NEW HANOVER SOIL & WATER CONSERVATION DISTRICT

NEW HANOVER COUNTY

SOIL & WATER CONSERVATION DISTRICT

230 Government Center Drive, Suite 100, Wilmington, NC 28403

Date: November 3, 2025

From: New Hanover Soil and Water Conservation District

To: US Army Corps of Engineers, Wilmington District
Wilmington District
ATTN: Wilmington Harbor 403
69 Darlington Avenue
Wilmington, NC 28403

Subject: Wilmington Harbor 403 Draft Environmental Impact Statement
Port Deepening Project

The New Hanover County Soil and Water Board appreciates the opportunity to provide comments on the Wilmington Harbor 403 Draft Environmental Impact Statement concerning deepening of the Cape Fear River. We also appreciate the detailed information provided within the report on the many aspects involved in such a large and complex project. We take your statement to heart that the purpose of the project is to "contribute to national economic development by addressing transportation inefficiencies for the forecasted vessel fleet, consistent with protecting the Nation's environment". And we would add that it is critical to the health and well-being of the Cape Fear River Estuary and surrounding areas. We believe that, even with several potential benefits to the plan, when viewed in its entirety, the economic and environmental facts do not justify deepening of the river as described in our comments below. However, as part of the EIS process that requires best alternatives, we request your consideration of our suggestions that address important issues with flooding, aquatic habitat and wetland mitigation plans, PFAS, and beneficial sediment placement among others.

Comments:

Beneficial Placement, Sediment Types and PFAS: The ~15 million cubic yards of sediment and rock that are recommended for beneficial placement in intertidal, riverfront, beaches, and in the WOFES site have the possibility of providing erosion control, habitat, renourishment opportunities, and artificial reefs. Careful study of placement locations and timing of placement are needed to maximize marsh and bird island habitat improvements and to minimize impacts on wildlife. Large ship wakes and tidal range increases may compromise the effectiveness of some of the planned placement areas even if your study indicates a reduction in ship traffic with the larger ships and some reduction in shear

stresses with deepening. Bird island aprons and erosion control structures such as living shorelines may be compromised by the waves. And in the marsh/intertidal placement areas, the sediment must be comparable to current sediment there and there must be enough sediment to be effective with the higher tide range with deepening. In addition, the sea level change you mention should at least be considered with the amounts of material placement though it is obvious you can't fully mitigate this rapid rise. It would be best to initiate a pilot study of sediment placement in a marsh area to determine best practices and effectiveness.

But another aspect that the USACE did not address, and that is critical, is the presence of toxins in the sediments that will be placed in critical habitat areas. Studies have shown PFAS to be in the riverine sediments. However, you have not addressed the amounts or impacts of these or other chemicals on wildlife or their forage/habitat areas. We understand, as you say, that these are not currently regulated chemicals, so you don't have to address them. We believe this to be in error and that sediment contamination must be considered before any reuse or placement of dredged materials occurs. One reason this is in error is that PFOA and PFOS have already been designated as hazardous materials. These "forever" chemicals are listed in CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act/Supefund) where EPA concludes that a hazard "*designation is warranted based solely on its finding that* ***PFOA and PFOS may present a substantial danger to the public health or welfare or the environment when released into the environment."*** *And, as of 2022 "EPA is designating PFOA and PFOS, including their salts and structural isomers, as hazardous substances under section 102(a) of CERCLA"* (https://www.epa.gov/superfund/questions-and-answers-about-designation-pfoa-and-pfos-hazardous-substances-under-cercla#:~:text=The%20EPA%20has%20designated%20PFOA%20and%20PFOS,for%20contamination%20pay%20to%20clean%20it%20up).

In addition, even though the chemicals are not regulated by EPA at the present time, **they will be regulated (currently PFOA and PFOS regulations are slated for 2031) when dredging begins and extends from 2030 to 2036.** Therefore, it is incumbent on you, as EIS's require looking at potential impacts of a project, to now investigate any potential impacts of PFAS in this EIS.

Flooding: The upper reaches of the Cape Fear River Estuary (Wilmington and Eagles Island) are compound flood areas. Flooding occurs with local rain events, upstream rainfall, storm surge, high tides, and sea level rise. It is true, as you state in the DEIS, that sea level rise is most important to the water level rise in the estuary as well as the increasing salinity and impacts to the surrounding ecosystems. However, the increase of 1.3 inches over current

high tides and the possibility of a 1-inch rise with storm surge are very important in an already flooded condition, too, particularly when sea level rise is factored. We do not believe you have considered the full impact of flooding in this area on infrastructure or properties. Rising waters will be detrimental to the culturally significant Gullah Geechee (1700 – 1800s) rice canals that are present in the middle to upper reaches of the estuary and especially on Eagles Island. But it is not just the rising waters but the likely harm with rising salinity, too. Increasing salinity leads to the breakdown of organic rich soils with the introduction of sulfate from the "saltier" water. This harms the plants with increasing toxicity and the saline waters then cause changes to the ecosystems (this is the subject of the ecosystems and mitigation given below). But the degradation of the soil also leads to increased erosion and to potential harm to rice canals and primary nursery grounds. It would be beneficial to include soil degradation in your model studies.

Climate Change and Higher Waters: This is really just an overarching concern in many of these issues but it is worth noting with how it impacts/exacerbates many of the hazards we face in the Cape Fear River Estuary. But for this project, we need to look at the future state of and vulnerability of the estuary to changes that may occur. We have seen the impacts of 500 and even 1000-year flood events in our area that have been caused by heavier rainfall events; warm air holds more moisture. And when coupled with the higher tides, storm surge, and sea level rise, our area businesses, property, and lives are even more at risk. Multiple studies discuss the increased impacts of these events: (https://www.weather.gov/ilm/hurricaneflorence#:~:text=Hurricane%20Florence%2C%20a%20large%20and,Cape%20Fear%20and%20Cape%20Lookout),

https://ncimpact.sog.unc.edu/2021/12/coastal-resilience-in-the-wilmington-region/#:~:text=In%20recent%20years%2C%20coastal%20North,this%20topic%20in%20September%202021 .

Florence is used by the USACE as the storm of record for our area with its associated flooding and rainfall. It is certainly our "disaster storm" of record. However, it is important to note that Isaias in 2020 had the highest flood stage at downtown Wilmington. As the Zurich Insurance Group said following Florence, "think how bad it can be and plan for worse". We believe your values are low for sea level rise. For information, the Coastal Resources Commission Science Panel has stated there is >1 foot of rise to occur in NC by 2050 (https://www.deq.nc.gov/2024-north-carolina-sea-level-rise-science-update/open). And NOAA has similar data as well as a 2-foot rise by ~2070 in just the intermediate case. Higher SLR values in the model studies are warranted.

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Changing Ecosystems - Impacts to Freshwater Wetlands, Aquatic Habitats and Mitigation Plans: Your models indicate that salinity rise is one of the most critical parameters leading to changes within the estuary, even without deepening. This is true. However, as you state, the deepening will lead to an extra rise in salinity of at least 1.28 ppt at the surface and 2.51 at the bottom layer in the upper reach of the estuary. We believe this is the value, or even higher, that should be used for the entirety of the estuary, not the average lower values given in the DEIS. The previous 203 Study indicated a potential rise of over 1 ppt at the surface but up to a rise of 5 ppt toward the base of the water column. Whether the plan to deepen is moved forward or not, you still need to properly address loss of freshwater wetlands and aquatic habitat impacts in the EIS. The following refer to the mitigation strategies you have proposed.

The rise in salinity is your basis for stating that 1,071 acres of freshwater wetlands and marshes will be converted to more oligohaline dominant species and therefore the loss of those freshwater ecosystems. All ecosystems are important but the freshwater wetlands in the upper reaches of the estuary provide important flood control, sediment retention, bottomland habitat, primary nursery areas, and carbon storage. It would be best if these were not lost or at least not lost prematurely. However, if they are, it is critical to do real mitigation as proximal to the sites of losses of these wetlands as possible. Purchase of bottomlands within the Black River Basin are appropriate as the only way to ensure preservation is to purchase/conserve lands. But the Eagles Island plan has limited benefits, and the money would best be spent to preserve other areas. Phragmites removal is rarely successful and the small restoration project on the 120 acres of Eagles Island offers little benefit; see https://news.ncsu.edu/2017/02/invasive-marsh-grass/ and https://www.wypr.org/wypr-news/2019-10-17/as-climate-changes-scientists-re-think-phragmites . We believe it would be better to acquire acreage a little further north on the NECFR bottomlands near Sledge Forest or at least in the area identified by the NC Natural Heritage Group as Significant Natural Areas in these NECFR bottomlands.

Impacts to aquatic habitats is also critical. Your mitigation plans have merit but we believe there is a better plan that maximizes the benefits to wildlife including the endangered sturgeon and other anadromous species. Improving Lock and Dam #1 passage is a positive though there hasn't been enough time and studies to determine the true impact of the modified rock arch and L&D #1. If it is not working or still allowing only ~25% of striped bass to move upstream the "canal" may be beneficial. A fully vetted design is critical, however. But the plan for a rock arch rapid at Lock and Dam #2, requiring $32 million, could and should be revisited. You state in the DEIS that removal of the dam was screened out "due to the structure's navigational authorization and congressional approval would be required to

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remove the structure". We don't believe this is an adequate reason to omit this as an option. There are no navigational requirements remaining with these locks and dams. Lock and Dam #1 and #3 are required to ensure adequate water supplies but there are no such requirements for #2. Part of the dam could be blown away for a small sum and allow anadromous fish to move upstream. The remaining money could then be used to construct the rock arch rapid at Lock and Dam #3 and complete the access for fish to move to their historic spawning grounds.

Other Considerations:

- Ensure that groundwater/aquifers are not impacted with the deepening. Although you state that the Cape Fear is a gaining stream and therefore will not contribute waters to the aquifers, monitoring to ensure this would be beneficial.

- An EIS is supposed to take secondary impacts into consideration. We do not believe that the current DEIS has accomplished this completely. With changing port cargo there will be changes in truck and rail requirements. These should be looked at for their impact on roads, bridges, and communities.

- Additional studies on the impacts of deepening and increasing salinities on the epifauna and infauna of the river channel and margins.

- Provide more consideration of primary nursery areas and adjacent marshes to river.

The New Hanover County Soil and Water Board appreciate the opportunity to comment on this very important project. Our comments are intended to encourage best practices and to ensure, if the project moves forward, that the best mitigation strategies are pursued. Thank you for the opportunity to comment and if you have questions, we would be happy to make further comment.

Thank you,

Chair – New Hanover Soil and Water Conservation District