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Via U.S. Postal Service and Electronic Mail
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Re: Comments on Final Environmental Impact Statement (FEIS) for the Installation of a Terminal Groin Structure at the Eastern End of Ocean Isle Beach, Extending Into the Atlantic Ocean, West of Shallotte Inlet (Brunswick County, NC) (SAW2011-01241)

Mr. Crumbley:

Please accept these comments on the Final Environmental Impact Statement ("FEIS") for the Ocean Isle Beach Shoreline Management Project. The Southern Environmental Law Center submits these comments on behalf of itself and the North Carolina Coastal Federation. The comments follow a March 16, 2015 submission of comments on the Draft Environmental Impact Statement ("DEIS") for this project detailing significant inadequacies with that document.[1]

The FEIS does little to remedy the substantial concerns raised in our earlier comments. Rather than stop and make any attempt to set forth an analysis that actually takes a hard look at alternatives and impacts, the document doubles down on the wholly inadequate methodologies and arbitrary assumptions of the DEIS. As such, the FEIS continues to fail to meet the requirements of the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4321, *et seq*; the Clean Water Act ("CWA"), 33 U.S.C. § 1251, *et seq.*; and the Endangered Species Act ("ESA"), 16 U.S.C. § 1531, *et seq.*

[1] On May 9th, the U.S. Army Corps of Engineers denied the North Carolina Coastal Federation's request for an extension of time to submit public comments. Since that time, online access to the EIS has been periodically unavailable and, indeed, was restored only after the North Carolina Coastal Federation informed the Corps of this problem. This lack of access violates the Corps' responsibility to make the EIS available to the public. 42 U.S.C. § 4332 (requiring that copies of environmental impact statements be available to the public); 40 C.F.R. § 1502.19. ("Agencies shall circulate the entire draft and final environmental impact statements except for certain appendices as provided in § 1502.18(d) and unchanged statements as provided in § 1503.4(c)."); *Id*. § 1506.6 (f).

I. The responsible federal agency did not independently evaluate the EIS, but instead conducted an illegal exercise in predetermined decisionmaking.

Statements in the FEIS make clear that the document is nothing more than an exercise in predetermined decisionmaking to justify construction of the terminal groin. As such, the document violates NEPA. The Council on Environmental Quality's NEPA regulations specifically require that an EIS be more than merely a "disclosure document," stating that an "environmental impact statement shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made." 40 C.F.R. §§ 1502.1, 1502.2(g). And the United States Court of Appeals for the Fourth Circuit itself has recognized that NEPA requires action and study based on "good faith objectivity." *Fayetteville Area Chamber of Commerce v. Volpe*, 515 F.2d 1021, 1026 (4th Cir. 1975).

In our earlier comments we noted that the engineering report upon which the whole EIS depends was "Prepared For" the "Town of Ocean Isle Beach" by the engineering firm CPE[2] and that the DEIS made clear that "[t]he objective of the Engineering Report (Appendix B) and this numerical study *is to refine the terminal groin's design and develop a recommended plan which includes groin construction and strategic placement of beach fill*."[3] Rather than consider the fundamental concern behind this critique—that the report is focused on justifying one particular alternative rather than objectively analyzing a reasonable range of alternatives as NEPA requires—the FEIS instead elects to simply change the title of the report and how it is discussed.[4]

This window-dressing alteration does little to alleviate the underlying problem that the EIS—with its different and contradictory rates of erosion, its overstated costs of alternative options, and its failure to take a "hard look" at environmental impacts—was prepared by private consultants working for Ocean Isle Beach for the sole purpose of justifying the construction of the terminal groin. The requirements of NEPA are clear. Agencies must take a "hard look" at a reasonable range of alternatives and that "hard look" "must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made." *Forest Guardians v. USFWS*, 611 F.3d 692, 712 (10th Cir. 2010) (quoting *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000)). This has not been done.

Ordinarily, a degree of deference is owed to a federal agency's NEPA analysis. Such deference is based on the idea that the agency is bringing its expertise to bear on the matters being considered. *See Balt. Gas & Elec. Co. v. NRDC*, 462, U.S. 87, 104 (1983). In this case, however, the U.S. Army Corps of Engineers ("Corps") did not exercise that expertise; rather, it relied entirely on the shoddy analysis performed by CPE[5] and paid for by the Town of Ocean Isle Beach. There is no evidence in the EIS or elsewhere that any degree of experience and skill was

[2] Draft Environmental Impact Statement ("DEIS"), Appendix B cover.
[3] DEIS Appendix C at 2 (emphasis added).
[4] Final Environmental Impact Statement ("FEIS"), Appendix G at 19, response to comment 173.
[5] As noted in our earlier comments on the DEIS, work by CPE should be treated with substantial skepticism. The group's work on the Figure Eight Island terminal groin has been determined to be utterly incorrect. Moreover, at North Topsail, the town, Corps, and Division of Coastal Management are currently working to remove substantial quantities of rock from the beach nourishment project that was permitted based on CPE's assessment of the sand source. Trista Talton, *Pumping Project Dumps Tons of Rocks at N. Topsail*, COASTAL REVIEW ONLINE, Mar. 13.2015, http://www.coastalreview.org/2015/03/pumping-project-litters-beach-with-rocks/.

employed by the Corps during the NEPA process. And despite substantial questions raised by state and federal partner agencies during the public comment process, the FEIS remains as fundamentally flawed as the DEIS before it.

NEPA requires the Corps to "independently evaluate the information submitted" by an applicant seeking the preparation of an EIS, and the Corps is "responsible for its accuracy." 40 C.F.R. § 1506.5(a). Adopting an applicants' analysis wholesale, without independently reviewing aspects such as the statement of purpose and need and the range of alternatives, and without exercising independent judgment, violates NEPA. *See Simmons v. United States Army Corps of Eng'rs*, 120 F.3d 664, 669 (7th Cir. 1997) (holding that an agency has the duty under NEPA to "exercise a degree of skepticism with self-serving statements" and failed to do so where the Corps did not consider all reasonable alternatives, instead restricting its analysis to the "alternative means by which a particular applicant can reach his goals") (citations omitted) (internal quotation marks omitted); 33 C.F.R. Part 325 App. B 21.8.f.(2) (stating that "the district engineer should document in the record the Corps' independent evaluation of the information and its accuracy"). As a basic NEPA requirement, when an agency does choose to "use the information submitted by the applicant in the environmental impact statement, either directly or by reference, then the names of the persons responsible for the independent evaluation shall be included in the list of preparers." 40 C.F.R. 1506.5(a). The FEIS, which fails even to include a list of preparers—let alone identify any individual responsible for the independent evaluation—violates not only this provision, but also the more general requirements of 40 C.F.R. § 1502.17.

Even had the Corps identified that it had independently verified CPE's analysis and exercised its own expertise, deference accorded an agency's scientific or technical expertise is not unlimited. *Brower v. Evans*, 257 F.3d 1058, 1067 (9th Cir. 2001). The presumption of agency expertise can be rebutted when the agency's decisions are not reasoned. *Id.* Specifically, an agency's analysis must have a "rational basis," be "consistently applied," and take "relevant considerations into account." *Druid Hills Civic Ass'n v. FHWA*, 772 F.2d 700, 711 (11th Cir. 1985)).

Here the FEIS falls down at every step. The FEIS admits that the methodology used has no "rational basis." In fact, the FEIS makes clear over and over again that the underlying Delft3D model used to forecast future impacts was "not intended to represent predictions of what changes to expect in the future."[6] Likewise, far from being "consistently applied," entirely different erosion rates and methodologies were used to calculate the economic and environmental impacts of the project. And "relevant considerations," such as the fact that recent trends on the beach have been the exact opposite of those predicted by the model used in the EIS, have not been taken "into account," but rather ignored entirely. "Deference . . . does not mean dormancy, and the rule of reason does not give agencies license to fulfill their own prophecies, whatever the parochial impulses that drive them." *Citizens Against Burlington v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991).

If the Corps intends to continue to move forward with permitting this project, it cannot stand on the illegal, arbitrary, and capricious analysis performed by CPE. Rather, the Corps must prepare a Supplemental EIS in which it independently verifies CPE's analysis, and then

[6] FEIS at 23.

conduct additional analysis to fully, accurately, and consistently analyze a reasonable range of alternatives and their environmental impacts.

II. The FEIS failed to thoroughly, accurately, and transparently analyze a reasonable range of alternatives.

Central to the NEPA process is the analysis and disclosure of reasonable alternatives. After identifying the underlying purpose and need for their intended project, agencies must "[r]igorously explore and objectively evaluate all reasonable alternatives" that could achieve that underlying purpose. 40 C.F.R. § 1502.14(a). An "informed and meaningful consideration of alternatives - including the no action alternative - is an integral part of the statutory scheme." *Friends of Southeast's Future v. Morrison*, 153 F.3d 1059, 1065 (9th Cir. 1998). The agency must "[d]evote substantial treatment to each alternative considered in detail, including the proposed action, so that reviewers may evaluate their comparative merits." 40 C.F.R. § 1502.14(b). Only those alternatives that are deemed to be unreasonable can be eliminated from study. *Id.* § 1502.14(a). Detailing all feasible solutions forces the agency to consider the environmental impacts of a proposed project and to evaluate those against the effects of alternatives. *Piedmont Heights Civic Club Inc. v. Moreland*, 637 F.2d 430, 436 (5th Cir. 1981).

Just like the DEIS, the FEIS fails to conduct the objective analysis of alternatives NEPA requires. Different and conflicting methodologies continue to be used to assess the environmental and economic impacts of the project. The analyses remain rooted in arbitrary assumptions, admittedly erroneous methodologies, and incomplete information. The flimsy responses to our earlier comments contained in Appendix G do little—if anything—to rectify the fundamental violations of NEPA.

A. The FEIS fails to analyze the environmental impacts of different alternatives.

1. The Delft3D model cannot be used to compare alternatives.

As we noted at length in our comments on the DEIS, the Delft3D model used to analyze the environmental impacts of some project alternatives has significant limitations and is unsuitable for use in the NEPA process. The FEIS concedes many of the inadequacies of the model identified in our previous comments, including the fact that it cannot predict the direction of sand transport or past erosion rates accurately,[7] much less provide any indication of future erosion rates or shoreline change.[8] Indeed, the Corps acknowledges that "the Delft3D model is not intended or [sic] is claimed to be a predictor of the future."[9] Given this definitive statement about the model's utter lack of utility, it is stunning that the Corps continues to rely on it for the entire analysis of environmental impacts. While agencies have some discretion to select tools for their analysis, an agency's use of a model is arbitrary "if the model bears no rational relationship

[7] *See, e.g.*, FEIS, Appendix G at 20, response to comment 177. "Granted the model indicated changes at anyone [sic] particular station did not agree with observed changes but, taken as a whole, the trends on both sides of the inlet obtained from Model Run 43A were judged to be sufficient to allow relative comparisons between the model results for each alternative."

[8] *See generally* discussion in FEIS Appendix C; Appendix G at 19-26, response to comments 173-225.

[9] FEIS, Appendix G at 20, response to comment 174.

to the reality it purports to represent." *American Iron & Steel Inst. v. EPA*, 115 F.3d 979, 1005 (D.C. Cir. 1997).

"Accurate scientific analysis . . . [is] essential to implementing NEPA." 40 C.F.R. § 1500.1(b). Agencies have a duty to "insure the professional integrity, including scientific integrity, of the discussions and analyses in environmental impact statements." *Id*. § 1502.24. The Corps' continued reliance on a model it acknowledges to be wholly inaccurate fails to "satisfy the requirements of NEPA," and the FEIS "cannot provide the basis for an informed evaluation or a reasoned decision." *Sierra Club v. U.S. Army Corps of Eng'rs*, 701 F.2d 1011, 1030 (2d Cir. 1983).

The FEIS attempts to explain away the fact that this key model does not work by noting that while the model results did not agree with observed changes, those realities do not matter because the sole purpose of Delft3D is to predict "relative" changes between various alternatives.[10] The FEIS does not explain why it is appropriate to use the model in this way. No reasoning is given as to why, if the model does come anywhere close to accurately predicting the future, it nonetheless can be trusted to accurately model proportional differences between future outcomes for different alternatives. Rather, the FEIS simply states that "an assumption was made, based on engineering judgment, that corresponding changes in the 'real world' would be proportionally the same as indicated by the model."[11]

The FEIS fails to back up this fundamental and counterintuitive assumption with any explanation as to why it is nonetheless reasonable. When an agency's analysis relies on a key assumption such as this one, it is required to explain the assumption so that the public may fully scrutinize the analysis and its roots. *See Sierra Club v. Costle*, 657 F.2d 298, 334 (D.C. Cir. 1981) ("the safety valves in the use of such sophisticated methodology are the requirement of public exposure of the assumptions and data incorporated into the analysis and the acceptance and consideration of public comment"); *Kennecott Corp. v. EPA*, 684 F.2d 1007, 1019 (D.C. Cir. 1982) (noting that because the "reasonableness and accuracy of the forecast data is critical," an agency is required to provide access in a manner that allows interested persons to exercise their right "to make their views known and influence the rulemaking process in a meaningful way").

Rather than explain why the assumption about proportionality is legitimate and allow such scrutiny, the only citation given in support of the validity of this assumption is to a "personal communication" from Beck, T., the Chief of Coastal Engineering at the Corps, in 2014.[12] No transcript or copy of this "personal communication" is included in the FEIS, yet it is cited for the fundamental proposition that the model—that all admit cannot predict future changes, and which has failed even to replicate past changes when all relevant factors were known—is nonetheless "valid for qualitative comparisons."[13] The reasoning behind such a fundamental assumption of the EIS demands more explanation.

[10] FEIS, Appendix C at 60; Appendix G at 20, response to comment 178.
[11] FEIS, Appendix G at 22, response to comment 184.
[12] FEIS at 23.
[13] *Id.*

Without more, the public, state, and federal resource agencies and other decisionmakers cannot know if the assumption is, in fact, reasonable. In the list of "Literature Cited," the communication with Beck is noted to concern "the predictability of future changes using coastal modeling."[14] But the broader subject of whether coastal models are predictable or not is quite a separate inquiry. Without more information, it is impossible to tell whether Beck addressed the more pertinent issue as to whether models, and specifically the Delft3D model, can reasonably be used to "pro-rate" the impacts of different project alternatives.[15]

The Fourth Circuit has made clear that "[w]hen relevant information 'is not available during the [impact statement] process and is not available to the public for comment[,] . . . the [impact statement] process cannot serve its larger informational role, and the public is deprived of [its] opportunity to play a role in the decision-making process." *N.C. Wildlife Fed'n v. N. C. Dep't of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012) (quoting *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1085 (9th Cir. 2011) and *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). Here, the public has been deprived of any explanation as to why the Delft3D model, despite its failure to accurately document and predict shoreline changes in the real world, is nonetheless a reasonable tool to use to compare the impacts of different shoreline management solutions.

That information is particularly crucial here, where the assumption is contradicted by the same agency (the Corps) evaluating a similar project (Figure Eight Island) based on use of the same model (Delft3D) by the same firm (CPE). In the Figure Eight Island DEIS and SEIS, neither CPE nor the Corps engaged in any "scaling" of past erosion rates based on the Delft3D results. CPE and the Corps simply adopted the results of the Delft3D modeling.[16] The reason is manifest—the model gave CPE and the Corps high enough erosion rates to support an argument for a terminal groin. Here, the Delft3D model, as described in our DEIS comments, predicts erosion rates that are more than compensated for with minimal beach nourishment, failing to meet CPE's goal of justifying a terminal groin. That reason cannot justify the cryptic reliance on unjustified assumptions regarding the use of the Delft3D model to manufacture excessive erosion rates.

As a related matter, in our previous comments we highlighted the assertion in the DEIS that the Delft3D model has "inherent accuracy" and asked that the error rate be included in the FEIS. In response to our comments the FEIS notes that "modeled elevation changes have an accuracy of (plus or minus) 0.2 feet—noting that for a 10 acre area the volume changes would have an accuracy of plus or minus 3,226 cubic yards."[17] This "explanation" is entirely useless. Rather than present the error rate for an arbitrary 10 acres, the FEIS should have explained how accurate the model was for the area under study. Moreover, the FEIS fails to explain what this "inherent accuracy" means for a model which has been shown to be inherently inaccurate.

[14] FEIS at 224.
[15] FEIS at Appendix G at 20, response to comment 183.
[16] *See, e.g.*, Figure Eight Island Inlet and Shoreline Management Project SEIS at 224-225 (July 9, 2015); Figure Eight Island Inlet and Shoreline Management Project DEIS at 47-49 (May 23, 2012).
[17] *Id.*

B. The economic analysis of alternatives is based on separate, conflicting, but equally arbitrary methodologies.

For no legitimate reason, the FEIS continues to use an entirely separate process to assess the supposed economic impact of different project alternatives. This analysis continues to contain the significant flaws we outlined in our previous comments.

1. The FEIS cherry-picks an arbitrary baseline sample to calculate future movement of the scarp line.

The economic analysis in the FEIS continues to center on the assumption that under Alternatives 1 or 2, erosion will take place at a consistently high rate modeled on the level witnessed between 1999 and 2010.[18] As a primary matter, this assumption is contradicted by the results of the Delft3D published elsewhere in the FEIS—further undercutting the public information process the NEPA process is intended to serve. Moreover, the use of that specific period as the rate at which erosion could be expected to "uniformly continue" for the next 30 years is entirely arbitrary. In response to our initial comments, the FEIS states that the use of this specific ten year period is appropriate to determine future erosion rates because it includes "recent man-induced changes that would have an impact on movement." This is not a rational explanation.

First, the "man-induced changes" listed took place from between 2001 and 2010. The period used does not match this time frame —it begins in 1999. No explanation is given as to why it was appropriate to include data from 1999 but not available data from 1998 or 1997. The period between 1997 and 2010 includes the "man-induced changes" just as completely as the ten year period between 1999 and 2010,[19] but has the added benefit of also including an example of the natural accretion that occurs at the inlet. The arbitrary decision to exclude this relevant information when projecting future erosion violates NEPA.

Moreover, the decision to place high importance on "man-induced changes" but to then ignore the equally important accretion that occurred between 1997 and 1999 requires explanation. But the FEIS includes no rationale as to why the "man-induced changes" should form part of the baseline whereas other indications of the natural cycle of erosion and accretion should not. Without directly stating as much, the FEIS appears to be asserting that natural accretion would no longer happen with "man-induced" changes in place. No explanation is given to support this assumption, however. Nor could one be offered. The addition of factors such as nourishment and the installation of sandbags into the baseline condition would not lead to automatically less accretion in the future. Moreover, the entire purpose of the EIS is to determine how additional "man-induced changes" may alter the erosion rate. The background "natural" condition before any "man-induced changes" should therefore be factored into the analysis.

[18] FEIS, Appendix B at 27.

[19] While Appendix B and the response to comments continue to suggest that the period between 1999 and 2010 was used to calculate the future movement of the scarp line, page 120 of the FEIS suggests that the period used was from 1997 to 2010. These different accounts further frustrate NEPA's purpose in informing the public.

The FEIS disregards entirely our reminder about the natural changes at Rich Inlet that have not only eliminated erosion at Figure Eight Island, but have resulted in substantial accretion of the northern end of the island in just a few years.[20] To shrug off such relevant information about erosion rates at similarly-situated inlets with the mere phrase "noted" violates NEPA's requirement to take a "hard look" and to consider and respond to public comments. *Suffolk Cty. v. Sec'y of Interior*, 562 F.2d 1368, 1383 (2d Cir. 1977) ("Where evidence presented to the preparing agency is ignored or otherwise inadequately dealt with, serious questions may arise about the adequacy of the authors' efforts to compile a complete statement"); 40 C.F.R. § 1503.4(a) (requiring agencies to consider and respond to public comments on environmental impact statements).

Without more explanation, it appears that the Corps is cherry-picking LiDAR data that will support a quickly eroding coastline and disregarding data that demonstrates accretion as part of its bid to justify the terminal groin. This use of data to justify a predetermined outcome is exactly what NEPA prohibits. 40 C.F.R. § 1502.1, 1502.2(g).

The Fourth Circuit has made clear that "[w]ithout [accurate baseline] data, an agency cannot carefully consider information about significant environmental impacts" and therefore the analysis will "result[] in an arbitrary and capricious decision." *N.C. Wildlife Fed'n* 677 F.3d at 603 (quoting *N. Plains Res. Council, Inc.* 668 F.3d at 1085). It is fundamental that baseline data for the analysis of environmental impacts represent reality. *See Friends of Back Bay v. U.S. Army Corps of Eng's*, 681 F.3d 581, 588 (4th Cir. 2012) ("A material misapprehension of the baseline conditions existing in advance of an agency action can lay the groundwork for an arbitrary and capricious decision"). Without an accurate assessment of baseline conditions, "the [impact statement] process cannot serve its larger informational role, and the public is deprived of [its] opportunity to play a role in the decision-making process." *N.C. Wildlife Fed'n*, 677 F.3d at 603 (quoting *N. Plains Res. Council*, 668 F.3d at 1085). Assuming erroneously high erosion rates based on the arbitrary, cherry-picked high erosion sample violates NEPA.

2. The FEIS arbitrarily overstates the costs of non-groin alternatives.

The DEIS used the overstated linear retreat of the scarp line to assert that 45 houses and 238 parcels would be lost over the next 30 years. We, along with several state and federal agencies, questioned this number and the FEIS was revised to state that 155 parcels would be lost.[21] Curiously, despite the removal of 83 parcels from the analysis the overall costs associated with the loss of these properties only diminished by $30,000.[22] Moreover, it remains unclear how the Corps is calculating this 155 parcel figure. A review of Figure 3.1 appears to show a much smaller number of parcels under threat.[23] The 155 parcels are not clearly described either in the text or in any figure in the FEIS, thus the public is left without any ability to determine where or what the parcels are and whether they are truly under threat in the next 30 years.

[20] FEIS, Appendix G.
[21] *Id.*
[22] *Compare* DEIS at 27 ($21.39 million for the loss of approximately 238 parcels), *with* FEIS at 28 ($21.36 million for the loss of 155 parcels).
[23] FEIS, Figure 3.1 at 27.

Over the past 15 years just six houses have been lost to erosion in the project study area.[24] For the FEIS to make the leap to conclude that erosion in the next 30 years will result in losses that are orders of magnitude greater than what has been seen to date requires significantly more support than is presented. It is essential that this information be made clear to the public and decisionmakers. The 155-parcel figure forms the basis for much of the economic analysis in the FEIS, and the justification for constructing the 750 foot groin. For example, the FEIS concludes that under Alternatives 1 and 2 the loss of all 155 parcels is expected to amount to $21.36 million.[25]

Moreover, the FEIS continues to improperly consider costs beyond those that flow to the Town of Ocean Isle Beach. As we have noted, the Town does not own the properties at issue; its only loss is future profit from tax revenue which would be a significantly lower cost.[26] In response, comments in the FEIS state that the economic analysis "was not presented as a cost to the Town of Ocean Isle Beach per se, rather, the analysis presented the potential future loses as an overall economic impact . . . ."[27] This analysis apparently disregards NEPA's requirement that alternatives be evaluated with reference to the stated purpose and need. *See City of Carmel-By-The-Sea v. U.S. Dep't of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Nat. Res. Def. Council, Inc. v. Callaway*, 524 F.2d 79, 93 (2d Cir. 1975). The FEIS clearly states that the purpose and need for this project includes the aim "to maintain the Town's tax base by providing long-term protection of property and infrastructure . . ."[28] The FEIS does not state that the purpose is to look generally at "overall economic impact." Not only would such a purpose be impermissibly broad, but it would require the consideration of a much expanded analysis.[29]

Likewise, the stated purpose and need of the project is not to reduce federal costs, yet the federal cost share remains factored into the economic analysis in the EIS. In response, comments in the FEIS state that the federal cost share was included to take account of the fact that it would be less under other alternatives.[30] In other words, it appears the federal share is being included to justify construction of the project. But again, reducing the federal cost share is not a stated aim of the project, and if it were, many other options might need to be considered. When the federal cost share is removed from consideration and the Town's cost share alone is compared for the various alternatives, there is very little difference between each one.[31]

Similarly, the FEIS continues to err by assessing the value of lost property and infrastructure at the "replacement cost."[32] With regard to individual properties, the FEIS itself makes clear why this is not an appropriate assessment. The document notes that when homes

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[24] FEIS at 27.
[25] *Id.*at 28.
[26] *See* Andrew S. Coburn, "A Fiscal Analysis of Shifting Inlets and Terminal Groins in North Carolina" at 8, http://www.wcu.edu/WebFiles/PDFs/TG_White_paper.pdf (calculating tax revenue of properties within 30-year risk area identified by Coastal Resources Commission) (attached to DEIS comments as Ex. 6).
[27] FEIS, Appendix G at 26, response to comment 225.
[28] *Id.*at 16.
[29] Economic & Planning Systems, Inc., Economic Analysis in the Context of 404(b) 1 Alternatives Analysis at 14-15 (Sept. 1999).
[30] FEIS, Appendix G at 28, response to comment 239.
[31] FEIS at 44.
[32] FEIS at 27.

become threatened it is individual property owners, *not the Town of Ocean Isle Beach*, who decide whether they will abandon it or move a different location.[33] In other words, in the event that properties are lost, the loss is *not* the Town's. The only loss to the Town is the potential minimal loss in tax revenue as noted above. Similarly, the FEIS inappropriately includes the full replacement costs of infrastructure such as roads to submerged houses. These roads would not be replaced, thus the Town would incur only the cost of removing them—not the greater additional replacement cost. Replacement costs for infrastructure that will not be replaced should not be factored into the financial analysis.

As a final matter, in calculating annual losses from the various alternatives, the EIS employs a discount rate of 4.125%. It is unclear from where this discount rate originates. There is nothing in the FEIS to support its use. The federal Office of Management and Budget currently recommends the use of a discount rate of 1.5%.[34] The FEIS should explain why it is departing so dramatically from this discount rate.

Even with these errors, the analysis in the FEIS makes clear that all alternatives are "practicable." No statement is given to suggest that any one alternative could not be pursued for financial reasons, and no other barriers are noted. When determining whether an alternative is "practicable" the Corps must consider the cost to the applicant. Guidelines for Specification of Disposal Sites for Dredged or Fill Material, 45 Fed. Reg. 85336, 85343 (Dec. 24, 1980); *see Sylvester v. U.S. Army Corps of Engineers*, 882 F.2d 407, 409 (9th Cir. 1989). As explained above, even when the inflated cost estimates for non-groin alternatives are included, the cost to the applicant—the Town of Ocean Isle—is essentially the same under each alternative.[35]

The Corps may not consider other general factors such as which alternative poses the overall lowest financial cost to society—as they apparently attempt to do here. The Corps' guidance makes clear that the inquiry surrounding its duty to select the least environmentally damaging practicable alternative ("LEDPA") is "not whether an alternative 'more fully or better addresses' management plans, goals, desire, political wishes" or other "non project purpose aspects."[36] Rather, the Corps has to consider alternatives based on the purpose and need and determine which are practicable. If all are practicable, only the alternative with the least aquatic resource impacts may be selected, even if an alternative had greater economic or social benefits.[37] Here, where all alternatives are practicable, the analysis must turn to which is the "least environmentally damaging."

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[33] FEIS at 27.

[34] *See* OFFICE OF MGMT. & BUDGET, CIRCULAR NO. A-94, Appendix C (2015), *available at* https://www.whitehouse.gov/omb/circulars_a094/a94_appx-c.

[35] FEIS at 44.

[36] Chandler Peter, *Alternatives Analysis: Satisfying NEPA, Public Interest Review & 404b1,* U.S. ARMY CORPS OF ENGINEERS at slide 11 (July 24, 2014), *available at* http://www.swf.usace.army.mil/Portals/47/docs/regulatory/Hot%20Topics/2014%20Jul%20Alternatives.pdf.http://www.swf.usace.army.mil/Portals/47/docs/regulatory/Hot%20Topics/2014%20Jul%20Alternatives.pdf.

[37] *Id.*

III. The FEIS's analysis of natural resources does not remedy the DEIS's failures.

In addition to our concern about the environmental models and economic assumptions used in the DEIS, we also objected to the DEIS's treatment of natural resources in the proposed project and alternatives considered. This analysis is essential to the evaluation of the alternatives under the CWA 404(b)(1) guidelines, which require not just informed analysis, as NEPA requires, but also the *selection* of the LEDPA. Notably, practicable is defined by regulation to mean "available and capable of being done after taking into consideration cost, existing technology, and logistics." 40 C.F.R. § 230.3(q). Once this threshold has been met—which, as noted above, has been for all of the alternatives considered—the analysis must switch to which is the least environmentally damaging. This is an environmental consideration, rendering irrelevant the FEIS's consideration of cost among the various alternatives.

A. The FEIS fails to properly evaluate direct, indirect, and cumulative impacts.

Direct effects are those "which are caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). Indirect effects are those that "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable." 40 C.F.R. § 1508.8(b). Because the purpose of this project is to modify natural sand transport processes, the analysis of indirect effects is a crucial part of the DEIS. The importance of the indirect effects analysis is heightened for the terminal groin alternatives because they would permanently disrupt natural inlet dynamics.

In the DEIS, "[i]ndirect impacts were determined by the changes to the shoreline at *Year 1 Post-construction* as interpreted from the Delft3D modeling results."[38] Two aspects of this analysis are critical. First, the impacts are based solely on the shoreline predicted by the Delft3D model as discussed above. Second, the analysis was limited to three and five years post construction.[39] While this is a very marginal improvement over the single year of modeling indicated in the DEIS, it remains entirely inadequate. The supposed economic benefit of the project is presented over a 30-year time period and the indirect effects on a variety of natural resources will continue well beyond that time.

Finally, the FEIS's cumulative impacts analysis fails to meet basic requirements. A "[c]umulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions." 40 C.F.R. § 1508.7. As discussed in more detail below, the proposed project threatens to degrade habitat for birds, turtles, and fish that use inlets like Shallotte Inlet for key portions of their life cycles. There are a limited number of inlets in North Carolina and several are intensively managed,[40] hardened,[41] or have proposed terminal groin projects.[42] The Corps is a

[38] DEIS at 113.
[39] FEIS at Appendix G at 24, response to comment 203.
[40] Oregon Inlet, Beaufort Inlet, Mason Inlet, Rich Inlet, Shallotte Inlet, and New River inlet, among others, are managed through dredging.
[41] Oregon Inlet, Beaufort Inlet, Masonboro Inlet, and Bald Head Island each have some type of hardened structure.

permitting agency for each of these inlet management projects. Yet the FEIS provides no analysis of the cumulative impact of these numerous projects on species that depend on functioning inlet systems. That failure violates NEPA. *See Nat'l Audubon Soc'y*, 422 F.3d at 187 ("The hallmarks of a 'hard look' are thorough investigation into environmental impacts and forthright acknowledgment of potential environmental harms"). The wildlife that depend on the dynamic processes at Shallotte Inlet cannot simply go somewhere else—the Corps is evaluating projects to destroy those processes at the "somewhere else" as well. Yet the FEIS fails to conduct a meaningful analysis of that cumulative impact.

B. The FEIS does not provide information required to satisfy the 404(b)(1) guidelines.

Since, as noted above, all alternatives are "practicable," the inquiry under the 404(b)(1) guidelines shifts to the selection of the alternative with the least environmental damage. In order to make this decision, the EIS must "consider[] the alternatives in sufficient detail to respond to the requirements of these Guidelines" discussed below and it is "necessary to supplement these NEPA documents with this additional information." 40 C.F.R. § 230.10(4). For the reasons described above, the analysis of environmental impacts based on a terminal-groin-oriented analysis does not provide the objective evaluation necessary to complete that analysis.

The alternatives fall into two categories. The first includes the non-structural alternatives, whose environmental impacts—dredging, smothering benthic organisms, altered beach profile, etc. vary by degree. The second category includes the terminal groin alternatives, whose unique environmental impacts—hardening of the shoreline, loss of overwash areas, etc.—are permanent. We noted in our previous comments that Alternative 4 appears to be the LEDPA and the only alternative that can be permitted.

In its application of the 404(b)(1) Guidelines, the Corps must evaluate "the nature and degree of effect that the proposed discharge will have, individually and cumulatively, on the characteristics at the proposed disposal sites." 40 C.F.R. § 230.11(a). That effect is measured by how the project will change the "physical, chemical, and biological characteristics of the substrate" and affect "bottom-dwelling organisms at the site by smothering immobile forms or forcing mobile forms to migrate." 40 C.F.R. § 230.20(b).

The analysis of these factors reveals a clear divide. The non-structural alternatives will have varying degrees of impact on infaunal communities in both the dredged areas and the nourished areas. Because it would require decreasing dredging and nourishment, Alternative 4 would have the least impact on substrate and benthic organisms. Unlike any of the non-structural alternatives, however, the terminal groin alternatives will permanently alter the characteristics of the inlet. The intertidal areas lost in the area that would be impacted by the terminal groin will not redevelop, eliminating the possibility that the benthic organisms buried or displaced could repopulate the area. The terminal groin alternatives will fundamentally change the nature of the eastern end of the island, eliminating overwash areas and permanently altering

[42] The Wilmington District's web page lists terminal groin projects proposed for Holden Beach and Figure Eight Island in addition to Ocean Isle Beach and Bald Head Island.

substrate and eliminating habit for benthic organisms. Alternatives 5a, 5b, and 5c are the most environmentally damaging alternatives when evaluated under the factors in 40 C.F.R. § 230.20.

The Corps must also evaluate "the nature and degree of effect that the proposed discharge will have individually and cumulatively on water, current patterns, circulation including downstream flows, and normal water fluctuation." 40 C.F.R. § 230.11(b). These effects are measured by the "adverse changes" that occur in "[l]ocation, structure, and dynamics of aquatic communities; shoreline and substrate erosion and deposition rates; [and] the deposition of suspended particulates." 40 C.F.R. § 230.23(b).

As with impacts to substrate, Alternative 4 clearly has the least environmental impact on the aquatic communities and deposition of suspended particles. It would less adversely affect aquatic communities and would continue to allow deposition of suspended particles on the overwash areas at the eastern end of the island (as would the other non-structural alternatives). By comparison, the terminal groin alternatives would permanently displace aquatic communities at the eastern end of the island and eliminate overwash, cementing the accompanying adverse environmental impacts.

The Corps' consideration of the fluctuation of normal water level must include consideration of "modifications [that] can alter or destroy communities and populations of aquatic animals and vegetation, . . . modify habitat, reduce food supply, restrict movement of aquatic fauna, destroy spawning areas, and change adjacent, upstream, and downstream areas." 40 C.F.R. § 230.24.

For the reasons described above and the impacts on the benthic communities, Alternative 4 appears to have the least environmental impact. Alternative 4 would also appear to have the least adverse environmental effect on wet beach habitat, adjacent dry beach habitat, and back beach habitat. Other non-structural alternatives would similarly have temporally limited environmental impacts to these habitats. Alternatives 5a, 5b, and 5c would have significant, permanent impacts to these areas. They would eliminate wet beach habitats and the associated benthic organisms, significantly modify dry beach habitats, and result in dense vegetation of what are now sparsely vegetated back beach habitats. They would therefore have the greatest adverse impacts of any of the alternatives.

C. The Project will have unacceptable impacts on threatened and endangered species and their habitat.

We discussed extensively in our previous comments the reasonably foreseeable impacts of terminal groin construction on threatened and endangered species and their critical habitat. In those comments, we noted that consultation must be undertaken pursuant to the ESA to "insure that any action authorized, funded or carried out by such agency is not likely to . . . result in the destruction or adverse modification of [critical] habitat." 16 U.S.C. § 1536(a)(2). While the U.S. Fish and Wildlife Service ("FWS" or "Service") has undertaken this analysis in its August 6, 2015 Biological Opinion ("Biological Opinion") for the project, the inquiry cannot stop there.

First, we are concerned that the FWS's Biological Opinion does not satisfy the Corps' independent duty to insure its actions will not cause jeopardy to the species or adverse modification to critical habitat. "The ultimate burden remains on the acting agency to insure any action it pursues is not likely to jeopardize protected species" or adversely modify or destroy critical habitat. *See Defenders of Wildlife v. Envtl. Prot. Agency*, 882 F.2d 1294, 1300 (8th Cir. 1989) (internal quotation marks omitted). Likewise, an agency is not insulated from this responsibility merely by relying on a biological opinion; rather, "its decision to rely on [that] biological opinion must not have been arbitrary or capricious." *Fla. Key Deer v. Paulison*, 522 F.3d 1133, 1144 (11th Cir. 2008) (quoting *Pyramid Lake Paiute Tribe of Indians v. U.S. Dep't of the Navy*, 898 F.2d 1410, 1415 (9th Cir. 1990)). There are numerous flaws in the August 6, 2015 Biological Opinion which render the Corps' reliance on it fundamentally flawed.

Second, and critical in this case, the Corps' legal duty goes beyond the no jeopardy mandate of the ESA to include the LEDPA mandate under CWA Section 404(b)(1). *See generally GYC v. Flowers*, 359 F.3d 1257 (10th Cir. 2004) (discussing separate duties under ESA and CWA). While the ESA no jeopardy standard looks at the species as a whole, the 404(b)(1) guidelines focuses on the impacts to the immediate project area. Under the CWA, the Corps must compare alternatives based on their potential impact on "nesting areas, protective cover, adequate and reliable food supply and resting areas for migratory species." 40 C.F.R. § 230.30(b)(2). The Corps must also consider "the loss or change of breeding and nesting areas, escape cover, travel corridors, and preferred food sources for resident and transient wildlife species associated with the aquatic system." 40 C.F.R. § 230.32(b).

Here, the FWS has repeatedly objected that the proposed project "has the potential to adversely affect nesting female sea turtles, nests, and hatchlings on the beach, piping plovers, red knots, and seabeach amaranth within the project area" and recommended that it not be authorized.[43] As early as its 2011 scoping comments on the project, FWS wrote:

> The issues are clear. A project of this nature will destroy the ecological functioning of this inlet and the surrounding areas. The science is unequivocal. I see no unique issues or areas of significant uncertainty. We oppose this project. There is nothing more to discuss.[44]

And in its most recent letter, FWS stated that the agency's "comments and concerns about impacts to our trust resources, downdrift erosion, and the inability to model past three years for a 30-year project were not" adequately addressed.[45] The agency goes on to say that "it is unlikely that the applicant could address these comments adequately without significantly revising the project or changing their preferred alternative, and as far as we can tell, there have not been any significant revisions to the preferred project."[46]

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[43] *See* letter from P. Benjamin, FWS, to T. Crumbley, USCOE (May 20, 2016) (attached to these comments as Attachment 1); letter from P. Benjamin, FWS, to T. Crumbley, USCOE (March 12, 2015) (attached to these comments as Attachment 2).

[44] Email from W. Laney, FWS, to C. Weaver, NCDENR, (Dec. 19, 2011) (attached to these comments as Attachment 3).

[45] *See* May 20, 2016 letter at 5.

[46] *Id.*

These clearly stated concerns and objections raise significant questions about the Corps proceeding with permitting the proposed project. Such questions have not been answered in the FEIS and the Corps appears legally vulnerable under both the ESA and the CWA.

1. The Corps may not rely on the August 6, 2015 Biological Opinion to avoid ESA liability.

At base, neither the 2015 Biological Opinion nor the FEIS into which it is incorporated provide information sufficient to show that the agency has *insured* that its actions are not likely to jeopardize the continued existence of listed species present in the project area or adversely modify or destroy designated critical habitat. Rather, the Biological Opinion and FEIS merely list concerns about negative impacts likely to result from the construction of the terminal groin proposed at Ocean Isle, and then determine without analysis that the project will not cause jeopardy or adverse modification of critical habitat. Importantly the ESA's standards are not just about preventing harm to existing members of the species, but about providing for the *recovery* of the species over time. In *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service*, 378 F.3d 1059, 1070-70 (9th Cir. 2004), the 9th Circuit explained that Congress enacted the ESA "not merely to forestall the extinction of [a] species (i.e., promote a species['] survival), but to allow a species to recover to the point where it may be delisted." *Id.* at 1070.

While we do not detail all of the flaws of the 2015 Biological Opinion here, we note that they are more than sufficient to raise questions about the Corps' ability to meet its legal duties under both the ESA and the CWA. As one glaring example, the Biological Opinion fails to assess the essential legal question of whether the project will impair the ability of sea turtles, piping plovers, red knots, and seabeach amaranth to *recover* to the point where they may be delisted. Instead, it repeatedly insinuates that the number of animals and amount of habitat likely to be affected by the project are modest relative to the population or critical habitat designation as a whole. Such a comparison does not serve to explain the impacts of the project on the species. Courts have repeatedly held that "a mere listing of activities does not constitute an analysis of *the impacts* of these activities." *Defenders of Wildlife v. Babbitt*, 130 F. Supp. 2d 121, 128 n.8 (D.D.C. 2001); *see also Nw. Envtl. Advocates v. U.S. Envtl. Prot. Agency*, 855 F. Supp. 2d 1199, 1222-1223 (D. Or. 2012) (invalidating a biological opinion where the agency "discussed general biological and geographical information for [listed species] but then provided scant analysis of how each proposed criterion would affect [such species]").

Loggerhead Sea Turtles

The Service is clear in its Biological Opinion about the negative impacts of the project to loggerhead sea turtles:

> The Service expects the action will result in direct and indirect, long-term effects to sea turtles, including the Northwest Atlantic DPS of the loggerhead sea turtle. Due to downdrift erosion, there may be loss or degradation of loggerhead terrestrial Critical Habitat Unity LOGG-T-NC-08. The Service expects there may be morphological changes to adjacent nesting habitat. Activities that affect or

> alter the use of optimal habitat or increase disturbance to the species may decrease the survival and recovery potential of the loggerhead and other sea turtles.[47]

These broad statements about likely harm are further supported by specific statements about the impacts to the habitat's primary constituent elements ("PCEs"), the "physical or biological feature[s] essential to the conservation of a species for which its designated or proposed critical habitat is based on."[48] These can include "space for individual and population growth, and for normal behavior; … nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, rearing of offspring; … and habitats that are protected from disturbance or are representative of the species' historic geographic and ecological distribution."[49] Agencies must use the "best scientific data" when conducting and relying on these Biological Opinions in order to evaluate whether proposed actions result in adverse modification of critical habitat. *Conservation Cong. v. United States Forest Serv.*, 2012 U.S. Dist. LEXIS 84943, 36 (D. Cal. 2012).

For loggerhead critical habitat, the Biological Opinion states directly, "**It is important that loggerhead nesting beaches be allowed to respond naturally to coastal dynamic processes of erosion and accretion or mimic these processes**."[50] Indeed, PCEs for the species' critical habitat include "[s]uitable nesting beach habitat that has relatively unimpeded nearshore access from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings," and "[n]atural coastal processes or artificially created or maintained habitat mimicking natural conditions. This includes artificial habitat types that mimic the natural conditions…"[51]

While the Service notes the potential benefits of erosion control measures to ensure the availability of sea turtle nesting beaches, the Biological Opinion is also clear that erosion control measures do not *guarantee* the availability of suitable nesting habitat. Shoreline hardening, as opposed to sand placement activities, increases the risk that nesting habitat will not be available. "The Service determined there is a potential for long-term adverse effects on sea turtles, particularly hatchlings, as a result of the presence of the groin. However, the Service acknowledges the potential benefits of the erosion control structure since it may minimize the effects of erosion on sea turtle nesting habitat and extend the sane placement interval. Nonetheless, an increase in sandy beach may not necessarily equate to an increase in suitable sea turtle habitat."[52]

Piping Plovers

The Biological Opinion is similarly stark about likely impacts to piping plover from projects like the one proposed:

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[47] Biological Opinion at 63.
[48] FWS, Endangered Species Glossary, *available at*: www.fws.gov/nc-es/es/glossary.pdf.
[49] *Id.*
[50] Biological Opinion at 30 (emphasis added).
[51] *Id*. at 30-31.
[52] *Id.* at 72.

> Past and ongoing stabilization projects fundamentally alter the naturally dynamic coastal processes that create and maintain beach strange and bayside habitats, including those habitat components that piping plovers rely upon…. [S]tabilization projects may directly degrade or destroy piping plover roosting and foraging habitat in several ways.[53]

Furthermore,

> Once the island becomes stabilized, vegetation encroaches on the bayside habitat, thereby diminishing and eventually destroying its value to piping plovers… Unstabilized inlets naturally migrate, re-forming important habitat components, whereas jetties often trap sand and cause significant erosion of the downdrift shoreline. These combined actions affect the availability of piping plover habitat.[54]

Nevertheless, the Biological Opinion takes the comparative approach mentioned above, noting that 32.5% of inlets throughout the Southeast and Gulf of Mexico have been hardened, including 12.5% in North Carolina.[55] It also notes that 50% of sites surveyed in the Atlantic and Gulf of Mexico during the 2006 winter International Piping Plover Census had hardened or developed structures adjacent to the shoreline.[56]

This is effectively a listing of activities, rather than assessment of impacts. As with sea turtles above, there is no estimation of the impact of the loss of habitat from this project, the pre-existing ones, or any future ones on piping plover life functions such as feeding and breeding or the additive effect of the proposed project. Nor is there any other discussion of the impact of this project or adjacent projects on the population as a whole. There is, however, this caution, which indicates that the impact to populations that use North Carolina beaches could be disproportionately high:

> North Carolina is the only state where the piping plover's breeding and wintering ranges overlap and the birds are present year-round…. The species requires broad, open, sand flats for feeding, and undisturbed flats with low dunes and sparse dune grasses for nesting. Piping plovers from the federally endangered Great Lakes population overwinter on North Carolina' beaches.[57]

Reconciling these statements with the no jeopardy or adverse modification requires a leap of faith not rationally based in the science cited by the agency. The duty is on the Corps to ensure that its action in relying on the FWS' Biological Opinion is not arbitrary and capricious. This is a challenge when, according to the Biological Opinion,

[53] *Id.* at 98.
[54] Biological Opinion at 99.
[55] *Id.* at 99, table 6.
[56] *Id.* at 107, table 8.
[57] *Id.* at 75.

> Habitat loss and degradation on winter and migration grounds from shoreline and inlet stabilization efforts, both within and outside of designated critical habitat, remain a serious threat to all piping plover populations. Modeling strongly suggests that the population is very sensitive to adult and juvenile survival… On the wintering grounds, the shoreline areas used by wintering piping plovers are being developed, stabilized, or otherwise altered, making it unsuitable.[58]

Red Knot

For the red knot, another shore bird that uses North Carolina beaches for foraging and resting, the expected impacts of the proposed project are expected to be similar. Unfortunately, the Biological Opinion does not include nearly as much detail on this species, presumably because no critical habitat has yet been designated for the species,[59] and no recovery plan has yet been completed.[60] Notably, however, shoreline stabilization like that involved in the proposed project is identified as one of the primary threats to the species.[61]

Seabeach Amaranth

Once again, "construction of beach stabilization structures" is identified as one of the "most serious threats to the continued existence of seabeach amaranth."[62] Although this discussion is less extensive than the others, it also indicates there are likely to be significant impacts to the species.

Overarching Flaws

For all of these species, one of the remaining and highly concerning flaws in the August 2015 Biological Opinion is the Incidental Take Statement ("ITS"). Even when a federal action is not likely to jeopardize a species, a Biological Opinion must still analyze whether a "taking" of listed species may occur. 16 U.S.C. § 1536(b)(4). The definition of "take" includes "to harass, harm… or attempt to engage in any such conduct." *Id.* § 1532(19). Whenever "such take *may* occur," the Biological Opinion must include an ITS. 50 C.F.R. § 402.14(g)(7) (emphasis added). "If the Bi[ological]Op[inion] concludes that the action is not likely to jeopardize the species, but is likely to result in some take, the Service will provide an ITS along with the Bi[ological]Op[inion]." *See Ctr. for Biological Diversity v. Salazar*, 695 F.3d 893, 909 (9th Cir. Alaska 2012*); Or. Natural Res. Council v. Allen*, 476 F.3d 1031, 1036 (9th Cir. 2007) ("The FWS must issue an Incidental Take Statement if the Bi[ological]Op[inion] concludes no jeopardy to listed species or adverse modification of critical habitat will result from the proposed action, but the action is likely to result in incidental takings."); *Strahan v. Roughead*, 2012 U.S. Dist. LEXIS 181824, at *11 (D. Mass. Dec. 26, 2012).

[58] *Id.* at 109.
[59] Biological Opinion at 119.
[60] *Id.* at 124.
[61] *Id.*
[62] *Id.* at 141.

While the FWS included an ITS in its Biological Opinion, it is wholly inadequate to meet its intended purpose. A primary function of any ITS is to identify triggers to reinitiate consultation with FWS to ensure that an action agency can meet its ongoing obligations to ensure against jeopardy and adverse modification of critical habitat over time. Importantly, the action agency "must immediately reinitiate consultation with [the expert agency] if the amount or extent of incidental taking is exceeded." *Or. Natural Res. Council*, 476 F.3d at 1034-35, *citing* 50 C.F.R. §§ 402.14(i)(4), 402.16(a). "This statutory and regulatory language obligates [the agency] to minimize the impact of the proposed action and also acts as a trigger for the reinitiation of formal consultation." *See Pac. Shores Subdivision Cal. Water Dist. v. U.S. Army Corps of Eng'rs*, 538 F. Supp. 2d 242, 258 (D.D.C. 2008). "[T]he permissible level of take [in an ITS] ideally should be expressed as a specific number." *Or. Natural Res. Council*, 476 F.3d at 1037 (*citing Ariz. Cattle Growers' Ass'n v. U.S. Fish & Wildlife, Bureau of Land Mgmt.*, 273 F.3d 1229, 1249 (9th Cir. 2001)); *Miccosukee Tribe of Indians of Fla. v. U.S.*, 566 F.3d 1257, 1274-75 (11th Cir. 2009).

The ITS for each of the affected species and the critical habitat affected by the project limits the effect of the activity to 24,500 lf.[63] Under the terms of the Biological Opinion, any amount of take or habitat disturbance within that area is allowed. Yet pursuant to the ESA's explicit requirements, FWS must have attempted to quantify the take expected to occur as a result of the proposed project, and if specific quantification was impossible, identify a surrogate that would provide a reasonable estimate. *See Miccosukee Tribe of Indians of Fla.*, 566 F.3d at 1275 (rejecting FWS' argument that because a sparrow has "secretive" behavior, "cryptic" color, and "move[s] over expansive and remote areas," a surrogate measure of take was required, and observing that FWS develops annual population data for the species); *Or. Natural Res. Council*, 476 F.3d at 1037-38 (invalidating Biological Opinion that "offers no explanation of why the FWS was unable numerically to quantify the level of take of northern spotted owls. . . . The FWS … never states that it is not possible to update the survey data in order to estimate the number of takings, only that it has not actually done the surveys. This does not establish the numerical measure's impracticality."); *Ariz. Cattle Growers' Ass'n*, 273 F.3d at 1249-51 (invalidating Biological Opinion where agency "fail[ed] to properly specify the amount of anticipated take in the [ITS] for the Cow Flat Allotment" and failed "to provide a clear standard for determining when the authorized level of take has been exceeded" and noting that "[i]deally, this 'trigger' should be a specific number"); *Ctr. for Biological Diversity v. Bureau of Land Mgmt.*, 422 F. Supp. 2d 1115, 1138 (N.D. Cal. 2006) ("[D]efendants have not pointed to any evidence in the record that it was impractical to estimate desert tortoise take. Indeed, the Service has estimated the numbers of desert tortoise in other areas of the Dunes . . . .").

"The terms of an [ITS] do not operate in a vacuum. To the contrary, they are integral parts of the statutory scheme, determining, among other things, when consultation must be reinitiated." *Ariz. Cattle Growers*, 273 F.3d at 1251; 50 C.F.R. § 402.16(b) ("Reinitiation of formal consultation is required . . . [i]f new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered").

Finally, we note in closing that the Timeline contained in the Biological Opinion at page 9 reflects the Corps' review and revisions to the Reasonable and Prudent Measures and Terms

[63] *See* Biological Opinion at 149-151.

and Conditions imposed in the Biological Opinion. These revisions should be disclosed to the public as part of the NEPA process and the public's review of whether the Corps' permitting of the proposed project meets applicable conservation requirements under the ESA and CWA.

2. Impacts to listed species under Section 404(b)(1)(a).

As detailed above, the Biological Opinion for the project details numerous direct and indirect effects to sea turtles, piping plover, red knots, and seabeach amaranth. While we disagree with the Biological Opinion's no jeopardy and adverse modification findings and object to its legally and biologically inadequate ITS, our concerns do not end there. For all of the harms to listed species discussed above, the proposed project cannot represent the least environmentally damaging practicable alternative required by Section 404(b)(1)(a).

Both the Biological Opinion and the FEIS are clear that hardened structures that permanently stabilize and alter natural coastal dynamics are most harmful for each of these species and their habitats, including federally designated critical habitat. While there may be some benefits to addressing erosion on the affected beaches, the overall concern is that beach hardening, such as with the construction of the proposed terminal groin, will so harm coastal dynamics necessary for habitat maintenance that there will be long term impacts to each of these listed species.

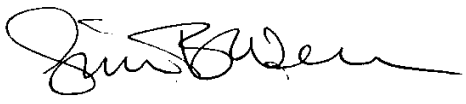
Conclusion

For the reasons described above, the FEIS fails to meet the minimum requirements of NEPA and fails to provide the analysis of shoreline changes and environmental and natural resources impacts necessary to meet the Corps' obligations under the CWA or ESA. Before the Corps can legally move forward with this project it must issue a Supplemental EIS addressing the issues raised in these comments.

Thank you for considering these comments. Please contact me at (919) 967-1450 or ggisler@selcnc.org if you have any questions regarding their content.

Sincerely,

Geoffrey R. Gisler
Senior Attorney



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