in Beaufort, North Carolina. If no local facility is capable of receiving the sea turtle/parts, they should be marked (spray paint works well), weighted down and disposed of under the direction of the USACE Regulatory Project Manager.

63. Observer(s) shall measure, weigh, scan for Passive Integrated Transponder (PIT) tags, and photograph any live turtle(s) incidentally taken by the dredge. If no tagging was identified, observers shall tag the turtle using Iconnel flipper and PIT tags if they are qualified to do so. Observer(s) or their authorized representative shall coordinate with the USACE Regulatory Project Manager and NMFS to transport, as soon as possible, the live turtle(s) taken by the dredge to an approved rehabilitation facility in the project area.
64. The Permittee shall maintain a log detailing all incidents, including sightings, collisions with, injuries, or killing of manatees, sea turtles, Atlantic sturgeon, or whales occurring during the contract period. The data shall be recorded on forms available on the website as indicated in Special Condition number 15. All data in original form shall be forwarded directly to Wilmington District within 10 days of collection. Following project completion, a report summarizing the above incidents and sightings shall be submitted to the following:
 - a. Wilmington District Regulatory Contact: Josh.R.Pelletier@usace.army.mil
 - b. South Atlantic Dredging Projects: Jennifer.L.Owens@usace.army.mil
 - c. National Marine Fisheries Service
 - i. Protected Resources Branch
 - ii. 263 13th Avenue South
 - iii. St. Petersburg, Florida 33701
 - d. North Carolina Wildlife Resources Commission
 - i. Matthew Godfrey
 - ii. 307 Live Oak Street
 - iii. Beaufort, North Carolina 28516
65. Reporting Forms. In order to avoid use of outdated forms, the Permittee is directed to the following website for forms and attachments required under this permit. Links to these forms are under the heading Turtle Information, <http://dqm.usace.army.mil/odess/#/download>, (List of forms required under this permit include: Sea Turtle/Pre and Post-Hopper Dredging Project Checklist, Endangered Species Observer Program Forms and Sea Turtle Trawling Report).