

Subject	Comment
Cost (Project and Mitigation)	Emergency treatment cost of sea turtle dredge survivors should be paid by the dredging operations responsible for the takes
Cost (Project and Mitigation)	The deepening of the channel will have hard-to-predict effects on BHI's South Beach, which has been re-nourished at a cost of tens of millions of dollars over the last decade, and will likely become even more expensive to maintain after the deepening of the channel is done.
Cost (Project and Mitigation)	Require that the USACE approval is contingent on fully funding the mitigation plan
Cost (Project and Mitigation)	Requirement for the NC State Ports Authority to provide funds for sand placement on the islands.
Cost (Project and Mitigation)	Since our NC taxes helped fund this Study, and we're directly impacted from its negative impacts, we ask that you work with the Bald Head Island Village to address the above concerns.
Cost (Project and Mitigation)	We encourage that USACE examine the potential economic impacts of the proposed project to property values, workforce housing and transport, and the costs and benefits to the local and regional economy.
Cost (Project and Mitigation)	1. 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. 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. Update the economic analysis to demonstrate that IDC was calculated correctly. 3. 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. 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. 5. 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. 6. Present clear evidence that validates the assumptions being made. 7. Update the economic analysis to use reasonable assumptions, determine the NED Plan, and document/support plan selection. 8. Update the economic analysis to show benefits for depths below -47FT and then identify the NED Plan. 9. 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. 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.
Cost (Project and Mitigation)	Should the deepening of the channel pass, it must be accompanied by a commitment to mitigate the erosion damage to Bald Head Island, Caswell Beach and Oak Island.
Cultural and Historic Resources	BOEM requests to be informally involved in any cultural resource survey effects conducted in the Outer Continental Shelf for this project.
Cultural and Historic Resources	We ask that a thorough archaeological study be performed on the site and an active conversation be established with the Gullah-Geechee communities so that they stay informed in this process and ensure their interests are protected.
Cultural and Historic Resources	Given that larger ships and container vessels would not be passing historic properties along and in the river "but for" the proposed deepening and widening, we believe that the effects on all Cape Fear River historic resources must be considered as part of the proposed undertaking. Close collaboration with the Underwater Archaeology Branch will be necessary, as alternatives are considered, and archaeological surveys are planned, to ensure there are no adverse effects to potentially significant, submerged historic resources. The USS North Carolina and the Fort Fisher (Battery Buchanan) site, as National Historic Landmarks, are provided special consideration under Section 106 of the National Historic Preservation Act and potential adverse effects to these resources needs to be addressed in consultation with the National Park Service and Advisory Council on Historic Preservation. Brunswick Town/Fort Anderson State Historic Site has also suffered extreme shoreline erosion attributed to an earlier widening of the Upper Midnight Channel Range.
Cumulative Effects	How does the channel alteration and the addition of more, bigger and deeper ships affect the depositional sediments at MOTSU?
Cumulative Effects	Potential increase in invasive species hitchhiking on ship hulls and inside ballast tanks that will have a negative impact on the riverine environment. We ask that you evaluate the potential risks and uncertainties related to introduction of invasive species.
Cumulative Effects	1. National Gypsum's vessels are currently experiencing significant delays and issues with Post Panamax vessels transiting the navigation channel. Since it is already issue, we are extremely concerned that widening the channel could prevent us from being able to utilize the Company dock to its full capacity. 2. Given the location of National Gypsum's berth, we are concerned that deepening the channel adjacent to our berth would prevent us from being able to properly maintain the depth of our berth and that any maintenance dredging to the new navigation channel will result in excessive silting in our berth that would not happen naturally. 3. The National Gypsum berth is already within the setback limits of the channel and widening the channel could impact our ability to maintain structures or add additional structures.
Cumulative Effects	The Corps must incorporate resilience strategy into the DEIS to assess the true vulnerability of the project area.
Cumulative Effects	Failure to consider the historical experience of the last widening/deepening project, which encountered significant unanticipated logistical problems in removal of unexpected materials, impacting cost and schedules; these same materials can be anticipated in the same Reaches projected to be widened and deepened and must therefore be considered in alternative selection.

Cumulative Effects	The Corps must also evaluate the impact of induced development resulting from the expanded Port facility. The DEIS must carefully consider how and where the Project might induce growth throughout the region, including the resulting impacts to communities and natural resources. 2. The DEIS should also take a hard look at whether the Project may exacerbate existing and reasonably foreseeable environmental threats in the lower Cape Fear River.
ESA Protected Species	Installation of a turtle-sized hyperbaric chamber to mitigate dredging impacts and increase chance of sea turtle survival.
ESA Protected Species	Significant erosion on eastern point of oak island that has decreased the amount of suitable habitat for shorebirds. Oak Island is listed as Loggerhead Sea Turtle Terrestrial Critical Habitat. Oak Island/Caswell Beach is designated as Critical Nesting Habitat. Fort Caswell would like to know what actions will be taken to preserve these critical areas on our shoreline since the project will increase erosion.
ESA Protected Species	Per federal standards, we request the Corps' participation in a systematic process of interagency coordination with USFWS and NMFS.
ESA Protected Species	The NMFS is concerned about potential impacts to sturgeon from blasting, pile driving, interactions with dredge equipment, and vessel traffic. NMFS is also concerned about potential impacts to Atlantic sturgeon critical habitat, specifically removal of soft substrate, the location of the upstream salt wedge, and water quality changes (e.g., temperature and concentration of dissolved oxygen).
ESA Protected Species	Firstly, the DEIS must evaluate the Project's impacts on threatened and endangered species listed under the federal ESA, as well as species protected under North Carolina state law. This evaluation should cover, at minimum, shortnose and Atlantic sturgeon, manatees, turtles, piping plovers, red knots, as well as the critically endangered North Atlantic right whale, including any critical habitat for these and other federally listed species within or near the Project site. Increased ship traffic and larger ships are likely to lead to more vessel strikes of protected species and must be considered in the DEIS. Additionally, the DEIS must examine any impacts of increased erosion and shoreline hardening on nearby sea turtle and bird nesting habitats.
Fish and Wildlife and Plants	We feel the dredging will significantly impact bird habitats, notably on Battery Island, which supports 25% of the State's nesting coastal water birds, as well as the marsh ecosystems that support many varieties of marine life.
Fish and Wildlife and Plants	The addition of stress to the marine life is also not been adequately explored after successive dredging projects.
Fish and Wildlife and Plants	Consider the environmental impacts on birds that nest on spoil islands. Visit Battery Island to look at the erosion that impacts nesting Ibis.
Fish and Wildlife and Plants	A deeper channel to accommodate post-panama ships that draw 49' will create an environmental hazard from a potential spill to increased pollution negatively impacting our bird, fish, turtle wildlife, and marsh vegetation.
Fish and Wildlife and Plants	The Corps must also assess potential adverse impacts from the Project on Venus flytraps, which are currently being considered for federal listing under the ESA and thus may become subject to ESA protections before the Corps completes the NEPA process. 2. The expansion of the Harbor has the potential to facilitate the introduction of invasive species through the discharge of ballast water from deep draft vessels. The DEIS must examine whether increasing the amount of ballast water exchange within the Wilmington Harbor could adversely affect the surrounding environment.
Groundwater/Castle Hayne Aquifer	Freshwater aquifer would be compromised
Groundwater/Castle Hayne Aquifer	The aquifer is basically at 47 feet of depth, the depth to which the channel is to be dredged. Obviously, salt water may intrude into the aquifer, BHI's primary water source, if such dredging occurs.
Groundwater/Castle Hayne Aquifer	The Castle Hayne Aquifer, which BHI draws and depends upon for its potable water, is estimated to lie at 47'. Any attempts to further deepen the channel would have a permanent destructive impact on this critical water supply.
Groundwater/Castle Hayne Aquifer	We are deeply concerned that the deepening of this channel into bedrock will damage and crack the fragile limestone beds that protects our Castle Haynes aquifer. The last thing we need is more saltwater intrusion into our important water supply source.
Inlet Morphology	Would deepening the channel mean widening the channel? It most certainly would.
Inlet Morphology	Carolina Beach Inlet- Please address, if any, potential effects on navigation and shoreline management elements resulting from an increased design template, volumetric flow and rate? Please specifically address potential effects on Snow's Cut, the AIWW crossing, CB Inlet, CB Inlet shoulders and NHC's Inshore Dredge Material Management Site.
Inlet Morphology	The analysis of the operation of the relevant sand transport systems (discussed further below) is deeply flawed. E.g., littoral transport rates cited are to a large degree based on a 1999 ERDC Report (CHL-99-18) which has proven to be grossly inaccurate. Proper understanding of these systems and the potential impact on them of each possible project alternative is necessary to a proper alternatives and cost-benefit analysis.
Inlet Morphology	The DEIS should also consider impacts to tidal marshes, which serve important ecosystem functions along the Cape Fear Basin. Shoreline armoring associated with the Project would likely impede marsh migration, and this should be carefully considered in the DEIS.
Mitigation	Will the Port be required to establish mitigation for this study including the GHG impacts caused by the increased size of the container ships and the amount of inbound and outbound rail and truck traffic required to move that increased freight volume?

Mitigation	FUND THE MITIGATION PLAN. Not only for the duration of construction, but also for the long term and ongoing environmental changes this will cause. Fund mitigation for beach maintenance, preservation of the terminal groin and the textile groins, and other structures that may be required to keep the sand on Bald Head Island's beaches and out of the Cape Fear River channel. ASSIST with identifying sand sources to replace sand for Bald Head Island's beaches that falls in the channel. REVISE the sand sharing plan among local beaches to more equitably share beach-quality dredged sand where impacts are greatest.
Mitigation	The EPA recommends that alternatives to preservation as compensatory mitigation utilize both the Northeast Cape Fear River and Town Creek options since the project effects will be spread throughout several Lower Cape Fear tidally influenced streams and rivers. The consideration to restore approximately 10,000 linear feet of tidal creek (Alligator Creek) and tidal wetland enhancement of Eagle Island is dependent upon a detailed analysis of the approach and reference system to be utilized for construction. Use of in-kind mitigation is preferable and the sponsor should continue to exhaust potential sources of mitigation credit suitable to replace functional loss in tidally influenced fresh water wetlands.
Mitigation	Measures should be incorporated into plans to protect, preserve, or restore environmental quality in the project area. Shoreline monitoring and mitigation strategies of our property should be requirements. We ask that we be made aware of any public/stakeholder meetings regarding this project and our concerns addressed in writing.
Mitigation	If the project proceeds as planned, at a minimum, significant funds in the hundreds of millions of dollars should be allocated to mitigate the potential problems listed above. BHI residents and homeowners should not bear the full burden of offsetting impacts to the beaches, protective dunes, and infrastructure of BHI caused by the WHNIP.
Mitigation	Prepare a comprehensive mitigation plan for the construction impacts as well as the long-term anticipated and unanticipated consequences
Mitigation	A perpetual mitigation plan that addresses the recurrent erosion that will happen to the bird nesting islands be required as part of the operation and maintenance of the shipping channel.
Mitigation	The Environmental Consequences 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.
Mitigation	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. 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.
Mitigation	The Draft Report makes no commitment to retaining beach quality sand in the coastal sand transport system or placing it strategically on the beaches that will be directly affected by this project. Proper analysis of this project and alternatives to this project must consider these impacts, the costs of mitigating these impacts, and the parties who will bear the responsibility for this mitigation. 2. to assure that future harm is avoided or mitigated, and to assure the on-going need for sand placement on beaches to retain sand in the delicate ecosystems of which it is a part, the project design itself must incorporate mitigation elements as project elements with the cost thereof projected and included in the cost-benefit analysis of the project, as required by WRDA. It appears that in other Corps Districts this is accomplished through the policies and principles associated with Regional Sediment Management, as adopted by SAD.
Mitigation	The Feasibility Study failed to include any beneficial use of dredged material. The DEIS must consider how dredged material can be used to create, protect, and enhance habitat, such as nesting bird habitat, that would be harmed by the project.
Modeling and Analysis (all types)	The EPA recommends the Corps and/or project sponsor commit to 10 years of post-construction monitoring. Additionally, we recommend that the sponsor conduct or provide conclusive baseline functional assessments in order to evaluate long-term trends in water and habitat quality. We also recommend the Corps fully develop and describe an adaptive management plan for the proposed project in the EIS. The adaptive management plan should include the formation of an Interagency Coordination Team that can collaboratively review the monitoring data (vegetation and water quality) and assess the accuracy of the model predicted impacts. If the observed impacts are different from predicted, the Corps should develop an adaptive management plan for how mitigation will be addressed.
Modeling and Analysis (all types)	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. 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. 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 Process	From Bald Head Island to Caswell, the existing channel width is 500ft but the proposed channel is 800ft. Fort Caswell would like to know how close the potential widening will occur to our shoreline and specifically the projections for increased ship wake in our area.
NEPA Process	The risk to private property owners is disproportionately stacked against us. A more thoughtful plan with all interests in mind, is needed. I urge you to pause this and allow for community participation as outlined in Federal guidelines.
NEPA Process	I do not see why the channel cannot be shifted to the west, to make it more centered between BHI and Oak Island, thus mitigating the effect on BHI's West Beach.
NEPA Process	Provide additional opportunities for more public input with meetings in the affected communities along the Cape Fear River and complete a thorough EIS.
NEPA Process (Public Input, Purpose and Need, Alternatives Analysis)	1. We request the Corps reject the findings of Section 203 Feasibility Study due to the lack of public involvement, since the Port failed to develop an "effective public involvement strategy" and the Corps guidelines in ER 1165-2-209 have not been satisfied. 2. Based on the evidence presented by the Assistant Secretary of the Army, 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. 3. 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. 4. 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. 5. The Alternatives and the Proposed Action section 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. 6. This Affected Environment section must describe the environment to be affected by the proposed Project. 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.

<p>NEPA Process (Public Input, Purpose and Need, Alternatives Analysis)</p>	<p>As written, the planning objectives are unclear and could potentially lead to the pre-selection of an alternative plan. As written, it is not quantifiable or measurable 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. In this instance, as the objectives were not correctly written, the planning process and selection of a plan would be inherently flawed. Revise the objectives to be policy compliant and conduct a new iteration of plan formulation and evaluation. 2. Correctly utilize the criteria (technical, economic, environmental, social, etc.) 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. After revision of the project objectives, conduct a new iteration of the formulation and screening of management measures. 4. Include additional environmental alternatives in the detailed evaluation. 5. 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. 6. In many cases, the report uses qualifying words, such as may, potentially, and just, to lessen the description of project impacts. Remove qualifiers to provide more objective predictions of effects. 7. Revise the text to say, "8.25.6 Future Environmental Considerations – The following actions will be considered during the preparation of a NEPA document." 8. Conduct an IEPR or obtain an IEPR exclusion from the Chief of Engineers. 9. 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. 10. Coordinate with Navigation PCX, HH&C, CPR CoP's, vertical team for specific direction. 11. 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. 12. 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. 13. It is not clear to what "removals" refers, particularly given that no real estate plan was provided. Explain what "removals" refers to in the recommendations section of the report. The non-federal sponsor would be responsible to perform or ensure performance of all relocations determined necessary for the project. 14. 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.</p>
<p>NEPA Process (Public Input, Purpose and Need, Alternatives Analysis)</p>	<p>NCSPA should withdraw the report in order to fully involve the public in the scoping and analyses required, as contemplated by Section 203. 2. Corps to lead a NEPA process, based on the already-prepared draft environmental report submitted with the NCSPA Report. The Village objects to this approach for two reasons. First, such a post hoc analysis cannot cure the failures (discussed above) to comply with the requirements for the other portions of the Report. Second, it cannot cure the failure to involve the public in the NEPA process from the beginning, as required by the Corps guidelines applicable to Corps projects generally and Section 203 feasibility studies specifically. 3. The Village's overriding concern is that it may be denied the opportunity for it and the public to provide input on the alternatives, the evaluation, and the outcome in the meaningful way contemplated by the Corps' mandate of robust public involvement. 4. Section 203 requires that a non-Federal feasibility study and the process under which it was developed comply with Federal law. The NCSPA Report does not. NCSPA should withdraw its Report and, in conjunction with a Corps-led NEPA process, re-open all the elements of the feasibility study to move forward with a full, fair, and transparent process required by Federal law.</p>
<p>NEPA Process (Public Input, Purpose and Need, Alternatives Analysis)</p>	<p>The efficacy of the last channel re-alignment. Part of that re-alignment has failed (cannot be maintained to current design) in the area of BHI Reach 1, and any further project modifications in that Reach must account for this in considering alternatives. 2. We urge public involvement in both scoping and all other phases of the analysis of this project and its environmental impacts, as required by the rules and guidelines implementing NEPA. 3. In addition to being held early, scoping meetings should focus on specific issues and have multiple meetings if necessary to target specific issues and audiences. 4. In addition to stakeholders specifically interested in environmental consequences of the proposed project, and in light of the technical complexity of the alternatives, VBHI suggests that a technical advisory committee also be formed. 5. Make the extant data easily available to the public by having the NCSPA also post their reports on its webpage.</p>
<p>NEPA Process (Public Input, Purpose and Need, Alternatives Analysis)</p>	<p>The Corps must not select a statement of project purpose that artificially restricts its analysis to alternatives that benefit the Ports Authority to the exclusion of other reasonable alternatives. The Port Authority, in turn, must not finalize its WRDA Section 203 Feasibility Report until the NEPA process is complete and the Port has full information about the environmental impacts of all available alternatives. 2. This analysis must contain a "no-action" alternative. For example, the Corps must include in its alternatives analysis an evaluation of whether another harbor could be deepened for less money and with fewer environmental impacts.</p>
<p>New Wilmington ODMDS</p>	<p>The EPA recommends the new work material for the proposed project be fully evaluated to ensure it meets ODC. The New Wilmington ODMDS capacity should be examined in the DEIS. The EPA recommends the Corps review the presented data in the Section 203 report and consult with the EPA Region 4 ODMDS staff to determine the remaining capacity in the New Wilmington ODMDS.</p>
<p>New Wilmington ODMDS</p>	<p>Finally, if beach compatible material is ultimately placed in the ODMDS or other inland/upland disposal area, the Town asks that the beach compatible material be placed in a specific compartmentalized area so that this material could be retrieved at a later date by local interests.</p>
<p>New Wilmington ODMDS</p>	<p>The DEIS must rigorously assess how contaminants potentially found in this dredged material may harm human health and wildlife. Moreover, the Corps must carefully study how the deposit of large quantities of dredged sediments in the water column and on beaches would affect the surrounding environment.</p>
<p>Noise and Air Quality Impacts</p>	<p>Will the Port be required to establish green house gas impacts for this study including the GHG impacts caused by the increased size of the container ships and the amount of inbound and outbound rail and truck traffic required to move that increased freight volume?</p>

Noise and Air Quality Impacts	The EPA recommends the Corps develop current and local modeling to evaluate statements and other general conclusions described above regarding potential emissions presented in the Section 203 report. The EPA also requests an air emissions inventory be conducted for the Port of Wilmington. To determine how landside emissions impact local area air quality, with an emphasis on port traffic effects in potential environmental justice (EJ) areas, the EPA requests that dispersion modeling be conducted. The EPA requests a screening-level risk assessment to evaluate the potential impacts associated with emissions of air toxics related to the harbor deepening and its operation. The future condition analysis should extend through the entire 50-year life of the project. In addition, the requested dispersion modeling for criteria pollutants should include air toxics emissions. Modeling results should be used in the requested screening-level risk assessment to help determine effects on landside sensitive receptors such as potential EJ areas located along road/trail corridors from localized emissions.
Noise and Air Quality Impacts	USACE must also consider the individual and cumulative effects to the ecosystem caused by hard bottom removal that will be required for this channel dredging project. There is research that clearly indicates that increased subaqueous noise levels may erode and degrade the aquatic acoustic habitat vital for migrating, mating and foraging.
Noise and Air Quality Impacts	The Corps needs to assess the impacts of greenhouse gas emissions and their effect on local air quality.
Noise and Air Quality Impacts	The DEIS should also evaluate the ways in which increased light pollution from the Project, all road and railway infrastructure, and induced development and associated habitat loss are likely to affect migratory birds, sea turtles, and other species. 2. The DEIS should carefully analyze the impacts of noise associated with the Project. In addition to noise from direct activities like construction (e.g., pile driving) or sediment excavation (e.g., blasting) activities, the DEIS must also look at long-term, indirect noise impacts associated with increased vessel traffic (e.g., engine noise and fog horns), crane container operations, and land-based transportation (at the site, on new roads and railways, and extending onto the existing regional transportation network). This evaluation should not only encompass impacts on the human environment, but must also include impacts to fish and wildlife. 2. The DEIS must carefully examine impacts to air quality from the Project, particularly how the deepening would impact the type and number of ships visiting the Wilmington Port, and how the nature of this new shipping traffic would impact air quality. In addition, the DEIS must also examine how increased truck trips would contribute to air quality problems in the region. Specifically, we recommend that additional truck emissions and congestion be evaluated for the entire Port. 3. In addition, the Corps must evaluate the public health impacts of declining air quality associated with the Project. This must include detailed dispersion modeling to accurately assess impacts to local communities and to account for the fact that those nearest the source face the greatest threat from exposure to air toxics. Given the wide and growing recognition of the significant harm port-generated air pollution can do to human health, the Corps should include a risk-based health impact study.
Salinity/Saltwater Intrusion	Saltwater intrusion, changes to the ecosystem of the river and marshes
Salinity/Saltwater Intrusion	Two salinity causing factors dismissed by the Draft Report, are likely to occur with regularity. 2. The impact of that increased salinity on adjacent and connected ground waters, and its influence on the advancing "wedge" of salt water related to ongoing sea level rise should be understood, especially considering the fact that many residents are dependent on groundwater for their drinking water.
Salinity/Saltwater Intrusion	The DEIS must carefully investigate potential impacts from this proposed deepening to surface and groundwater supplies. Another concern of saltwater intrusion is the loss of freshwater wetlands upriver, such as the bottomland cypress forests. Over time, plants that are adapted to live in freshwater conditions may no longer be able to survive when the water becomes saltier. This potential loss of vegetation and associated ecosystem services as a result of the Project should be thoroughly examined in the DEIS.
Sand Management/Beneficial Use of Material	We encourage the Corps to work with the EPA through the development of beneficial use of dredge material options to ensure compliance with the CWA and MPRSA.
Sand Management/Beneficial Use of Material	Confined Disposal Facility (CDF) #4- Will a revised Dredge Material Management Plan retain CDF #4 along the Horseshoe Shoal Reach as a management site for beach compatible material? If so, what are the anticipated beach quality new construction and maintenance volumes? If the new work and maintenance material remain within beach quality standards, may Pleasure Island be designated as having first right of refusal for beneficial reuse?
Sand Management/Beneficial Use of Material	The Town of Holden Beach would like to know if the project would yield beach compatible sand. If so, we would be interested in being considered as in 2000 when a similar project occurred.
Sand Management/Beneficial Use of Material	1. While the current documents and Appendix R reference a USACE Sand Management Plan which mentions an eight-year interval, other documents and the current practice is for a six-year interval. 2. On Page 93 in the integrated main report (Table 2-24) there is a reference to West Oak Island (WOI) as a placement area. Please explain the meaning of "west". 3. Also, while it is understood that Figure A-6 is only an example of potential beach placement areas, the Town of Oak Island believes that placement of material from this project should occur further westward and should be permitted/allowed across the entire island. 4. The Town of Oak Island requests to be included in any discussions concerning the management of materials being dredged for the project as well as any potential adjustments to the current preferred plan concerning potential channel realignments, etc. in later studies and the upcoming EIS. The Town also requests that the USACE and NC Ports would look to maximize beach placement of all material that currently meets regulatory requirements. Based on a review of the documents and appendices (especially Appendix B), it appears that numerous channel reaches contain beach compatible material. This material should be placed on adjacent shorelines to the maximum extent practicable. The Town of Oak Island requests that the permits for this proposed project and subsequent maintenance projects should expand the allowable placement area on Oak Island to cover the entire island to maximize use of this precious resource.

Sand Management/Beneficial Use of Material	The DEIS should also include a discussion of the ways in which dredged materials from the Harbor would be used for beach nourishment or to protect or enhance nesting habitats, as well as all related monitoring data collected with respect to the use of dredged materials for these purposes.
Sea Level Rise/Flooding	The overall wetland impact analysis should consider the project effects independent of the projected sea level rise (SLR) since the analysis masks the effects of the project on shifting isopleths during the life of the project. This may result in unanticipated or drastically different impacts to tidally influenced fresh water wetlands for the life of the project. The EPA recommends that wetland impacts anticipated for the duration of the project be the primary focus of impact analysis.
Sea Level Rise/Flooding	One of our greatest concern lies with the future impacts of this project as it relates to global warming. We ask that your evaluation of this project look well forward into the future and contain a thorough examination of the full range of risks and uncertainties related to greenhouse gas emission impacts and required mitigation. We strongly suggest that USACE review and analyze the findings and observations related to climate change and its impacts on stream flow and runoff patterns as well as the warming of lakes and rivers, with effects on thermal structure and water quality.
Sea Level Rise/Flooding	1. 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. 2. 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?
Sea Level Rise/Flooding	The flooding effects of the project are not even explored in the Draft Report. We believe the precepts (and inputs) from the South Atlantic Coast study are an important factor to be considered in the assessment of this project.
Sea Level Rise/Flooding	The DEIS should consider the added potential of increased flood hazards resulting from the Project. Storm surge and rainfall become even more damaging when added to rising sea levels. This evaluation should take into account projections of these impacts over the next 100 years, including an assessment of potential flooding in areas likely to be developed in response to the Project. The Corps’ evaluation should also account for how loss of wetlands from the Project would affect the flooding and storm surge vulnerability of surrounding communities. 2. Rising sea levels will continue to put additional stress on the coastline, through increased erosion and higher storm surges, and this must be considered in the DEIS. The DEIS should evaluate the long-term viability of the Port under such expected conditions. Potential effects of sea level rise under scenarios that reflect low, moderate, and high rates of change should be considered.
Socio-economic and Environmental Justice Impacts	The EPA recommends the Corps identify minority and low-income populations within a mile of the proposed project. If EJ populations reside within this area, the DEIS should fully assess the potential impacts from the proposed project on these populations. The Corps should evaluate whether EJ populations will be disproportionately impacted by the proposed project. The EPA recommends the Corps and project sponsors actively engage the surrounding communities during the NEPA process to help them understand the proposed project, the potential impacts of the project, and the mitigation opportunities. Most of the communities surrounding the project have elevated levels of minority and low-income populations, therefore, project effects on potential EJ communities and children’s health should be considered in future project development. These analyses should include potential landside emission effects on nearby populations (as previously requested above General Air Quality). Public concerns and their follow-up outcomes, and disclosure of the demographics of children under age 18 within the project area should be included in the DEIS.
Socio-economic and Environmental Justice Impacts	We recommend that the US Army Corps of Engineers (USACE) adequately identify EJ communities within and adjacent to the project area and evaluate the EJ direct, indirect and cumulative impacts associated with increased river and highway traffic, noise, vibration, land use, as well as riparian, fisheries and watershed impacts and air quality. We are also concerned with the proposed project’s impact to the Gullah Geechee Cultural Heritage Corridor and encourage the USACE leaders to work with the Gullah Geechee Cultural Heritage Corridor Commission, National Park Service, and the Gullah Geechee community to avoid, minimize, and mitigate any potential impacts. We also encourage the USACE to reach out and engage local Gullah Geechee groups and individuals in our community and other EJ communities in a meaningful way to solicit their input on this project.
Socio-economic and Environmental Justice Impacts	The 203 study 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.
Socio-economic and Environmental Justice Impacts	There are numerous public health and safety concerns associated with the Project that should be evaluated in the DEIS. These include the risk of additional injuries associated with increased traffic, as well as emergency response delays caused by such congestion. 2. The DEIS should also assess impacts on recreational activities, with particular focus on water-borne recreation, including boating, fishing, oyster harvesting, shrimping, and bird- watching. 3. Finally, the DEIS must evaluate disproportionate impacts of the Project on low-income and minority populations. The DEIS should consider the EJ communities alongside the port and canal from increased land-based traffic, toxic air pollution, water quality impacts, and potential displacement as a result of the Project.
Underwater Utilities/Structures	We encourage you to identify, locate and safely relocate any and all utilities, pipelines and underwater structures that may be in harm’s way of the proposed project.
Vessel Wakes/Shoreline Erosion	Fort Caswell is concerned about the increased shoreline erosion, increased area wake, and ecological impacts to our historic property.

Vessel Wakes/Shoreline Erosion	Gigantic ships will produce gigantic wakes during high tides.
Vessel Wakes/Shoreline Erosion	Increased erosion from additional dredging at BHI's West Beach will directly, negatively impact BHI by narrowing the beach buffer that protects the west side of the island, and by reducing the usable beach there.
Vessel Wakes/Shoreline Erosion	Minimize erosion to multiple bird sanctuary islands contained within the area of the shipping channel
Vessel Wakes/Shoreline Erosion	BHI already suffers from beach erosion from previous deepening and widening of the river channel. Further attempts to deepen/widen will have a more aggressive significant impact for erosion to our beaches. Not only are these beaches important from the areas vacation/tourism perspective, but further erosion will also have a significant detrimental impact on home market values.
Vessel Wakes/Shoreline Erosion	1. We ask the Corps to address the effects of previous and current erosion in the project area combined with the potential for new erosion. 2. 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. 3. As part of the DEIS the Corps should perform the Section 111 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.
Vessel Wakes/Shoreline Erosion	Zekes Island/Buzzard Bay Rock Revetment- Please address, if any, the potential for revetment scouring, increased tidal topping and sound side impacts on southern NHC's Fort Fisher recreational beach front including the potential re-emergence of the former Corncake Inlet.
Vessel Wakes/Shoreline Erosion	Sensitive habitats (such as aquatic, avian, and other wildlife nesting and nursery areas) will be damaged by the significant increase in erosion forces. The Draft Report does not even acknowledge the existence of these estuarine impacts (the discussion of erosion is limited to coastal beach erosion; Draft Report Section 2.2 and Section 8). And the Draft Report's analysis of the erosion impacts of the larger vessels is both frightening and appallingly naive.
Vessel Wakes/Shoreline Erosion	The DEIS should assess whether the Project may contribute to increased wetland and shoreline erosion along the Cape Fear River and on adjacent oceanfront beaches. Deepening or widening the channel, "softening" river bends, and extending the Port seaward would likely affect the wave energy and sediment dynamics of the entire region. Furthermore, shipping wakes from larger and more numerous vessels would alter the wave energy in and around the river. The Corps should take a hard look at how these changes would affect the erosion already occurring both on neighboring beaches and inshore on islands and wetlands marshes lining the river channels. In addition, the DEIS should consider the secondary effects of any resulting increased use of erosion control methods like sandbags, bulkheads, and beach nourishment. Furthermore, the Corps must address any impacts associated with increased beach nourishment events resulting from the Project. Habitat value for foraging shorebirds like piping plovers and nesting sea turtles can be significantly degraded after a beach nourishment event, and these effects must be given consideration in the DEIS.
Water Quality Impacts	The EPA recommends that the Corps include a discussion of potential impacts from the WHNIP on summer DO conditions in the Cape Fear River in the Draft Environmental Impact Statement (DEIS). The EPA is willing to assist with the review of data and model results of predicted DO conditions and other relevant water quality parameters for the TSP to ensure that Wilmington Ports Authority uses comparable water quality modeling tools to NCDENR to assess nutrient and organic enrichment impacts in the Cape Fear estuarine system.
Water Quality Impacts	We are deeply concerned with the potential environmental impacts of the proposed project on the local waterways and Cape Fear River, which some residents use to sustain themselves via fishing traditions. We are aware that the oxygen levels in our local water courses are desperately low. We need to protect our local fisheries by replenishing oxygen in the river to levels adequate to promote sustainable populations of fish.
Water Quality Impacts	In addition to contamination and sedimentation from dredge material disposal, the activity of dredging itself can negatively impact water quality by stirring up sediments and toxic materials that may be found on the bottom of the river. Harbor deepening can also reduce dissolved oxygen levels to unnaturally low levels on a river's bottom, as well as alter the horizontal and vertical salinity profiles of the river. Such changes in the aquatic chemistry of the region can imperil wildlife and fisheries ⁶² and must be studied carefully in the DEIS, especially within protected areas like critical habitat areas and PNAs. Moreover, the Corps must comprehensively evaluate anticipated impacts to wetlands in the vicinity of the Port. The Port has been dredged for over a century, which has led to salinity and tidal range changes as well as extensive changes to wetlands in the area. Finally, indirect impacts from increased truck traffic and induced growth can lead to additional impacts from stormwater runoff through the addition of harmful pollutants into surrounding watersheds.
Wind Energy	Wind Energy Areas are within the project area. Coordinate with Will Waskes regarding all potential use conflicts related to Office of Renewable Energy Programs activities.