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October 2, 2020

Submitted via electronic mail

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Re: Comments on Draft Environmental Assessment for Maintenance Dredging and Bed Leveling at Wilmington and Morehead City Harbors, NC

Dear Ms. Hughes:

The Southern Environmental Law Center (“SELC”) submits these comments on behalf of Audubon North Carolina, Cape Fear River Watch, Defenders of Wildlife, N.C. Coastal Federation, and N.C. Wildlife Federation, regarding the U.S. Army Corps of Engineers’ (“Corps”) Notice of Availability of a Draft Environmental Assessment (“EA”) for Maintenance Dredging and Bed Leveling at Wilmington and Morehead City Harbors, North Carolina.¹

The agency is proposing drastic and permanent changes to the maintenance dredging practices for the Wilmington and Morehead City Harbors. Disturbingly, the proposed changes include the complete elimination of the hopper dredging window (currently December 1-April 15), a seasonal restriction that has been in place since the 1980s.² Hopper dredging can be detrimental to wildlife, fisheries, and other natural resources, and these impacts are amplified during certain times of the year. We do not suggest hopper dredging should be banned year-round, instead, we urge the continued use of the existing, longstanding, and effective dredging windows to minimize such effects. Our organizations have a number of concerns with the proposal for year-round hopper dredging and the assessment of potential impacts outlined in the Draft EA:

- The Corps greatly underestimates harm to a variety of species—including sea turtles, birds, and fish—many of which are protected under the Endangered Species Act (“ESA”) and all of which have benefitted greatly from seasonal dredging windows for decades.

¹ U.S. ARMY CORPS OF ENGINEERS (USACE), WILMINGTON DIST., *Wilmington Harbor and Morehead City Harbor Maintenance Dredging and Bed Leveling: Draft Environmental Assessment* (Aug. 2020), [https://saw-nav.usace.army.mil/FILES/Public Notice/Wilmington Morehead City Harbors Maintenance Dredging Draft EA 19Aug2020.pdf](https://saw-nav.usace.army.mil/FILES/Public%20Notice/Wilmington%20Morehead%20City%20Harbors%20Maintenance%20Dredging%20Draft%20EA%2019Aug2020.pdf) [hereinafter “Draft EA”].

² *Id.* at 61.

- Year-round dredging could lead to more frequent year-round beach fill projects, as using dredged material for beach fill is encouraged by State law, which would have significant environmental impacts that have been ignored in the Draft EA.
- The Corps' instant proposal and Draft EA completely ignore the significant cumulative impacts on the Wilmington Harbor in particular in light of the proposed Wilmington Harbor expansion project.
- The Corps fails to analyze a reasonable range of alternatives, including those that do not involve removing dredging windows.
- The Corps appears to already be implementing its proposed action prior to completing the National Environmental Policy Act ("NEPA") process, by soliciting bids and entering a dredging contract that omits any requirements about dredging windows.

The enormity of these impacts and the clear deficiencies in the Draft EA emphasize the need for a full environmental impact statement ("EIS") to accurately and adequately assess the environmental effects of this proposal.

I. BACKGROUND: DREDGING IN NORTH CAROLINA

The Corps has a long history of dredging in North Carolina, and a similarly long history of doing so during certain seasons to mitigate adverse environmental impacts. The Wilmington District is responsible for maintaining the federal waterways associated with the two deep draft navigation channels in the State—Wilmington and Morehead City Harbors. Historically, the Corps has performed maintenance dredging within specified windows of time when associated environmental impacts would be minimized.

A. Hopper Dredging is Detrimental to the Coastal Environment

Since the Wilmington and Morehead City channels were constructed, maintenance dredging has been required at various frequencies, as often as once per year.³ Maintenance dredging in this context is defined as the repetitive, periodic removal of shoaled sediments from existing navigational channels in order to maintain a depth that is appropriate for navigation.⁴ While a number of methods exist to accomplish maintenance dredging, hopper dredging is most often preferred by the agency "due to efficiency, safety and economic advantage" over other types of dredging.⁵ Hopper dredges remove bottom sediments through suction pipes equipped with dragheads, discharging them into a holding area or "hopper" within the vessel until disposal.

Unfortunately, repeated hopper dredging associated with navigation can have substantial adverse impacts on surrounding habitat. First, increased sedimentation can temporarily degrade water quality by: suspending contaminants; altering the natural temperature, pH, or salinity; reducing dissolved oxygen levels; impeding light penetration; and disrupting the tidal dynamics

³ See *id.* at 9, 12, Tables 1a-b.

⁴ See *Dredging Operations*, USACE, <https://www.sam.usace.army.mil/Missions/Civil-Works/Navigation/Dredging-Operations/>, (last visited Sept. 30, 2020).

⁵ Draft EA at 5.

of the area.⁶ This can compromise habitat quality for plankton, invertebrates, and fish, sometimes leading to cascading effects up the food chain.⁷ These changes can also interrupt spawning and larval recruitment of many fish species which rely on particular water quality criteria for success.⁸ Entrainment of larger fish species such as Atlantic sturgeon is also of concern.⁹ Dredging also disturbs the stability of the benthic environment and can smother submerged aquatic vegetation (“SAV”) and kill organisms that live on the bottom like demersal fish and crustaceans.¹⁰ In turn, disposal of dredged material can also come with its own similar set of adverse impacts at the dump site and in adjacent areas.¹¹

Hopper dredging is often harmful to threatened and endangered species, and is of particular concern for sea turtles. Hopper dredges are slow-moving and nearly silent while suctioning sediments, thereby potentially harming sea turtles that become entrained in the pipes.¹² Entrainment can cause massive injuries, including fractures, crushed organs, hemorrhage, and mortality.¹³ Hopper dredging was first identified as a source of turtle mortality in 1980, when 71 turtle injuries and deaths from hopper dredges were recorded over a period of five months in Canaveral Channel, Florida.¹⁴ Subsequently, 225 sea turtle deaths—including 22 live injuries—were documented between 1980 and 1990 in Southeast channels.¹⁵ It is likely that this number is greatly underestimated, as the probability that turtles are found after injury or mortality in the water usually does not exceed 10-20%.¹⁶ Moreover, given the powerful draw of hopper dredges, turtles are unable to free themselves after entrainment, and they are often pulverized beyond recognition.¹⁷

⁶ N.C. DEP’T OF ENVTL. QUALITY (DEQ), *North Carolina Coastal Habitat Protection Plan Source Document* (2016), <https://apnep.nc.gov/documents/2016-coastal-habitat-protection-plan-source-document>, at 174.

⁷ Karen Greene, *Beach Nourishment: A Review of the Biological and Physical Impacts*, ATL. ST. MARINE FISHERIES COMM’N (Nov. 2002), <http://www.asmfc.org/uploads/file/beachNourishment.pdf>, at 131.

⁸ *Id.*

⁹ See Lisa Wickliffe et al., *An Assessment of Fisheries Species to Inform Time-of-Year Restrictions for North Carolina and South Carolina* (NOAA Technical Memorandum NOS NCCOS 263), NAT’L OCEANIC & ATMOSPHERIC ADMIN. (NOAA) (Oct. 2019), <https://repository.library.noaa.gov/view/noaa/22032>.

¹⁰ N.C. DEQ, *supra* note 6, at 173 (“Dredge and fill activities have historically been recognized as the primary physical threat to SAV [submerged aquatic vegetation].”); see also Gary L. Ray & Douglas G. Clarke, *Issues related to entrainment of horseshoe crabs (Limulus polyphelus) by hopper dredges*, W. DREDGING ASS’N (2010), provided as Attachment 1.

¹¹ Greene, *supra* note 7, at 131.

¹² Dena Dickerson et al., *Dredging impacts on sea turtles in the southeastern USA: A historical review of protection*, PROCEEDINGS OF THE 17TH WORLD DREDGING CONGRESS (2004), provided as Attachment 2, at 7.

¹³ See, e.g., Daphne W. Goldberg et al., *Hopper dredging impacts on sea turtles on the Northern Coast of Rio de Janeiro State, Brazil*, MARINE TURTLE NEWSLETTER (Oct. 2015), provided as Attachment 3, at 16-20.

¹⁴ NAT’L MARINE FISHERIES SERV. (NMFS), *Biological Opinion: The Continued Hopper Dredging of Channels and Borrow Areas in the Southeastern United States* (Sept. 25, 1997) (on file with NMFS) [hereinafter “1997 SARBO”], at 2.

¹⁵ *Id.*

¹⁶ Volker Koch et al., *Estimating at-sea mortality of marine turtles from stranding frequencies and drifter experiments*, PLOS ONE (Feb. 10, 2013), provided as Attachment 4.

¹⁷ Goldberg et al., *supra* note 13, at 16-20.

B. The Corps Proposes to Eliminate Longstanding Seasonal Dredging Protections

Seasonal environmental moratoria, or dredging windows, have been used at the Wilmington and Morehead City Harbors by state and federal agencies since the 1980s as a tool to reduce the risk to coastal resources and their inhabitants during sensitive life stages, including sea turtles, fish, and invertebrates. Currently, the Corps conducts hopper dredging activities in these North Carolina harbors only between December 1 and April 15¹⁸ to minimize environmental impacts. As explained in the Draft EA, “the Wilmington District currently abides by self-imposed windows and/or windows coordinated with National Marine Fisheries Service Habitat Conservation Division (NMFS HCD) or imposed through the Federal Coastal Zone Management Act (CZMA), which is enforced by State resource agencies.”¹⁹

These restrictions are supported by other state and federal policies. At the State level, provisions of the N.C. Coastal Area Management Act and Rules of the Coastal Resources Commission require that projects “shall be timed to avoid significant adverse impacts on life cycles of estuarine and ocean resources.”²⁰ Similarly, the Division of Marine Fisheries, the Marine Fisheries Commission, and the South Atlantic Fisheries Management Council all have historically used their authorities to protect marine and estuarine resources from dredging and beach nourishment or “beach fill” projects through seasonal environmental moratoria.²¹

At the federal level, the Corps has long consulted with the National Marine Fisheries Service (“NMFS”) and the Fish and Wildlife Service to determine necessary seasonal precautions that can be taken throughout the Southeast to reduce risk to threatened and endangered species during hopper dredging. Over time, consultations have consistently resulted in the implementation of dredging windows, targeting winter months when sea turtle abundance is dramatically reduced.²² The most recent biological opinion (“2020 SARBO”) removed NMFS-imposed dredging windows throughout the Southeast for the first time in nearly three decades and increased the permissible levels of take for sea turtle species,²³ a move that seemed to pave the way for this proposal.²⁴

Despite how successful dredging windows have been in mitigating environmental harms from hopper dredging, the Corps now seeks to completely undo these longstanding protections. The Corps specifically proposes to entirely eliminate the existing hopper dredging windows at Wilmington and Morehead City Harbors, allowing hopper dredging to occur year-round in these

¹⁸ Draft EA at 5.

¹⁹ *Id.* at 16.

²⁰ 15A N.C. Admin. Code 07H.0208(a)(2)(f).

²¹ Letter from Sheila C. Holman, Assistant Sec’y for the Env’t, N.C. DEQ, to Emily Hughes, Biologist, USACE (May 7, 2020) (on file with USACE), at 4.

²² NMFS, *Biological Opinion: Dredging of Channels in the Southeastern United States from North Carolina Through Cape Canaveral, Florida* (Nov. 25, 1991) (on file with NMFS) [hereinafter “1991 SARBO”], at 17; NMFS, *Biological Opinion: Hopper Dredging of Channels and Beach Nourishment Activities in the Southeastern United States from North Carolina Through Florida East Coast* (Aug. 25, 1995) (on file with NMFS) (i.e., “1995 SARBO”), at 5; 1997 SARBO at 15, Table 3.

²³ NMFS, *Biological Opinion: South Atlantic Regional Biological Opinion for Dredging and Material Placement Activities in the Southeast United States* (Mar. 27, 2020) (on file with NMFS) [hereinafter “2020 SARBO”].

²⁴ Draft EA at 62.

channels.²⁵ Worse, in the description of its proposed action, the Corps envisions that this proposal will allow for longer periods of consecutive dredging,²⁶ as well as deeper and larger maintenance dredging projects instead of the “bare minimum needed to keep channels open.”²⁷ In other words, eliminating dredging windows will not only allow hopper dredging to occur during times of the year most sensitive to vulnerable coastal resources, it will also allow for *more dredging* than is currently occurring. As discussed below, the impacts from this proposal to North Carolina’s precious coastal resources would be significant and widespread, and they are sorely underestimated in the Draft EA. The Corps must instead adequately address these impacts through a full EIS under NEPA.

II. THE DRAFT EA IS FUNDAMENTALLY FLAWED

The purpose of NEPA is “[t]o declare a national policy which will encourage productive and enjoyable harmony between man and his environment.”²⁸ Through NEPA, Congress declared its desire that federal agencies “use all practicable means and measures...to create and maintain conditions under which man and nature can exist in productive harmony.”²⁹ In order to achieve these goals, NEPA demands: (1) thoughtful, informed agency decisionmaking, and (2) making information available to the public at a meaningful time.³⁰ The heart of NEPA requires that federal agencies prepare a “detailed” EIS on any “major Federal actions significantly affecting the quality of the human environment.”³¹ By focusing the agency’s attention on the environmental consequences of its proposed action, NEPA “ensures that important effects will not be overlooked or underestimated only to be discovered after resources have been committed or the die otherwise cast.”³²

As detailed below, the Draft EA contains numerous inadequacies that render it insufficient under NEPA. These shortcomings underscore the need for a more detailed NEPA analysis in the form of a full EIS.

A. The Corps Underestimates Impacts to Marine Turtles

This proposal is likely to cause harm to a number of federally and state listed turtle species. Yet according to the Draft EA, the proposed action “may affect but is not likely to adversely affect” all five species of sea turtle.³³ The Corps defends this finding by stating that all effects “are accounted for under NMFS and the 2020 SARBO”³⁴ and “hopper dredges would

²⁵ *Id.* at 5.

²⁶ *Id.* at 18 (noting that eliminating windows “would also allow dredges to continue working until project completion, rather than having to stop and return at a later date to complete the work”).

²⁷ *Id.*

²⁸ 42 U.S.C. § 4321.

²⁹ *Id.* § 4331(a).

³⁰ *See id.* § 4332; *see Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989) (“[NEPA] guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process” and “provides a springboard for public comment.”); *Webster v. U.S. Dep’t of Agric.*, 685 F.3d 411, 421-22 (4th Cir. 2012).

³¹ 42 U.S.C. § 4332(C).

³² *Robertson*, 490 U.S. at 349.

³³ Draft EA at 53.

³⁴ *Id.* at 64.

follow project design criteria set forth in the 2020 SARBO to protect NMFS protected T&E species...and monitor for incidences of take of these species.”³⁵

We believe the decision by the Corps to put total faith in the 2020 SARBO as being sufficiently protective of sea turtles is flawed for two reasons. First, the recent changes in the 2020 SARBO are based in large part on the observation that sea turtle nesting populations are growing, and therefore total populations can withstand higher take levels.³⁶ However, upward trends in nesting abundance do not necessarily translate into an increase in adult female or overall population abundance,³⁷ and as a result, abundance is often overestimated in management contexts.³⁸ Moreover, climate change is expected to significantly hinder recovery, particularly along the coast of North Carolina which is under severe threat of sea level rise and prone to coastal development.³⁹ Any interruption of breeding or nesting—particularly the loss of gravid females, which have a high reproductive value for the larger population—from year-round dredging could be detrimental to their populations, especially if allowed annually or biennially. This is of particular concern for nesting female green sea turtles in North Carolina, which are a relatively small population that are genetically isolated from the North Atlantic population, and may be considered a Distinct Population Segment (“DPS”) separate from the Florida nesting population.⁴⁰

Second, the mitigation and monitoring requirements set forth in the 2020 SARBO have not yet been tested or proven to reduce takes of sea turtles. The Draft EA lacks any meaningful description of what these requirements would look like, or analysis of their effectiveness in preventing sea turtle take. In the past, when dredging has been permitted in North Carolina channels outside of the dredging windows on a case-by-case basis, additional measures have been implemented to minimize species interactions. According to the N.C. Wildlife Resources Commission’s comments on the April 7, 2020 scoping notice for this proposal, when discussing such measures:

[T]hese measures were often time intensive and were not as effective as the use of moratoria. Additional pressure was placed not only on the resources, but federal, state, and local staff needed to implement the measures. Species takes still occurred, and while the additional strain on the resources could be managed for a

³⁵ *Id.* at 53.

³⁶ 2020 SARBO at 325 (“it is clear that the number of reported nests per season, and therefore likely the population for these species, has...increased in recent years.”)

³⁷ Simona A. Ceriani et al., *Conservation implications of sea turtle nesting trends: Elusive recovery of a globally important loggerhead population*, ECOSPHERE (Nov. 25, 2019), provided as Attachment 5.

³⁸ Paolo Casale & Simona A. Ceriani, *Sea turtle populations are overestimated worldwide from remigration intervals: Correction for bias*, ENDANGERED SPECIES RES. (Jan. 30, 2020), provided as Attachment 6; Nicole Esteban et al., *How numbers of nesting sea turtles can be overestimated by nearly a factor of two*, PROCEEDINGS ROYAL SOC’Y B: BIOLOGICAL SCI. (Jan. 23, 2017), provided as Attachment 7.

³⁹ See, e.g., Mariana M.P.B. Fuentes et al., *Potential adaptability of marine turtles to climate change may be hindered by coastal development in the USA*, REG’L ENVTL. CHANGE (July 15, 2020), provided as Attachment 8.

⁴⁰ Brian M. Shamblin et al., *Green turtles nesting at their northern range limit in the United States represent a distinct subpopulation*, CHELONIAN CONSERVATION & BIOLOGY (Dec. 18, 2018), provided as Attachment 9.

portion or entirety of a single season, consecutive seasons with project activities may not be manageable.⁴¹

Meanwhile, adherence to seasonal environmental moratoria has long proven to be effective at reducing sea turtle takes. Indeed, earlier versions of the SARBO have determined that mitigation measures that do not include seasonal environmental moratoria are not adequately protective.⁴² According to the 1991 SARBO:

What has been learned from past dredging episodes is that *turtle take cannot be avoided if hopper dredging occurs when turtles are present*. To significantly reduce/eliminate turtle mortalities from hopper dredges given our present abilities to protect turtles, dredging should be scheduled in areas and at times when turtles are not present or occur at low abundance levels.⁴³

Given this, and without a meaningful discussion and analysis of the mitigation and monitoring measures the Corps intends to implement as a substitute for seasonal environmental moratoria, the Corps cannot prematurely conclude that they are sufficient to avoid and minimize the impacts of year-round dredging on sea turtles. The Corps must assess through a full EIS the feasibility and cost projections of implementing any necessary mitigation and monitoring measures to minimize the impacts of its proposal.

Performing maintenance dredging during the nesting season would almost certainly increase sea turtle deaths—as was observed before seasonal environmental moratoria went into place in the 1990s—and could potentially lead to population-level impacts. Despite years of state and federal data collection of sea turtle takes from dredging in North Carolina waters, the Draft EA lacks any scientific evidence to prove that sea turtles are unlikely to be adversely impacted by this proposal.

Finally, year-round dredging could impact the diamondback terrapin, a state-listed species of Special Concern in North Carolina that is known to be threatened by harbor dredging. Despite the fact that terrapins show a seasonal vulnerability to harbor dredging,⁴⁴ and thus likely benefit from the seasonal dredging windows, the Draft EA neglects to mention any potential impacts to this species. Therefore, the Corps must provide a thorough analysis of impacts to all marine turtles, through a full EIS under NEPA.

⁴¹ Letter from Shannon Deaton, Habitat Conservation Div. Chief, N.C. Wildlife Res. Comm'n, to Emily Hughes, Biologist, USACE (May 8, 2020) (on file with USACE), at 5.

⁴² 1991 SARBO at 3 (“During the period of 1980 through 1986, ...[a]ttempts were made to scare turtles out of the channel, devices were tested to detect and capture turtles, trawlers were used to remove turtles from the dredge path, dredges were equipped with deflector devices, and a variety of other ideas were tested. Unfortunately, no acceptable means of protecting sea turtles from hopper dredges was identified, and take of sea turtles continued.”)

⁴³ 1991 SARBO at 6 (emphasis added).

⁴⁴ Theodore Castro-Santos et al., *Assessing risks from harbor dredging to the northernmost population of diamondback terrapins using acoustic telemetry*, ESTUARIES & COASTS (Nov. 29, 2018), provided as Attachment 10.

B. The Corps Underestimates Impacts to Fisheries

The Draft EA similarly finds that the proposed action would have impacts on fisheries that are expected to be minimal, minor, insignificant, or temporary.⁴⁵ Yet, as discussed above, impacts to fisheries during hopper dredging events can be significant, and can include entrainment or degraded water quality from sedimentation. While these changes would occur during any dredge event, the effects they have on fisheries resources are amplified during certain times of the year.⁴⁶ Evidence from decades of dredging windows in North Carolina shows that seasonal environmental moratoria are most effective at minimizing these adverse impacts.⁴⁷ According to the State’s Coastal Habitat Protection Plan (“CHPP”), “[s]easonal restrictions on navigational dredging are an effective means of protecting fish during critical times of their lives, such as during spawning periods or when early juvenile fish are growing in nursery areas.”⁴⁸

The current dredging windows were developed based on sampling data about known seasonal fish distribution in North Carolina and proven impacts to a fish and fish habitat from dredging.⁴⁹ This information has not changed, and the Draft EA does not adequately demonstrate that these impacts would not occur as a result of the proposed changes. Instead, the Draft EA claims that impacts would not be significant because the area of disturbance is small compared to total available habitat.⁵⁰ This misstates the appropriate inquiry, which is whether the project’s impacts to the action area will be significant, and completely ignores the relative value of different habitat types to fisheries in the Atlantic. As discussed in more detail below in Section III.A.3, the Wilmington and Morehead City Harbors contain sensitive spawning and nursery areas which are critically important to the life history of many of the State’s fisheries, and any disturbance to these life stages is of great concern. Therefore, the Corps must conduct and disclose a thorough analysis of the expected impacts to fish and fish habitat, in the form of a full EIS under NEPA.

C. The Corps Discounts Indirect Impacts to Birds

Alarming, the Draft EA finds that eliminating dredging windows would have zero impact on shorebirds, including the federally threatened piping plover and red knot, “[s]ince placement of the dredged material will not occur on the beach.”⁵¹ Even if we agreed with the Corps’ assertion that year-round beach fill activities would not increase as a result of their proposal—which, as discussed below, we do not—this conclusion completely ignores other indirect impacts to birds from year-round dredging. Notably, if maintenance dredging were allowed to occur year-round, opportunities for beneficial use of dredged material for the purposes of restoring important bird islands would likely decrease. This is because these projects can only occur during the fall and winter months when birds are not breeding or nesting.

⁴⁵ Draft EA at 37, 40, 42, 46, and 48.

⁴⁶ See generally Wickliffe et al., *supra* note 9.

⁴⁷ *Id.*

⁴⁸ N.C. DEQ, *North Carolina Coastal Habitat Protection Plan* (2016), https://files.nc.gov/apnep/documents/files/2016_CHPP_Final.pdf, at 11.

⁴⁹ *Id.*

⁵⁰ Draft EA at 40 (claiming impacts to fisheries “would be minor when considering the vastness of habitat in the ocean as compared to the footprint of the federal channel”).

⁵¹ *Id.* at 54.

Indeed, the Corps forecasts all dredged material will go to offshore disposal sites,⁵² an assertion that implies restoring bird islands is not a priority. This is of highest concern for the Wilmington Harbor, which contains a number of sensitive bird islands—such as Ferry Slip and South Pelican Islands—that otherwise should regularly receive dredged material from maintenance projects.⁵³

Furthermore, more frequent dredging and offshore disposal activities throughout the year would naturally remove much-needed sediment from the natural systems within and surrounding the project areas. It is well established that repeated dredging can alter wave patterns and sea floor topography, interrupt long-shore sediment transport, and starve the long-term sediment budget for the entire barrier island system, leading to increased erosion rates far beyond the target system.⁵⁴ Loss of sediment would also prevent the formation of shoals, which serve as important intertidal fish habitat and, in turn, foraging habitat for colonial waterbirds and shorebirds.⁵⁵ These sensitive bird habitats, particularly those found along the Lower Cape Fear River, are already at severe risk of disappearing due to sea level rise and coastal development in the region, and any additional habitat loss is of serious concern.⁵⁶ These and any other indirect impacts from the Corps' proposal must be seriously addressed in a full EIS.

D. The Corps Overlooks Indirect Impacts of Increased Summertime Beach Fill Activities

The Draft EA inappropriately assumes that because beach fill projects are constrained by a separate environmental moratorium, year-round beach fill would not increase as a result of the Corps' proposal.⁵⁷ Yet in most cases, dredging of navigational channels and beach fill projects go hand in hand. Oceanfront beach fill frequently occurs after maintenance dredging at both Wilmington and Morehead City Harbors through so-called “beneficial placement” of dredged material.⁵⁸ Indeed, State law *encourages* the placement of dredged material on nearby beaches wherever possible, with no mention of seasonal protections:

Clean, beach quality material dredged from navigation channels within the active nearshore, beach, or inlet shoal systems must not be removed permanently from the active nearshore, beach or inlet shoal system unless no practicable alternative exists. Preferably, this dredged material will be disposed of on the ocean beach or

⁵² *Id.* at 21.

⁵³ *Id.* at 9, Table 1a.

⁵⁴ Greene, *supra* note 7, at 12.

⁵⁵ Indeed, intertidal shoals are used extensively by the threatened piping plover and have been identified as primary constituent elements making up their critical habitat, meaning they are essential to the conservation of the species. *See* Endangered and Threatened Wildlife and Plants; Final Determination of Critical Habitat for Wintering Piping Plovers, 66 Fed. Reg. 36,038, 36,064 (July 10, 2001). These habitat areas are also important to the threatened red knot and have been identified as threatened by dredging. U.S. FISH & WILDLIFE SERV., *Rufa Red Knot Background Information and Threats Assessment* (Nov. 2014), https://www.fws.gov/Northeast/redknot/pdf/20141125_REKN_FL_supplemental_doc_FINAL.pdf, at 149. (“Dredging often involves removal of sediment from...shoals...in the nearshore zone, directly impacting optimal red knot...foraging habitats.”)

⁵⁶ *See, e.g.,* Betsy von Holle et al, *Effects of future sea level rise on coastal habitat*, J. WILDLIFE MGMT. (Feb. 3, 2019), provided as Attachment 11.

⁵⁷ Draft EA at 5.

⁵⁸ *Id.* at 7, 10 (describing that oceanfront beach fill sourced from maintenance dredging at Wilmington and Morehead City Harbors occurs about every 2-3 years on neighboring beaches).

shallow active nearshore area where environmentally acceptable and compatible with other uses of the beach.⁵⁹

Given this, we are concerned that the Corps' proposal would inevitably lead to more municipalities taking advantage of these changes and seeking dredged sand to place on their beaches during the spring and summer months.⁶⁰ The Corps must therefore seriously consider the risk of increased year-round beach fill activities—and associated environmental impacts—stemming from its proposal, including a complete review of the patchwork of agreements and local regulations regarding the seasonality of beach placement associated with maintenance dredging across the North Carolina coast.

It is well documented in the literature that beach fill projects can directly and indirectly harm protected species and habitat areas. Birds may be displaced by pipelines and other equipment used or may avoid foraging during a fill event.⁶¹ Beach fill equipment may also crush eggs, hatchlings, and adult birds, and may cause birds to abandon nests during operations.⁶² Noise and presence of such equipment can disrupt or altogether prevent courtship, nesting, brooding, and fledging of breeding birds.

Beach fill projects can also directly impact nesting sea turtles by burying nests and crushing nesting females or hatchlings.⁶³ Beach fill equipment and artificial lighting also deter females from nesting.⁶⁴ In some extreme cases, fill events may lead to temporary or permanent escarpments, which altogether inhibit access to nesting sites.⁶⁵ Sometimes this means eggs are laid closer to the water, where they are more likely to be swept away.⁶⁶

Beach fill projects can also directly degrade benthic habitat in significant ways. The massive amounts of sand deposited during beach fill projects often kill off the entire community of benthic infauna—small crustaceans and other invertebrates that live in the sand—both on the beach and in the intertidal zone.⁶⁷ The temporary or long-term loss of lower trophic level organisms has cascading effects on a wide range of species that prey upon them, from commercially and recreationally important fish to threatened and endangered birds.⁶⁸ Foraging

⁵⁹ 15A N.C. Admin. Code 07M.1102(a).

⁶⁰ As discussed below in Section III.A.2, coastal municipalities have shown a recent interest in obtaining seasonal exemptions for beach placement due to certain constraints. *See* Scoping Letter from Jennifer Owens, Env'tl. Res. Section Chief, USACE (May 26, 2020) (on file with USACE) (proposing year-round beach fill activities at Surf City and North Topsail Beach, NC); *see also* Scoping Letter from J. Owens, USACE (July 13, 2020) (on file with USACE) (proposing year-round beach fill activities at Bogue Banks, NC).

⁶¹ Greene, *supra* note 7, at 31.

⁶² *Id.*

⁶³ *Id.* at 142.

⁶⁴ *Id.* at 31.

⁶⁵ *Id.* at 30.

⁶⁶ *Id.*

⁶⁷ *See, e.g.,* Charles H. Peterson et al., *Exploiting beach filling as an unaffordable experiment: Benthic intertidal impacts propagating upwards to shorebirds*, J. EXPERIMENTAL MARINE BIOLOGY & ECOLOGY (Nov. 14, 2006), provided as Attachment 12; Tyler Wooldridge et al., *Effects of beach replenishment on intertidal invertebrates: A 15-month, eight beach study*, ESTUARINE, COASTAL & SHELF SCI. (Jun. 20, 2016), provided as Attachment 13.

⁶⁸ *See, e.g.,* Lisa M. Manning et al., *Degradation of surf-fish foraging habitat driven by persistent sedimentological modifications caused by beach nourishment*, BULL. MARINE SCI. (2013), provided as Attachment 14; Brad Rosov et

habitat value for shorebirds in particular can be significantly degraded after a beach fill event.⁶⁹ If the sediment is “too coarse or high in shell content” it can inhibit foraging shorebirds from extracting food particles from the sand, while fine sediment can become impacted or reduce intertidal zone water clarity, both of which decreases feeding efficiency.⁷⁰

It is well established that these impacts can be mitigated through the implementation of seasonal environmental moratoria.⁷¹ Restricting beach placement to winter months avoids interaction with nesting and migratory birds, sea turtles, fish, and invertebrates. The Corps must seriously consider the potential that these impacts may indirectly occur if dredging is allowed outside of the existing dredging windows.

E. The Corps Fails to Consider Cumulative Impacts from the Proposed Wilmington Port Expansion

In order to ensure an accurate accounting of environmental effects from a proposal, NEPA requires the consideration of “cumulative or synergistic” environmental impacts to an area that are caused by multiple actions.⁷² A cumulative impact results when the impact of the proposed action is “added to other past, present, and reasonably foreseeable future actions.”⁷³ Here, the Draft EA should have considered the impacts of the Corps’ proposal alongside other actions that have occurred, are occurring, or will occur in the area. It did not do so.

In particular, the Draft EA completely fails to address the interrelated and cumulative impacts of the Corps’ proposal with the proposed expansion of the Wilmington Harbor, aside from a brief mention of the feasibility study prepared by the state project sponsor.⁷⁴ The Wilmington Harbor expansion project seeks to both deepen and widen the channel at Wilmington Harbor, an area that is directly targeted by the Corps’ proposal.⁷⁵

al., *The state of understanding the impacts of beach nourishment activities on infaunal communities*, SHORE & BEACH (Jan. 2016), provided as Attachment 15.

⁶⁹ Charles H. Peterson et al., *Multi-year persistence of beach habitat degradation from nourishment using coarse shelly sediments*, SCI. TOTAL ENV’T (Jul. 15, 2014).

⁷⁰ Greene, *supra* note 7, at 31.

⁷¹ See, e.g., Rosov et al., *supra* note 68.

⁷² *Kleppe v. Sierra Club*, 427 U.S. 390, 410 (1976) (basing the analysis on 42 U.S.C. § 4332 and stating that “when several proposals for [] actions that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental consequences must be considered together.”). This directive has been found in judicial decisions predating the enactment of the 1978 CEQ Regulations. See *NRDC v. Callaway*, 524 F.2d 79, 88 (2d Cir. 1975) (“[A]n agency may not...treat[] a project as an isolated “single-shot” venture in the face of persuasive evidence that it is but one of several substantially similar operations, each of which will have the same polluting effect in the same area. To ignore the prospective cumulative harm under such circumstances could be to risk ecological disaster.”).

⁷³ 40 C.F.R. § 1508.7 (1978) (repealed Sept. 14, 2020). Even the new, illegal NEPA regulations, discussed in greater detail in Part III below, require agencies to consider related actions with potential cumulative impacts. The new regulations state that an EIS “shall...describe the environment of the area(s) to be affected...including the reasonably foreseeable environmental trends and planned actions in the area(s).” See 40 C.F.R. §1502.15 (2020).

⁷⁴ Draft EA at 56 (“The Port of Wilmington has modernized to handle larger vessels and has completed a feasibility study to increase the harbor channel depth an additional 5 feet to accommodate future growth.”)

⁷⁵ N.C. ST. PORTS AUTH. (SPA), *Wilmington Harbor, North Carolina Navigation Improvement Project: Integrated Section 203 Study & Environmental Report* (Feb. 2020) (on file with N.C. SPA) [hereinafter “2020 Feasibility Study”].

In June of 2019, the N.C. Ports Authority prepared and submitted to the Corps a feasibility study under Section 203 of the Water Resources Development Act.⁷⁶ Shortly after reviewing the feasibility study, the Corps responded to the Ports Authority with significant concerns. Then, in September 2019, the Corps published a scoping notice stating its intent to prepare a draft EIS and solicited comments in response to the notice.⁷⁷ In February 2020, the Ports Authority published a revised 203 feasibility study, and while the Corps continued to have concerns about the analysis, it completed a Final Review and Approval in May of 2020.⁷⁸ With the Corps' approval, the 203 feasibility study has now been submitted to Congress for possible inclusion in WRDA legislation. This history of agency involvement illustrates that the Corps is well aware of—and involved with—the Ports Authority's plans to expand Wilmington Harbor. As a reasonably foreseeable future action, the planned expansion should have been considered in a cumulative impact analysis in this Draft EA.

The impacts of the proposed Wilmington Harbor expansion would be far-reaching and severe, making the Draft EA's failure to acknowledge this related proposal even more egregious. The Ports Authority's proposal seeks to deepen the navigational channel at the Wilmington Harbor from 42 to 47 feet, widen portions of the channel by hundreds of feet, and extend the entrance to the Port further offshore in order to accommodate larger ships.⁷⁹ Port expansion and harbor deepening projects are some of the most environmentally significant projects affecting the Southeast, as they pose many threats to surrounding natural resources and sensitive ecosystems. Possible direct and indirect effects from the proposed Wilmington Harbor expansion project include increased erosion and flooding, saltwater intrusion, marsh migration, harm to ESA-protected species and wildlife, increased noise pollution, and degraded air quality.

If the Wilmington Harbor channel is expanded to be deeper, wider, and longer, associated maintenance dredging will have correspondingly larger, more devastating impacts.⁸⁰ With the completion of the expansion project, the Ports Authority predicts that maintenance dredging in the area will increase by over 121,500 cubic yards in the anchorage and 57,000 cubic yards at the entrance.⁸¹ As a result, impacts from maintenance dredging to natural resources and water quality will increase relative to the increased size of the channel. For example, turbidity would likely increase “given the larger size and scale” of the dredging.⁸² Further, the intensity and magnitude of resuspension and redeposition effects on shell bottom during construction and

⁷⁶ N.C. SPA, *Wilmington Harbor, North Carolina Navigation Improvement Project: Integrated Section 203 Study & Environmental Report* (Jun. 2019) (on file with N.C. SPA).

⁷⁷ Notice of Intent to Prepare a Draft Environmental Impact Statement (DEIS) for the Wilmington Harbor Navigation Improvement Project Integrated Feasibility Study and Environmental Report, New Hanover and Brunswick Counties, NC, 84 Fed. Reg. 48,131 (Sept. 12, 2019). SELC, on behalf of six conservation groups, submitted comments in response to the Corps' notice, urging the Corps to fully assess and disclose all environmental impacts of the proposed Wilmington Harbor expansion project. See Letter from SELC et al. to Elden Gatwood, Planning & Envtl. Branch Chief, USACE (Oct. 11, 2019), provided as Attachment 16.

⁷⁸ USACE, *Review Assessment of Wilmington Harbor, North Carolina Navigation Improvement Project Integrated Section 203 Study & Environmental Report* (May 2020) (on file with USACE) [hereinafter “Corps Final Review”].

⁷⁹ See generally 2020 Feasibility Study.

⁸⁰ The Corps' explained in its Final Review of the 203 feasibility study that “[i]ncreasing 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.” Corps Final Review at 31.

⁸¹ 2020 Feasibility Study at 213 (this “represent[s] a 9.6% increase in annual maintenance dredging”).

⁸² *Id.* at 265.

maintenance dredging would increase relative to the increased size and depth of the channel.⁸³ Similarly, if the Harbor is deepened to 47 feet, an additional 925 acres of previously undisturbed soft bottom fishery foraging habitat would be affected by maintenance dredging.⁸⁴ Notably, with each extra foot of depth, maintenance dredging would disturb at least an additional 20 acres of soft bottom fishery foraging habitat.⁸⁵ These impacts are only exacerbated by the 203 feasibility study's own conclusion that over time, the effects of climate change on a larger harbor would force an increased amount of maintenance dredging in the future.⁸⁶ None of these expected environmental impacts caused by the proposed Wilmington Harbor expansion—either from the expansion itself or from the removal of dredging windows—are mentioned in the Draft EA for the dredging window proposal.⁸⁷

Failing to consider the proposed Wilmington Harbor expansion project in the Draft EA gives an incomplete and unrealistic view of the impacts from the proposed removal of dredging windows at the Wilmington Harbor. If fully assessed, the impacts of the proposed Wilmington Harbor expansion could significantly alter the analysis of the Draft EA. Likewise, the Corps' proposed removal of dredging windows could significantly influence the forthcoming environmental reviews for the proposed Wilmington Harbor expansion. Thus, the interrelated impacts of the two proposals should be considered alongside one another, in order to properly ascertain cumulative impacts under NEPA.

F. The Corps Fails to Analyze a Reasonable Range of Alternatives

NEPA requires federal agencies to “study, develop, and describe appropriate alternatives” to the agency’s proposed course of action.⁸⁸ The purpose of an agency’s alternatives analysis is to provide a full and complete picture of the environmental impacts of the agency’s proposed action and to determine whether there are “other options [the agency] could take that might be *less damaging* to the natural environment.”⁸⁹ An agency must consider a range of alternatives “sufficient to permit a reasoned choice.”⁹⁰ “Only alternatives that accomplish the purposes of the proposed action are considered reasonable, and only reasonable alternatives require detailed

⁸³ See Corps Final Review at 28; 2020 Feasibility Study at 192-93.

⁸⁴ See 2020 Feasibility Study at 192-93, 194-95.

⁸⁵ *Id.* at 192-93.

⁸⁶ *Id.* at App. A, 1-53 (concluding that “the project will be affected by the results of climate change,” and explaining that climate change-induced increases in streamflow and suspended sediment “will likely increase potential maintenance dredging activities”).

⁸⁷ This omission is especially striking because the 203 feasibility study based its impact analysis on the expectation that the maintenance dredging would adhere to *the established dredging windows*. See, e.g., 2020 Feasibility Study at 246 (finding few impacts to the protected Florida Manatee because “[h]opper dredging operations in the outer harbor entrance channel would adhere to a dredging window of 1 December to 15 April; thus limiting operations to periods of relatively cold water temperatures when manatees are unlikely to be present in NC waters”); *id.* at 250 (finding no expected impacts on sea turtles because prior recording of takes “occurred outside of the proposed 1 December- 15 April hopper dredging environmental work window” and “[h]opper dredging operations in the ocean entrance channel reaches would adhere to a 1 December–15 April environmental work window”).

⁸⁸ 42 U.S.C. § 4332(E); see also *id.* § 4332(C)(iii) (requiring a “detailed statement on...alternatives to the proposed action”).

⁸⁹ *Soda Mountain Wilderness Council v. Norton*, 424 F. Supp. 2d 1241, 1263 (E.D. Cal. 2006) (emphasis added) (citing *Headwaters, Inc. v. Bureau of Land Mgmt.*, 914 F.2d 1174, 1180 (9th Cir. 1990)).

⁹⁰ *Nat. Res. Def. Council v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972); see also *W. Watershed Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013) (applying reasonableness standard to EA alternatives analysis).

study. So how the agency defines the purpose of the proposed action sets the contours for its exploration of available alternatives.”⁹¹

Here, the Corps has stated its purpose as “to increase flexibility and assurance in maintaining the Wilmington and Morehead City entrance channel areas while maintaining compliance with the Federal Standard.”⁹² The purpose provides no threshold level of flexibility to be attained and does not explain what “flexibility and assurance” means. Yet each of the three alternatives evaluated are solely focused on dredging windows and ignore other means of increasing flexibility and assurance: a no action alternative “abiding by the existing hopper dredge window,”⁹³ an “expansion of the environmental window for hopper dredging and bed leveling” to July 1 through April 15,⁹⁴ or “elimination of hopper dredging window and addition of bed leveling.”⁹⁵

The Draft EA goes on to state the need for the project based on an alleged inadequate supply of hopper dredges, which prevents the Corps from completing maintenance dredging as regularly as it would like. The Corps cites seven out of 40 contracts district-wide over the past seven years that have not been successful⁹⁶—leaving more than 80% of contracts which *have* been successful, despite the alleged shortfall in hopper dredges. The Draft EA acknowledges that two new hopper dredges are scheduled to be constructed by the first quarter of 2023, but fails to evaluate how these new vessels would help meet demand in the future under the No Action alternative or otherwise.⁹⁷

The Draft EA also points to the Corps’ practice for the past three years of entering a regional contract to cover the hopper dredging needs of the Wilmington, Charleston, and Savannah Districts, and emphasizes that the Wilmington District is the only one constrained by environmental windows, which creates “challenges in executing” the regional contract.⁹⁸ Not only is this inaccurate—hopper dredging in the Savannah River Harbor is currently restricted to the window of December 1 through March 31⁹⁹—but easing a perceived administrative burden is not a sensible justification for removing long-standing protective measures. Moreover, even if Wilmington and Morehead City Harbors were the only channels constrained by windows, there is no reason why other channels could not be dredged during other times of the year. In essence, there should be little competition to secure hopper dredges during the current windows if that is a constraint that exists only for these two harbors.

⁹¹ *Webster*, 685 F.3d at 422 (citations omitted).

⁹² Draft EA at 13.

⁹³ *Id.* at 16.

⁹⁴ *Id.* at 17-18.

⁹⁵ *Id.* at 18.

⁹⁶ *Id.* at 13-14.

⁹⁷ *E.g.*, Draft EA at 17 (claiming that the “[s]tatus quo could result in continuance of unsuccessful contract awards” without any mention of how in two years, two more dredges will help alleviate this alleged pressure).

⁹⁸ *Id.* at 14.

⁹⁹ *See* Settlement Agreement at 2, *S.C. Coastal Conservation League et al. v. U.S. Army Corps of Eng’rs* (May 2013), provided as Attachment 17 (“All dredging activities will only take place from December 1 through March 31...[a]ll dredging in the Inner Harbor upstream of Station 63+000 is prohibited during the striped bass spawning period of April 1 to May 15.”).

Even then, the Corps dismisses the second alternative—expansion of dredging windows—without justification, claiming that all risk must be eliminated, and that the Corps “needs *as much* flexibility as possible”¹⁰⁰—a standard *not* incorporated into its purpose and need statement. Moreover, the Corps provides no support for the belief that the expanded dredging windows alternative would not provide sufficient flexibility. The agency provides no analysis of whether dredges would likely be available during those expanded dredging windows, and indeed, elsewhere the Draft EA claims that dredges would not likely be used during those most sensitive seasons that would still be protected under the second alternative, thus begging the question why complete elimination is needed.¹⁰¹ The Draft EA’s own cost-savings estimates show that “Alternative 2 results in roughly a 5% savings over Alternative 1, and Alternative 3 results in roughly a 7% savings over Alternative 1”¹⁰²—miniscule cost savings overall for a proposal largely premised on a supposed lack of supply and attendant expenses, but an especially incremental difference between Alternative 2 and the preferred alternative.

Fundamentally, the range of alternatives is too narrow, is exclusively focused on dredging windows, and only seriously considers the elimination alternative. If the purpose is about flexibility and assurance generally, with a goal of ensuring the harbor channels are adequately maintained, the Corps should consider alternatives *other than* changing or removing dredging windows. For example, the Corps could analyze alternatives relying on maintenance dredging methods that do not rely on hopper dredges, or an alternative that involves the Wilmington District entering its own contracts for dredging events, separate from the current regional contract approach. The Corps could also consider alternatives related to growing the fleet of available hopper dredges.

G. The Corps Appears to Already Be Implementing the Proposal

The NEPA process must be used as a tool to assess impacts of a proposed action, “rather than justify[] decisions already made.”¹⁰³ NEPA requires action and study based on “good faith objectivity rather than subjective impartiality.”¹⁰⁴ Specifically, the “hard look” required by NEPA cannot act as a “subterfuge designed to rationalize a decision already made or to purposefully minimize negative side effects.”¹⁰⁵ Predetermined decisionmaking is antithetical to the purpose of NEPA to fairly evaluate reasonable alternatives and disclose to the public the agency’s findings regarding the different alternatives at a meaningful time.

Despite NEPA’s clear admonitions against predetermined decisionmaking, the Corps appears to have been soliciting and awarding bids on maintenance dredging contracts for

¹⁰⁰ Draft EA at 18 (emphasis added).

¹⁰¹ *Id.* at 64 (“The removal of the hopper dredge window will allow hopper dredging to occur any time of year, however, it should not be assumed that hopper dredging will necessarily occur within the spring and summer months.”).

¹⁰² *Id.* at 19.

¹⁰³ 40 C.F.R. § 1502.2(g) (1978) (“Environmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.”).

¹⁰⁴ *Fayetteville Area Chamber of Commerce v. Volpe*, 515 F.2d 1021, 1026 (4th Cir. 1975) (quoting *Envtl. Def. Fund v. Corps of Eng’rs, U.S. Army*, 470 F.2d 289, 296 (8th Cir. 1972)); see also *Nat’l Audubon Soc’y v. Dep’t of Navy*, 422 F.3d 174, 199 (4th Cir. 2005) (noting that “NEPA of course prohibits agencies from preparing an EIS simply to ‘justify[] decisions already made.’” (quoting 40 C.F.R. § 1502.2(g) (1978))).

¹⁰⁵ *Colo. Env’tl. Coal. v. Salazar*, 875 F. Supp. 2d 1233, 1250 (D. Colo. 2012) (citations omitted).

Wilmington and Morehead City Harbors *on the assumption that dredging windows will be removed*. On August 5, 2020—two weeks *before* the Corps’ publicly proposed removing dredging windows—the Corps began soliciting bids for a maintenance dredging contract to cover Brunswick, Savannah, Wilmington, and Morehead City Harbors.¹⁰⁶ The bid solicitation contains multiple documents that place bidders on notice of requirements and specifications for the projects. One such document, a Notice to Bidders, states: “there are no environmental windows” for the project.¹⁰⁷ Another document, the RTA Specifications, explicitly states that environmental windows are “not applicable.”¹⁰⁸

Just over one week ago, on September 23, the Corps actually awarded a bid to the Great Lakes Dredge & Dock Company, LLC for \$16,362,450, with updated specifications and requirements that do not include any dredging windows for Wilmington or Morehead City Harbors.¹⁰⁹ By soliciting and awarding bids with explicit language denouncing the presence of environmental windows, the Corps has engaged in predetermined decisionmaking that undermines the entire purpose of the NEPA process. Rather than utilizing the preparation of this EA as a good faith analysis of reasonable alternatives to fit the agency’s need, the Corps appears to be merely going through the motions to “justify[] decisions already made.”¹¹⁰

III. THE CORPS MUST PREPARE AN EIS FOR THIS PROPOSAL

The Draft EA’s numerous inadequacies demonstrate that the Corps’ proposal here is a major federal action that would significantly affect the coastal environment, and a full EIS is required. The Corps is proposing to abandon seasonal dredging windows that have been both longstanding agency policy and incredibly successful at protecting coastal resources for decades. As such, this proposal is a significant reversal from previous practice that would have far-reaching implications for the North Carolina coast and could set precedent for dredging and beach management projects up and down the Atlantic coast. Yet the Corps has determined that a mere EA is sufficient to analyze the impacts of this decision. As an “action-forcing” statute, NEPA is designed to ensure that the public and decision-makers are provided with the information they need to make a considered decision about the best path forward, and to ensure that the agency has carefully and fully contemplated the environmental effects of its proposed action.¹¹¹

¹⁰⁶ *South Atlantic Regional Harbor Dredging Contract Notice* W912PM20B0008, USACE, <https://beta.sam.gov/opp/4726ad7b44674b07b7965fe982996b14/view> (updated Sept. 4, 2020).

¹⁰⁷ USACE, Application & Notice to Bidders, A21-W912PM20B0008, Section 00 10 00 Note 6 [hereinafter “USACE Application & Notice to Bidders”], provided as Attachment 18, *available at* <https://beta.sam.gov/opp/4726ad7b44674b07b7965fe982996b14/view>.

¹⁰⁸ USACE, *South Atlantic Division Regional Harbor Dredging RTA Specifications* IFB No. W912PM20B0008, SECTION 35 20 23, 1.3 (Aug. 5, 2020), provided as Attachment 19, *available at* <https://beta.sam.gov/opp/4726ad7b44674b07b7965fe982996b14/view>.

¹⁰⁹ *South Atlantic Regional Harbor Dredging Contract Notice*, *supra* note 106.

¹¹⁰ *See* USACE Application & Notice to Bidders.

¹¹¹ 40 C.F.R. § 1502.1 (1978); *N.C. Wildlife Fed’n v. N.C. Dep’t of Transp.*, 677 F.3d 596, 601 (4th Cir. 2012) (quoting *Robertson*, 490 U.S. at 350).

The Draft EA fails to fulfill this purpose, and the Corps fails to explain why it has chosen to develop an EA rather than an EIS for its proposal. Under NEPA, “an EA and an EIS serve very different purposes.”¹¹² As the Ninth Circuit explained:

An EA simply assesses whether there will be a significant impact on the environment. An EIS weighs any significant negative impacts of the proposed action against the positive objectives of the project. Preparation of an EIS thus ensures that decision-makers know that there is a risk of significant environmental impact and take that impact into consideration. As such, an EIS is more likely to attract the time and attention of both policymakers and the public.¹¹³

The Corps should prepare a full EIS for its instant proposal, which would have far-reaching implications for North Carolina’s coastal resources and communities. Entirely eliminating long-standing seasonal environmental moratoria is a major action with significant environmental impacts.

Since the Corps began its scoping process earlier this year, the Council for Environmental Quality (“CEQ”) has promulgated revised regulations for NEPA implementation, which went into effect September 14, 2020. Going forward, the Corps should continue to apply the prior, long-standing NEPA regulations that were in effect when it initiated this project,¹¹⁴ rather than the new, illegal, NEPA regulations which are already being challenged in court.¹¹⁵ Use of the new regulations would leave the Corps unable to meet the minimum requirements of the NEPA statute, and the Corps has an independent obligation to meet those requirements “to the fullest extent possible,” notwithstanding CEQ’s unlawful new rules.¹¹⁶

The Corps should continue to operate under the regulations that have controlled its NEPA process thus far for this proposal. Below we first detail how the longstanding NEPA regulations demonstrate this action would have significant impacts, then discuss how an EIS must be completed even under the new, likely illegal, NEPA regulations

A. The Prior, Long-Standing NEPA Regulations Demand an EIS

The “significance” of a proposed action has historically been determined by evaluating both the context of the action and the intensity of the impact.¹¹⁷ Under the regulations in effect at the time the Draft EA was prepared, intensity referred to the severity of the activity as revealed through the consideration of ten factors, several of which apply to this proposal:

¹¹² *Sierra Club v. Marsh*, 769 F.2d 868, 875 (1st Cir. 1985).

¹¹³ *Anderson v. Evans*, 371 F.3d 475, 494 (9th Cir. 2004).

¹¹⁴ 40 C.F.R. § 1506.13 (2020) (The new regulations apply to “any NEPA process *begun* after September 14, 2020.” (emphasis added)). Thus even under the new rule, an agency may continue using the old regulations for ongoing processes such as this one. *Id.*

¹¹⁵ *Wild Virginia v. Council on Environmental Quality*, No. 3:20-cv-00045-MFU (W.D. Va. filed Aug. 18, 2020); *California v. CEQ*, No. 3:20-cv-06057-RS (N.D. Cal. filed Aug. 28, 2020); *Env’t Just. Health All. v. CEQ*, No. 1:20-cv-06143-CM (S.D.N.Y. filed Aug. 6, 2020); *Alaska Cmty. Action on Toxics v. CEQ*, No. 3:20-cv-05199-RS (N.D. Cal. filed July 29, 2020).

¹¹⁶ 42 U.S.C. § 4332.

¹¹⁷ 40 C.F.R. § 1508.27 (1978).

- (1) Impacts that may be both beneficial and adverse;
- (2) The degree to which the proposed action affects public health or safety;
- (3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;
- (4) The degree to which the effects on the quality of the human environment are likely to be highly controversial;
- (5) The degree to which the possible effects on the human environment are highly unknown or involve unique or unknown risks;
- (6) The degree to which the action may establish a precedent for future actions with significant effects;
- (7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts...;
- (8) The degree to which the action...may cause loss or destruction of significant scientific, cultural, or historical resources;
- (9) The degree to which the action may adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the [ESA]; and
- (10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.¹¹⁸

“An action may be ‘significant’ if one of these factors is met.”¹¹⁹ Furthermore, “[a] determination that significant effects on the human environment will in fact occur is not essential” for an EIS to be required; “[i]f substantial questions are raised whether a project *may* have a significant effect upon the human environment, an EIS must be prepared.”¹²⁰

Without properly analyzing these factors, the Corps has prematurely concluded that its alternatives would cause no or minor adverse effects on the environment. An actual analysis of these factors reveals that the environmental impacts of the proposal would inevitably be significant, thus requiring the Corps to prepare a detailed EIS.¹²¹ While the presence of a single factor would be sufficient to warrant a full EIS, at least four of the factors are implicated by the Corps’ proposal, as explained below.

1. The Corps’ Proposal Would Harm Threatened and Endangered Species

The factor requiring consideration of the “degree to which the action may adversely affect any endangered or threatened species or its habitat that has been determined to be critical under the [ESA]”¹²² unquestionably calls for an EIS in this instance. The Wilmington and Morehead City Harbors and surrounding areas are home to no fewer than *nineteen* ESA-listed

¹¹⁸ *Id.*

¹¹⁹ *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1220 (9th Cir. 2008).

¹²⁰ *Sierra Club v. U.S. Forest Serv.*, 843 F.2d 1190, 1193 (9th Cir. 1988) (quotations omitted) (emphasis added); *see also Steamboaters v. F.E.R.C.*, 759 F.2d 1382, 1393 (9th Cir. 1985) (stating that an agency “must supply a convincing statement of reasons why potential effects are insignificant”).

¹²¹ *See* 42 U.S.C. § 4332(C); *see also Wildlands v. Woodruff*, 151 F. Supp. 3d 1153, 1167 (W.D. Wash. 2015) (finding agency violated NEPA and vacating EA where agency failed to prepare an EIS and failed to take a hard look at significant issues).

¹²² 40 C.F.R. § 1508.27(b)(9) (1978).

species and five sets of critical habitat units.¹²³ Notably, the four beaches immediately adjacent to the two Ports—Bald Head Island, Caswell Beach, Fort Macon State Park, and Shackleford Banks—all serve as important sea turtle nesting habitat. North Carolina is home to five species of sea turtle, including the federally threatened loggerhead and green sea turtles. Loggerhead sea turtles have both nesting and in-water critical habitat designations surrounding the two Harbors. Nearshore waters off the two ports are designated as marine critical habitat to protect nesting loggerhead females approaching the beach.¹²⁴ Three of the four beaches of concern here (excluding Shackleford Banks) have been designated as terrestrial critical habitat for nesting loggerheads.¹²⁵ Caswell Beach and Bald Head Island see the third and fourth highest annual nesting density, respectively, of any beach in the State, with an average of 134 nests laid along the 16 miles of beach per year.¹²⁶ In 2019, these two beaches combined saw a record 275 nests laid.¹²⁷ Sea turtles are iconic elements of the tourism industry in North Carolina. On Bald Head Island, sea turtle viewing activities bring in as much as \$30 million per year in tourism spending.¹²⁸

In addition, portions of Fort Fisher (adjacent to Wilmington Harbor) and Shackleford Banks (adjacent to Morehead City Harbor) are designated as critical habitat for the federally threatened piping plover.¹²⁹ North Carolina is the only state where the piping plover's breeding and wintering ranges overlap and where the birds are present year-round.¹³⁰ The lower Cape Fear River is also designated as critical habitat for the federally endangered Atlantic sturgeon, which travels upriver to spawn.¹³¹ Both the Cape Fear River and Northeast Cape Fear River are identified as important spawning rivers for Atlantic sturgeon, meaning that both juvenile and adult sturgeon are present in the rivers at different times of the year.

As discussed above in Section II, the Corps' proposal would harm these threatened and endangered species and their critical habitats in ways that have been overlooked by the Draft EA.

¹²³ These species are: West Indian manatee; blue, sei, sperm, fin, humpback, and North Atlantic right whales; piping plover; red knot; roseate tern; green (North Atlantic DPS), hawksbill, leatherback, loggerhead (Northwest Atlantic DPS), and Kemp's ridley sea turtles; Atlantic (Carolina DPS) and shortnose sturgeon; smalltooth sawfish; and seabeach amaranth. The affected area for the proposal includes critical habitat for the Atlantic sturgeon (Carolina DPS), loggerhead sea turtle (Northwest Atlantic DPS), piping plover, and North Atlantic right whale. Draft EA at 55-56, Table 7.

¹²⁴ Endangered and Threatened Species: Critical Habitat for the Northwest Atlantic Ocean Loggerhead Sea Turtle Distinct Population Segment (DPS) and Determination Regarding Critical Habitat for the North Pacific Ocean Loggerhead DPS, 79 Fed. Reg. 39,856 (Jul. 10, 2014).

¹²⁵ Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Northwest Atlantic Ocean Distinct Population Segment of the Loggerhead Sea Turtle, 79 Fed. Reg. 39,756 (July 10, 2014).

¹²⁶ *Sea Turtle Nest Monitoring System*, N.C. WILDLIFE RES. COMM'N (last visited Sept. 30, 2020), <http://www.seaturtle.org/nestdb/?view=1>.

¹²⁷ *Id.*

¹²⁸ Kate E. Queram, *Report – Sea Turtles Have Economic Impact*, STAR NEWS (Dec. 4, 2013), <http://www.starnewsonline.com/news/20131204/report---sea-turtles-have-economic-impact>.

¹²⁹ See 66 Fed. Reg. 36,037.

¹³⁰ *Showcase Species: Southeast – Piping Plover in the Southeast*, NAT'L WILDLIFE FED'N, [https://www.nwf.org/~media/PDFs/Wildlife/SE-PipingPlover.ashx](https://www.nwf.org/~/media/PDFs/Wildlife/SE-PipingPlover.ashx).

¹³¹ Endangered and Threatened Species; Designation of Critical Habitat for the Endangered New York Bight, Chesapeake Bay, Carolina and South Atlantic Distinct Population Segments of Atlantic Sturgeon and the Threatened Gulf of Maine Distinct Population Segment of Atlantic Sturgeon, 82 Fed. Reg. 39,160 (Aug. 17, 2017).

It is therefore incumbent upon the agency under NEPA to analyze and disclose these impacts through a full EIS and associated comment period.

2. The Corps' Proposal Would have Precedential Effects on Dredging and Beach Placement along the Atlantic Coast

The Corps must also consider the “degree to which the action may establish a precedent for future actions with significant effects.”¹³² The agency’s proposal to remove dredging windows is likely to set a dangerous precedent for dredging and beach fill projects up and down the North Carolina coast. As discussed above, seasonal environmental moratoria have been longstanding agency policy and incredibly successful at protecting coastal resource—during both dredging and beach fill activities—for decades. As such, this proposal would be a significant reversal from previous practice if finalized.

According to the N.C. Department of Environmental Quality’s comments on the April 7, 2020 scoping notice for this proposal: “[b]y having dredging moratoria in place, applicants are more likely to strive to avoid the most sensitive time periods, reaching out where exceptions are needed. This allows biological impacts to be minimized to the greatest extent possible, while still allowing projects to occur.”¹³³ If dredging windows are completely eliminated for the Wilmington and Morehead City Harbors—the two locations where maintenance dredging occurs most frequently in the State—the undersigned organizations are concerned that this would become the rule rather than the exception across the board for dredging and related activities in North Carolina. The new regulatory environment created from this proposal would send a signal to dredging applicants that they no longer need to avoid the time periods most sensitive to species of concern when conducting harmful dredging projects. Worse, this proposal could effectively create greater “demand” for beach fill projects outside of current nourishment windows as a means of disposing of the dredged material. Coastal municipalities are already increasingly seeking to nourish their beaches during existing environmental moratoria through exemptions.¹³⁴

The Corps’ proposal would establish a precedent facilitating more frequent dredging and beach placement activities during seasons that pose the highest risk to coastal and marine resources, and the agency must prepare a full EIS to analyze these environmental impacts. The agency cannot escape this harmful precedential effect by suggesting that dredging events would sometimes *not* occur during the most detrimental seasons; instead, the Corps must analyze the full possible impacts of this proposal, including the very likely possibility that dredging would regularly—if not always—occur during those times previously-off limits.

3. The Impacted Geographic Areas Support Numerous Ecologically and Culturally Significant Resources

Under the NEPA regulations in effect when the Draft EA was prepared, the Corps is required to consider the “[u]nique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or

¹³² 40 C.F.R. § 1508.27(b)(6) (1978).

¹³³ Letter from S.C. Holman to E.B. Hughes, *supra* note 21, at 4.

¹³⁴ *See* Scoping Letters from J. Owens, USACE, *supra* note 60.

ecologically critical areas.”¹³⁵ The natural environments surrounding the Wilmington and Morehead City Harbors boast spectacular barrier islands, tidal creeks, and marsh ecosystems rife with wildlife and natural resources. Indeed, the N.C. General Assembly has declared that “[a]mong North Carolina’s most valuable resources are its coastal lands and waters.”¹³⁶ Among those resources are fish habitats vital to the State’s economy. Our coast, and in particular the estuaries, includes some of the “most biologically productive regions of the State and of the nation” providing “ninety percent (90%) of the most productive sport fisheries on the east coast of the United States” that have “extremely high recreational and esthetic value which should be preserved and enhanced.”¹³⁷

Parts of these coastal areas have been designated as essential fish habitat or habitat areas of particular concern under the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801 *et seq.*, to protect a large variety of species, including: bluefish, summer flounder, Atlantic butterfish, dolphinfish, wahoo, cobia, king and Spanish mackerel, swordfish, blue and white marlin, sailfish, little tunny, calico scallop, three shrimp species, four tuna species, ten shark species, and over fifty snapper-grouper species.¹³⁸ Hundreds of acres of riverine, estuarine, and nearshore coastal waters up and down the coast, including those surrounding the two ports, serve as primary nursery areas¹³⁹ where post-larval and juvenile development of young finfish and crustaceans takes place.¹⁴⁰

The diversity of habitats found along the Wilmington and Morehead City Harbors also supports a great variety of bird life throughout the year. Thousands of shorebirds stop over during spring and fall migration and to overwinter, utilizing the extensive tidal flats, river islands, marshes, and beaches in these areas. In particular, over 330 species of bird have been spotted in the Lower Cape Fear region, from bald eagles to piping plovers.¹⁴¹ Over 25 percent of the State’s coastal waterbirds depend on the lower Cape Fear River for nesting, meaning this region is critical for supporting healthy state and regional populations.¹⁴² These species include the common tern, gull-billed tern, American oystercatcher, black skimmer, glossy ibis, least tern, little blue heron, snowy egret, tricolored heron, and Wilson’s plover. Bald Head Island supports the state’s largest population of breeding painted buntings, and the lower Cape Fear supports the state’s largest group of great cormorants.¹⁴³ Understandably, bird-watching is a popular pursuit in the lower Cape Fear region, drawing locals and birders from across the Southeast.

¹³⁵ 40 C.F.R. § 1508.27(b)(3) (1978).

¹³⁶ N.C. Gen. Stat. § 113A-102.

¹³⁷ *Id.*

¹³⁸ Draft EA at 43-45, Table 6.

¹³⁹ See 15A N.C. Admin. Code 3I .0101(4)(f) (differentiating between primary, secondary, and special secondary nursery areas).

¹⁴⁰ Draft EA at 33, 35, Figures 4-5.

¹⁴¹ *Brunswick Islands Birding*, N.C.’s BRUNSWICK ISLANDS, <https://www.ncbrunswick.com/activity/brunswick-bird-watching> (last visited Sept. 30, 2020).

¹⁴² *2017 Waterbird Nesting Season Recap*, AUDUBON, <https://nc.audubon.org/news/2017-waterbird-nesting-season-recap> (last visited Sept. 30, 2020).

¹⁴³ *Bald Head – Smith Island*, AUDUBON, <https://www.audubon.org/important-bird-areas/bald-head-smith-island> (last visited Sept. 30, 2020).

Given the vibrant natural and cultural resources in the area, all foreseeable environmental impacts to these resources from the Corps' proposal require thorough examination in the form of a full EIS under NEPA.

4. The Corps' Proposal Would Have Significant Cumulative Impacts

An EIS is also warranted when "it is reasonable to anticipate a cumulative impact on the environment."¹⁴⁴ As discussed above, removing dredging windows would result in multiple significant cumulative impacts along the North Carolina coast in light of the consequences associated with this proposal, as well as other ongoing actions in the affected areas.

The Corps' proposal is inherently rife with cumulative impacts by facilitating more frequent maintenance dredging events during times of the year when ecosystems are most susceptible to additional stressors. The cumulative effect of repeated dredging events during these sensitive seasons are significant alone—but are particularly concerning combined with other related impacts and activities. As noted above, this proposal must be considered in conjunction with ongoing dredging and beach placement and fill trends, and the cumulative impacts of these events should be assessed in a full EIS. Finally, as provided in greater detail in Section II.E above, the proposal stands to have much larger and more damaging effects in light of the proposal to deepen and expand Wilmington Harbor channel. The Draft EA fails to acknowledge these cumulative impacts of the Corps' proposal, underscoring the need for an EIS to fully assess and publicly disclose the proposal's full set of impacts.

B. An EIS Should be Prepared Even Under the New NEPA Regulations

All of the information discussed above regarding the prior significance factors still supports preparation of an EIS under the newly-effective NEPA regulations. As already noted above, the Corps began this process under the prior, long-standing NEPA regulations and should continue to apply those regulations throughout its NEPA process here.¹⁴⁵ Nonetheless, the new regulations would call for preparation of a full EIS here.

Under the new NEPA regulations, agencies determine if the effects of a proposed action are significant enough to require an EIS by analyzing "the potentially affected environment and degree of the effects of the action."¹⁴⁶ In assessing the potentially affected environment, agencies should consider "the affected area (national, regional, or local) and its resources, such as listed species and designated critical habitat under the [ESA]."¹⁴⁷ In considering the degree of the effects, agencies should consider:

- (1) Both short- and long-term effects.
- (2) Both beneficial and adverse effects.
- (3) Effects on public health and safety.

¹⁴⁴ 40 C.F.R. §1508.27(b)(7) (1978).

¹⁴⁵ 40 C.F.R. § 1506.13 (2020) (The new regulations apply to "any NEPA process *begun* after September 14, 2020" (emphasis added)).

¹⁴⁶ *Id.* § 1501.3(b).

¹⁴⁷ *Id.* § 1501.3(b)(1).

- (4) Effects that would violate Federal, State, Tribal, or local law protecting the environment.¹⁴⁸

As already discussed above, the Corps' proposal to eliminate dredging windows would have widespread impacts on the affected area, which include a wide variety of ecologically significant resources and imperiled species, including nineteen ESA-listed species living in and around the Wilmington and Morehead City Harbors.¹⁴⁹ In turn, the degree of the impacts to these coastal resources would be severe, with short-term and long-term adverse effects. Dredging results in acute short-term effects on the environment, including degraded water quality, benthic disturbance, and major harm to imperiled species, and these effects are more pronounced during certain seasons. Removing dredging windows would also have harmful long-term impacts with recurring maintenance dredging events and the precedential impacts on dredging and related beach fill projects up and down the coast, as highlighted above. In short, whether analyzed under the NEPA regulations in place at the time the Draft EA was prepared, or under the new, illegal NEPA regulations, the Corps' proposed action would have significant impacts on the environment, necessitating an EIS.

IV. CONCLUSION

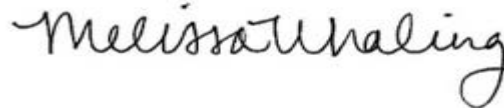
For the reasons discussed above, it is clear that an EIS is required for the Corps' proposal under NEPA. The Corps' plan to abandon longstanding, successful environmental moratoria at Wilmington and Morehead City Harbors is a significant reversal from previous practice that would have serious adverse impacts on North Carolina's coastal resources, and could set precedent for dredging and beach management projects up and down the coast. The impacts to North Carolina's threatened and endangered species, fisheries, and coastal environment are greatly underestimated in the Draft EA, and must be reassessed through a full EIS under NEPA. Furthermore, the cumulative impacts resulting from other related actions affecting these areas, such as the proposed Wilmington Harbor expansion project, must be fully analyzed and disclosed. Finally, the Corps must seriously consider a full, reasonable range of alternatives to its proposal, and wait until the NEPA process is complete before implementing any resulting action.

Thank you for your consideration of these comments.

Sincerely,



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[signature page to follow]

¹⁴⁸ *Id.* § 1501.3(b)(2).

¹⁴⁹ Draft EA at 55-56, Table 7.

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[Attachments]