

APPENDIX A

REVIEW COMMENTS AND RESPONSES

DETAILED PROJECT REPORT AND ENVIRONMENTAL ASSESSMENT

SOUTHPORT, NC SECTION 14 EMERGENCY STREAMBANK AND SHORELINE EROSION PROTECTION PROJECT

The following comments were received in response to a USACE scoping letter dated April 27, 2011, which invited comments from all private interests, along with Federal, State, and local agencies with an interest in the project. Following are the comments which were received, along with USACE responses.

A. North Carolina Department of Administration
Contact: State Environmental Review Clearinghouse
(June 6, 2011)

1. Attached to this letter for your consideration are the comments made by agencies in the course of this review.

Response: *Comment noted; attached comments addressed individually.*

Contact: Environmental Review Coordinator

2. The Department of Environment and Natural Resources has reviewed the proposed project. The attached comments are for the applicant's consideration. More specific comments will be provided during the environmental review process.

Response: *Comment noted and attached comments addressed individually.*

B. North Carolina Office of Conservation, Planning & Community Affairs
Contact: Natural Heritage Program
(May 24, 2011)

1. The Natural Heritage Program has no records of natural communities or conservation/managed areas within 0.5-mile of the project area. The adjacent waters are considered to be a part of the large, State significant Lower Cape Fear River Aquatic Habitat. However, close to the project area, our Program has no records of rare species, other than an occasional sighting of the Federally Endangered West Indian manatee (*Trichechus manatus*). This mammal occurs in warm waters of the state almost annually, but unpredictably regarding a specific site, and sightings are always of transient individuals. Nonetheless, it is important to keep sedimentation of the waters of the Cape Fear to a minimum, and the applicant should strive to completely avoid any sedimentation of the waters.

Response: *Measures for protection of the manatee, and minimization of sedimentation of waters, will be included in the plans and specifications phase, within the Environmental Protection requirements, and Erosion and Sedimentation Control Plan to be approved by the state.*

C. North Carolina Wildlife Resources Commission (NCWRC)
Contact: Southeastern Permit Coordinator, Habitat Conservation Program
(May 24, 2011)

1. The NCWRC does not have any specific concerns regarding this project at this time. However, to help facilitate future document preparation and the review process, our general informational needs are outlined below:

Response: *Comment noted, and specific comments addressed individually below.*

- 1.) Alternatives in the study should include relocating the wastewater pump station to an area that is located further inland. Along with a new location, or multiple potential new locations, the associated pipeline realignments should be included.

Response: *Relocation of the facility was considered as an alternative, but was not carried forward due to substantial costs (approximately \$2 million) and uncertainty surrounding the availability of a suitable alternative location.*

- 2.) The City of Southport and the Army Corps of Engineers should explore alternative options for shoreline protection that do not further result in the loss of shallow bottom area. Evaluation of the feasibility of marsh sills and other alternatives that will not result in the hardening of the shoreline should be discussed in the final study.

Response: *Explored alternatives that would not harden the shoreline are described in Section 5.2. "Offshore Stone Sill" was considered an acceptable alternative, but was not chosen as the preferred alternative due to significantly higher cost. "Relocation of the structure" was also considered but screened out due to cost. "Marsh Fringe" and "Placement of Surplus Dredged Material" were considered unacceptable due to likely failure from wind fetch exposure.*

- 3.) Please include a description of any wetlands or tidal marsh that may be affected by the project and how these impacts have been avoided and minimized to the greatest extent practicable.

Response: *No wetlands or tidal marsh exist at the site; therefore, none would be affected by the project. See 6.3, "Wetlands and Floodplains".*

- 4.) Mitigation for avoiding, minimizing or compensating for direct and indirect degradation in habitat quality as well as quantitative losses that result from the project.

Response: *There would be no degradation or losses in habitat quality due to the project, but a minimal environmental benefit would result from stopping the present erosion into waters, so mitigation would not be required. See 5.2, "Sloping Rock Revetment".*

- 5.) Discuss the cumulative impacts of secondary development facilitated by the proposed project. Such discussion should weigh the economic benefits of such growth against the costs of associated environmental degradation.

Response: *No secondary development impacts would occur as a result of the project, since its purpose would be to protect an already-existing sewage pumping station serving existing development. See Sections 1.0 and 2.0.*

- (a) Include specific requirements for both residential and industrial developments and Best Management Practices (BMPs) that will be required.

Response: *None required since there would be no secondary development impacts.*

- (b) Include specific measures that will be used to protect stream corridors, riparian habitat, and a minimum of the 100-year floodplain from filling and development.

Response: *Other than construction of the project, which would stop the present shoreline erosion into waters, no such measures would be required. See 5.2, "Sloping Rock Revetment".*

- (c) We offer the following recommendations to address secondary and cumulative impacts and to reduce impacts to aquatic and terrestrial wildlife resources. Additional information regarding these recommendations can be found in NCWRC's *Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality* (August 2002). This document is located on the web at:

http://www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7c3_impacts.pdf.

Response: *Comment and recommendations noted.*

- 6.) Description of fishery and wildlife resources within the project area, including a listing of federally or state designated threatened, endangered, or special concern species. A listing of designated plant species can be developed through consultation with:

NC Natural Heritage Program
Dept. of Environment & Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601
(919) 733-7795

and,

NCDA Plant Conservation Program
P. O. Box 27647
Raleigh, N. C. 27611
(919) 733-3610

Response: Comment and references noted.

D. North Carolina Division of Coastal Management (NCDCM)
Contact: Federal Consistency Coordinator
(May 20, 2011)

1. We recommend that any measure involving shoreline work be compliant with CAMA requirements contained in 15A NCAC 07H .0208(b)(7) and/or 15A NCAC 7H .1100.

Response: The Preferred Alternative, Sloping Rock Revetment, is believed to be consistent with the North Carolina Coastal Management Program. This would be confirmed through the Federal coordinator prior to construction. See 6.12, "North Carolina Coastal Management Program".

2. The scoping request was a brief statement that the existing facility is being threatened by erosion. One potential protection measure would be to re-locate the existing facility further inland. Relocating the facility inland may be a reasonable strategy if the existing facility is nearing the end of its useful live [*sic*] and would soon require rebuilding anyway. We would encourage the Corps to undertake a full economic analysis of the cost of protecting the structure in its current location versus relocating it further inland.

Response: Relocation of the facility was considered as an alternative, but was not carried forward due to substantial costs (approximately \$2 million) and uncertainty surrounding the availability of a suitable alternative location.

3. For maintain [*sic*] the existing facility at its current location, protection strategies could take three potential forms. One, a hard form consisting of riprap or a bulkhead placed on the shoreline. Second, the periodic placement of surplus material dredged by the Corps obtained from other projects to replace material that has been eroded away. Third, the use of an offshore sill to create wetlands behind the sill (please see 15A NCAC 07h .2700). We would encourage the Corps to consider each of these approaches.

Response: The three approaches are described in 5.1 and 5.2. The "hard form" includes the Preferred Alternatives "Sloping Rock Revetment" and "Bulkhead". "Placement of Surplus Dredged Material" is described by that name. The "offshore sill" is covered by "Offshore Stone Sill".

4. We recognize that the objective of the proposed action is protection of the existing facility. Nevertheless, the project site is at a street end. We would encourage the Corps, to the extent practical, to consider integrating the selected protection strategy with

making the project site an enjoyable coastal experience for the public that may be passing by.

Response: *The preferred alternative, “Sloping Rock Revetment”, would have a negligible aesthetic effect, since it would be level with the existing shoreline and sloping down toward the water. This alternative would also stop the present erosion and alleviate the visual intrusion of the existing material along the shoreline at the site. See 6.5, “Cultural Resources”.*

E. North Carolina State Clearinghouse, Department of Administration, Intergovernmental Review

Contact: Dept of Cultural Resources, State Historic Preservation Office
(May 16, 2011)

1. There are no known archaeological sites within the proposed project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

Response: *Comment noted.*

2. Please know that this location is within the Southport Historic District, which is listed in the National Register of Historic Places. To the best of our knowledge, the eligibility of the pumping station itself for listing in the National Register has never been determined, neither individually nor as part of the Southport Historic District. This determination should be made in the planned F.A. Potential effects that the erosion control may have on historic properties, including the River Pilot’s Tower and the houses on the north side of Bay Street, should be determined as well.

Response: *Comment noted, and needed determinations will be made prior to construction.*

(August 29, 2011)

3. (to John Mayer) We appreciate your research on the pump station, which was omitted from the National Register nomination for the Southport Historic District. We concur with your finding that the pump station does not meet the Nation Register Criteria that the historic district was nominated under. The pump station is also not eligible to be listed individually as it is less than 50 years old and does not meet Criteria Consideration G for exceptional importance. Therefore, the pump station is considered a non-contributing resource within the Southport Historic District.

Response: *Comments noted and summary included in 6.5 “Cultural Resources”.*

4. We also concur with you *[sic]* finding that the project, which includes replacing the existing loose piles of concrete and brick along the shoreline with a granite revetment, will have no adverse effect on historic resources.

Response: *Comments noted and reference included in 6.5 “Cultural Resources”.*

F. United States Department of the Interior, Fish and Wildlife Service
Contact: Raleigh Field Office
(May 24, 2011)

1. The Service agrees that erosion control is needed to protect not only the area immediately in front of the pumping station but also extending some distance down the eroding shoreline to the west (at least as far as the pier shown on the photograph).

Response: *The project would be constructed along the entire shoreline to property limits of the pumping station site, approximately 350 linear feet. See 5.1, “Preferred Alternative”.*

2. The Service does not endorse armoring the shoreline as has been done to the east of the site.

Response: *Although “Bulkhead”, the stabilization method used east of the site, was considered as an acceptable alternative (see 5.2, “Bulkhead”), it was not chosen as the preferred alternative due to significantly higher cost, and expected higher level of maintenance, than “Sloping Rock Revetment”.*

3. Instead the Service recommends the establishment of a submerged breakwater composed of a line of large boulders offshore but parallel to the shoreline from just to the east of pumping station to the end of the pier as can be seen in figure 3 of your letter.

Response: *Comment noted. This alternative was evaluated as “Offshore Stone Sill” (section 5.0), but was not selected as the preferred alternative due to significantly higher cost, and somewhat higher expected level of maintenance, than “Sloping Rock Revetment”.*

4. The submerged breakwater would be placed 20 to 30 yards offshore (as far as depth will allow) and be designed so that it would be submerged at high tide but have a portion exposed at low tide.

Response: *Comment noted. See 5.1, “Offshore Stone Sill” for design details of this alternative.*

5. The breakwater should be composed of large dense rock to insure *[sic]* stability and have the rock voids filled with marl to speed the colonization by oysters. By breaking the wave energy a sandy beach should reestablish and the rocky substrate and oysters should provide valuable fish habitat. Artificial oyster reefs parallel to the shoreline is *[sic]* a natural way to slow the rate of erosion by catching wave energy. The breakwater should

be designed to look as natural as possible after oysters colonize the site and if designed correctly should be a nice habitat and aesthetic addition to the Southport waterfront.

Response: *Comment noted. See 5.1, "Offshore Stone Sill" for design details of this alternative.*

6. The Service would like to be included in further discussions with this project. Since we are facing budget reductions the ability to participate using conference calls would be appreciated.

Response: *Comment noted. The USFWS will be included in continuing coordination of this project.*

G. Environmental Protection Agency (EPA)

(No contact or date furnished; list of general comments/suggestions for NEPA compliance)

1. The EA should be developed consistent with Section 309 of the Clean Air Act.

Response: *The proposed action, construction of the Sloping Rock Revetment, would be in compliance with the Clean Air Act. See 6.6, "Air Quality" and Table 6.01.*

2. The EA should include clear conclusions why the Preferred Alternative was selected. The "Preferred Alternative" should be individually evaluated, i.e., without solely referencing to the impacts attendant to other alternatives.

Response: *Conclusions regarding the preferred alternative are presented individually in detail in 5.2, "Sloping Rock Revetment", and in 6.0, "Existing and Future-Without Project Conditions, and Impacts of the Recommended Plan".*

3. The EA should have a complete list of abbreviations, definitions, acronyms and symbols. Similar subjects/terminologies should be cross-referenced with like definition shown/found on other document's pages.

Response: *A complete list of acronyms is included in the Table of Contents.*

4. The EA should be specific and describe what facilities or portions of the facilities will be demolished and when. Any deconstruction (demolition) should be done according to the state Historic Preservation Officer (SHPO), the National Historic Preservation Act (NHPA)'s rules, regulations and guidelines and should ensure disposal of federal property is done according to federal regulations for disposal of federal property. Ensure the demolition and construction debris be properly handled by licensed contractors (if needed) and disposed in licensed sanitary landfills for each type of debris.

Response: *For construction of the preferred alternative, no facilities, other than existing rubble along the shoreline bank, would be demolished or removed (section 5.1). The State Historic Preservation Office has been consulted, and no archaeological investigation is*

recommended for this project. See 6.5, “Cultural Resources” and Appendix A, “Review Comments and Responses, “State Historic Preservation Office”. No federal property exists at the proposed project site. Under the construction contract, licensed contractors would be required for all work, and disposal methods would be required to be in compliance with local, state, and federal laws as applicable, for all debris to be disposed.

5. In any project related construction/demolition, the EA should address: proper handling of hazardous materials removal and disposal (asbestos, PCBs, lead from paint), and waste management (e.g., reuse or recycling as opposed to landfill dumping); wastewater management, indoor air quality, energy and waste conservation (e.g., low flow toilets, energy efficient windows and doors, efficient lighting, etc.); other pollution prevention measures (e.g., use of materials with recycled content) as well as impacts to noise, traffic, air and water quality, wildlife and vegetation (could any endangered or threatened species be impacted?), erosion, sedimentation control, and impacts to historic resources.

Response: *It is not expected that any HTRW would be encountered during construction of the preferred alternative (see 6.4, “Hazardous and Toxic Waste”). Waste management practices would be covered in the contract for construction. Building-related elements of the comment would not apply to this project, which is limited to shoreline stabilization and erosion protection. As summarized in Section 6.11 and Table 6.03, there would be temporary and short-duration increases of noise during construction, and minimal impacts to traffic circulation. Effects to air and water quality would also be minimal and short-term. No terrestrial resources other than mown grasses would be affected, nor would there be adverse effects to aquatic resources. Only slight and temporary impacts on benthic resources would be expected. No adverse impact to endangered, threatened, or State-listed species are anticipated. The project would be constructed in compliance with State erosion and sedimentation control requirements. No impacts to cultural resources would be expected.*

6. The EA (and Finding of No Significant Impact if one is prepared) should be made available for public inspection at several different public locations. It would be very beneficial to ensure the public is well informed at all times through frequent public meetings, flyers, announcements and public hearings.

Response: *As outlined in section 15.0 public coordination is being conducted at appropriate times throughout the development of this project, as required under Section 14 authority.*

7. The EA should address the needed and required permits, how to obtain them from the associated regulatory agencies and how to implement and comply with them.

Response: *Pursuant to Section 404 of the Clean Water Act, Nationwide Permit #13 is applicable to the proposed project, and a Section 401 Water Quality Certification has been issued by the State of North Carolina for this permit. See 6.2, “Water Quality”. Concurrence from the NC Department of Environment and Natural Resources will be obtained prior to construction.*

8. The EA should address land cleared or forested clear-cut harvested trees and should describe the type and age of trees present; will the trees be harvested? Concerning cumulative impacts, recently (in the near past/present/future) how many other sites and cumulative number of acres of land will or have been cleared at the facility?

Response: *No tree clearing or harvesting would occur in relation to construction of this project. See Figures 4.07-4.10.*

9. The EA should make sure decisions made based on archaeological surveys done in previous years are still valid.

Response: *As reviewed in 6.5, "Cultural Resources", archaeological coordination and evaluations are up-to-date, with determination that the project would have no adverse effect on historic resources.*

10. The EA should address impacts to traditional American Indian resources, if any, under the various alternatives. Consultation with the American Indian Tribes/organizations should be made and it should include a list of Tribes and or Native American Indian Organizations consulted about this project along with their responses and comments.

Response: *As stated in 6.5, "Cultural Resources", no known historic properties are located along the shoreline proposed for stabilization.*

11. The EA should address the Graves and Repatriation Act – (NAGPRA) to identify National Register-eligible archaeological sites; to ensure proper evaluations are carried out in order to minimize the adverse impacts to historic properties in the project areas; and so that in the event burials are located during ground-disturbing activities, the proper procedures for unexpected discoveries are followed.

Response: *As stated in 6.5, "Cultural Resources", no known historic properties are located along the shoreline proposed for stabilization. The contract specifications for construction would detail the procedures required in the event any such cultural resources are discovered during construction.*

12. The EA should discuss in some detail if there was any EJ community involvement, follow-up analyses, and /or outreach efforts performed. Also, what impact will the project have on minority businesses?

Response: *The project would have no adverse impacts relating to EJ communities or minority businesses. Any impacts relating to community or businesses would be positive. See 6.5, "Cultural Resources".*

13. In addition to the noise analyses to be done related to the entire site, the EA should also discuss what noise effects can be attributed to the temporary (state type and length of time) demolition and construction that will take place on the site.

Response: As stated in 6.11, “Aesthetic and Recreational Resources”, any impacts related to noise would be temporary and of short duration, from operation of construction equipment during a construction period of 4-5 months.

14. The EA should establish the contractor’s procedures for borrow materials which should be according to local and state soil conservation rules and regulations to ensure the quality of the fill to be used and where the fill is borrowed from (to ensure protection of that environment).

Response: Borrow materials for the preferred alternative, “Sloping Rock Revetment”, would be 5-12-inch granite bedding stone overlaid with 3.5 feet of 600-1100 lb armor stone from quarries operating under applicable state and federal regulations. See 5.1, “Preferred Alternative”.

15. If there are any reasons to expect the contractor to encounter any contaminated soils, this should be discussed in detail in the EA and the proper studies of the site should be done along with the corrections before any work on the project is done by the contractor. In addition, contaminated soils, solid wastes, chemicals and hazardous materials should be properly handled by licensed contractors and disposed in licensed sanitary landfills according to the type of waste; that chemicals and hazardous material be disposed of according to local, state, Federal and Clean Water Act (including RCRA and CERCLA) rules, regulations, guidelines and requirements.

Response: It is not expected that any HTRW would be encountered during construction of the Preferred Alternative (see 6.4, “Hazardous and Toxic Waste”).

16. The EA should address handling of above ground/underground storage tanks (AST/UST), if any, according to the State and Federal rules [sic] regulations and guidelines. The EA should also address the issue of removing or not removing them and should include state and federal documentation concurring/not concurring with the final decision.

Response: There are no storage tanks within the site of proposed construction. See Figures 4.07-4.10.

17. The EA should address the potential for impacts from air toxics associated with the project.

Response: The preferred alternative is not expected to contribute significantly to direct or indirect emissions and would not impact air quality within the project area. See 6.6, “Air Quality”.

18. In general, construction activities should be restricted to existing rights-of-way, if possible and best management practices should be utilized. Impacts to wetlands, floodplains, and other sensitive resources should be avoided. If avoidance is not possible, mitigation must be offered to minimize adverse impacts. If construction must run through a wetland, the area should be restored to its “natural” state. That is, the affected

area should be returned to its original soil horizon as well as original contours. Also, the area should be re-vegetated with indigenous species.

Response: *Construction activities would be restricted to existing rights-of-way (and needed easements, etc. obtained by the non-Federal sponsor), in that work would occur only along the immediate shoreline of the pump station site. There are no existing wetlands within the project site, and the project would create no environmental impacts requiring mitigation. There is no practical alternative to constructing the project within the flood plain, since it is a shoreline stabilization project bordering estuarine waters. However, construction of the project would not impact the overall floodplain. See 6.3, "Wetlands and Floodplains".*

19. If structures must be placed in a floodplain, they should be constructed to minimize the infiltration/inflow (I/I) of flood waters and should be sturdy enough to withstand the uplift and velocity forces of such waters. To minimize impacts to prime farmland and public health, water and sewer lines should not run directly through fields or obstruct the flow of water to crops. The land should be returned to its original contour and re-vegetated with indigenous plant life. Ancillary facilities (e.g., pump stations) should be designed so not to impede the natural flow of flood waters.

Response: *The proposed project design would be constructed to withstand the forces of waters and wave action within the floodplain, without creating adverse effects to the overall floodplain. See 7.0, "Hydraulic Analysis" and 6.3, "Wetlands and Floodplains". No water or sewer lines, or ancillary facilities, would be constructed as part of this project.*

20. Since soil disturbance associated with the demolition and construction would require disturbance to the existing site soils [sic] topography it [sic] could generate considerable amounts of storm water, erosion and environmental harm, the owner should require and monitor the contractor to apply stringent controls to minimize potential adverse impacts on wetlands, groundwater, aquifers, creeks/rivers, lakes, ponds, reservoirs, and water quality per local and state erosion and sediment rules and guidelines; the Clean Water Act; the required state and COE permits; the Executive Order 11988 – Flood Plain Management and the Executive Order 11990 – Protection of Wetlands. Runoff controls should be updated periodically for the duration of the construction (e.g., every 2-3 months) and maintained to help ensure success (e.g., silt fences emptied and hay bales replaced).

Response: *The project would be designed, and plans and specifications approved prior to construction, for compliance with State of North Carolina Erosion and Sedimentation regulations, including restabilization of the mown grass areas at top of the shoreline slope. The project would serve to alleviate the continuing erosion of the shoreline into estuarine waters. All applicable state and federal permitting would be in place prior to start of construction. See 6.2, "Water Quality".*

21. The EA should include the latest cumulative impacts (past, present and future and also the total direct and indirect impacts) analysis as they affect the air quality in the area.

Response: *The proposed project would not affect cumulative impacts to air quality in the area, since expected impacts would only occur during construction, from dust generation and operation of equipment, and such impacts would be temporary and short-term. See 6.6, “Air Quality”.*

22. The owner should encourage the contractors to maintain and operate all construction equipment per manufacturer’s specifications and recommendations to minimize air emissions. The owner should also consider offering incentives for contractors to specify the use of retrofitted diesel equipment or purchase of available ultra-low diesel fuel in their bids. The EA should address the impact of the construction on the air quality if some of the construction could be done at night.

Response: *Minimization of air emissions would be a requirement of the construction contract and plans and specifications for this project.*

23. The long-term and indirect impacts of the proposed action should be considered. If the extension of service to the proposed users could cause further development of an environmentally sensitive area, alternate alignments/sites should be considered.

Response: *The long-term and indirect impacts of the proposed project would be beneficial by alleviation of the continuing erosion along the project shoreline. Since the project would serve only to protect existing infrastructure, it would not encourage further development in the area.*

24. The EPA suggests the recommendations made by Green Building to be followed whenever possible. Green or sustainable building is the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition. Research and experience increasingly demonstrate that when buildings are designed and operated with their lifecycle impacts in mind, they can provide great environmental, economic, and social benefits.

Elements of Green building include:

- *Smart Growth and Sustainable Development
- *Energy Efficiency and Renewable Energy
- *Water Stewardship
- *Environmentally Preferable Building Materials and Specifications
- *Waste Reduction
- *Toxics
- *Indoor Environments.

Additional information on Green Building can be found at:

<http://www.epa.gov/greenbuilding/>
<http://www.greenbuilding.com/>
www.epa.gov/greenbuilding
www.greenhighways.org

<http://www.usgbc.org/>
www.greenseal.org

Other links

Waste Reduction Resource Center – hosted by North Carolina but it is an EPA Region 4 resource – <http://wrrc.p2pays.org/>
Industrial materials – <http://www.epa.gov/osw/conserves/rrr/imr/index.htm>
http://www.fema.gov/plan/prevent/fhm/dl_zone.shtm
C&D – [http://www.epa.gov/osw/conserves/rrr/imr/cdm/
www.epa.gov/nscep/](http://www.epa.gov/osw/conserves/rrr/imr/cdm/www.epa.gov/nscep/)

***Response:** No building construction, renovation, or demolition is included in the proposed project. The Preferred Alternative would require the least maintenance of any of the screened alternatives, a resource-efficient benefit over the project lifecycle (see Table 5.2).*