US Army Corps
of Engineers ®
Wilmington District

General Re-evaluation Report and Environmental Assessment
Surf City, Onslow and Pender Counties, North Carolina
Coastal Storm Risk Management Project

Appendix R: Public and Agency Comments and USACE Responses

Final

February 2025

	SC CSRM Public and Agency Comments	Response
Catawba Nation		
1	The Catawba have no concerns with the draft.	Noted.
NCWRC		
2	To minimize impacts to nesting sea turtles, the nesting sea turtle moratorium, May 1 - November 15 or until the last known sea turtle nest has emerged, should be observed.	The project will abide by the beach placement window for renourishments. Completing initial construction with one continuous disturbance event (any time of year) increases flexibility and efficiencies and measures will be implemented to reduce impacts to the most vulnerable species in the project area. This change from the Authorized Plan to construct the project with no environmental window will also reduce potential risks to the critically endangered North Atlantic Right Whale. The Section 7 Endangered Species Act consultation with the US Fish and Wildlife Service has been completed . All Terms and Conditions required to obtain an Incidental Take Statement will be met. Therefore, although the project is likely to adversely affect nesting sea turtles, the overall impacts are deemed not significant and will not result in Jeopardy to any species.
3	The NCWRC still has concerns with the use of hopper dredges during months with warmer water temperatures. We see the use of December 1 - March 31 window as a measure to minimize sea turtle interactions as interactions with sea turtles increase when water temperatures reach 57 degrees Fahrenheit.	Please see response to comment #2 for information regarding impacts during warmer months. Additionally, the project will comply with the NMFS 2020 South Atlantic Regional Biological Opinion (SARBO) and Project Design Criteria (PDC) will be met. The SARBO concluded that hopper dredging with implementation of the applicable PDCs is not likely to jeopardize the continued existence of the following ESA-listed species or Distinct Population Segments (DPS): Northwest Atlantic DPS of loggerhead sea turtles, green sea turtles (South and North Atlantic DPSs), leatherback sea turtles, and Kemp's ridley sea turtles.
4	The USACE stated the project has demonstrated minimization since the Town of North Topsail Beach has withdrawn from participation in the federal project. However, the NCWRC does not really consider this as minimization as impacts within the proposed project area have not changed and may actually be considered as increased since the proposal now includes working during sea turtle nesting season.	Removing the North Topsail portion of the project avoids the impacts associated with dredging and sand placement at North Topsail Beach, which reduces the original authorized project's overall impacts. The proposed plan also reduces impacts to the now critically endangered North Atlantic Right Whale and to repeated beach impacts due to multiple placement events for initial construction. We agree that potential impacts to organisms active during the warmer weather months may increase; however, impacts would not be significant.
5	While the NCWRC understands the engineered design and permit must be based upon survey data from a set date and point, we must also recognize ocean front shorelines are very dynamic. Therefore, it is requested that prior to conducting nourishment activities, a survey is conducted approximately three months prior to the final construction design to provide an accurate representation of the beach profile. Adjustments may need to be made after the survey to compliment the intent of the permit as well as to protect environmental and public resources.	It is USACE's common practice to request beach and bathymetry survey data from the Town for the design phase of the nourishment in the year prior to a solicitation. USACE also requires the Contractor to provide a preconstruction survey of the project area as part of the technical specifications of the contract documents to allow adjustments to the authorized template, as well as, post construction survey to ensure the authorized template has been met within the acceptable tolerances.
6	Beach quality material that is compatible with native beach is essential. If during construction non-compatible material is placed on the beach, nourishment activities should stop, state and federal agencies should be notified, and it should be determined if the dredge needs to move to an alternative location within the borrow source to obtain compatible material. Additionally, state and federal agencies should assess the non-compatible material for removal to determine if mitigation is required. Compatibility includes grain size, percent fines, calcium carbonate, color, and clast count. Even if material is within the NCDCM's sediment criteria, concerns may be raised and remediation measures requested if the sediment placed provides much lower quality sea turtle nesting habitat.	All material will be screened at the beach with a 3/4 inch screen to catch non-beach quality material, including shell, clay balls and MEC. The contractor shall be present and will monitor the dredge discharge location and work zone continuously while the discharge is occurring. Frequent visual inspections of the beach placement will also be conducted by a government inspector and Wilmington District technical staff.

	SC CSRM Public and Agency Comments	Response
NCWRC		
7	If material placed on the beach is significantly darker than native material, the sex of sea turtle hatchlings produced from nests laid in the material will be skewed. Sand temperatures that are too high can cause failure of incubating sea turtle eggs. Therefore, no material placed on the beach should have a Munsell value darker than 10YR-5.	Geophysical investigations do not indicate the existence of persistently dark colored sand. Beach quality sand usually does not contain darker colors as opposed to material that contains shell, phosphates and other non-beach compatible sediments like silt and clay. Wilmington District has historically met the intent of the State sediment compatibility standards through diligent best professional judgment practices coupled with detailed sediment compatibility analyses, which evaluate the grain size characteristics of the material within the potential borrow area. To assure that beach placement material consists predominately of sand, the Wilmington District compatibility practice requires that the borrow area contains sediment with an average weighted fine-grained material content of less than (<) 10% passing the #200 sieve. These guidelines have historically been utilized by the Wilmington District to assure compatibility for CSRM projects (i.e., Wrightsville, Carolina, Kure, and Ocean Isle beaches) with much success.
8	A nesting female sea turtle is not deterred from nesting on newly constructed areas with a gentle slope of 5:1 or less. While the NCWRC prefers a slope of 3:1, 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 can be considered. The current 25 foot wide dune width crest is also rather wide and is not generally consistent with natural dune widths.	The beach is designed as 10 feet horizontal to one foot vertical on the seaward slope of dune. Therefore, this should be in compliance with the 5:1 outlined in the comment. Modeling determined that 25 feet wide for the berm was optimal for beach protection.
9	Therefore, any new or modified material placed on the beach should tie into the existing profile in a manner to not create backslope or troughs. If existing profiles exhibit topography conditions that lend themselves to this situation, the area should be remediated prior to project implementation.	Concur. To prevent back slope or troughs that hinder turtles, all nourishment events would tie into the existing profile in a manner that does not create backslope or troughs.
10	Dune planting is proposed within the project area. Consideration should be given to existing vegetation and structures, as well as any proposals post nourishment. Just as with any activity on the shore, measures should be implemented to follow existing regulatory definitions and rule and minimize wildlife impacts. In general, the NCWRC requests activities occur as much as possible outside the sea turtle nesting season and that contact continues throughout this project or any other upcoming planting events during nesting season. Appendix N within the document seems to show support from NCWRC and guidance for planting during the sea turtle nesting season moratorium. However, the guidance is only for areas less than 2500 feet in length and should not be considered as appropriate for this proposal. Planting outside the hot, dry summer months is also better for the survivability of the plants. Planting of native grasses should only be done on dunes, not beach berms, and should only progress 1/4 the distance down the waterward slope of the dune as measured from the crest.	Dune planting will be performed from the crest to the toe of the dune. A typical detail will be included on the plans showing row spacing and planting pattern and will not progress past 1/4 the distance down the waterward slope of the dune as measured from the crest. Plantings will be limited during the summertime to the maximum extent practicable. To reduce erosion, the contractor will use sand fencing during the summer period until planting is more optimal.
11	Shoreline stabilization measures, including dune planting and sand fencing, have been conducted within the project area. These management tools should be taken into account when planning nourishment activities. Sand fencing installation should not be conducted without consultation with the NCWRC and USFWS. Sand fence installation can have significant influence on sea turtle nesting activities, especially when dunes that have less steep slopes can serve as nesting habitat and as dunes, including fencing and planted grasses, are positioned closer to mean high water. Fencing should also only be installed on dunes, and not down the beach berm and beach profile. Just as with any activity on the shore, measures should be implemented to follow existing regulatory definitions and guidance to minimize wildlife impacts. The installation of fencing between other sections of fencing and/or the placement of Christmas trees and hay bales between the fencing creates sea turtle entanglement concerns and nesting restrictions along portions of the beach.	Sand fencing (not hay bales, Christmas tress or fencing crates) will be used as a temporary solution during the summer time to prevent erosion. Sand fencing will be removed when planting. The USACE will coordinate with the WRC before any sand fencing is placed.

	SC CSRM Public and Agency Comments	Response
NCWRC		
12	In addition to the concern with troughs on the backside of dunes, NCWRC staff have noticed that with the expansion of beach berm and beach slope widths, areas within the beach profile sometimes do not exhibit natural beach profiles or slopes toward the ocean. As a result, sometimes valleys, swales, or ponds within the beach profile form as the beach constricts or after equipment removed. These low areas remain inundated for extended periods and are no longer suitable habitat for sea turtle egg incubation. Any nests laid in these areas must be relocated so the eggs can successfully produce hatchlings. Any such features present before project completion should be remediated to ensure the beach slopes naturally to the ocean and that depresses areas are not present in the constructed beach profile.	Concur. Any valleys, swales, or ponds that occur within the beach profile during construction will be fixed to meet design criteria. Once construction is complete and the contractor has left the beach, then it will be the local sponsor's responsibility to remedy any issues.
13	Visual surveys for escarpments along the project area must be made immediately after completing of sand placement, and within 30 days from 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 reconfigured to minimize scarp formation by May 1. Any escarpment removal must be reported by location. NCWRC and the USFWS must be contacted immediately if subsequent reformation of escarpments that interfere with sea turtle nesting or that exceeds 18 inches in height for a distance of 100 feet occurs during the nesting and hatchling season to determine the appropriate action to be taken.	Concur. Surveys and coordination will be conducted as outlined. This commitment has been added to Table 14 Additional Environmental Commitments.
14	The NCWRC is concerned with the frequent disturbance of the beach and borrow areas from this and other projects in the vicinity. These impacts should be assessed cumulatively, not merely on an individual project basis.	Cumulative impacts are assessed in Section 5.15 and all past, present and reasonably foreseeable future projects are addressed.
SHPO		
15	While the section of the Area of Potential Effect (APE) comprising the beachfront has been cleared in the past by our office (with a single beach wreck, NTB0001, marked for avoidance), the latest submission includes new offshore borrow areas that have not yet been subject to archaeological review. Due to the high potential for submerged shipwrecks along North Carolina’s coast, we therefore recommend a comprehensive maritime archaeological survey for the potential borrow areas noted in the submission.	After coordination with the USACE the SHPO provided the following on December 6, 2024, “The updated project submission indicates that the offshore borrow areas designated for this renourishment effort have in fact been surveyed for the presence of archaeological resources in 2005 and 2010 respectively, and that no known historic properties have been recorded within said proposed offshore sand borrow locations. Based on the information provided, we therefore rescind our previous request for an archaeological survey and the project may proceed as planned.”

	SC CSRM Public and Agency Comments	Response
DMF		
16	Due to the lengthy time since the geophysical surveys occurred, the inaccuracy of those surveys (based on the outcome of the non-federal project), and the numerous storms that have occurred and potentially changed the distribution and character of sediment and hard bottom around the proposed borrow area, the DMF recommends that any areas proposed for dredging be reinvestigated to verify suitability as a borrow area and as a means to avoid and minimize impacts to hard bottom and their associated fauna and flora. Different methodology than used in the previous geophysical surveys may be needed to accurately characterize the benthic structure and community. If different methodology is used, the EA should include an explanation on how the results of the more recent surveys are more accurate.	The Wilmington District conducted an evaluation of existing data in 2020 which included a review of the estimated volumes based on the original compatibility analysis and a limited scope bathymetric survey for borrow areas G, H, L, N, O, and P. An additional bathymetric survey was conducted in March 2020 by Geodynamics using Multi-Beam Echosounder (MBES) for Borrow Areas G, H, L, N, O, and P. The purpose of this survey was to verify the existing conditions of the borrow areas and determine the magnitude of change using volume analysis with those surveys acquired from 2011-2013. A track line spacing of 400 feet was used in this survey and an interpolated surface was generated using Surfer 9 software. To reduce error and provide a more accurate depiction of volumetric change, the 2011-2013 data were re-gridded using the 2020 parameters. The finalized surfaces, at 5 feet resolution, were then exported to ArcGIS. Borings within the 2020 dredge box delineations also included a rescreening of the laboratory analysis to exclude those areas containing >10 percent material retained on the composite gravel sieves (#4, #3/8, and #3/4). Estimated volumes were then recalculated utilizing ArcGIS (USACE, 2020). Note that the existing boring logs represent the conditions at the time of sampling. Multiple geophysical surveys have been performed offshore including the following: Topsail Geophysical Survey (Bathy/Sub Bottom/Paleochannels) Ocean Surveys Inc. and Greenhorne & O'Mara; USACE 2011 Borrow Area A (Bathy/Sub Bottom); USACE 2011 Borrow Areas G, H, J, L, O, and P (Bathy/Sub bottom); 2013 Borrow Areas E, F, N, R, and S (Bathy/Sub bottom). Some of these included ground-truthing while Vibracore collection was used for ground-truthing other areas. Additional Vibracore collection was obtained in Borrow Areas A, O, and P and further Vibracore collection is scheduled to occur in other borrow areas before being utilized for sand nourishment. Hardbottom areas have been identified and low-relief buffers established. In addition, a review of the data indicates the presence of sorted bedform packages between known rock outcrops which can appear as brighter, stippled areas that mimic rock and hardbottom in the geophysical data.

	SC CSRM Public and Agency Comments	Response
DMF		
17	In addition to the concerns regarding the borrow areas, there are concerns with the effects of year-round construction that would be best addressed through a moratorium. Moratoria have been used by state and federal agencies for decades as a tool to minimize impacts to aquatic resources, including fish, invertebrates, as well as coastal habitats. Sensitivity to dredging varies by species, life stage, environmental conditions, the landscape position of the dredging project relative to inlets, spawning and nursery areas, sensitive habitats, and duration and extent of exposure. Bottom substrate, tidal flow, water temperature and dissolved oxygen are some of the environmental factors influencing the extent of impact. Moratoria are necessary to maintain healthy stocks and ensure that the habitats they depend on remain functioning. Moratoria vary regionally due to the time that a species life stage is present in a given area. The moratorium periods recommended by DMF are based on sampling data, known fish distributions, and documented impacts to a fish or habitat from exposure to turbidity or sedimentation. Dates are approximate and dependent on site specific environmental conditions at the proposed project time and are sometimes shortened or lengthened. For beach nourishment projects, DMF generally supports the moratoria requested by WRC and USFWS of May 1 to November 15 for protection of sea turtles and shorebirds. This time of year corresponds to the period of peak invertebrate productivity in the intertidal beach and nearshore waters, as well as for fish in the surf zone and nearshore waters. Coquina clams (Donax variabilis) and mole crabs (Emerita talpoida) are the dominant invertebrates in the intertidal beach and nearby soft bottom, and serve as the dominant prey for spot (Leiostomus xanthurus), Atlantic croaker (Micropogonias undulates), kingfish (Menticirrhus americanus), and Florida pompano (Trachinotus carolinus). Kingfish and Florida pompano use the surf zone as a nursery area. The proposed CSRM will place sand over all of the intertidal bottom and extend over shallow subtidal bottom, causing mortality of benthos in that area. Loss of a major food source for multiple years could significantly impact foraging ability. *Continued below*	Impacts to USFWS species are addressed in comment #2 above. Additional literature review was conducted to identify additional impacts and added to the GRR/EA. The determination that there are greater impacts to some species during the spring and summer months is still valid, but due to the scale of impacts to the resource as apposed to the large quantity of suitable habitat, overall impacts are still minor. Multiple environmental commitments are also in place to help minimize impacts to important species (See response to # 2, 3, 6, 19 and 20). Borrow Areas without hard bottom will be used for initial construction, which will minimize impacts on aquatic species that use those areas. Future nourishments will abide by the November 16 through April 30th window. During initial construction and nourishments, the active construction zone of the beach placement would cover approximately 1,000 feet of the beach of the 6-mile-long project. Progress along the beach for both initial construction and nourishment events would be expected to move along the beach at a relatively slow rate (i.e., about a mile per month or about 200 feet per day). Such a rate of progress is slow enough that surf-feeding fishes could move to other areas not affected by the nourishment operation. As the dredging operation passes by a section of beach, that area would be available for recolonization by invertebrates. Even though some species may be present in higher abundance and in varying life stages, the impacts would still be short term and recoverable based on continued implementation of the 2010 environmental commitments and any new commitments established as a component of this analysis. Overall, these impacts would be minor when considering the abundance of habitat in the ocean as compared to the footprint of the identified borrow sites and the areas disturbed by placement.
17 Cont'	*Continued from above* Studies have found that benthic recovery at the intertidal beach can be enhanced by having compatible sediment, limiting sand placement to winter months, limit time interval between projects to allow full benthic recovery, and limit length of beach project to provide undisturbed areas as a source of invertebrates to recruit into disturbed areas, (DEQ 2016). The EA should include literature review on the impact of beach placement on those species, considering the scope and timing of the project – year-round, four years, ten miles. Given that seasonality will not be used as a minimization measure, the EA should include other avoidance and minimization measures that will be utilized in this project to offset and limit impacts to benthos and fish from year-round construction.	
18	While a six-year nourishment interval after the initial project would provide time for benthic recovery, DMF is concerned with the impact on beach invertebrate populations should non-federal projects continue to occur. Minimal time for shoreline recovery from all projects should be taken into account and scheduling to allow at least four years between beach placement events. Staggering of project reaches would also be beneficial to allow increased recovery of benthic invertebrates.	Limitations due to funding availability and sand need constrain the ability for the USACE to assure two or more beaches are not being nourished at the same time. Also, Topsail and North Topsail Beach do not have regular nourishment intervals making it difficult to synchronize work schedules. In combination with past, present and foreseeable future hopper dredging of federal and non-federal projects along the entire North Carolina coast, impacts to benthic organisms, fisheries and marine reptiles and mammals would be minimal. Therefore, cumulative effects from of the proposed project are expected to be minor.

	SC CSRM Public and Agency Comments	Response
DMF		
19	Hard bottom habitat and the nearby soft bottom is used by several species of juvenile reef fish, such as black sea bass (Centropristis striata), gag (Mycteroperca microlepis), red grouper (Epinephelus morio), and red porgy (Pagrus pagrus), white grunt (Haemulon plumierii), and tomtate (Haemulon aurolineatum). Year-round construction would increase the exposure risk to those species. Beach nourishment has been cited as a threat to nearshore hard bottom (Greene 2002; Lindeman and Snyder 1999; Riggs et al. 1998). The monitoring of hard bottom required for the non-federal North Topsail Beach project in Phase 5 (3.5 miles of beach) reported loss of approximately seven acres of hard bottom associated with dredging and beach, primarily around edges of the hard bottom patches. The scoping document should include information on the effect of habitat loss, disturbance, and turbidity to these species. The document should also include avoidance and minimization measures that will be taken to prevent similar loss of hard bottom for this project.	Only initial construction will be done without a window. An extensive geophysical investigation was conducted and outlined in the 2010 FEA/EIS to identify hardbottom presence and delineate hardbottom that was identified in and near several borrow areas. Hard-bottom buffers of 500 meters (1,640 ft.) were established for high- and moderate-relief hardbottom and 122 meters (400 ft.) were established for low relief hardbottom. The USACE has coordinated with the NMFS to obtain input to develop a plan to monitor sedimentation effects from dredging activities (sediment resuspension and potential deposition on hardbottom habitat) within the 122-meter (400-foot) hardbottom buffer as outlined in Appendix L. Only short-term impacts to hardbottom habitat communities are expected from offshore dredging operations due to suspended/resuspended sediment plumes. As part of the borrow area use plan, the contractor would recover the maximum amount of beach nourishment material within one portion of a borrow area using a two-foot buffer (i.e., leaving approximately 2 feet of sand on the bottom) before relocating to another portion of the same borrow area or to a separate borrow area. The potential impacts to the hardbottom communities would not be expected to exceed the natural sedimentation and turbidity conditions of the project area. These impacts may include minor and short-term suspended sediment plumes and related turbidity. However, the high quality of the sediment selected for beach fill and the small amount of beach affected at any point in time would not suggest that this activity poses a significant threat.
20	In summary, there will be additional impacts to habitat function and fisheries if year-round dredging occurs. The offshore area is unique compared to other nourishment projects using borrow areas, due to the extent of nearshore hard bottom. This habitat is relatively rare and of key importance to reef fish. The DMF is concerned that year-round dredging and beach placement at this unique location will result in permanent hard bottom habitat loss and loss of soft bottom function. Year-round dredging increases the potential impact to aquatic resources like fish, as well as sea turtles and shore birds that are an important component of the ecosystem. The EA needs to fully evaluate the impacts and include measures to avoid and minimize impacts. Because of the known vulnerability of the hard bottom and that this beach project will be one of the first to perform year-round construction, monitoring specific to this project is necessary.	Additional literature review was conducted to identify additional impacts and added to the GRR/EA. The determination that there are greater impacts to some species during the spring and summer months is still valid, but due to the scale of impacts to the resource as opposed to the large quantity of suitable habitat, overall impacts would still be minor. Multiple environmental commitments are also in place to help minimize impacts to important species (See response to # 2, 3, 6, 16, and 19). Monitoring of sedimentation effects from dredging activities (sediment resuspension and potential deposition on hardbottom habitat) within the 122-meter (400-foot) hardbottom buffer will be a part of the project. Permanent hard bottom habitat loss is not anticipated. Any loss of soft bottom function should be short-term and minor.
USFWS		
21	All of the species listed above are affected in general by coastal activity and anthropogenic disturbance. The Service is concerned for the potential for direct and indirect adverse impacts to listed species and nesting shorebirds from construction activities, presence of heavy machinery in suitable habitat, increased human activity, and increased light pollution. In addition, the Service is concerned for potential future storm recovery or erosion protection activities. Development doesn't allow beaches to move naturally, which, combined with sea level rise and increased erosion from tropical storms effectively limits the available habitat along the oceanfront portions of developed barrier islands. Rising water further limits the available habitat and results in a condition called “coastal squeeze” (Defeo et al. 2021).	The proposed action is to accomplish initial construction any time of year (no environmental window) and to accomplish all nourishments within the beach placement window of November 16 to April 30. A new USFWS BO was obtained on December 4, 2024 and the USACE will adhere to all terms and Conditions of the BO. USACE would implement a sea turtle nest monitoring plan as noted for any work within the sea turtle nesting season. Concur that Surf City is nearly 100 percent built out, limiting areas of available habitat; however, construction of the Surf City CSRM project will enhance available habitat through sand placement waterward of development, creating and enhancing habitat that has not existed for many years in the natural, eroded, state of the beach.
22	The Service can concur with the Corps’ determinations of May Affect, Not Likely to Adversely Affect for the West Indian manatee, based on the location of the borrow area and low likelihood of presence of the species.	Noted.

	SC CSRM Public and Agency Comments	Response
USFWS		
23	The Service concurs with the species determination of “May Affect, Likely to Adversely Affect” for the loggerhead sea turtle, and the determination of “May Affect, Not Likely to Adversely Affect” for the leatherback and hawksbill sea turtles because there are no recent records of those two species on Topsail Island. However, the Service cannot concur with the determination of “May Affect, Not Likely to Adversely Affect” for the green and Kemp’s ridley sea turtles. The project is likely to cause direct and/or indirect adverse effects to nesting sea turtle species, and the presence of nesting green sea turtles and Kemp’s ridley sea turtles cannot be discounted in the proposed project area. The Service recommends that the Corps request the initiation of formal consultation for this project for the loggerhead, green, and Kemp’s ridley sea turtles. The Corps has also determined that the proposed action is not likely to “adversely modify” loggerhead critical habitat. The Service recognizes that the Corps probably intended to make a determination of “Not Likely to Adversely Affect” (because the determination of adverse modification is relatively equivalent to the determination of species jeopardy). The Service recommends that effects to designated loggerhead nesting critical habitat be included in the request for formal consultation.	Noted. The green and Kemp's ridley sea turtle determinations were changed to "May Affect, Likely to Adversely Affect". The effects to designated loggerhead nesting critical habitat have been included in the Biological Assessment submitted to the USFWS. The USACE received the USFWS Biological Opinion dated December 3, 2024.
24	Piping plover: Although piping plover critical habitat won't be affected by the Surf City project, Topsail provides important habitat for plovers on the north and south extents. Presence of wintering birds in the middle of the island cannot be discounted. Therefore, the Service cannot concur with the determination of May Affect, Not Likely to Adversely Affect for piping plover and recommends including piping plover in the request for formal consultation.	Designation has been changed to "May Affect, Likely to Adversely Affect" and was included in formal consultation.
25	Red knot: Sand placement activities will disturb migrating and wintering red knot. Individuals are likely to succumb from lack of prey availability and increased disturbance during one of their most sensitive times, migration. The formation of high-value inlet complex habitats is moot if they are unable to reach northern breeding grounds, especially since an indirect effect listed was an increase in recreational activities within red knot habitats. Long-term positive effects will not make up for increased disturbance during their most sensitive migration events. The Service cannot concur with the determination of May Affect, Not Likely to Adversely Affect for red knot and recommends including red knot in the request for formal consultation. Also, the Corps did not analyze the potential for effects to proposed critical habitat for the red knot. The Service recommends that the Corps include coordination of potential impacts to proposed critical habitat during formal consultation.	Red knots and the designated critical habitat were added to formal consultation and changed in this document to "May Affect, Likely to Adversely Affect".
26	In order to avoid and minimize impacts to the West Indian manatee, the Service recommends that any contract for the project require adherence to the Service's 2017 Guidelines for Avoiding Impacts to the West Indian Manatee.	Noted.
27	The Service acknowledges that the Corps has tested sediment quality in the currently proposed borrow areas and found it compatible, but existing survey methods may not be adequate to characterize an entire area, and there is a risk that incompatible sediment will be placed on the beach. The Corps states that it will require the contractor be present and monitor the dredge discharge location and work zone continuously while the discharge is occurring, and that frequent visual inspections of the beach placement will be conducted by a government inspector and Wilmington District technical staff. The Service appreciates the commitment to continuous sediment quality monitoring. During formal consultation, the Service would like to work with the Corps to develop other procedures as appropriate to avoid and minimize the placement of incompatible materials on the beach.	All material will be screened at the beach with a 3/4 inch screen to catch non-beach quality material including shell, clay balls and MEC. The contractor shall be present and will monitor the dredge discharge location and work zone continuously while the discharge is occurring. Frequent visual inspections of the beach placement will also be conducted by a government inspector and Wilmington District technical staff. Additionally, the USACE has collected additional cores in Borrow Areas A, O, and P, and plans to collect more additional cores in the remaining borrows before use in nourishment in an effort to reduce uncertainty in the quality and quantity of material. Geotechnical data collection was designed to obtain, when possible, 500 foot spacing, which will help account for the lateral variability found in these areas.

	SC CSRM Public and Agency Comments	Response
NCDOT		
28	The NCDOT – Transportation Planning Division would like to make the applicant aware of the following 2024-2033 State Transportation Improvement Program (STIP) projects of 1) R-5877, 2) R-5899, and 3) R-5900. Here are details of each STIP Project: R-5877: An intersection improvement at US 17 and NC 210, R-5899: A roundabout construction at SR 1560 (Watts Landing Road), R-5900: A roundabout construction at SR 1534 (Belt Road).	Noted.
NC DEQ State Clearinghouse		
29	The Department of Environment Quality has reviewed the proposal for the referenced project. Based on the information provided, NC Wildlife Resources Commission is the only agency to provided valuable comments which should be addressed in the environmental assessment document.	Noted.
NC DPS DEM		
30	No comment	Noted.
NC Agriculture		
31	No comment	Noted.
Public		
31	If Surf City were to encounter a storm of significance that alters the current beach profile prior to the construction start, would this possibly require a new plan or new series of approvals?	If the town were to encounter a significant storm prior to the start of construction, a new plan or series of approvals would not be required. If the condition of the beach were to change prior to construction, those changes would be captured in a beach survey to be completed prior to the start of construction. Any changes will be captured then and incorporated into the existing plan and approvals.
33	If during the construction phase a significant storm occurs, would plans be adjusted and the construction continue (with possible adjustments) or would reapprovals and funding need to be secured?	No reapprovals would be required for the project if a storm were to occur during construction. The beach would be evaluated post-storm to determine the impact and if any adjustments would be required, USACE would coordinate those changes with the contractor and the town. Additional funding and real estate interests may be required depending on the severity of the impact and changes.
34	As the property owner, is it my responsibility to build a new walkover from my home to the beach?	Yes, it is the homeowner's responsibility to build new walkovers from individual homes to the beach.
35	Do you know/think we can expect reduction in property insurance rates because of this project?	USACE has no input to property insurance rates. Homeowners would need to speak with their insurance company to discuss any impacts the project may have on rates.

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J.R. "JOEY" HOPKINS
SECRETARY

September 10, 2024

MEMORANDUM TO: Crystal Best
NC State Clearinghouse
Administrative Building, 5th Floor, Room #5026

FROM: Wongoo Lee
Wongoo Lee
Transportation Engineer
Coastal Planning Group, Transportation Planning Division

SUBJECT: **25-E-0000-0037**

These are comments from the NCDOT – Transportation Planning Division (TPD) regarding North Carolina State Clearinghouse of Administration Intergovernmental Review **24-E-0000-0037**.

The NCDOT – Transportation Planning Division would like to make the applicant aware of the following 2024-2033 State Transportation Improvement Program (STIP) projects of 1) R-5877, 2) R-5899, and 3) R-5900.

Here are details of each STIP Project:

- **R-5877**: An intersection improvement at US 17 and NC 210,
- **R-5899**: A roundabout construction at SR 1560 (Watts Landing Road),
- **R-5900**: A roundabout construction at SR 1534 (Belt Road).

2024-2033 State Transportation Improvement Program (STIP) project details can be found at:
https://ncdot.maps.arcgis.com/home/webmap/viewer.html?webmap=cb02f4f828974670ad01bb83be91b18c

Please see the attached graphics for a better view of the proposal. If you have any further questions, please do not hesitate to contact me at 919-707-0925 or email at wlee3@ncdot.gov.

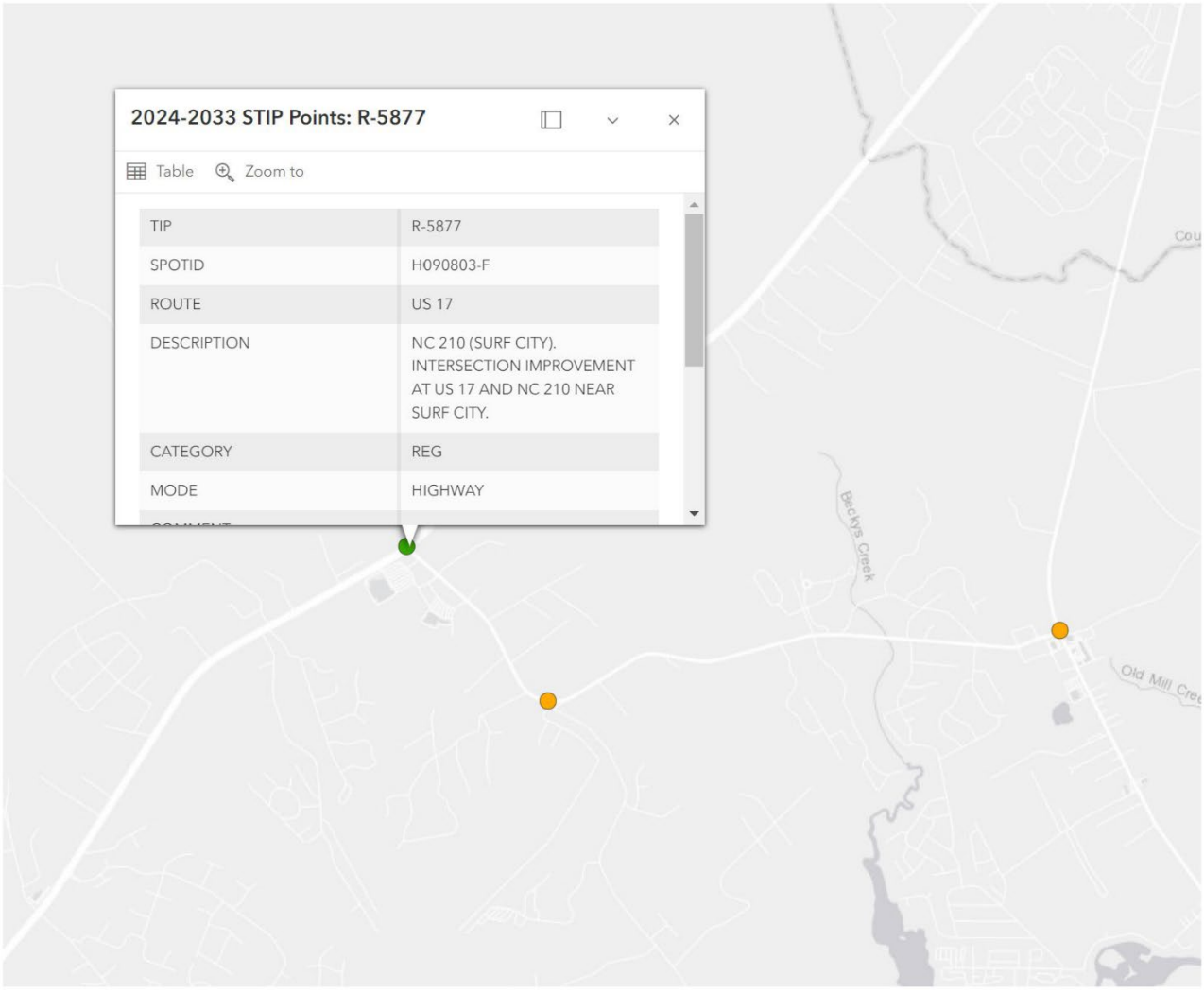
Attachments: 2024-2033 State Transportation Improvement Program (STIP) projects maps

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING DIVISION
1554 MAIL SERVICE CENTER
RALEIGH, NC 27699-1554

Telephone: (919) 707-0900
Fax: (919) 733-9794
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601


2024-2033 STIP Points: R-5877
Table
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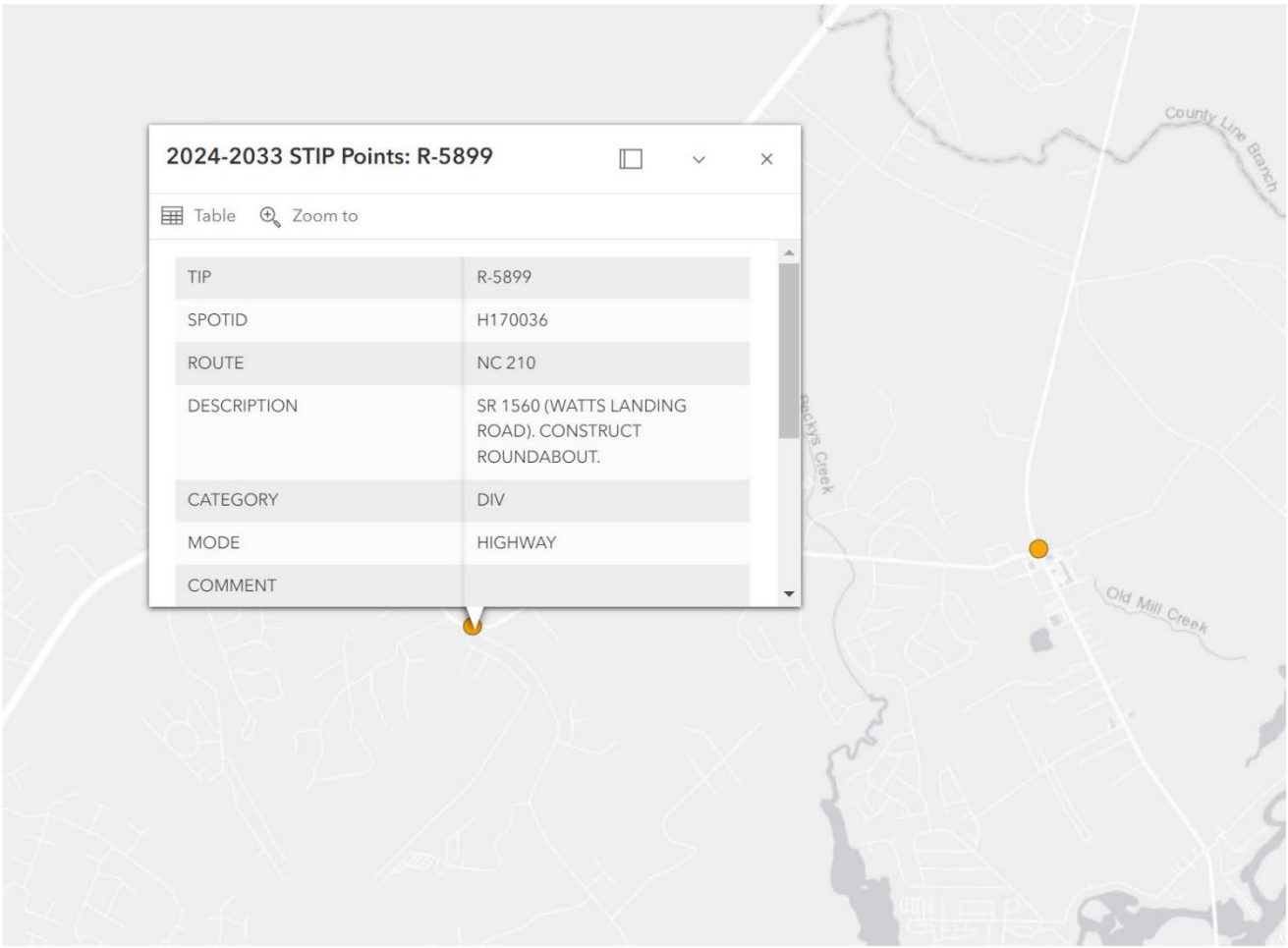
TIP
R-5877
SPOTID
H090803-F
ROUTE
US 17
DESCRIPTION
NC 210 (SURF CITY). INTERSECTION IMPROVEMENT AT US 17 AND NC 210 NEAR SURF CITY.
CATEGORY
REG
MODE
HIGHWAY
Becky's Creek
Old Mill Cree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R-5899
SPOTID
H170036
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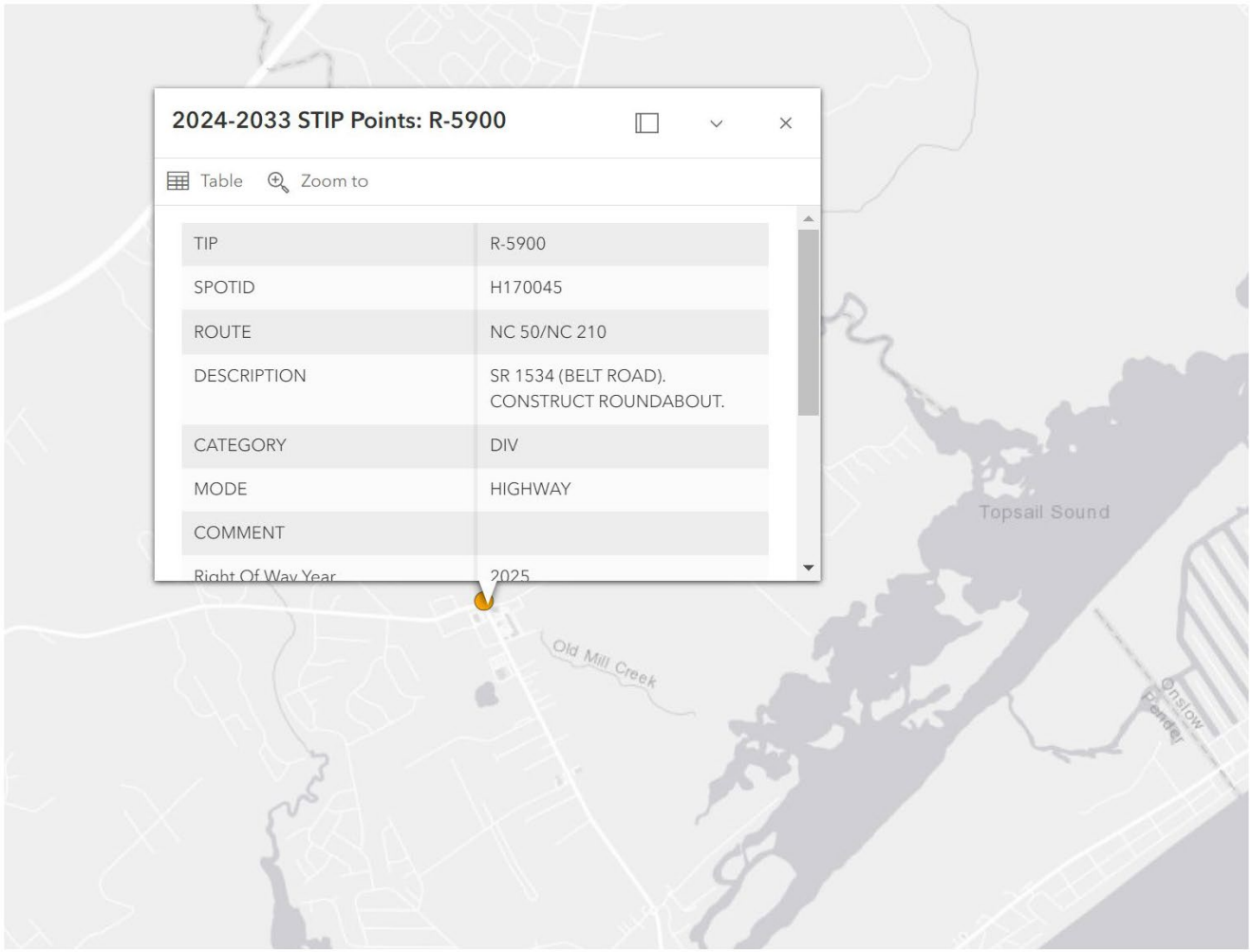
NC 210
DESCRIPTION
SR 1560 (WATTS LANDING ROAD). CONSTRUCT ROUNDABOUT.
CATEGORY
DIV
MODE
HIGHWAY
COMMENT
County Line Branch
Old Mill Creek


2024-2033 STIP Points: R-5900
Table
Zoom to
TIP
R-5900
SPOTID
H170045
ROUTE
NC 50/NC 210
DESCRIPTION
SR 1534 (BELT ROAD). CONSTRUCT ROUNDABOUT.
CATEGORY
DIV
MODE
HIGHWAY
COMMENT
Right Of Way Year
2025
Topsail Sound
Old Mill Creek
Onslow
Pender

Control No.: 25-E-0000-0037

County.: ONSLOW, PENDER

Date Received: 8/30/2024

Agency Response: 9/30/2024

Review Closed: 9/30/2024

JINTAO WEN

CLEARINGHOUSE COORDINATOR

DPS - DIV OF EMERGENCY MANAGEMENT

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: Department of the Army

Project Desc.: The purpose and need of this project is to reduce the impacts and risks associated with erosion, flooding, storm surge and wave attack created by severe coastal storms and sea level rise for the Town of Surf City, NC.

An electronic version of the draft report is available on the USACE, Wilmington District website

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: JINTAO WEN Date: 9/23/2024

Control No.: 25-E-0000-0037

County.: ONSLOW, PENDER

Date Received: 8/30/2024

Agency Response: 9/30/2024

Review Closed: 9/30/2024

DIANNE FARRER
CLEARINGHOUSE COORDINATOR
DEPT OF AGRICULTURE

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: Department of the Army

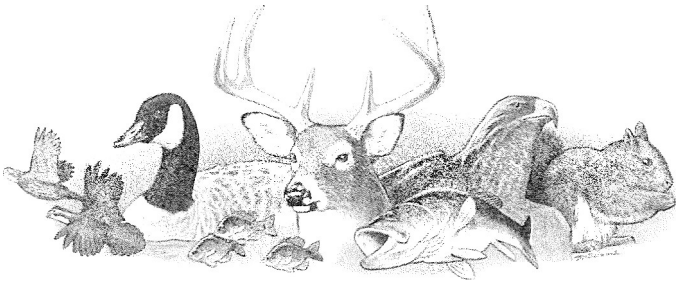
Project Desc.: The purpose and need of this project is to reduce the impacts and risks associated with erosion, flooding, storm surge and wave attack created by severe coastal storms and sea level rise for the Town of Surf City, NC.

An electronic version of the draft report is available on the USACE, Wilmington District website

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: DIANNE FARRER Date: 9/16/2024



North Carolina Wildlife Resources Commission

Cameron Ingram, Executive Director

MEMORANDUM

TO: Eric Gasch
US Army Corps of Engineers, Wilmington District

FROM: Maria T. Dunn, Coastal Coordinator
Habitat Conservation Division

DATE: October 4, 2024

SUBJECT: USACE Draft General Re-Evaluation Report and Environmental Assessment for Surf City Coastal Storm Risk Management Project, Onslow and Pender Counties, North Carolina.

Biologists with the North Carolina Wildlife Resources Commission (NCWRC) reviewed the notice of availability, report, and environmental assessment with regard to impacts on fish and wildlife resources for the above referenced project. The current project area is located along a six-mile segment of ocean shoreline within Surf City and no longer includes the ocean shoreline within the Town of North Topsail Beach. Our comments are provided in accordance with provisions of the Coastal Area Management Act (G.S. 113A-100 through 113A-128), as amended, Sections 401 and 404 of the Clean Water Act, as amended, the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the Magnuson-Stevens Fishery Conservation and Management Act (FCMA), as amended (16 U.S.C. 1801 et seq.), and the Migratory Bird Treaty Act (16 U.S.C. 703-712 et seq.).

The US Army Corps of Engineers (USACE) has provided a Notice of Availability for the Re-Evaluation Report and Environmental assessment (EA) for the Coastal Storm Risk Management (CSRM) Project for Surf City and The Town of North Topsail Beach. Since the 2010 and subsequent 2020 documents, the Town of North Topsail Beach has withdrawn from participation in the federal project, leaving the 6.0-mile portion within Surf City rather than the entire 9.9-mile project area. The original authorized project design template and nourishment intervals have not changed as compared to those described in the Integrated Feasibility Report and Environmental Impact Statement (EIS), Coastal Storm Damage Reduction, Surf City and North Topsail Beach, North Carolina, December 2010. The beach and berm design consists of a 25' wide sand dune constructed to+ 14' NAVD 88 fronted by a 50' wide design beach berm constructed to an elevation of +6' NAVD 88. A tapered 1000' transition at the Surf City/

Mailing Address: Habitat Conservation • 1721 Mail Service Center • Raleigh, NC 27699-1721
Telephone: (919) 707-0220 • **Fax:** (919) 707-0028

North Topsail Beach town limit will be included on the north end with a tapered end within the limits of Surf City to the south. The dune will be stabilized by the planting of native dune grasses.

The NCWRC has reviewed the current proposal and is familiar with the project area and proposed CSRM proposal. We have participated in numerous meetings and correspondences throughout the last 16 years and has provided official comments during this process (Ellwood 5 March 201O; Ellwood 28 October 2010; Dunn 24 April 2020; Dunn 25 June 2020). Concerns stated within the previous correspondences, especially the proposal to work within the shorebird and sea turtle nesting periods, are still valid.

Topsail Island, which includes the project area of Surf City, provides important habitat opportunities for several shorebirds and sea turtles. These habitats are within the project area and would be impacted by any activities associated with the CSRM, but especially if conducted within their nesting seasons. Shorebirds that utilize the area include the federally listed piping plover *(Charadrius melodus* red-knot *(Calidris canutus rufa),* and imp01tant North Carolina species including Wilson's plover *(Charadrius wilsonia),* American oystercatcher *(Haematopus palliatus),* common tern *(Sterna hirundo),* gull-billed tern *(Sterna nilotica),* and black skimmer *(Rynchops niger).* Sea turtle species that utilize Topsail Island include loggerhead *(Caretta caretta),* green *(Chelonia mydas),* leatherback *(Dermochelys coriacea),* hawksbill *(Eretmochelys imbricate),* and Kemp's ridley *(Lepidochelys kempii).* Piping plover and loggerhead sea turtles have areas designated as critical nesting habitat by the US Fish and Wildlife Service (USFWS) within the complex. Topsail Island is also the highest-density sea turtle nesting beach in North Carolina. Therefore, it is crucial for measures to be in place during CSRM implementation to avoid and minimize impacts to these species' habitats. Moratoria were established to protect threatened and endangered species that use the shoreline for foraging and nesting. Although we understand weather during the winter months will make the project more difficult, the impact of this project and the cumulative impact of other projects during the nesting season may adversely affect wildlife resources. Interruption of breeding and nesting season could be detrimental to their populations, especially during a 16-month period for initial CSRM construction.

A summer month construction schedule includes the time of peak migration for beach nesting shorebirds. These birds forage in the project area during their migration along the Atlantic shore. Potential impacts may include direct disturbance of birds as a result of continuous construction activities and decreased recruitment of invertebrates that provide food. Placement of material on the beach during the summer season would decrease invertebrate populations, especially if beach nourishment work is done in subsequent years. Placement of material on the beaches outside the summer months would minimize these impacts. It is difficult to discern the definition of the long-term management, the triggers that would initiate another nourishment activity, the anticipated frequency of events, and how those will take into account non-federal projects. Frequency of nourishment events greatly affects invertebrate recruitment and beach recovery.

Dredging, especially by hopper dredges, during May through November would increase the likelihood of sea turtle take incidents. The National Marine Fisheries Service (NMFS) limits the number of incidental takes of sea turtles by dredge activity in the Southeastern United States. While we understand the new South Atlantic Region Biological Opinion (SARBO) has altered many management measures for dredge activities, further discussion on how to deter incidental take of sea turtles during hopper dredge use, protocol in case of sea tmtle capture, potential tagging methodology for captured sea turtles, and notification protocol will be discussed during any pre-construction meetings. Any dredge activity allowed during nesting season must anticipate these interactions and plan accordingly. Consistent tagging, reporting, and release protocols are expected.

Additionally, the placement of material on beaches may disrupt turtle nesting by causing lost nesting opportunities, destruction of unmarked nests (not all eggs can be successfully located by nesting

monitors), and the misorientation ofhatchlings due to artificial lights used at night on construction equipment. Misorientation could be minimized with the use of directional LED lights that have a predominant wavelength of about 650 nm. Lighting on the beach at night should be minimized to what is necessary for safe operations and if equipment used on the beach at night do not have the proper LED lights, operation should occur under acceptable lights without the use of traditional lights and wavelengths. Even with the intensive monitoring for nesting turtles, a percentage of nests are still expected to be unsuccessful due to missed nests or relocation failures. Some indirect impacts may include an increased disturbance of nesting females and reduced availability of suitable nesting habitat due to changes in the beach's physical characteristics, such as increased escarpment formation, increased compaction levels, and other changes.

The USACE states this will be the initial event for the Surf City CSRM. While this statement is correct, the activity will not be the first nourishment activity on the shore. Several non-federal projects have been permitted and constructed within the project area since the CSRM proposal. These projects have nourished the beach and have changed the profile from the conditions presented in previous USACE documents. In addition to these nourishment activities, several tropical storms have affected the area. Therefore, the USACE should consider the current profile of the shore and how the engineered profile presented earlier may need to be redeveloped. This may alter the amount of material needed or overall project design. It is recommended surveys are conducted immediately prior to any nourishment event to better understand the beach profile and needs.

Numerous nourishment projects have occurred throughout coastal North Carolina since the initial development of the Surf City CSRM. As a result of these projects, observations have been made that may not have been considered previously. "Over engineering" of a beach template or placing additional material on the shoreline may seem like a means to extend the life of a project, but undesirable effects, such as chronic escarpments and swales within the beach profile, as well as troughs landward of material placement, may occur. It is crucial that the engineered profile and placed material are suitable for the shoreline's current needs and characteristics. Therefore, the project design may need to change over time and not maintain and engineered design that is no longer appropriate.

Overall, the NCWRC does not object to the placement of material on the ocean shoreline of Surf City. However, to protect wildlife resources, we continue to request the following be incorporated into project design and included as permit conditions:

- Surf City has exhibited some of the highest density of sea turtle nests for the state of North Carolina, including Kemp's Ridley, hawksbill, leatherback, loggerhead, and green sea turtles. To minimize impacts to nesting sea turtles, the nesting sea turtle moratorium, May 1 - November 15 or until the last known sea turtle nest has emerged, should be observed. This includes the removal of heavy equipment, any remediation that may be needed on the beach, dune planting and sand fence construction. While some concessions have been given in this area to complete projects during the sea turtle moratorium, these allowances were given for projects that needed additional time to complete, not to work through the moratorium. Other areas have received allowance to work during the sea turtle nesting moratorium; however, these were areas with north facing beaches that exhibit different sea conditions than south facing beaches such as Topsail Island.

- The NCWRC still has concern with the use of hopper dredges during months with warmer water temperatures. We see the use of the December 1 - March 31 window as a measure to minimize sea turtle interactions as interactions with sea turtles increase when water temperatures reach 57 degrees Fahrenheit.

- The USACE stated the project has demonstrated minimization since the Town of North Topsail Beach has withdrawn from participation in the federal project. However, the NCWRC does not really consider this as minimization as impacts within the proposed project area have not changed and may actually be considered as increased since the proposal now includes working during sea turtle nesting season.

- While the NCWRC understands the engineered design and permit must be based upon survey data from a set date and point, we must also recognize ocean front shorelines are very dynamic. Therefore, it is requested that prior to conducting nourishment activities, a survey is conducted approximately three months prior to the final construction design to provide an accurate representation of the beach profile. Adjustments may need to be made after the survey to compliment the intent of the permit as well as to protect environmental and public resources.

- Beach quality material that is compatible with native beach is essential. If during construction non-compatible material is placed on the beach, nourishment activities should stop, state and federal agencies should be notified, and it should be determined if the dredge needs to move to an alternative location within the borrow source to obtain compatible material. Additionally, state and federal agencies should assess the non-compatible material for removal to determine if mitigation is required. Compatibility includes grain size, percent fines, calcium carbonate, color, and clast count. Even if material is within the NCDCM's sediment criteria, concerns may be raised and remediation measures requested if the sediment placed provides much lower quality sea turtle nesting habitat.

- While Munsell values were developed for soil identification more so than sand compatibility, they can be used as a color reference to aid in the determination whether material placed on the beach is too dark. Darker sands absorb more solar radiation and therefore have higher temperatures than lighter colored sands. This is important on sea turtle nesting beaches as sea turtle sex is determined by egg incubation temperatures. If material placed on the beach is significantly darker than native material, the sex of sea turtle hatchlings produced from nests laid in this material will be skewed. Sand temperatures that are too high can cause failure of incubating sea turtle eggs. Therefore, no material placed on the beach should have a wet Munsell value darker than lOYR-5.

- Dunes are proposed within the project area. The NCWRC supports the USFWS recommendations on dune construction and beach profiles. These recommendations minimize misorientation of nesting females and hatchlings, increasing nest success. A nesting female sea turtle is not deterred from nesting on newly constructed areas with a gentle slope of 5:1 or less. While the NCWRC prefers a slope of 3:1, 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 can be considered. The current 25' wide dune width crest is also rather wide and is not generally consistent with natural dune widths.

- Any backslope on newly constructed dunes and beaches or any troughs that exist between the constructed area and the frontal dune system obstructs the line of sight for a turtle. This obstruction may hinder the adult female from finding the ocean, leading to additional post nesting exhaustion. The obstructed line of sight also may prevent hatchlings from orienting to the ocean or physically block their path, leading to increased predation and death from extended time on the shore. Therefore, any new or modified

material placed on the beach should tie into the existing profile in a manner to not create backslope or troughs. If existing profiles exhibit topography conditions that lend themselves to this situation, the area should be remediated prior to project implementation.

- Dune planting is proposed within the project area. Consideration should be given to existing vegetation and structures, as well as any proposals post nourishment. Just as with any activity on the shore, measures should be implemented to follow existing regulatory definitions and rule and minimize wildlife impacts. In general, the NCWRC requests activities occur as much as possible outside the sea turtle nesting season and that contact continues throughout this project or any other upcoming planting events during nesting season. Appendix N within the document seems to show support from NCWRC and guidance for planting during the sea turtle nesting moratorium. However, this guidance is only for areas less than 2500' in length and should not be considered as appropriate for this proposal. Planting outside the hot, dry summer months is also better for the survivability of the plants. Planting of native grasses should only be done on dunes, not beach berms, and should only progress¼ the distance down the waterward slope of the dune as measured from the crest. As an education and guidance tool, the following link can be referenced:

  https://content.ces.ncsu.edu/restorati on-and-management-of-coastal-dune-vegetation

- Shoreline stabilization measures, including dune planting and sand fencing, have been conducted within the project area. These management tools should be taken into account when planning nourishment activities. Sand fence installation should not be conducted without consultation with the NCWRC and USFWS. Sand fence installation can have significant influence on sea turtle nesting activities, especially when dunes that have less steep slopes can serve as nesting habitat and as dunes, including fencing and planted grasses, are positioned closer to mean high water. Fencing should also only be installed on dunes, and not down the beach berm and beach profile. Just as with any activity on the shore, measures should be implemented to follow existing regulatory definitions and guidance to minimize wildlife impacts. The installation of fencing between other sections of fencing and/or the placement of Christmas trees and hay bales between the fencing creates sea turtle entanglement concerns and nesting restrictions along portions of the beach.

- In addition to the concern with troughs on the backside of dunes, NCWRC staff have noticed that with the expansion of beach berm and beach slope widths, areas within the beach profile sometimes do not exhibit natural beach profiles or slopes toward the ocean. As a result, sometimes valleys, swales, or ponds within the beach profile form as the beach constricts or after equipment is removed. These low areas remain inundated for extended periods and are no longer suitable habitat for sea turtle egg incubation. Any nests laid in these areas must be relocated so the eggs can successfully produce hatchlings. Any such features present before project completion should be remediated to ensure the beach slopes naturally to the ocean and that depressed areas are not present in the constructed beach profile.

- 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" in height for a distance of 100' must be leveled and the beach profile reconfigured to minimize scarp formation by May I. Any escarpment removal must be reported by location. NCWRC and the USFWS must be contacted immediately if subsequent reformation of escarpments that interfere with sea turtle nesting or that exceed 18"in height for a distance of 100' occurs during the nesting and hatching season to determine the appropriate action to be taken.

- The NCWRC is concerned with the frequent disturbance of the beach and borrow areas from this and other projects in the vicinity. These impacts should be assessed cumulatively, not merely on an individual project basis.

We appreciate the opportunity to review and comment on this draft enviromnental assessment. lfyou need further assistance or additional information, please contact me at maria.dunn@ncwildlife.org or (252) 495-5554.

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

October 8, 2024

Justin Bashaw justin.p.bashaw@usace.army.mil
U.S. Army Corps of Engineers – Wilmington District
Wilmington Regulatory Field Office
69 Darlington Avenue
Wilmington, NC 28403

RE: Beach Renourishment South of Humphrey Ave to north of 9th Street, adjacent to the Atlantic Ocean/AIWW, Surf City, Pender County, ER 20-0050

Dear Mr. Bashaw:

Thank you for your September 3, 2024, submission concerning the above-referenced project. We have reviewed the project and offer the following comments.

While the section of the Area of Potential Effect (APE) comprising the beachfront has been cleared in the past by our office (with a single beach wreck, NTB0001, marked for avoidance), the latest submission includes new offshore borrow areas that have not yet been subject to archaeological review. Due to the high potential for submerged shipwrecks along North Carolina's coast, we therefore recommend a comprehensive maritime archaeological survey for the potential borrow areas noted in the submission.

The purpose of the survey is to identify archaeological sites and make recommendations regarding their eligibility for the National Register of Historic Places (NRHP). This work should be conducted by an experienced archaeologist, who meets the *Secretary of the Interior Professional Qualifications Standards*, as well as the procurement of a State ARPA permit, which is required for any work on state-owned land.

A list of archaeological consultants who have conducted or expressed an interest in contract work in North Carolina is available at https://archaeology.ncdcr.gov/archaeological-consultant-list. The archaeologists listed, or any other experienced archaeologist, may be contacted to conduct the recommended survey. ***Please note that our office requests consultation with the Office of State Archaeology Review Archaeologist to discuss appropriate field methodologies prior to the archaeological field investigation.***

OSA's Archaeological Standards and Guidelines for Background Research, Field Methodologies, Technical Reports, and Curation can be found online at: https://files.nc.gov/dncr-arch/OSA_Guidelines_Dec2017.pdf.

Please note that starting June 30, 2023, OSA will use Citrix ShareFile for archaeological consultants to submit digital archaeological reports and site files for Environmental Review. Consultants should review our ShareFile User Guidelines and submit a ShareFile User Access Form to Kim Urban (kimberly.urban@dncr.nc.gov) to obtain access to ShareFile if they have not already done so.

Additionally, the OSA has changed our Environmental Review report and site form submission requirements. We now require:

- One (1) digital copy of the archaeological survey report, to be sent through ShareFile.
- One (1) digital copy of each NC Site Form(s) with site map(s) for each site that was recorded as part of the archaeological investigation, to be sent through ShareFile. Please submit each site form as a separate document.
- Hard copies of reports will be requested by the OSA once we determine that no further changes to the report are needed. Concurrence letters will not be sent until after we receive the hard copy of the final archaeological survey report.

More information on our Environmental Review submission requirements can be found at: https://archaeology.ncdcr.gov/programs/environmental-review.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

cc:	Heather Coats, CAMA	heather.coats@deq.nc.gov
	Kadisha Molyneaux, SCH, (25-E-0000-0037)	state.clearinghouse@doa.nc.gov
	Eric Gasch, USACE	Eric.K.Gasch@usace.army.mil

Roy Cooper
Governor

Pamela B. Cashwell
Secretary

October 11, 2024

Eric Gasch
Department of the Army
Wilmington Dristrict
Corps of Engineers
Wilmington, NC 28403-1343

Re: SCH File # 25-E-0000-0037 The purpose and need of this project is to reduce the impacts and risks associated with erosion, flooding, storm surge and wave attack created by severe coastal storms and sea level rise for the Town of Surf City, NC.

An electronic version of the draft report is available on the USACE, Wilmington

Dear Eric Gasch:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act.

Attached to this letter are comments made in the review of this document. The Department of Cultural Resources, SHPO has requested additional information prior to their concurrence with the above referenced document.

Therefore, pursuant to 1 NCAC 25 .0506(c), this office requests that a supplemental document providing the additional information requested by the Department of Cultural Resources, SHPO be submitted to the Clearinghouse for further review and comment.

If you have any questions, please do not hesitate to contact me at (984) 236-0000.

Sincerely,

KADISHA MOLYNEAUX
State Environmental Review Clearinghouse

Attachments

ROY COOPER
Governor
MARY PENNY KELLEY
Secretary
JAMIE RAGAN
Director

NORTH CAROLINA
Environmental Quality

To: Kadisha Molyneau
State Clearinghouse
NC Department of Adminstration

From: Lyn Biles
Division of Environmental Assistance and Customer Service
NC Department of Environmental Quality

Re: 25-0037
Environmental Assessment - The purpose and need of this project is to reduce the impacts and risks associated with erosion, flooding, storm surge and wave attack created by severe coastal storms and sea level rise for the Town of Surf City, NC.
Onslow and Pender Counties

Date: October 11, 2024

The Department of Environment Quality has reviewed the proposal for the referenced project. Based on the information provided, NC Wildlife Resources Commission is the only agency to provided valuable comments which should be addressed the the environmental assessment document.

I have attached the comments for the applicant's review.

Thank you for the opportunity to respond.

Attachments

ROY COOPER
Governor

MARY PENNY KELLEY
Secretary

KATHY B. RAWLS
Director

To: Heather Coats, NC Division of Coastal Management

From: Zach Harrison, Section Chief Habitat and Enhancement, NC Division of Marine Fisheries

Through: Kimberlee Harding, Fisheries Specialist, NC Division of Marine Fisheries

SUBJECT: US Army Corps of Engineers Draft General Re-evaluation Report and Environmental Assessment, Surf City, Onslow and Pender Counties, North Carolina, Coastal Storm Risk Management (CSRM) Project, August 2024 (GRR/EA)

DATE: October 19, 2024

A North Carolina Division of Marine Fisheries (DMF) Fisheries Resource Specialist has reviewed the U.S. Army Corps of Engineers Wilmington District (Corps), Draft General Re-evaluation Report and Environmental Assessment, Surf City, Onslow and Pender Counties, North Carolina, Coastal Storm Risk Management (CSRM) Project, August 2024 (GRR/EA) for proposed actions that impact fish and fish habitats. These comments are provided under the authority of G.S. 113-131 that states that the marine and estuarine resources of North Carolina are public trust resources of the State and the Department is charged with stewardship of these resources, including commenting on environmental permit applications which may affect the public trust resources. Additionally, G.S. 143B-279.8 requires the Department to develop Coastal Habitat Protection Plans with recommendations that will result in long-term enhancement of coastal fisheries associated with each coastal habitat and to adhere to those recommendations. Under those authorities the DMF provides the following comments.

The Corps has provided a re-evaluation report and environmental assessment, for Surf City. The original evaluation included the Town of North Topsail Beach, but they have withdrawn from participation in the federal project. The project area is now 6.0 miles of beach, opposed to the original evaluation of a 9.9-mile beach project. The Environmental Impact Statement for the original project was completed in 2010; a supplemental Environmental Assessment and Finding of No Significant Impact was completed in 2014 to address changes to borrow area characterizations; and the project was authorized in 2014. The proposed modification to the SC project is for year-round dredging and beach placement during the initial construction project, and an expanded beach fill window for all subsequent renourishment events from November 16 to April 30. Renourishment projects are scheduled to occur every 6 years. The stated purpose for the change is to increase flexibility in obtaining contractors and reduce overall project costs.

The SC CSRM is a significant project, proposing a beach and berm design of a 25’ wide sand dune constructed to +14’ NAVD 88 front by a 50’ wide design beach berm constructed to an elevation of +6’ NAVD 88. A tapered 1000’ transition at the Surf City town limit into the town of North Topsail Beach. The sand source is from multiple offshore borrow areas one to six miles from shore. Initially, 20 areas were selected, but eight of those were surveyed by the Corps in 2020 and will be the

primary sources, although some appear to contain hard bottom. Fewer larger borrow areas were not feasible due to the presence of hard bottom areas scattered throughout the area and limited suitable sand. Initial construction is expected to take three to four years, but without a dredge moratorium, could be somewhat shorter. Subsequent renourishment events are proposed to take place on six-year cycles following construction, and the project is authorized for 50 years.

Since the DMF reviewed the project in 2010, a separate non-federal beach nourishment event was completed in North Topsail Beach in 2015. Other non-federal projects have also occurred, including placement of sand using trucks and beach bulldozing, that have altered the shoreline profile since 2010. The non-federal project at North Topsail Beach in 2015 resulted in significant amounts of gravel, cobble, and boulders being placed on the beach. That project utilized material from Borrow Areas Q and R as identified in the EIS for the SC CSRM. The Corps is proposing to utilize borrow areas in similar vicinity as Q, although they are excluding Q, K, M, and I due to hard bottom presence. Extensive efforts were required to remove the rock material from the beach, and some still remains. Even at that time, with more recent geophysical surveys (2003 and 2014), incompatible sediment/rock occurred in the identified sand sources.

Since the EIS was completed, there have been several tropical cyclones and nor-easters that have had an obvious impact on beach erosion, and unknown impact on sediment distribution and hard bottom offshore. According to NOAA data, there have been approximately 14 tropical cyclones of various magnitude and influence that passed within 60 nautical miles of the project area since 2010.

Due to the lengthy time since the geophysical surveys occurred, the inaccuracy of those surveys (based on the outcome of the non-federal project), and the numerous storms that have occurred and potentially changed the distribution and character of sediment and hard bottom around the proposed borrow area, the DMF recommends that any areas proposed for dredging be reinvestigated to verify suitability as a borrow area and as a means to avoid and minimize impacts to hard bottom and their associated fauna and flora. Different methodology than used in the previous geophysical surveys may be needed to accurately characterize the benthic structure and community. If different methodology is used, the EA should include an explanation on how the results of the more recent surveys are more accurate.

In addition to the concerns regarding the borrow areas, there are concerns with the effects of year-round construction that would be best addressed through a moratorium. Moratoria have been used by state and federal agencies for decades as a tool to minimize impacts to aquatic resources, including fish, invertebrates, as well as coastal habitats. Sensitivity to dredging varies by species, life stage, environmental conditions, the landscape position of the dredging project relative to inlets, spawning and nursery areas, sensitive habitats, and duration and extent of exposure. Bottom substrate, tidal flow, water temperature and dissolved oxygen are some of the environmental factors influencing the extent of impact. Moratoria are necessary to maintain healthy stocks and ensure that the habitats they depend on remain functioning. Moratoria vary regionally due to the time that a species life stage is present in a given area.

The moratorium periods recommended by DMF are based on sampling data, known fish distributions, and documented impacts to a fish or habitat from exposure to turbidity or sedimentation. Dates are approximate and dependent on site specific environmental conditions at the proposed project time and are sometimes shortened or lengthened. For beach nourishment projects, DMF generally supports the moratoria requested by WRC and USFWS of May 1 to November 15 for protection of sea turtles and shorebirds. This time of year corresponds to the

period of peak invertebrate productivity in the intertidal beach and nearshore waters, as well as for fish in the surf zone and nearshore waters. Coquina clams (*Donax variabilis*) and mole crabs (*Emerita talpoida*) are the dominant invertebrates in the intertidal beach and nearby soft bottom, and serve as the dominant prey for spot (*Leiostomus xanthurus*), Atlantic croaker (*Micropogonias undulates*), kingfish (*Menticirrhus americanus*), and Florida pompano *(Trachinotus carolinus*). Kingfish and Florida pompano use the surf zone as a nursery area. The proposed CSRM will place sand over all of the intertidal bottom and extend over shallow subtidal bottom, causing mortality of benthos in that area. Loss of a major food source for multiple years could significantly impact foraging ability. Studies have found that benthic recovery at the intertidal beach can be enhanced by having compatible sediment, limiting sand placement to winter months, limit time interval between projects to allow full benthic recovery, and limit length of beach project to provide undisturbed areas as a source of invertebrates to recruit into disturbed areas, (DEQ 2016). The EA should include literature review on the impact of beach placement on those species, considering the scope and timing of the project – year-round, four years, ten miles. Given that seasonality will not be used as a minimization measure, the EA should include other avoidance and minimization measures that will be utilized in this project to offset and limit impacts to benthos and fish from year-round construction.

While a six-year nourishment interval after the initial project would provide time for benthic recovery, DMF is concerned with the impact on beach invertebrate populations should non-federal projects continue to occur. Minimal time for shoreline recovery from all projects should be taken into account and scheduling to allow at least four years between beach placement events. Staggering of project reaches would also be beneficial to allow increased recovery of benthic invertebrates.

Hard bottom habitat and the nearby soft bottom is used by several species of juvenile reef fish, such as black sea bass (*Centropristis striata*), gag (*Mycteroperca microlepis*), red grouper (*Epinephelus morio*), and red porgy (*Pagrus pagrus*), white grunt (*Haemulon plumierii*), and tomtate (*Haemulon aurolineatum*). Year-round construction would increase the exposure risk to those species. Beach nourishment has been cited as a threat to nearshore hard bottom (Greene 2002; Lindeman and Snyder 1999; Riggs et al. 1998). The monitoring of hard bottom required for the non-federal North Topsail Beach project in Phase 5 (3.5 miles of beach) reported loss of approximately seven acres of hard bottom associated with dredging and beach, primarily around edges of the hard bottom patches. The scoping document should include information on the effect of habitat loss, disturbance, and turbidity to these species. The document should also include avoidance and minimization measures that will be taken to prevent similar loss of hard bottom for this project.

Effects of dredging and beach nourishment have been summarized in the Coastal Habitat Protection Plan (DEQ 2016). Biological effects of dredging and associated turbidity were also summarized in Wilber et al. (2015) and Wilber and Clarke (2001), as well as other individual studies. The North Carolina Marine Fisheries Commission and the South Atlantic Fisheries Management Council have policies on protection and restoration of marine and estuarine resources from beach dredging and filling that provide relevant information on minimization and avoidance of dredging impacts.

In summary, there will be additional impacts to habitat function and fisheries if year-round dredging occurs. The offshore area is unique compared to other nourishment projects using borrow areas, due to the extent of nearshore hard bottom. This habitat is relatively rare and of key importance to reef fish. The DMF is concerned that year-round dredging and beach placement at this unique location will result in permanent hard bottom habitat loss and loss of soft bottom function. Year-round dredging increases the potential impact to aquatic resources like fish, as well

as sea turtles and shore birds that are an important component of the ecosystem. The EA needs to fully evaluate the impacts and include measures to avoid and minimize impacts. Because of the known vulnerability of the hard bottom and that this beach project will be one of the first to perform year-round construction, monitoring specific to this project is necessary.

Thank you for the opportunity to comment. If you have any questions, please contact Zach Harrison at (252)-515-5485 or zach.harrison@deq.nc.gov

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services, Eastern North Carolina Field Office
3916 Sunset Ridge Rd.
Raleigh, North Carolina, 27607

25 October 2024

Mr. Eric Gasch
Planning and Environmental Branch
Wilmington District, U. S. Army Corps of Engineers
69 Darlington Avenue
Wilmington, North Carolina 28403-1343

Subject: Draft General Re-evaluation Report and Environmental Assessment (GRR/EA)
Surf City, Onslow and Pender Counties, North Carolina
Coastal Storm Risk Management (CSRM) Project
USFWS IPaC Code 2024-0048393

Dear Mr. Gasch:

The U.S. Fish and Wildlife Service (Service) has reviewed the U.S. Army Corps of Engineers' (Corps) Draft General Re-evaluation Report and Environmental Assessment, Surf City, Onslow and Pender Counties, North Carolina, Coastal Storm Risk Management (CSRM) Project, August 30, 2024. The following comments address the Corps request for concurrence under section 7 of the Service's authorities pursuant to, and in accordance with, provisions of the Endangered Species Act of 1973, as amended (ESA), the Coastal Barrier Resources Act (CBRA) (16 U.S.C. 3501 et seq), and the Migratory Bird Treaty Act (MBTA). In May 2010, Howard Hall of our office provided a final FWCA report for this project, known then by the name Surf City-North Topsail Beach (SC-NTB) Shore Protection Project. This project has also been previously associated with the West Onslow Beach and New River Inlet (Topsail Beach) Coastal Storm Damage Reduction Project (CSDR). The Service has coordinated at various times over the past 25 or more years on the Corps' Civil Works activities on Topsail Island.

Project Area, Proposed Activities, and Anticipated Impacts

The originally authorized project design template and renourishment intervals have not changed as compared to those described in the December 2010 Integrated Feasibility Report and EIS. The Service's May 2010 FWCA Report provides information concerning a larger project than is currently proposed, reaching from the boundary of Topsail Beach and Surf City limits to a point in North Topsail Beach (NTB) at the southern edge of the Coastal Barrier Resources Act CBRA)

Zone in NTB (approximately 9.9 miles). The 52,150foot-long system was to be constructed to an elevation of 14 feet North Atlantic Vertical Datum 1988 (NAVD 88) and a 25-foot-wide crest, fronted by a 50-foot-wide berm at an elevation of 6-foot (NAVD 88) and renourished seven times over 50 years at fixed six-year intervals. Other features of the project included dune vegetation and the construction of 60 dune walkover structures. Sand for the berm and dune construction and renourishment intervals was to be taken from borrow sites identified between one and six miles off the coast of Topsail Island. The plan also included post-construction monitoring over the period of Federal participation (i.e. 50 years) to ensure project performance and adjust the renourishment plan as needed. In July of 2021, the Town of NTB announced its intention to pull out of the construction phase of the project due to financial reasons. The Town of Surf City maintained its support for a Federal project and asked the Corps to examine Coastal Storm risk reduction alternatives within its town limits.

Currently, the project includes the beachfront within the corporate limits of Surf City. The northern limits of the study area are in Onslow County near the road intersection of Island Drive and Scotch Bonnet Drive, while the southern limits are in Pender County near the road intersection of South Shore Drive and Hispaniola Lane. From the shoreline, the study area extends landward approximately 500 feet. Seaward, the study area extends from the shoreline approximately one mile. The study area also includes several borrow areas offshore of Topsail Island.

The recommended plan is a berm and dune system measuring approximately 33,300 ft long, or approximately 6 miles of shoreline, with a dune constructed to an elevation of 14 feet (NAVD 88) and fronted by a 6-foot (NAVD 88) (50 ft wide) beach berm restricted by the town limits of Surf City. The alternative would include a 1000 ft transition berm in northern end of the project from the town limits of Surf City into the town limits of NTB. Other features of the alternative would include dune vegetation and 40 public walkover structures.

The proposed plan is to complete initial construction any time of year. Initial construction would result in one disturbance event, lasting approximately 16 months, from the dredges and all other required equipment in the water and on the beach. Nourishment events would occur during the beach placement window of November 16 to April 30, during one dredging season. The periodic nourishment intervals would be every six years with a total of seven nourishment events over the 50-year project life (i.e. 2024-2073).

Federally Protected Species

Based on the information provided and other information available, the following endangered and threatened species may be adversely affected by the proposed construction associated with the requested CSRM project: piping plover, red knot, seabeach amaranth, green, leatherback Kemp's ridley and hawksbill sea turtles and West Indian manatee. In addition, designated critical habitat is present in the project area for nesting loggerhead sea turtles (Unit LOGG-T-NC-03), and proposed critical habitat is present for the red knot (Unit NC-5).

Piping plovers (Threatened [T]; Great Lakes Population is Endangered [E])

North Carolina is the only state where the piping plover's breeding and wintering ranges overlap, and the birds are present year-round. Topsail Inlet and the northern inlet shoulder is optimal habitat for breeding, migrating, and overwintering piping plovers. Breeding piping plovers from the Atlantic population have been documented on the north and south ends of Topsail Island in recent years (www.ncpaws.org, accessed October 3, 2024). In 2024, one nest on the south side of New River Inlet (North Topsail Beach) fledged four chicks, and one nest each in 2018 and 2019 on the south end of Topsail Island fledged one chick. Although the current project does not propose impacts to the inlet habitats or piping plover critical habitat, piping plovers of all three populations (including the endangered Great Lakes population) may utilize the beachfront areas of Surf City.

The proposed action has the potential to adversely affect wintering, migrating, and breeding piping plovers and their habitat. Potential effects to piping plover include direct loss of foraging and roosting habitat and attraction of predators due to food waste from the construction crew. Plovers face predation by avian and mammalian predators that are present year-round on the wintering and nesting grounds.

Red Knots (T)

Migrating and overwintering red knots utilize the proposed renourishment area. Red knots may be present any month of the year, although they are less likely to be present during the height of the breeding season (July). Spring migration peaks in North Carolina in May-June, while fall migration peaks between mid-August and early September, though many individuals stay until November, and small flocks may utilize the beachfront for the entire winter (nc.audubon.org).

The area proposed for renourishment is within and adjacent to proposed red knot critical habitat Unit NC–5. This unit contains a high concentration of rufa red knots during the spring migration period, serving as an important northbound stopover site. Additionally, this unit contains a high concentration of rufa red knots during the winter period, providing important wintering habitat

on the Southeastern U.S. portion of the subspecies range for foraging and roosting during a time of the year when rufa red knots are seeking to build energy sources for migration.

The proposed action has the potential to adversely affect wintering and migrating red knots and their habitat. Potential effects to red knots include degradation of foraging habitat and destruction of the prey base from sand disposal, and attraction of predators due to food waste from the construction crew. Like the piping plover, red knots face predation by avian and mammalian predators that are present year-round on the migration and wintering grounds. Potential effects to red knot proposed critical habitat include habitat degradation and destruction of the prey base.

Loggerhead (T), Green (T), Leatherback (E), Kemp's ridley (E), and Hawksbill Sea (E) Turtles

Loggerhead, Green and Kemps ridley sea turtles are known to nest on Topsail Island. Topsail Beach is located within loggerhead sea turtle critical habitat Unit LOGG-T-NC-03 and contains the highest-density nesting by loggerhead sea turtles in North Carolina. The other species of turtles are known to occur in the surrounding area.

Potential adverse effects of sand placement during the sea turtle nesting season include disturbance of existing nests, which may have been missed by surveyors and thus not marked for avoidance, disturbance of females attempting to nest, and disorientation of emerging hatchlings. In addition, heavy equipment will be required to re-distribute the sand to the original natural beach template. This equipment will have to traverse the beach portion of the Action Area, which could result in harm to nesting sea turtles, their nests, and emerging hatchlings.

Placement of sand on a beach in and of itself may not provide suitable nesting habitat for sea turtles. Although sand placement activities may increase the potential nesting area, significant negative impacts to sea turtles may result if protective measures are not incorporated during project construction. Sand placement activities during the nesting season can cause increased loss of eggs and hatchlings and, along with other mortality sources, may significantly impact the long-term survival of the species. For instance, projects conducted during the nesting and hatching season could result in the loss of sea turtles through disruption of adult nesting activity and by burial or crushing of nests or hatchlings. While a nest monitoring and egg relocation program would reduce these impacts, nests may be inadvertently missed (when crawls are obscured by rainfall, wind, or tides) or misidentified as false crawls during daily patrols. In addition, nests may be destroyed by operations at night prior to beach patrols being performed. Even under the best of conditions, about 7 percent of the nests can be misidentified as false crawls by experienced sea turtle nest surveyors (Schroeder 1994).

Regardless of the time of year (even outside of the sea turtle nesting season), sand placement projects may result in changes in sand density (compaction), beach shear resistance (hardness),

beach moisture content, beach slope, sand color, sand grain size, sand grain shape, and sand grain mineral content if the placed sand is dissimilar from the original beach sand (Nelson and Dickerson 1988a). These changes could result in adverse impacts on sea turtle nest site selection, digging behavior, clutch viability, and hatchling emergence in the following nesting season(s) (Nelson and Dickerson 1987; Nelson 1988). There are remaining concerns about the potential for incompatible material in the borrow areas offshore Topsail Island. Recent offshore dredging activities have resulted in the placement of large amounts of rock on the beach just north of the project area. The Service appreciates the avoidance of those particular borrow areas, but the concerns remain for this offshore area in general.

Beach nourishment projects create an elevated, wider, and unnatural flat slope berm. Sea turtles nest closer to the water the first few years after nourishment because of the altered profile (and perhaps unnatural sediment grain size distribution) (Ernest and Martin 1999; Trindell 2005). Beach compaction and unnatural beach profiles resulting from beach nourishment activities could negatively impact sea turtles regardless of the timing of projects. Sand compaction may increase the length of time required for female sea turtles to excavate nests and cause increased physiological stress to the animals (Nelson and Dickerson 1988b). The placement of rocky material may have similar effects. These impacts can be minimized by using suitable sand.

A change in sediment color on a beach could change the natural incubation temperatures of sea turtle nests in an area, which, in turn, could alter natural sex ratios. To provide the most suitable sediment for nesting sea turtles, the color of the nourished sediments should resemble the natural beach sand in the area. Natural reworking of sediments and bleaching from exposure to the sun would help to lighten dark nourishment sediments; however, the timeframe for sediment mixing and bleaching to occur could be critical to a successful sea turtle nesting season.

Seabeach amaranth (T)

Seabeach amaranth is an annual plant. The typical habitat where it is found includes the lower foredunes and upper beach strands on the ocean side of the primary sand dunes and overwash flats at accreting spits or ends of barrier islands. It also may be found in dune swales such as those in the area proposed for renourishment. Seabeach amaranth populations are declining range-wide, so every population is important. Historically, this area contained one of the largest populations of seabeach amaranth along the North Carolina coast. In 2016, the USFWS coordinated with the Town of Surf City, to conduct an experimental planting of seabeach amaranth in the conservation area at the south end of the island. We planted several hundred seeds on the upper beach along the oceanfront edge of the natural area. Over time, we hope to boost this population to historical numbers.

The proposed action has the potential to adversely affect seabeach amaranth and its habitat. Potential effects include burying, trampling, or injuring plants as a result of construction operations and/or sediment disposal activities; burying seeds to a depth that would prevent future germination as a result of construction operations and/or sediment disposal activities; and destruction of plants by trampling or breaking as a result of increased recreational activities. The Corps proposes to place sand over a 16-month period, including during the seabeach amaranth growing season.

Service Concerns and Recommendations

1. All of the species listed above are affected in general by coastal activity and anthropogenic disturbance. The Service is concerned for the potential for direct and indirect adverse impacts to listed species and nesting shorebirds from construction activities, presence of heavy machinery in suitable habitat, increased human activity, and increased light pollution. In addition, the Service is concerned for potential future storm recovery or erosion protection activities. Development doesn't allow beaches to move naturally, which, combined with sea level rise and increased erosion from tropical storms effectively limits the available habitat along the oceanfront portions of developed barrier islands. Rising water further limits the available habitat and results in a condition called "coastal squeeze" (Defeo et al. 2021).

2. The Service can concur with the Corps' determinations of May Affect, Not Likely to Adversely Affect for the West Indian manatee, based on the location of the borrow area and low likelihood of presence of the species.

3. The Service concurs with the species determination of "May Affect, Likely to Adversely Affect" for the loggerhead sea turtle, and the determination of "May Affect, Not Likely to Adversely Affect" for the leatherback and hawksbill sea turtles because there are no recent records of those two species on Topsail Island. However, the Service cannot concur with the determination of "May Affect, Not Likely to Adversely Affect" for the green and Kemp's ridley sea turtles. The project is likely to cause direct and/or indirect adverse effects to nesting sea turtle species, and the presence of nesting green sea turtles and Kemp's ridley sea turtles cannot be discounted in the proposed project area. The Service recommends that the Corps request the initiation of formal consultation for this project for the loggerhead, green, and Kemp's ridley sea turtles.

   The Corps has also determined that the proposed action is not likely to "adversely modify" loggerhead critical habitat. The Service recognizes that the Corps probably intended to make a determination of "Not Likely to Adversely Affect" (because the determination of adverse modification is relatively equivalent to the determination of

species jeopardy). The Service recommends that effects to designated loggerhead nesting critical habitat be included in the request for formal consultation.

4. Piping plover: Although piping plover critical habitat won't be affected by the Surf City project, Topsail provides important habitat for plovers on the north and south extents. Presence of wintering birds in the middle of the island cannot be discounted. Therefore, the Service cannot concur with the determination of May Affect, Not Likely to Adversely Affect for piping plover and recommends including piping plover in the request for formal consultation.

5. Red knot: Sand placement activities will disturb migrating and wintering red knot. Individuals are likely to succumb from lack of prey availability and increased disturbance during one of their most sensitive times, migration. The formation of high-value inlet complex habitats is moot if they are unable to reach northern breeding grounds, especially since an indirect effect listed was an increase in recreational activities within red knot habitats. Long-term positive effects will not make up for increased disturbance during their most sensitive migration events. The Service cannot concur with the determination of May Affect, Not Likely to Adversely Affect for red knot and recommends including red knot in the request for formal consultation. Also, the Corps did not analyze the potential for effects to proposed critical habitat for the red knot. The Service recommends that the Corps include coordination of potential impacts to proposed critical habitat during formal consultation.

6. In order to avoid and minimize impacts to the West Indian manatee, the Service recommends that any contract for the project require adherence to the Service's 2017 Guidelines for Avoiding Impacts to the West Indian Manatee.

7. The Service acknowledges that the Corps has tested sediment quality in the currently proposed borrow areas and found it compatible, but existing survey methods may not be adequate to characterize an entire area, and there is a risk that incompatible sediment will be placed on the beach. The Corps states that it will require the contractor be present and monitor the dredge discharge location and work zone continuously while the discharge is occurring, and that frequent visual inspections of the beach placement will be conducted by a government inspector and Wilmington District technical staff. The Service appreciates the commitment to continuous sediment quality monitoring. During formal consultation, the Service would like to work with the Corps to develop other procedures as appropriate to avoid and minimize the placement of incompatible materials on the beach.

With the commitments made by the Corps in the Draft GRR/EA, the Service can concur with the Corps determination of May Affect, Not Likely to Adversely Affect for West Indian manatee and leatherback and hawksbill sea turtles. The Service also concurs with the determination of May Affect, Likely to Adversely Affect for loggerhead sea turtle. We cannot concur that the project is Not Likely to Adversely Affect the green and Kemp's ridley sea turtles, piping plover, red knot, and seabeach amaranth. The Service recommends that the Corps request initiation of consultation for these species, as well as for designated loggerhead nesting critical habitat and proposed red knot critical habitat.

The Service appreciates the opportunity to comment on this Draft GRR/EA. If you have questions regarding these comments, please contact Caroline Causey at 919-371-6785 or by e-mail at <caroline_causey@fws.gov >.

Sincerely,

For Pete Benjamin
Field Supervisor

cc (via email):

Maria Dunn, NC Wildlife Resources Commission, Washington
NCDCM, Morehead City, NC

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North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

December 6, 2024

Justin Bashaw
U.S. Army Corps of Engineers – Wilmington District
Wilmington Regulatory Field Office
69 Darlington Avenue
Wilmington, NC 28403

justin.p.bashaw@usace.army.mil

Re: Beach Renourishment South of Humphrey Ave to north of 9th Street, adjacent to the Atlantic Ocean/AIWW, Surf City, Pender County, 25-E-0000-0037, ER 20-0050

Dear Mr. Bashaw:

Thank you for your October 9, 2024, submission concerning the above-referenced project. We have reviewed the project and offer the following comments.

The updated project submission indicates that the offshore borrow areas designated for this renourishment effort have in fact been surveyed for the presence of archaeological resources in 2005 and 2010 respectively, and that no known historic properties have been recorded within said proposed offshore sand borrow locations. Based on the information provided, we therefore rescind our previous request for an archaeological survey and the project may proceed as planned. Please note however that the Area of Potential Effect (APE) still contains the beach wreck NTB0001, which continue to be marked for avoidance.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@dncr.nc.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Sincerely,

Renee Gledhill-Earley

for Ramona Bartos, Deputy
State Historic Preservation Officer

From:	Pace Wilber - NOAA Federal
To:	Gasch, Eric K CIV USARMY CESAW (USA); Owens, Jennifer L CIV USARMY CESAW (USA); Brayman, Christine M CIV USARMY CESAW (USA)
Subject:	[Non-DoD Source] Surf City GRR -- NMFS HCD Comments
Date:	Tuesday, December 3, 2024 10:53:18 AM

Dear Mr Gasch,

NOAA's National Marine Fisheries Services (NMFS) has reviewed the "Appendix H: Essential Fish Habitat Assessment," dated August 2024, from the "General Re-evaluation Report and Environmental Assessment Surf City, Onslow and Pender Counties, North Carolina Coastal Storm Risk Management Project,"nand the accompanying letter dated August 30, 2024. The letter indicates the Town of North Topsail Beach has withdrawn from the Federal project leaving Surf City as the focal location.

Aside from revising focal locations, the revised action now has initial project construction occurring over 16 continuous months versus accomplishing initial construction using a December 1 through March 31 timeframe, which would require work over several dredging seasons. The letter affirms all periodic renourishments are proposed to be accomplished during the beach placement timeframe of November 16 through April 30.

As discussed in the previous correspondence for this project, NMFS believes limiting the work to winter months (i.e., December 1 to March 31) would minimize impacts (primarily from sedimentation in this case) to fishery habitat. We understand postponed construction has presented new challenges to the project's initial construction. Given the environmental commitments the Wilmington District made in the Final Environmental Impact Statement and affirmation that subsequent renourishments will abide by the environmental window agreed to previously, NMFS has no EFH Conservation Recommendations for the initial construction occurring over a 16-month period.

Please let us know if additional coordination is needed.

Sincerely,
Pace Wilber, Ph.D.
South Atlantic Branch Chief
NMFS SERO Habitat Conservation Division
--

From: Caitlin Rogers
To: Bashaw, Justin P CIV USARMY CESAW (USA)
Subject: [Non-DoD Source] Draft GRR/EA
Date: Thursday, January 9, 2025 1:52:57 PM

The Catawba have no concerns with the draft. If you have any questions or need anything else let me know.

Hawuh (Thank you),

Caitlin Rogers
Catawba Nation
Cultural Division Programs Manager
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, SC 29730

803-328-2427 ext. 226

Please Note: We CANNOT accept Section 106 forms via e-mail, unless requested. Please send us hard copies. Thank you for your understanding