



North Carolina
Coastal Federation
Working Together for a Healthy Coast

October 11, 2019

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Chief, Planning and Environmental Branch
U.S. Army Corps of Engineers, Wilmington District
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Re: Comments on the Notice of Intent to Prepare a Draft Environmental Impact Statement for the Wilmington Harbor Navigation Improvement Project

Mr. Gatwood:

On behalf of the North Carolina Coastal Federation, please accept the following comments regarding the development of the Draft Environmental Impact Statement (“DEIS”) on Wilmington Harbor Navigation Improvement Project (“the Project”). The U.S. Corps of Engineers (“Corps”) proposes to deepen and widen sections of Wilmington Harbor Federal Navigation Channel leading from the Atlantic Ocean to the Port of Wilmington, Cape Fear River, North Carolina.

The Coastal Federation is a non-profit organization dedicated to protecting and restoring the North Carolina coast. Our organization represents 16,000 supporters statewide and works with the public, state and federal agencies and local governments to communicate and collaborate towards solutions that lead to the stewardship and resiliency of our coast. Since 1982, the federation has been working with coastal communities and other partners to protect and restore coastal water quality and natural habitats, which are intricately tied to our coastal economy. By focusing primarily, but not exclusively on natural and productive estuarine shorelines, oyster and salt marsh habitat restoration, coastal management and cleaning the estuaries of marine debris, we strive to support and enhance the coastal natural environment.

We request the Corps reject the findings of Section 203 Feasibility Study (“203 Study”) of the Water Resources Development Act performed by the North Carolina State Ports Authority (“the Port”). According to Corps’ own guidelines the non-federal entities’ studies should be evaluated in part on the merits of public involvement.¹ Given that the public has been minimally involved

¹ ER 1165-2-209 Appendix B, 2.e. Water Resources Policies and Authorities. Studies of Water Resources Development Projects by Non-Federal Interests.

during the development of the Port's feasibility study, the Corps cannot rely on study's data nor its findings.

Furthermore, and in accordance with the procedures of the National Environmental Policy Act ("NEPA") we request the Corps executes its own study closely following guidelines put forward by the Council of Environmental Quality ("CEQ") including a thorough scoping process, development of the Project Review Team, a comparable analysis of all feasible alternatives for the purpose and goal established through the scoping process and finally a detailed analysis of the environmental impacts and steps the agency will take to mitigate them.

1. The Corps Must Reject Findings of the 203 Study

During the scoping meeting on September 26, 2019 the Corps stated it will use data from the Port's 203 Study to draft the DEIS. However, this study was done with minimal public input, despite Corps' guidelines for non-federal entities that include ample public involvement. Corps' implementation guidelines for Section 203 of the Water Resources Development Act (WRDA) of 1986 were amended by section 1014(a) of the Water Resources Reform and Development Act of 2014. This section authorizes a non-federal entity to undertake feasibility studies of proposed water resources development projects for submission to the Secretary of the Army. To do so, as stated in the Water Resource Policies and Authorities for Studies of Water Resources Development Projects by Non-Federal Interests the non-federal entity is **required** to follow detailed guidelines for public involvement developed by the Corps and outlined in the Planning Guidance Notebook - ER 1105-2-100.²

Appendix B of the Corps' Planning Guidance Notebook describes the purpose of the guidelines is to "*provide the requirements for public involvement, collaboration, and coordination*".³ The goals and objectives of the guidelines are to "*give full consideration to public views and information in the planning process*" and to provide a two-way street of communication between the Corps and the interested parties of the public.⁴ The requirements for such interactions should provide "*open atmosphere... trust and mutual cooperation... and provision for public to participate throughout the planning process*".⁵ The most obvious statement in the Notebook regarding relevance of public involvement in the development of a project affecting development of water resources is (emphasis added):

² ER 1165-2-209 Appendix B, 2.e. Water Resources Policies and Authorities. Studies of Water Resources Development Projects by Non-Federal Interests.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

*“Generally, it is **impossible** to plan effectively for water resources development in accordance with Federal regulations and laws **without open and effective public involvement**. Public involvement is integral to all phases and activities of the planning process.”⁶*

However, the 203 Study has been done with minimal to no public involvement. The public notice issued on June 12, 2018 did not identify any public meeting nor did it solicit input from the public via comment letters.⁷ In fact, as of today the full study is still not available for public perusal through the project’s website.⁸ Furthermore, the only public meeting held on August 9, 2018 in Wilmington provided little to no information, displayed an incorrect website and was poorly attended.

The Port failed to develop an “effective public involvement strategy”, therefore the Corps’ guidelines for public involvement in developing a feasibility study have not been satisfied. Thus, following its own guidelines in ER 1165-2-209 to evaluate the feasibility study to the degree to which it has been open to public, the Corps needs to fully reject the 203 Study.⁹

The Assistant Secretary of the Army Strongly Criticized the Feasibility Study

A concurrent review of the 203 Study was conducted by the Office of the Secretary of the Army for Civil Works and Corps’ staff to determine whether the study and the process under which the study was developed comply with Federal laws and regulations. This *Policy Review Assessment*, enclosed in the attachment determined the report would need significant revisions before it would be considered to be legally and policy sufficient.

Significant review comments were identified, which could preclude the Secretary from making a positive determination of project feasibility in accordance with Section 203 of the WRDA. Issues identified during the review pertain to plan formulation, project economics, evaluation of sea level change, and completeness of NEPA documentation.

There were a number of concerns identified, a handful of which are outlined below:

- 1. As written, the planning objectives are unclear and could potentially lead to the pre-selection of an alternative plan. The objectives would need to be revised to be policy compliant and conduct a new iteration of plan formulation and evaluation.*

⁶ ER 1165-2-209 Appendix B, 2.e. Water Resources Policies and Authorities. Studies of Water Resources Development Projects by Non-Federal Interests.

⁷ North Carolina Ports. Public Notice. June 12, 2018. <https://ncports.com/wp-content/uploads/2018/08/WHNIP-Section-203-Study-Public-Notice-060618-revised-email.pdf>

⁸ North Carolina Ports. The Wilmington Harbor Improvement Project Section 203 Study. A Study in Opportunity.

<https://ncports.com/port-improvements/section-203-wilmington-harbor-improvements-project/>

⁹ ER 1165-2-209 Appendix B, 2.e. Water Resources Policies and Authorities. Studies of Water Resources Development Projects by Non-Federal Interests.

2. *Many of the screening criteria that are listed are unnecessary and could potentially eliminate solutions for the identified problems. The criteria that were listed should actually be used to establish assumptions for projecting the planning setting in the future with project settings; however, in this instance, by using these elements incorrectly as screening criteria, it seems that the plan formulation and evaluation process may have been unnecessarily restricted.*
3. *The screening of measures for the study is flawed. According to Table 5-1 on page 134, a stepped channel would meet all 3 project objectives; however, the measure was then eliminated from consideration. After revision of the project objectives, a new iteration of the formulation and screening of management measures needs to be conducted.*
4. *The document only includes one implementation alternative. Normally, navigation improvement projects include increments of dredging depth in the detailed environmental analysis. According to the Principles and Guidelines, the recommended plan will contribute to national economic development consistent with protecting the Nation's environment. Environmental effects of the alternative plans must be considered and can drive the selection of the recommended plan; that's not possible if only one plan is considered. Reasonable alternatives other than channel depth increments with less significant environmental effects, such as relocating facilities should be considered in the report in greater detail to compare the economic and environmental advantages and disadvantages. Decision makers need sufficient information to identify the recommended plan.*
5. *The report provides very good information to form the basis of effects determinations, but in many cases, it understates environmental effects in summary statements without fully and objectively relating impacts to the resource characterizations and analysis that preceded it. The report needs to be reviewed to ensure that summary statements accurately reflect the magnitude of effects described in the preceding text, particularly, accurately describing long term or permanent effects vs. short term effects. Clearly distinguish the difference in effects between the new areas affected by improvement dredging and those that are regularly exposed to maintenance dredging.*
6. *In many cases, the report uses qualifying words, such as may, potentially, and just, to lessen the description of project impacts. Qualifiers must be removed to provide more objective predictions of effects.*
7. *Independent External Peer Review (IEPR) is required for Section 203 project just like USACE led projects. Given the magnitude of the project implementation costs and the non-traditional economic analysis and the assumptions used, IEPR is recommended.*
8. *The report lacks a discussion relevant information about observed and expected climate change impacts in hydrologic analyses developed for the study. These*

impacts combined with sea level change will profoundly impact the future with project conditions and inform cost and cost risk assumptions of future OMRR&R costs related to dredging.

9. *The report and analysis are not fully compliant with USACE policy on sea level change.*

Based on the evidence presented above the Corps cannot rely on the 203 Study performed by the Ports Authority. The Corps must completely reject the findings of the study and perform its own study and analysis complying with the NEPA requirements.

2. The Corps Must Follow Council of Environmental Quality's Detailed Guidelines for Developing DEIS under NEPA.

The Council of Environmental Quality within the Executive Office of the President sets detailed Guidelines for developing a DEIS under NEPA. These include: developing a meaningful purpose and need for the project; formulating a Project Review Team and scheduling scoping meetings with the public; outlining and equally analyzing all available alternatives and selecting the preferred one; analyzing and describing environmental impacts of the proposed project and describing mitigation measures for such impacts.

Purpose and Need

The purpose and need of a proposed federal action are an essential component of a DEIS analysis. The purpose and need statement as described in 40 CFR §1502.13 needs to explain why an action is necessary from the perspective of a Federal agency that is proposing the action. Potential improvements outlined in the proposed Project include deepening and widening of the Federal navigational channel, extending the ocean entrance channel farther offshore, expanding the Turning Basin, and expanding wideners at turns along the channel. As stated in the 203 Study the purpose of these potential improvements is to efficiently accommodate larger cargo vessels which are already using or are projected to use the port in the near future.

Before significant federal and non-federal funds are allocated to such an undertaking, the Project must be evaluated to determine if bringing larger cargo vessels to the Port of Wilmington is indeed a federal need. The mere desire of the N.C. Ports Authority to bring larger size ships to the Wilmington Port does not automatically constitute a valid purpose and need for the Corps. The purpose and need must be developed in a collaborative way with the Project Review Team and the relevant stakeholders through a scoping process.

Scoping

Under NEPA, the environmental review process provides an opportunity for the public to be involved in the Federal agency decision making process:

“The scoping process is the best time to identify issues, determine points of contact, establish project schedules, and provide recommendations to the agency. The overall goal is to define the scope of issues to be addressed in depth in the analyses that will be included in the EIS. Specifically, the scoping process will:

- *Identify people or organizations who are interested in the proposed action;*
- *Identify the significant issues to be analyzed in the EIS;*
- *Identify and eliminate from detailed review those issues that will not be significant or those that have been adequately covered in prior environmental review;*
- *Determine the roles and responsibilities of lead and cooperating agencies;*
- *Identify any related EAs or EISs;*
- *Identify gaps in data and informational needs;*
- *Set time limits for the process and page limits for the EIS;*
- *Identify other environmental review and consultation requirements so they can be integrated with the EIS; and*
- *Indicate the relationship between the development of the environmental analysis and the agency’s tentative decision making schedule.”¹⁰*

Project Review Team

As part of the DEIS development process, agencies should identify and invite the participation of interested persons. Thus, we request the Corps assemble a Project Review Team for the proposed action. The federation would subsequently like to express interest in participating on such team.

Alternatives and the Proposed Action

As defined in 40 CFR §1502.14 this section is the heart of an DEIS. It needs to “rigorously explore and objectively evaluate all reasonable alternatives”, and outline reasoning for alternatives eliminated from consideration.¹¹ It should also clearly state the preferred and selected alternative. Thus, all viable alternatives, not just the implementation alternative presented in the 203 Study, must be fully explored and considered in a comparable way.

Affected Environment

This section must describe the environment to be affected by the proposed Project.

In 2018, the federation adopted the *Lower Cape Fear River Blueprint*, which is a collaborative planning effort to protect, manage and restore the important estuarine and riverine natural resources of the Lower Cape Fear River. Pressures from historic alterations, short-sighted

¹⁰ Council of Environmental Quality. Executive Office of the President. A citizen’s Guide to NEPA. https://ceq.doe.gov/docs/get-involved/Citizens_Guide_Dec07.pdf

¹¹ Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act. 40 CFR §1502.14

development, unregulated industrial uses, conflicting water uses, and changes associated with climate alterations have affected drinking, surface and groundwater water supplies and quality, as well as ecosystem health. Through the unified approach outlined in the *Lower Cape Fear River Blueprint*, the federation aims to protect and restore the lower, coastal Cape Fear River to maintain a healthy, productive, and resilient coast and empower communities and partners to work together to improve the river and surrounding watershed's overall health and water quality.¹²

As proposed, modifications to the Federal navigation channel pose impacts to *fisheries and benthic resources, threatened and endangered species*, such as sea turtles, marine mammals, and water and air quality to the Lower Cape Fear River and surrounding region. These effects are not consistent with the long-term restoration and preservation strategies outlined in the *Lower Cape Fear River Blueprint*. To ensure that sufficient measures are taken to protect vital habitat, protected and commercially important species and localized water quality, we request a formal and public interagency review and coordination process.

Environmental Consequences

This section needs to include the adverse and unavoidable effects that the proposed and preferred alternatives will have on environmental resources. In addition, this section must outline a clear strategy for mitigating such consequences. 40 CFR §1502.16 specifies that the following aspects must be included in such analysis:

1) Direct and indirect and cumulative effects and their consequences

40 CFR §1508.7 explains cumulative effects as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such other actions.”

There is a high complexity, scope and potential for direct, indirect and cumulative impacts to the natural and water resources of the Lower Cape Fear River and the surrounding area. The federal channel from the Atlantic Ocean to Wilmington has been incrementally improved for more than 100 years, and as such, the potential impacts of cumulative and indirect effects cannot be discounted.

Specifically, we ask the Corps to address the effects of previous and current *erosion* in the project area combined with the potential for new erosion. The 203 Study indicates a 4.6 – 5.5-inch increase in tidal range all the way up to the mouth of the Black River, but does not address

¹² Lower Cape Fear River Blueprint. <https://www.nccoast.org/protect-the-coast/advocate/lower-cape-fear-river-blueprint/>

localized flooding in these areas nor does it include long-term resilience planning. The presence of even larger ships within the channel will cause additional displacement of water and serve to cause further erosion.

Further, current proposed state rules regarding the “State Ports Inlet Management” Area of Environmental Concern could lead to increased use of hardened erosion control measures adjacent to these ecologically sensitive areas, by broadening the definition of structures “imminently threatened” by erosion. More hardened structures would almost certainly accelerate erosion in these areas that are already vulnerable to sea level rise and storm damage. It is highly likely that these activities will increase erosion of the beach inside and adjacent to the inlet, which will further increase the demand for erosion control structures like sandbags and geotubes. These cumulative and direct consequences must be measured for the system as whole and past, present, and future actions must be taken under consideration.

Finally, the most recent modification to the Port of Wilmington – the turning basin expansion – was approved by the Corps despite being in violation of state statute and riddled with inconsistencies. The regulatory review process was conducted with an egregious lack of public input and blatant discord for interagency coordination. Consequently, we ask the Corps to include the effects of the turning basin into the analysis of the cumulative and indirect ecosystem effects of the Project.

2) *Possible conflicts between the proposed action and the objectives of federal, regional, state, local and tribal land use plans and policies.*

In order to fully understand the cumulative effects of the proposed project, the Corps must incorporate resilience strategy into the DEIS to assess the true vulnerability of the project area. As part of Executive Order 80, the state of North Carolina is working to develop a *Climate Risk Assessment and Resiliency Plan*.¹³ In response to the Executive Order the N.C. Division of Coastal Management in partnership with the federation and other organizations held a North Carolina Coastal Resilience Summit. The information gathered during the Summit will be the basis of the newly developed State Resilience Plan. The 203 Study fails to include resilience planning and is thus in conflict with the state policies.

Furthermore, under section 307 of the Coastal Zone Management Act, *federal consistency* authority exists requiring federal actions within the coastal zone to be consistent with the enforceable policies of the N.C. Division of Coastal Management. Failure to include long-term resilience planning in the DEIS would not be consistent with the state’s coastal program. The

¹³ Executive Order NO.80: North Carolina’s Commitment to Address Climate Change and Transition to a Clean Energy Economy. <https://governor.nc.gov/documents/executive-order-no-80-north-carolinas-commitment-address-climate-change-and-transition>

Corps cannot expect the Port to effectively minimize and avoid impacts without taking into account the near and long-term effects of increasingly severe climate hazards.

3. The Corps Must Complete Section 7 Consultation under the Endangered Species Act.

Pursuant to Section 7 of the Endangered Species Act (ESA), federal agencies are required to consult with United States Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) to ensure that actions they undertake, fund, or authorize are not likely to jeopardize the continued existence of any threatened or endangered species; or result in the destruction or adverse modification of designated critical habitat. Per federal standards, we request the Corps' participation in a systematic process of interagency coordination with USFWS and NMFS.

The 203 Study identifies thirteen ESA-listed threatened and endangered species within the vicinity of the study area. Additionally, the study area encompasses a number of defined geographic areas that are designated under the ESA as critical habitats for threatened and endangered species. Critical habitats are areas considered essential to the conservation of a species that may require special management or protection. Designated critical habitats have essential habitat features known as "primary constituent elements" that are considered requirements for survival and reproduction.¹⁴ Thorough and transparent interagency cooperation is vital to ensure minimal impacts to threatened and endangered species and their habitat.

4. The Corps Must Consider Environmental Justice Considerations

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Population and Low-Income Populations, directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations.

When conducting NEPA evaluations, CEQ directs federal agencies to incorporate Environmental Justice considerations into both the technical analyses and the public involvement. The 203 Study includes preliminary statistical data for minority populations, but does not take into consideration potential impacts of the Project on said populations. Before coming to any decisions on potential alternatives, impacts to Environmental Justice populations must be wholly considered.

¹⁴ U.S. Fish and Wildlife Service. Critical Habitat. What is it?
<https://www.fws.gov/verobeach/MammalsPDFs/CriticalHabitatFactSheet.pdf>

5. The Corps Should Study the Effects of Potential Increase in Greenhouse Gas Emissions

The Council of Environmental Quality has developed guidelines for addressing the greenhouse gases (GHG) emissions when developing DEIS.¹⁵ The risk to regional air quality from the proposed project is two-fold: 1) potential increase in GHG emissions from larger vessels; and 2) increase in GHG emissions from land-based transportation of cargo from the vessels. The Corps needs to assess the impacts of greenhouse gas emissions and their effect on local air quality.

6. The Corps Should Perform Section 111 Study under 1968 River and Harbor Act

Section 111 of the 1968 River and Harbor Act authorizes the Secretary of the Army to investigate, study and construct projects for prevention or mitigation of shore damages attributable to Federal navigation works. The Act authorizes the study, construction and maintenance of work for prevention or mitigation of damages to both public and privately-owned shores to the extent of the damages that can be directly identified and attributed to Federal navigation work located along the coastal shorelines of the United States.

In Folly Beach, South Carolina for example a Section 111 study found “that 57% of the erosion/damage at Folly Beach resulted from the Federal navigation improvements at the Charleston Harbor jetties, therefore, it is classified as a navigation mitigation project. This resulted in cost sharing of 85% Federal and 15 % non-Federal instead of the usual 65% Federal and 35% non-Federal.”¹⁶

As part of the DEIS the Corps should perform this study to determine what extent of the erosion will the deepening of the navigation channel cause to the region, and what it needs to do to mitigate the effects of erosion.

Conclusion

We work to provide opportunities and guidance to partners, communities and individuals who seek to preserve the quality of our coast and strengthen our coastal economies; we believe every informed opinion matters.

In order to fully understand the total and cumulative impacts of the proposed Project, and to properly evaluate the avoidance, minimization and compensation requirements for the project as

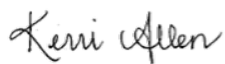
¹⁵ National Environmental Policy Act. Guidance on Consideration of Greenhouse Gases.
https://ceq.doe.gov/guidance/ceq_guidance_nepa-ghg.html

¹⁶ Project Fact Sheet, Folly Beach, SC
<https://www.sac.usace.army.mil/Portals/43/docs/congressionalvisits/2018/spring/civilprojects/Folly%20Beach%20-%20District%201.pdf>

proposed, we seek confirmation that the Corps will perform a detailed analysis following NEPA requirements. We also hope the project development will be subject to public involvement and thorough review.

Thank you for your consideration of our comments, we look forward to further engagement and guidance for increased transparency, public involvement and coordinated agency review on this proposed project.

Sincerely,



Kerri Allen
Coastal Advocate



Ana Zivanovic-Nenadovic
Senior Policy Analyst

**Wilmington Harbor Navigation Improvement Project
Section 203 Feasibility Study/Environmental Report, dated June 2019**

Policy Review Assessment – July 2019

Review Assessment

A concurrent review was conducted by the Office of the Secretary of the Army for Civil Works (OASACW) and the Headquarters, US Army Corps of Engineers (USACE) staff. This review has been conducted to determine whether the study and the process under which the study was developed, each comply with Federal laws and regulations; a determination of whether the project is feasible; and identification of any conditions that the Secretary may require for construction of the project. Specific comments on the report are included as below. In summary, the report would need significant revisions before it would be considered to be legally and policy sufficient. Significant review comments were identified, which could preclude the Secretary from making a positive determination of project feasibility in accordance with section 203 of the Water Resources Development Act (WRDA) of 1986, as amended. Issues identified during the review pertain to plan formulation, project economics, evaluation of sea level change, and completeness of the National Environmental Policy Act (NEPA) documentation.

A. Plan Formulation

1. Objectives

Concern: As written, the planning objectives are unclear and could potentially lead to the pre-selection of an alternative plan. The first two objectives, “reduce access restrictions and accommodate efficient loading,” do not identify the effect desired, which is used to measure and compare alternatives. Typically, objectives for deep draft navigation studies would have an effect to reduce the transportation costs, which would then result in cost reduction benefits as noted in ER 1105-2-100. In this instance, the objectives are not linked to a method to analyze beneficial contributions to national economic development. The third objective, “Maintain the Port of Wilmington as a port-of-call for USEC-Asia services from 2027-2076,” seems to be a corporate objective rather than a planning objective. As written, it is not quantifiable or measureable against other plans, and seems to have been used to eliminate potential measures or alternatives that include light loading by establishing a minimum depth for the deepening alternatives.

Basis of Concern: ER 1105-2-100, Section 2-3.a.(4) indicates: Objectives must be clearly defined and provide information on the effect desired (quantified, if possible), the subject of the objective (what will be changed by accomplishing the objective), the location where the expected result will occur, the timing of the effect (when would the effect occur) and the duration of the effect. Additionally, ER 1105-2-100, Section 2-3.c.(1) indicates that “alternative plans shall be formulated to identify specific ways to achieve planning objectives within constraints, so as to solve the problems and realize the opportunities that were identified in Step1.” In this instance,

as the objectives were not correctly written, the planning process and selection of a plan would be inherently flawed.

Significance of Concern: *High, as it seems that depths between 42' and 46' were eliminated from consideration due to flawed objectives.*

Action Needed to Resolve the Concern: Revise the objectives to be policy compliant and conduct a new iteration of plan formulation and evaluation.

2. Screening Criteria

Concern: Section 5.2. Pages 128.-130. Many of the criteria that are listed are unnecessary and could potentially eliminate solutions for the identified problems. The criteria that were listed, technical, economic, environmental, social, etc., should actually be used to establish assumptions for projecting the planning setting in the future with project settings; however, in this instance, by using these elements incorrectly as screening criteria, it seems that the plan formulation and evaluation process may have been unnecessarily restricted. Additionally, some of the elements, such as “the selected plan should be consistent with local, regional, and state goals for water resources development,” are not required for USACE Civil Works projects.

Basis of Concern: ER 1105-2-100, E-10.c.(3)(b) indicates that the planner should “specify the significant technical, economic, environmental, social and other elements of the planning setting to be projected over the period of analysis. Also, the planner should “discuss the rationale for selecting these elements.”

Significance of Concern: *Medium, as improper utilization of these criteria could have affected the formulation and evaluation of measures/alternatives.*

Action Needed to Resolve the Concern: Correctly utilize these criteria in the future project condition and eliminate any screening criteria that may errantly or artificially constrain the planning process. Review the study plan formulation to ensure that potential measures and/or alternatives were not errantly eliminated from consideration.

3. Screening of Measures

Concern: The screening of measures for the study is flawed. According to Table 5-1 on page 134, a stepped channel would meet all 3 project objectives; however, the measure was then eliminated from consideration. Additionally, the table indicates tidal advantage is carried forward even though it does not meet the third objective. What is the criteria for retaining measures? Do they need to meet all 3 of the objectives, or just one? This issue is related to the non-compliant study objectives as mentioned previously.

Basis of Concern: ER 1105-2-100, Section 2-3.d.(2) indicates the following: “Criteria to evaluate the alternative plans include all significant resources, outputs and plan effects. They also include contributions to the Federal objective, the study planning objectives, compliance with environmental protection requirements, the P&G’s four evaluation criteria (completeness,

effectiveness, efficiency and acceptability) and other criteria deemed significant by participating stakeholders.”

Significance of Concern: *Medium, as the study plan formulation may not include all reasonable alternatives.*

Action Needed to Resolve the Concern: After revision of the project objectives, conduct a new iteration of the formulation and screening of management measures.

4. Assumptions/FWOP Condition

Concern: The report indicates that the vessels for USEC-Asia services would not call on the port in the future without project condition due to the high cost of light loading; however, no documentation from the shipping companies has been provided to support this project assumption, which has in turn been used to eliminate full examination of alternatives. As noted in ER 1105-2-100, Section E-10.c.(1)(a), basic assumptions for all studies are non-structural measures within the authority and ability of port agencies, other public agencies, and the transportation industry.

Basis of Concern: ER 1105-2-100, Appendix E, Section E-10.c.(1) indicates the following: “Assumptions specific to the study should be stated and supported.”

Significance of Concern: *High, as the project assumptions/future without project conditions significantly affect the plan formulation and selection of a plan.*

Action Needed to Resolve the Concern: Fully document all assumptions for the study, providing letters or agreements where necessary to evidence conclusions. All assumptions, data, and other information must be specific to the current study and the port of Wilmington, unless it is clear that utilization of data or information from other studies will provide identical conclusions.

B. Environmental

1. Number of Alternatives

Concern: The document only includes one implementation alternative. Normally, navigation improvement projects include increments of dredging depth in the detailed environmental analysis. According to the Principles and Guidelines, the recommended plan will contribute to national economic development consistent with protecting the Nation's environment. Environmental effects of the alternative plans must be considered and can drive the selection of the recommended plan; that's not possible if only one plan is considered. Reasonable alternatives other than channel depth increments with less significant environmental effects, such as relocating facilities should be considered in the report in greater detail to compare the economic and environmental advantages and disadvantages. Decision makers need sufficient information to identify the recommended plan.

Basis of Concern: Principles and Guidelines; NEPA requires agencies to consider reasonable alternatives and the guidance for Studies of Water Resources Development Projects by Non-Federal Interests (ER 1165-2-209) requires Non-Federal Interests to evaluate reasonable alternatives.

Significance of Concern: *High.*

Action Needed to Resolve the Concern: Include additional alternatives in the detailed evaluation.

2. Accuracy Effects Determinations

Concern: The report provides very good information to form the basis of effects determinations, but in many cases, it understates environmental effects in summary statements without fully and objectively relating impacts to the resource characterizations and analysis that preceded it. An example is the treatment of project effects on benthic habitats - which affects the impact analysis for many other resources, e.g. fisheries, threatened and endangered species. The project will change a substantial area of shallow subtidal habitat to deep subtidal habitat. The benthic community in those areas will change because of the physical and chemical changes to the habitat that result. Therefore, a conclusion such as the following for Atlantic sturgeon critical habitat understates the effects, "Based on existing conditions within the new dredging areas, it is anticipated that the recovering benthic communities would provide prey resources similar to those of the existing communities. Therefore, it is expected that effects on foraging habitat PBFs would be short-term." By increasing the depth of shallow areas, the channel deepening and widening will produce a benthic community more similar to that of the existing deep channel bottom, which could be described and quantified by sampling and comparing both areas. This is a long term effect; overall, there will be less shallow subtidal habitat in the estuary and the benthic species composition of those areas will be affected over the long term because of the change in depth and frequency of disturbance.

Similarly, the conclusions do not flow from the information that precedes the following case related to effects on sea turtle habitat and is repeated in many locations within the report, "Operations under the TSP would not be expected to increase the frequency of beach disposal events, as excavation to construct the channel reaches would effectively eliminate the need for a scheduled maintenance dredging event. Based on the proposed conservation measures, it is expected that any adverse indirect effects on sea turtle nesting habitat would be minor and short term." Increasing the depth and width of the project would increase the volume of sediment removed and the area affected by its disposal, including during future maintenance dredging. That is a long term effect.

Section 8.24.3.3 Benthic Communities seems to be describing the effects of maintenance dredging for improvement dredging: "New dredging in the channel expansion areas would remove the majority of the associated soft bottom benthic invertebrate infauna and epifauna, resulting in an initial sharp reduction in community levels of abundance, diversity, biomass, and availability of prey for predatory demersal fishes within the dredged areas. Dredging involves

direct, short term impacts to softbottom communities in the dredge footprint during construction; however the communities are not expected to be negatively affected over the long term.”

Basis of Concern: NEPA regulations, Clean Water Act, Section 404(b)(1) Guidelines, Marine Protection, Research and Sanctuaries Act regulations

Significance of Concern: *Medium*

Action Needed to Resolve the Concern: Review the report and ensure that summary statements accurately reflect the magnitude of effects described in the preceding text, particularly, accurately describing long term or permanent effects vs. short term effects. Clearly distinguish the difference in effects between the new areas affected by improvement dredging and those that are regularly exposed to maintenance dredging.

3. Presentation of Effects Determinations

Concern: In many cases, the report uses qualifying words, such as *may*, *potentially*, and *just*, to lessen the description of project impacts. For instance, Section 8.11.2.1 provides several examples highlighted in italics in the following paragraph:

“Temporary losses of benthic invertebrates in the new dredging areas may negatively affect the foraging activities of predatory demersal fishes (e.g., flounders, rays, spots, and croakers), *potentially* inducing fishes to seek out alternative soft bottom foraging habitats (Byrnes et al. 2003). It is expected that rapid recolonization of disturbed soft bottom habitats in the new dredging areas would provide substantial prey resources within a relatively short period of time. However, increases in depth and subsequent periodic disturbance from maintenance dredging *may* permanently shift community composition towards a more early successional benthic assemblage. At greater depths, lower DO concentrations and reduced sunlight penetration *may* limit the productivity of benthic communities as a prey resource for demersal fishes. However, the vast majority of the ~547 acres of estuarine softbottom habitat that would be affected by new dredging are located in relatively deep waters (97% >12ft and 99% >6ft) along the margins of the existing navigation channel, and thus are presently subject to frequent disturbance from strong tidal currents, ship prop wash, and maintenance dredging; as well as depth limitations on productivity. Therefore, the recovering communities would generally be expected to provide benthic prey resources that are similar to those of the existing communities. The proposed new dredging areas encompass *just* 5.9 acres of shallow (<6 ft) soft bottom habitat. In contrast, the Cape Fear River estuary contains an estimated 37,800 acres of shallow softbottom habitat in waters <6 ft and an estimated 188,549 acres of softbottom habitat in waters >6 ft (NCDEQ 2016). However, it is anticipated that the effects of prey loss on demersal fishes would be localized and short-term based on the following considerations: 1) early recruitment of opportunistic benthic taxa to the disturbed areas would provide substantial prey resources within a relatively short period of time, 2) demersal fishes are highly mobile and capable of seeking out alternative habitats, and 3) the distribution of alternative shallow soft bottom habitats within the overall project area is expansive.”

Basis of Concern: NEPA – Planning Guidance Notebook. The NEPA requires that decision making should proceed with full awareness of the environmental consequences that follow from a major federal action that significantly affects the environment.

Significance of Concern: *Low.*

Action Needed to Resolve the Concern: Remove qualifiers to provide more objective predictions of effects.

4. Mitigation Plan

Concern: The mitigation recommendations are not linked to an explicit consideration of the level of significance of the resources and impacts and may imply a greater commitment to mitigation than is justified.

Basis of Concern: Planning Guidance Notebook - Justification of mitigation features recommended for inclusion in projects shall be based upon analyses that demonstrate the combined monetary and non-monetary values of the last increment of losses prevented, reduced, or replaced is at least equal to the combined monetary and non-monetary costs of the last added increment so as to reasonably maximize overall project benefits. In addition, an incremental cost analysis, to the level of detail appropriate, will be used to demonstrate that the most cost effective mitigation measure(s) has been selected. And, Non-monetary value shall be based upon technical, institutional, and public recognition of the ecological, cultural and aesthetic attributes of resources within the study area. Criteria for determining significance shall include, but not be limited to, the scarcity or uniqueness of the resource from a national, regional, state, and local perspective.

Significance of Concern: *Medium.*

Action Needed to Resolve the Concern: Recognizing that the cost effectiveness/incremental cost analysis would be premature at this stage, revise the mitigation plan section to clearly establish the significance of the resources and impacts following the procedures in ER 1105-2-100, then provide only those mitigation options (without commitments) that would be required to ensure that the recommended plan would not have more than negligible adverse impacts on ecological resources and may fully justified.

5. Environmental Commitments

Concern: The report indicates that “The USACE commits to completing or implementing the following analyses and measures.”

Basis for Concern: Studies of Water Resources Development Projects by Non-Federal Interests (ER 1165-2-209)

Significance of Concern: *High.*

Action Needed to Resolve the Concern: Revise the text to say, “8.25.6 Future Environmental Considerations – The following actions will be considered during the preparation of a NEPA document.”

C. Economics

1. Price Levels

Concern: The report correctly uses the FY 19 price level and discount rate. However, if future versions of the report cross into FY 20 then it will be necessary to update the recommended plan at that time.

Basis of Concern: Reference ER 1105-2-100 Appendix D-3.d.(2).

Significance of Concern: *Low. Reporting requirement not likely to impact plan selection.*

Action needed to resolve the concern: *This is a proactive comment for awareness and requires no action at this time. Appropriate updates should be made prior to the final report to ASA(CW).*

2. Interest during Construction (IDC)

Concern: It is unclear from the economic analysis if IDC was calculated correctly.

Basis of Concern: IDC is an important economic cost that must be accounted for in plan selection and justification; ER 1105-2-100 Appendix D Para D-3.e. (11).

Significance of Concern: *Low to Medium. Not likely to impact plan selection or justification if it was calculated, but full extent of an incorrect calculation cannot be determined without additional information.*

Action needed to resolve the concern: Update the economic analysis to demonstrate that IDC was calculated correctly.

3. Commodity Forecast for TEUs

Concern: The only benefitting containerized trade in the economic analysis is the USEC-Asia route. The commodity forecast presented for that one trade route far exceeds what could be supported by empirical data from the Waterborne Commerce Statistics Center (WCSC) for all Port of Wilmington containerized trade. For example, Table 2-4 of the economic appendix shows the economic analysis assumes 272,615 TEUs for USEC-Asia traffic for 2025 and total Port TEUs of 425,328 (179,713 + 272,615) – see image below. However, the most recent WCSC data for 2017 for total Port TEUs is only 178,865. Even accounting for growth between 2017 and 2025, the forecast assumes a 137% $((425,328 - 178,865) / 178,865)$ increase of TEUs, as compared to WCSC officially collected data. It appears that the commodity forecast has been significantly overestimated. Correcting that error would result in a dramatic reduction in project benefits.

Table 2-4
Port of Wilmington Containerized Cargo Forecast (TEUs)

Region	Port	2025	2030	2035	2040	2045
Non-Asia	Wilmington, NC	179,713	223,554	252,930	286,168	323,772
Asia	USEC Alternate	272,615	339,119	383,682	434,101	491,145

Basis of Concern: Validity of assumptions that form a building block of the economic analysis.

Significance of Concern: *High. Directly impacts both plan selection and justification.*

Action Needed to Resolve the Concern: Correct the economic analysis to use appropriate number of TEUs for the benefitting USEC-Asia traffic or clearly explain and defend the dramatic difference in the number of TEUs used (i.e., between the WCSC data and that used in the analysis).

4. Future Without Project Assumptions – Alternative Port (1)

Concern: The economic analysis assumes that the Future Without Project (FWOP) condition of no additional depth at the Port of Wilmington would result in a transfer of all USEC-Asia TEUs to alternative Ports and that the TEUs would then be trucked to their final destinations. This appears to be a faulty assumption in that the Port of Wilmington is currently still getting TEUs on smaller vessels even though most of the alternative east coast ports are already deeper than Wilmington.

Basis of Concern: Validity of assumption.

Significance of Concern: *High. This comment has direct impact on all of the economic benefits claimed.*

Action Needed to Resolve the Concern: Update the economic analysis using a more reasonable and defensible assumption of the FWOP as TEUs continuing to go through the Port of Wilmington.

5. Future Without Project Assumptions – Fleet Transition

Concern: The economic analysis assumes that the Future Without Project (FWOP) condition has a USEC-Asia transition to virtually all PPX3 and larger vessels. While it is acknowledged that the world fleet is transitioning to larger vessels with the opening of the newly expanded Panama Canal, it is not realistic to assume that 100% of the fleet for USEC-Asia will transition to the largest containership vessel classes. This is a critical assumption because if the fleet did not transition 100% as assumed and Panamax vessels remained in the fleet mix, then the assumption of FWOP TEUs leaving to alternative ports would not be valid (see comment on Future Without Project Conditions – Alternative Ports).

Basis of Concern: Validity of assumption.

Significance of Concern: *High. This comment has direct impact on all of the economic benefits claimed.*

Action Needed to Resolve the Concern: Update the economic analysis to document a more reasonable assumption of the FWOP as the USEC-Asia fleet having a distribution rather than an unrealistic assumption of 100% PPX3 and greater.

6. Overstating of Landside Benefits

Concern: Please note Future Without Project (FWOP) Condition Assumption comments that question the validity of the transition to other ports.

Notwithstanding other concerns, if it is assumed that USEC-Asia TEUs would transition to alternative ports in the future FWOP condition, it appears that the benefits are significantly overstated. The reason for this is (1) all of the alternative ports have rail connections to the hinterland and rail was not considered as a land transportation alternative despite rail being significantly cheaper than trucking and (2) Wilmington is not the closest port to a number of the destinations, including Charlotte, which is almost a wash with Charleston.

Table B-2
Round Trip Distances Between Ports and Cities

City	Round Trip Port Distance (mi)			
	Wilmington	Norfolk	Charleston	Savannah
Fayetteville, NC	196	454	432	524
Raleigh, NC	284	390	572	666
Columbia, SC	396	778	224	318
Charlotte, NC	416	648	428	520
Winston-Salem, NC	450	508	596	688
Greenville, SC	574	854	404	496
Nashville, TN	1278	1412	1108	974
Cleveland, OH	1376	1080	1412	1506
Chicago, IL	2008	1794	1842	1934

Basis of Concern: Validity of assumption. Next Least Costly Alternative - ER 1105-2-100 Appendix E Page E -6 Paragraph E-3.a.(4)(a)(2)(c).

Significance of Concern: *High. This comment has direct impact on all of the economic benefits claimed.*

Action Needed to Resolve the Concern: Notwithstanding the other comments that could change the economic analysis and assuming the transition assumption remains, the economic analysis must be updated to only count landside costs for those TEUs where the Port of Wilmington is actually closer than alternative ports AND the analysis must include rail as a potential least cost alternative.

7. Evidence for Supporting Assumptions

Concern: There are a number of assumptions used in the analysis that do not have sufficient evidence to support the assumptions. Two examples are the assumption that 100% of the vessel fleet for the USEC-Asia will be PPX3 or greater and that TEUs will transfer to other Ports. We are now going into the 4th year of the newly expanded Panama Canal and if the trends that are assumed are really underlying, there would seem to be evidence of it already starting to happen. However, Waterborne Commerce Statistics Center (WCSC) data does not support these conclusions. What has happened to Wilmington shipping since the Panama Canal third lock opened in 2016?

Basis of Concern: Validity of key underlying assumption.

Significance of Concern: *High. This comment has direct impact on all of the economic benefits claimed.*

Action needed to resolve the concern: Present clear evidence that validates the assumptions being made.

8. Overall Economic Feasibility and Selection of the NED Plan

Concern: Based on Economic comments 12-16, there is a high likelihood that neither -47FT nor -48FT are the NED plan. Further, project justification (positive NED benefits) at those depths is uncertain.

Basis of Concern: Cumulative effect on benefits resulting from the number of high significance concerns.

Significance of Concern: *High. Directly calls into question the NED plan and demonstrating economic feasibility as required for Sec 203 reports.*

Action Needed to Resolve the Concern: Update the economic analysis to use reasonable assumptions, determine the NED Plan, and document/support plan selection.

9. Sufficient Array of Alternatives to Identify the NED Plan

Concern: Reference table 4-7 of the economic appendix. The economic analysis only evaluates -47FT and -48FT and identifies -47FT as the NED Plan because it has greater net benefits than -48FT. However, -47FT cannot be determined to be the NED Plan because a lesser alternative was not evaluated. The argument presented is that there are \$0 in landside costs for -44FT, -

45FT, and -46FT. This does not seem reasonable as there is no evidence that larger ships could not call on Wilmington harbor at those depths. Data for other east coast ports shows PPX3 and larger vessels calling at depths below -47FT. If this singular assumption did not hold true, the NED Plan would not be -47FT.

Basis of Concern: Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies 1983 Section VI; ER 1105-2-100 2-4.

Significance of Concern: *High. Directly calls into question the identification of the NED plan.*

Action Needed to Resolve the Concern: Update the economic analysis to show benefits for depths below -47FT and then identify the NED Plan.

10. Independent External Peer Review (IEPR)

Concern: IEPR is required for Section 203 project just like USACE led projects. Given the magnitude of the project implementation costs and the non-traditional economic analysis and the assumptions used, IEPR is recommended.

Basis of Concern: ER 1165-2-209.

Significance of Concern: *Medium to high. This comment has direct impact on all of the economic benefits claimed.*

Action Needed to Resolve the Concern: Conduct an IEPR or obtain an IEPR exclusion from the Chief of Engineers.

D. Climate Preparedness and Resilience

1. Climate Hydrology Analysis

Concern: The report lacks a discussion relevant information about observed and expected climate change impacts in hydrologic analyses developed for the study. These impacts combined with sea level change will profoundly impact the future with project conditions and inform cost and cost risk assumptions of future OMRR&R costs related to dredging.

Basis of Concern: ECB 2018-14 requires a qualitative analysis of climate-impacted hydrology to describe future conditions, which includes a literature review. Climate change information for hydrologic analyses includes direct changes to hydrology through changes in temperature, precipitation, evaporation rates and other climate variables, as well as dependent basin responses to climate drivers, such as sedimentation loadings. For the Wilmington Harbor Section 203 study, this analysis would inform future potential changes to streamflow, precipitation and sedimentation in the project area which is currently lacking the report.

Significance of concern: Low to medium. The qualitative analysis required by this ECB should focus on those aspects of climate and hydrology relevant to the project's problems, opportunities,

and alternatives, and include consideration of both past (observed) changes as well as projected, future (modeled) changes.

Future with project impacts on water quality should be informed by changes in water temperature and freshwater inputs. Sediment delivery and transport to the project area are impacted by these changes and would impact the shoaling rates developed in the analysis, adding uncertainty to future with project assumptions informed by the analysis conducted for the study.

Action Needed to Resolve the Concern: A policy compliant climate hydrology analysis should be performed using ECB 2018-14 guidance. The climate discussion should be summarized in the main report, with the detailed material included in Appendix A (Engineering). The results should be integrated into the key assumptions in the future with and without project assumptions, and inform any adjustments to risk register and current cost risk assumptions in the report.

2. Sea Level Change (SLC) Analysis

Concern: The report and analysis are not fully compliant with USACE policy on SLC.

Basis of concern: Review of the documents provided and analysis indicate that SLC was incorporated into analyses and discussion, in various sections of the main report; however, application and presentation is piecemeal in the report and does not appear to inform performance and impact risk of TSP. Specific concerns by discipline/section follow.

Sea Level Change – The sea level rates are presented in section 2.6, presenting the 50 year project projections for the Wilmington, NC NOAA tide gauge. These projections are understating the changes in future water levels. Due to the alteration of the Cape Fear River Estuary (CFRE) by the federal navigation project over the last 150 years, the Wilmington tidal gauge has experienced an anomalously large increase in tidal constituents and tidal range since the current NOAA tidal gauge records in the 1930's. The tidal datum which is defined by the tidal range is not stable and is increasing at a greater rate than the mean sea level trend. The significance of this phenomena is that tide level and extreme water level projections should not be based on the published observed 2006 mean sea level trend (2.13 mm/year), but on the MHW trend, 4.26 mm/yr. (Zervas, 2013) This is approximately double the rate used in the study analysis, and result in a RSLR increase between 0.70 to 2.92 feet compared to 0.34 to 2.56 feet respectively.

Plan Formulation – Future without project and future with project discussions do not fully integrate impacts of climate change to hydrology and changes in sea level. Future changes in water levels, salinity intrusion due to RSLR and further channel alteration are likely understated. The section listing constraints does not include increases in water levels or induced flooding.

Economics/Planning – The non-structural measure “tidal advantage” should perform better under the intermediate/high scenarios since the tidal range is increasing. Has a sensitivity analysis been done showing performance of larger tidal ranges on tidal advantage?

Engineering Analysis/Hydrodynamic Modeling – Future without project, future with project modeling is likely underestimating impacts since the RSLR rates are low by a significant amount. Changes in flood risk for the with project condition was not investigated.

ER 1100-2-8162/Hydrodynamics – “As used in this ER, locations with oceanic astronomical tidal influence, as well as connected waterways with base-level controlled by sea level. In the latter waterways, influence by wind driven tides may exceed astronomical tidal influence. Coastal areas include marine, estuarine, and riverine waters and affected lands.” In addition to the impacts of future conditions described in earlier comments, when assessing coastal storm risk in the estuary, wind loading should be considered.

NEPA/Impacts – The CFRE is a funnel shaped estuary, which has an increasing tidal range due to incremental deepening and channel maintenance over the last 150 years. Further deepening will increase these changes and create additional flood risk from coastal storms due to storm surge amplification (Famalkhalili and Talke, 2016). Nuisance flooding frequency will likely increase as a result of the project. As the tide range expands, some stormwater drainage outfalls to Wilmington harbor will be impacted, resulting in decreased gravity drainage performance. Future salinity changes in the estuary have been underestimated. Future freshwater inputs from the watersheds may trend upward under climate change ameliorating the impacts of the deepening slightly.

Significance of concern: *High.*

Action Needed to Resolve the Concern: Coordinate with Navigation PCX, HH&C, CPR CoP's, vertical team for specific direction.

E. Counsel

1. Study Authority

Concern: The study authority cited in section 1.2 of the report is not cited correctly.

Basis of Concern: Section 203 of the Water Resources Development Act (WRDA) of 1986, Public Law 99-662 (33 U.S.C. 2231) was further amended by section 1152 of WRDA 2018, Public Law 115-270. Specifically, section 1152 amended subsections (c) and (e) of section 203.

Significance of Concern: Medium. The non-federal interest should understand the revisions to the study authority, as explained in the implementation guidance for section 1152 approved by the Assistant Secretary of the Army for Civil Works on 2 May 2019.

Action Needed to Resolve the Concern: The study authority cited in section 1.2 of the report should be updated to include the modifications to the authority made by section 1152 of WRDA 2018. The non-federal interest also should review the “Implementation Guidance for Section 1152 of the Water Resources Development of 2018, Studies of Water Resources Development Projects by Non-Federal Interests,” dated 2 May 2019.

2. Tentatively Selected Plan

Concern: Sections 6.1 and 10.1 of the report describe the recommended plan as “dredging” the federal navigation channel.

Basis of Concern: Dredging may occur for construction, operation, or maintenance of navigation projects. For clarity and to avoid confusion with operation and maintenance dredging activities, the tentatively selected plan should be described as “deepening” the federal navigation channel instead.

Significance of Concern: *Low.*

Action Needed to Resolve the Concern: The tentatively selected plan recommended generally should be referred to in sections 6.1 and 10.1 and throughout the report and its appendices as “deepening” the federal navigation channel, rather than simply “dredging” the federal navigation channel.

3. Recommendations

Concern: For the recommendations in section 14, the report describes only the first cost and annual incremental operations and maintenance cost to the federal government. No reference is made to the mitigation required for the project.

Basis of Concern: When a project is authorized by Congress, the recommendations contained in the feasibility report become the basis for proceeding with the project as a Federal undertaking. ER 1105-2-100, App’x G, para. G-9.i.(1). The wording of recommendations, incorporated by reference in the authorizing act, has the force of law for the project, and therefore requires special attention. The recommendations must contain a “clear reference to the plan being recommended for implementation, including appropriate mitigation.” ER 1105-2-100, App’x G, para. G-9.i.(4)(a).

Significance of Concern: *Medium. While total project costs and mitigation are summarized elsewhere in the report, the recommendations section needs to clear reference these items as well.*

Action Needed to Resolve the Concern: Provide the total project cost at FY 2019 price levels in the recommendations section of the report. Indicate the expected federal and non-federal cost-share amounts. Summarize the mitigation for the project as well.

4. Items of Local Cooperation

Concern: The non-federal responsibilities listed in the recommendations section of the report states the North Carolina State Ports Authority will “[a]ccomplish all removals determined necessary by the Federal Government other than those removals specifically assigned to the Federal Government.”

Basis of Concern: It is not clear to what “removals” refers, particularly given that no real estate plan was provided.

Significance of Concern: *Medium.*

Action Needed to Resolve the Concern: Explain what “removals” refers to in the recommendations section of the report. As noted in a few paragraphs above this reference, the non-federal sponsor would be responsible to perform or ensure performance of all relocations determined necessary for the project.

5. Real Estate Plan

Concern: There is no Real Estate Plan (REP).

Basis of Concern: Section 12-16(b) in Chapter 12 of ER 405-1-12 specifies that “A REP must be prepared in support of decision documents for all types of water resources projects whether full Federal or cost shared, specifically authorized or continuing authority. The level of detail required for each item described in subparagraph c below will vary depending on the scope and complexity of each project.”

Significance of Concern: *High. The significance of this concern is high because it describes a fundamental problem with the project that could affect the recommendation, success, or justification of the project.*

Action Needed to Resolve the Concern: A REP consistent with the requirements of Section 12-16(c) in Chapter 12 of ER 405-1-12 should be added to the report. Per the guidance from Section 12-16(c), the Real Estate Plan must identify a number of requirements, such as "a description of the LER required for the construction, operation and maintenance of the project including those required for relocations, borrow material and dredged or excavated material disposal." The Corps recognizes that if it is doing the construction for the project, no land must be acquired for the dredging itself, but the Mitigation, Monitoring, and Adaptive Management Plan is missing a number of requirements relating to the lands needed for mitigation that would be in the REP.