

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF NORTH CAROLINA  
SOUTHERN DIVISION

NO. 7:17-CV-162-FL

NATIONAL AUDUBON SOCIETY, )  
)  
Plaintiff, )  
)  
v. )  
)  
UNITED STATES ARMY CORPS OF )  
ENGINEERS, COLONEL ROBERT J. )  
CLARK in his official capacity as District )  
Commander of the Wilmington District, )  
and THE TOWN OF OCEAN ISLE )  
BEACH, )  
)  
Defendants. )

ORDER

This matter is before the court on the parties' cross-motions for summary judgment. (DE 47, 55, 57). The issues raised have been fully briefed, and in this posture are ripe for decision. For reasons that follow, summary judgment is granted in favor of defendants.

**STATEMENT OF THE CASE**

Plaintiff is a membership organization that works to conserve and restore habitat for wildlife, with a particular focus on birds and bird habitat. Plaintiff initiated this action August 14, 2017, seeking review of final agency action by defendant United States Army Corps of Engineers ("USACE") allowing defendant The Town of Ocean Isle Beach ("Ocean Isle") to construct a type of rock wall known as a "terminal groin" and a beach fillet in that part of Ocean Isle Beach immediately southwest of Shallotte Inlet ("Project").<sup>1</sup> Particularly, plaintiff seeks judicial review

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<sup>1</sup> Due to the large number of acronyms and abbreviations in this case, a glossary of terms is attached.

of the record of decision (“ROD”) issued by USACE, granting Ocean Isle a permit allowing discharge of dredged or fill material into navigable waters, pursuant to section 404 of the Clean Water Act, 33 U.S.C. § 1344, et seq. (“CWA”). Plaintiff also challenges the adequacy of an environmental impact statement (“EIS”) prepared by defendant USACE in support of the ROD and permit, pursuant to the National Environmental Policy Act, 42 U.S.C. § 4331, et seq. (“NEPA”). Plaintiff amended its complaint as of right August 28, 2017, joining Ocean Isle as a defendant.

Defendant USACE is an agency within the United States Department of Defense charged with regulating construction in the waters of the United States, pursuant to the CWA, and defendant Colonel Robert J. Clark (“Clark”) is district commander at defendant USACE’s Wilmington district office (collectively “federal defendants”). Defendant Ocean Isle is an incorporated town located in Brunswick County, North Carolina.

Plaintiff alleges that the federal defendants approved the Project without proper consideration of environmental consequences. In the first claim for relief, plaintiff alleges that USACE violated NEPA where it failed to evaluate fairly the comparative merits of studied alternatives. In the second claim for relief, plaintiff alleges USACE failed to include certain information in NEPA documents essential to a reasoned choice among alternatives, in violation of regulations promulgated by the Council on Environmental Quality (“CEQ regulations”). In its third claim for relief, plaintiff alleges that USACE failed to evaluate “secondary effects” of the studied alternatives, in violation of the CWA and CEQ regulations. In the fourth claim for relief, plaintiff alleges that USACE selected an alternative other than the Least Environmentally Damaging Practicable Alternative (“LEDPA”), in violation of the CWA. Finally, in the fifth claim for relief, plaintiff alleges USACE failed to “independently evaluate” environmental information submitted

by Coastal Planning and Engineering of North Carolina, Inc. (“CPE”), in violation CEQ regulations. In each claim for relief, plaintiff proceeds under the judicial review provisions of the Administrative Procedure Act (“APA”), 5 U.S.C. § 701, et seq.

Plaintiff moved to complete and supplement the administrative record on February 16, 2018. The court allowed as extra-record evidence certain emails purporting to show a conflict of interest and the lack of independent review by defendant USACE, and denied the motion in remaining part. Nat’l Audubon Soc’y v. United States Army Corps of Engineers, No. 7:17-CV-162-FL, 2018 WL 4760124 (E.D.N.C. Sept. 30, 2018). Thereafter, federal defendants submitted the administrative record to the court. See Nat’l Audubon Soc’y v. United States Army Corps of Engineers, No. 7:18-MC-00010-FL (E.D.N.C. Oct. 16, 2018).<sup>2</sup> The administrative record contains voluminous documents involving the permitting process for the Project, broadly including but not limited to defendant Ocean Isle’s processing agreement with defendant USACE; CPE’s disclosure statement; miscellaneous communications; records from the scoping process; defendant Ocean Isle’s permit application; internal drafts, comments, revisions, and draft EIS (“DEIS”); public notice and comment on DEIS; various agency consultations; internal drafts, comments, revisions, and final EIS (“FEIS”); public notice and comment on FEIS; ROD; and the permit.

Plaintiff moved for summary judgment on November 21, 2018, relying upon the completed administrative record, as well as declarations from several of its members. Each defendant also moved for summary judgment on January 31, 2019, relying upon the same.

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<sup>2</sup> The administrative record is docketed in the miscellaneous case file noted above, pursuant to amended case management order entered November 29, 2017. Hereinafter, all citations to the administrative record shall be denoted as “R.”

## STATEMENT OF THE UNDISPUTED FACTS

The undisputed facts may be summarized as follows. Ocean Isle Beach is a coastal barrier island in southwest Brunswick County, North Carolina. (R. 8228). The island spans approximately 5.6 miles west-to-east from Tubbs Inlet to Shallotte Inlet and 0.6 miles north-to-south from the Intracoastal Waterway to the Atlantic Ocean. (R. 8185, 8228). Holden Beach, also a barrier island, lies to the east of Shallotte Inlet, which connects the Atlantic Ocean to the Intracoastal Waterway before joining Shallotte River. (R. 8186). Ocean Isle Beach and Holden Beach provide important habitats for birds and other wildlife, including the piping plover and red knot, which are federally protected shorebirds. (See R. 8253–85).

In 2001, the United States began protecting Ocean Isle Beach’s shoreline by dredging sand from a “borrow area” in Shallotte Inlet, and placing that sand along approximately three miles of defendant Ocean Isle’s shoreline (“Federal Project”). (R. 8186–87, 8532, 10954). Following initial construction of the Federal Project, the beach was scheduled for renourishment every three years, and in practice renourished in 2006-2007, 2010, and 2014. (R. 8197–98, 8204). The far eastern end of the island was not included in the Federal Project because of the predicted high rates of loss of beach fill due to erosion. (R. 8196). As predicted, severe erosion plagued the eastern end of the island. (See R. 8198). Despite efforts to stop the shoreline’s advance, including use of sandbag revetments beginning in 2005 and additional beach nourishment in 2007, erosion destroyed several houses, portions of streets, and certain utilities. (R. 8197–99, 8204).

In 2011, the North Carolina General Assembly passed a law allowing construction of terminal groins in North Carolina. (R. 342–45). Following the change in state law, defendant Ocean Isle commissioned CPE to prepare a feasibility study to determine whether a terminal groin would

resolve defendant Ocean Isle's erosion problem along its eastern shoreline. (R. 146–83). CPE preliminarily determined that a terminal groin feasibly would reduce erosion rates and periodic nourishment events, and avert further damage at the eastern end of the island. (R. 181–82).

In May 2012, defendant Ocean Isle asked defendant USACE to formally initiate the environmental review and approval process for the Project, and after interviewing several environmental consulting firms recommended CPE as the contractor to prepare the EIS for the Project. (R. 40). After reviewing CPE's qualifications, defendant USACE selected CPE to prepare the EIS. (R. 60–61). CPE executed a disclosure statement representing it had “not entered into and, during the lifetime of the EIS preparation, will not enter into any agreement affording us or any Subcontractors that we may hire with any direct or indirect financial interest in the planning, design, construction or operation” of the Project. (R. 91). Shortly thereafter, defendant Ocean Isle entered into a processing agreement with defendant USACE. (R. 105–11). On September 15, 2014, defendant Ocean Isle, with CPE acting as its agent, filed a permit application with defendant USACE seeking permission to construct a terminal groin and place approximately 264,000 cubic yards of sand along the beach. (R. 588–615).

Environmental review of the Project took place over five years following defendant Ocean Isle's initial contact with defendant USACE. On January 23, 2015, defendant USACE issued its DEIS, together with public notice seeking comments on the DEIS and proposed project. (R. 3920–33, 3960–4903). Defendant USACE held a public hearing on the proposed project and the DEIS on March 3, 2015. (R. 4926–5015). After reviewing public comment on the DEIS, defendant USACE responded to the comments and issued public notice of its FEIS on April 29, 2016, again requesting public comment. (R. 8161–68, 8170–9522).

The purpose of defendant Ocean Isle’s project was to reduce erosion along its eastern shoreline, maintain defendant Ocean Isle’s tax base, maintain recreational resources, and balance the needs of the human environment with protecting natural resources. (R. 8196). The FEIS reviewed five project alternatives. Alternative one continued existing beach management practices. (R. 8203–08). Alternative two continued the Federal Project, but removed sand bag barricades where erosion occurs. (R. 8209). Alternative three continued the Federal Project, along with non-federally-sponsored beach nourishment activities along the eastern portion of Ocean Isle. (R. 8210–12). Alternative four provided the same beach fill as alternative three, along with targeted dredging to realign the main channel in the Shallotte Inlet. (R. 8213–14). Finally, alternative five called for constructing a 750-foot terminal groin at the eastern end of the beach and add beach fill to the west of the groin. (R. 8215–16). Alternative five is depicted below:



(R. 8226).

To compare alternatives, the FEIS relied upon light detection and ranging (“LiDAR”) surveys,<sup>3</sup> beach profile surveys, the Delft3D model,<sup>4</sup> and maximum periodic nourishment volume per operation. (R. 8202–03). The FEIS included discussion of each alternative’s economic costs, as well as each alternative’s potential environmental impacts. (See R. 8202–8374). Pursuant to the Endangered Species Act (“ESA”), defendant USACE also consulted the United States Fish and Wildlife Service (“USFWS”) and National Marine Fisheries Service (“NMFS”), both of which determined the terminal groin did not jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of designated critical habitat. (R. 6216, 6446).

On February 27, 2017, defendant USACE issued its ROD, concluding that the terminal groin was the LEDPA. (R. 10954–55, 10970, 10978–79). In reaching its decision, defendant USACE determined that alternatives one and two were not practicable because they would not meet the Project purpose of mitigating chronic erosion on the eastern shoreline of Ocean Isle. (R. 10971–74). Alternatives three and four were determined to be practicable, but they were not the least environmentally damaging alternative because they would require more frequent and extensive beach nourishment than the terminal groin, jeopardizing the recovery of species harmed during those nourishment operations. (R. 10975, 10977). Alternative four also would disturb intertidal habitat as a result of channel realignment. (R. 10977). In the ROD, defendant USACE responded to

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<sup>3</sup> “LiDAR is an optical remote sensing technology that measures the ground elevation or seafloor at relatively high spatial resolutions.” (R. 8202).

<sup>4</sup> The Delft3D model “simulates flows, sediment transport, and bathymetric changes by using advanced sediment transport formulations that respond to forcing functions that include waves, tides, winds, and density gradients.” (R. 8203, 8589).

comments on the FEIS, justifying its decision. (See R. 11004–50). Thereafter, defendant USACE issued defendant Ocean Isle a permit under the CWA. (R. 11520–70).

Additional facts pertinent to the instant motions will be discussed below.

## **DISCUSSION**

### A. Standards of Review

#### 1. Summary Judgment

Summary judgment is appropriate where “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). On cross-motions for summary judgment, the court “consider[s] each motion separately on its own merits to determine whether [any] of the parties deserves judgment as a matter of law.” Defs. of Wildlife v. N. Carolina Dep’t of Transp., 762 F.3d 374, 392 (4th Cir. 2014). The party seeking summary judgment “bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of [the record] which it believes demonstrate the absence of a genuine issue of material fact.” Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986).

Once the moving party has met its burden, the non-moving party must then “come forward with specific facts showing that there is a genuine issue for trial.” Matsushita Elec. Indus. Co. Ltd. v. Zenith Radio Corp., 475 U.S. 574, 586–87 (1986) (internal quotation omitted). Only disputes between the parties over facts that might affect the outcome of the case properly preclude entry of summary judgment. See Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 247-48 (1986) (holding that a factual dispute is “material” only if it might affect the outcome of the suit and “genuine” only if there is sufficient evidence for a reasonable jury to return a verdict for the non-moving party).

“[A]t the summary judgment stage the [court’s] function is not [itself] to weigh the evidence



and determine the truth of the matter but to determine whether there is a genuine issue for trial.” Id. at 249. In determining whether there is a genuine issue for trial, “evidence of the non-movant is to be believed, and all justifiable inferences are to be drawn in [non-movant’s] favor.” Id. at 255; see United States v. Diebold, Inc., 369 U.S. 654, 655 (1962) (“On summary judgment the inferences to be drawn from the underlying facts contained in [affidavits, attached exhibits, and depositions] must be viewed in the light most favorable to the party opposing the motion.”).

Nevertheless, “permissible inferences must still be within the range of reasonable probability, . . . and it is the duty of the court to withdraw the case from the [factfinder] when the necessary inference is so tenuous that it rests merely upon speculation and conjecture.” Lovelace v. Sherwin-Williams Co., 681 F.2d 230, 241 (4th Cir. 1982) (quotations omitted). Thus, judgment as a matter of law is warranted where “the verdict in favor of the non-moving party would necessarily be based on speculation and conjecture.” Myrick v. Prime Ins. Syndicate, Inc., 395 F.3d 485, 489 (4th Cir. 2005). By contrast, when “the evidence as a whole is susceptible of more than one reasonable inference, a [triable] issue is created,” and judgment as a matter of law should be denied. Id. at 489-90.

## 2. APA

“A person . . . adversely affected by agency action within the meaning of a relevant statute[,]” 5 U.S.C. § 702, may bring an action pursuant to the judicial review provisions of the APA, id. § 701, et seq., to challenge “final agency action[.]” Id. § 704. “The reviewing court shall . . . hold unlawful and set aside any agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A). The scope of “arbitrary and capricious” review is narrow, but the court must ensure that

“the agency examine[s] the relevant data and articulate[s] a satisfactory explanation for its action including a rational connection between the facts found and the choice made.” Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983); see N.C. Wildlife Fed’n v. N.C. Dep’t of Transp., 677 F.3d 596, 601 (4th Cir. 2012) (The court “must ensure that the agency has examined the relevant data and articulated a satisfactory explanation for its action, and must not reduce itself to a rubber-stamp of agency action.”) (internal citations and quotation marks omitted). “Both NEPA and CWA claims are subject to judicial review under the APA.” Ohio Valley Envtl. Coal. v. Aracoma Coal Co., 556 F.3d 177, 189 (4th Cir. 2009).

#### B. NEPA

Plaintiff’s first, second, and fifth claims arise under NEPA. NEPA “establishes a national policy to encourage productive and enjoyable harmony” between humans and their environment, “and was intended to reduce or eliminate environmental damage and to promote the understanding of the ecological systems and natural resources important to the United States.” Defs. of Wildlife, 762 F.3d at 393. For every major federal action significantly affecting the quality of the human environment, the agency involved must prepare an EIS “that discloses and evaluates, among other things, the environmental impact of the proposed action, unavoidable adverse effects of the proposed action, and alternatives to the proposed action.” Id. at 393–94; 42 U.S.C. § 4332(C); see 40 C.F.R. § 1508.18.

NEPA mandates “a set of ‘action-forcing’ procedures that require that agencies take a ‘hard look’ at environmental consequences, . . . and that provide for broad dissemination of relevant environmental information.” Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989) (internal quotations and citations omitted). “What constitutes a ‘hard look’ cannot be

outlined with rule-like precision. At the least, however, it encompasses a thorough investigation into the environmental impacts of an agency's action and a candid acknowledgment of the risks that those impacts entail." Nat'l Audubon Soc'y v. Dep't of Navy, 422 F.3d 174, 185 (4th Cir. 2005). "[A] court reviewing an EIS for NEPA compliance must take a holistic view of what the agency has done to assess environmental impact. Courts may not 'flyspeck' an agency's environmental analysis, looking for any deficiency, no matter how minor." Id. at 186. "If the agency has followed the proper procedures, and if there is a rational basis for its decision, [the court] will not disturb its judgment." Hodges v. Abraham, 300 F.3d 432, 445 (4th Cir. 2002).

1. Defendant USACE's Oversight of EIS Development

In preparing an EIS, "[t]he agency shall independently evaluate the information submitted and shall be responsible for its accuracy." 40 C.F.R. § 1506.5(a). If the agency elects to hire a third party contractor to create the EIS, the regulations impose two requirements. First, the contractor must execute a disclosure statement "specifying that they have no financial or other interest in the outcome of the project." Id. § 1506.5(c). Second, the agency "shall furnish guidance and participate in the preparation and shall independently evaluate the statement prior to its approval and take responsibility for its scope and contents." Id. § 1506.5(c).

a. CPE's Alleged Conflict of Interest

The first issue presented is whether CPE had a conflict of interest that prevented it from serving as an unbiased third party contractor.

Defining "financial or other interest in the outcome of the project" is an issue of first impression for this court. The term broadly covers "any known benefits other than general enhancement of professional reputation. This includes any financial benefit such as a promise of

future construction or design work on the project.” Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations (“Forty Questions”), 46 Fed.Reg. 18,026, 18,031 (Council on Env’tl. Quality 1981). Examples of such benefits include “an agreement to perform the construction,” being “the owner of the construction site,” or a contract for EIS preparation that contains “incentive clauses or guarantees of any future work on the project.” Guidance Regarding NEPA Regulations, 48 Fed.Reg. 34,263, 34,266 (Council on Env’tl. Quality 1983).<sup>5</sup>

The United States Court of Appeals for the Fourth Circuit has not interpreted the scope of § 1506.5(c).<sup>6</sup> However, other circuit courts emphasize the importance of a future benefit arising from approval of the project. The United States Court of Appeals for the Tenth Circuit found a contract for preliminary design work between an applicant and the contractor insufficient to create a conflict of interest where final design work had been omitted from the contract in effect at the time the contractor was employed to develop an EIS. Associations Working for Aurora’s Residential Env’t v. Colorado Dep’t of Transp. (“AWARE”), 153 F.3d 1122, 1128 (10th Cir. 1998). Similarly, the United States Court of Appeals for the Ninth Circuit rejected a claim that a contractor preparing the EIS and also helping an applicant obtain permit approvals created a conflict of interest. Cachil Dehe Band of Wintun Indians of Colusa Indian Cmty. v. Zinke, 889 F.3d 584, 607–08 (9th Cir. 2018).

The Ninth and Tenth Circuit’s reasoning is persuasive. Section 1506.5(c) addresses conflicts arising from interests in “the outcome of the project.” The CEQ regulations caution that “[w]hen

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<sup>5</sup> “CEQ’s interpretation of NEPA is entitled to substantial deference.” Andrus v. Sierra Club, 442 U.S. 347, 358 (1979); Nat’l Audubon Soc’y, 422 F.3d at 184.

<sup>6</sup> Indeed, this court has found only one district court opinion within this circuit has even cited to 40 C.F.R. § 1506.5(c). See Bragg v. Robertson, 54 F. Supp. 2d 653, 667 (S.D.W. Va. 1999).

a consulting firm has been involved in developing initial data and plans for the project, but does not have any financial or other interest in the outcome of the decision, it need not be disqualified from preparing the EIS.” Forty Questions, 46 Fed. Reg. at 18,031. “Further, § 1506.5(c) does not prevent an applicant from submitting information to an agency.” Guidance Regarding NEPA Regulations, 48 Fed. Reg. at 34,266.

On July 2, 2012, after reviewing defendant Ocean Isle’s proposal to use CPE as a contractor for the EIS, (see R. 40–44), defendant USACE chose to use CPE, conditional on execution of a disclosure statement and completion of the processing agreement. (R. 93). CPE executed its § 1506.5(c) disclosure statement on July 13, 2012, representing that it had “not entered into and, during the lifetime of the EIS preparation, will not enter into any agreement affording us . . . with any direct or indirect financial interest in the planning, design, construction or operation of the [project], except with regard to the preparation of the EIS.” (R. 91). CPE also agreed to “make a full disclosure of the scope and extent of the firm’s prior involvement” with the Project in the DEIS. (R. 91). Subsequently, defendants Ocean Isle and USACE completed the processing agreement on August 21, 2012, in which defendant Ocean Isle also represented CPE did not have a conflict of interest. (R. 105–11).

The record does not disclose that CPE had an interest in the Project outcome. Plaintiff makes much of the fact that CPE, acting as agent for defendant Ocean Isle, submitted the application for a permit to build the terminal groin. (R. 588–615). Relying on emails from an attorney for defendant USACE, (see R. 72, 74), plaintiff asserts this is a conflict of interest. As noted above, the court rejects this position as an incorrect interpretation of the CEQ regulations. The mere fact that CPE filled out a permit application or did preliminary design work on behalf of defendant Ocean

Isle does not create an interest in the outcome of the Project unless accompanied with a promise of future work.<sup>7</sup> See Colusa Indian Cmty., 889 F.3d at 607–08; AWARE, 153 F.3d at 1128.

The record is awash with examples showing no such promise of future work from defendant Ocean Isle existed before the ROD issued. For example, Brad Rosov (“Rosov”), CPE’s primary contact with defendant USACE, commented that “I don’t think that we will have permits in hand in time to go to bid this fall.” (R. 6201 (emphasis added)). In another instance, Rosov listed several items defendant Ocean Isle needed to complete before constructing the terminal groin and indicated that, “due to the 3rd party contract, we are prohibited from assisting the Town with these tasks until the ROD is issued.” (R. 10934). Even CPE’s correspondence with defendant Ocean Isle following issue of the ROD shows that CPE and defendant Ocean Isle had not developed a “Scope of Work and formalized cost associated with the ‘During Construction’ services for the terminal groin project as well as the ‘Year 1 Post-Construction’ services.” (R. 11573).

Plaintiff asserts that the court already held CPE had a conflict of interest when it allowed certain emails from CPE to defendant Ocean Isle to be considered as extra record evidence. See Nat’l Audubon Soc’y, 2018 WL 4760124 at \*5. Plaintiff misinterprets the court’s decision. The court merely held that “any failure to evaluate CPE’s work product in light of CPE’s close association with the permit applicant, namely, defendant Ocean Isle, constitutes the type of ‘bad faith or improper behavior’ that justifies consideration of extra-record evidence.” Nat’l Audubon Soc’y, 2018 WL 4760124 at \*5. However, at the time the court issued its prior order, it had not determined what constitutes a conflict of interest under 40 C.F.R. § 1506.5(c), and it did not have

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<sup>7</sup> Plaintiff argues being an agent inherently creates a conflict for CPE. (Pl. Mem. (DE 60) at 20 (citing Constr. Techniques, Inc. v. Dominske, 928 F.2d 632, 637 (4th Cir. 1991)). Plaintiff’s argument is unpersuasive, as the CEQ regulations, not general principles of agency, define what types of interests create a conflict under NEPA. See 40 C.F.R. § 1506.5(c).

a complete administrative record before it. Accordingly, CPE did not have conflict of interest in preparing the EIS for defendant USACE.<sup>8</sup>

b. Defendant USACE's Independent Evaluation of CPE's Work

The next issue is whether defendant USACE fulfilled its duty to “independently evaluate” CPE's work. See 40 C.F.R. § 1506.5(a), (c). An agency relying on a third-party contractor to prepare an EIS “clearly may not substitute a private firm's efforts and analysis for its own, and it must bear responsibility for the ultimate work product.” Essex Cty. Pres. Ass'n v. Campbell, 536 F.2d 956, 960 (1st Cir. 1976); see Sierra Club, Inc. v. United States Forest Serv., 897 F.3d 582, 594–96 (4th Cir. 2018). An agency has discharged its duty to independently evaluate an independent contractor's work where it has “consistently exercised control over the scope, content, and development of the EIS.” Communities Against Runway Expansion, Inc. v. F.A.A., 355 F.3d 678, 687 (D.C. Cir. 2004); see Essex Cty. Pres. Ass'n, 536 F.2d at 959–60. In determining if an agency has fulfilled its obligation, “the [c]ourt ‘can evaluate the oversight that the agency provided to the [EIS] process as a factual matter and make a determination upholding the [EIS].’” Colusa Indian Cmty., 889 F.3d at 608 (alterations in original) (quoting AWARE, 153 F.3d at 1129).

The administrative record demonstrates that defendant USACE was involved in the development of the EIS throughout the review process. Defendant USACE organized and led early meetings integral to identifying issues to be addressed in the EIS, including the public scoping meeting in October 2012 and the project review team<sup>9</sup> meeting in March 2013. (See R. 424–38, R.

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<sup>8</sup> Even if CPE did have a conflict of interest, such conflict does not invalidate an FEIS or ROD unless defendant USACE also failed to independently evaluate CPE's work. Colusa Indian Cmty., 889 F.3d at 608; AWARE, 153 F.3d at 1129.

<sup>9</sup> The project review team consisted of representatives from state and federal agencies, non-profit groups, and defendant Ocean Isle, all of which would assist in the development of the EIS. (R. 467–68).

467–80). Following these early meetings outlining the issues to be addressed in the DEIS, defendant USACE received monthly progress reports from CPE, received documentation from CPE for review, and gave CPE guidance in response to CPE’s reports. (See, e.g., R. 628, 656–57). Defendant USACE also gave significant substantive feedback in its review of the DEIS. (See, e.g., R. 1186, 1201–03, 1206–07, 1209–17, 1238, 1247, 1251, 1282, 1284–85, 1294, 1297, 1299, 1307, 1309, 1323, 1328, 1344, 1351, 1362). From June 2013 to January 2015, defendant USACE commented on several versions of the DEIS, and CPE made revisions in response to the comments. (See R. 656–57, 668–81, 687–94).

Following publication of the DEIS in January 2015, (R. 3960), defendant USACE remained actively engaged in soliciting feedback from the public. On March 3, 2015, defendant USACE held a public hearing to solicit comments on the DEIS. (R. 4926–5015). Written public comments providing feedback on the DEIS also were received. (See R. 5016–5368). At defendant USACE’s direction, CPE created a table summarizing and drafting proposed responses to comments received. (R. 5352–53, 5368–84). Defendant USACE then reviewed CPE’s proposed responses and provided feedback, noting specific areas of improvement for the FEIS. (R. 5391–5408). Defendant USACE again raised questions and provided comments to CPE regarding the drafts of the FEIS. (See, e.g., 6799–6804, 6819, 6992, 7007–11, 7017–20, 7023–26, 7048, 7056–57, 7059, 7062–64, 7083, 7090, 7094, 7098, 7100–03, 7108–09, 7119–20, 7146, 7162–65, 7170, 7174). CPE incorporated defendant USACE’s changes, and the FEIS was published in April 2016. (R. 8171). In sum, defendant USACE “consistently exercised control over the scope, content, and development of the EIS.” Communities Against Runway Expansion, 355 F.3d at 687.

Plaintiff raises several challenges asserting defendant USACE failed to independently



evaluate CPE's work. First, plaintiff argues that defendant USACE accepted CPE's responses to public comment without oversight. As noted above, defendant USACE reviewed CPE's proposed responses to public comment, and where defendant USACE determined CPE's draft FEIS did not adequately address public comments, it directed further response. Focusing on one comment in particular, plaintiff argues that defendant USACE did not consider possible inconsistencies between terminal groin proposals at Ocean Isle and in other locations. (See R. 10769). However, defendant USACE directed CPE to address issues regarding scaling on different projects. (See R. 6819). CPE responded that Ocean Isle has different environmental dynamics than other projects considered by defendant USACE, and that analysis of erosion rates based on historical erosion rates, and that the model was used to compare relative differences between alternatives involving man-induced changes. (R. 6817, 10902).

Plaintiff also contends defendant USACE did not independently evaluate CPE's analysis of alternative four in this case, which was not modeled in the DEIS. However, defendant USACE determined that failure to model alternative four could impact the alternatives analysis, and thus ordered defendant CPE to conduct additional modeling of alternative four. (R. 6776, 6779–81). Upon reviewing an updated version of the alternative four analysis with modeling, one of defendant USACE's coastal engineers, Layla Kashlan ("Kashlan"), confirmed that alternative four was appropriately modeled to simulate repetitive dredging and that the methodology was consistent with other alternatives. (See R. 6972).

Plaintiff asserts defendant USACE did not independently evaluate CPE's engineering report. However, Michael Wutkowski ("Wutkowski"), another coastal engineer for defendant USACE, did review CPE's draft engineering report. (See R. 3816–22). Wutkowski identified major issues in

the report, including the assumption that federal dredging would be on a two year renourishment cycle, and failure to evaluate effects on the shoreline east of the groin. (R. 3822). Defendant USACE passed these concerns along to CPE, and the final engineering report contained in the FEIS was revised to identify and address these limitations. (See R. 3824, 8544, 8571).

Accordingly, defendant USACE independently evaluated CPE's work.

## 2. Alternatives Analysis

Comparative evaluation of alternatives “is the heart of the environmental impact statement . . .” Defs. of Wildlife, 762 F.3d at 394; 40 C.F.R. § 1502.14. Therefore, agencies must “[r]igorously explore and objectively evaluate all reasonable alternatives” that could “avoid or minimize adverse impacts.” Save Our Sound OBX, Inc. v. N. Carolina Dep’t of Transportation, 914 F.3d 213, 218 (4th Cir. 2019) (quoting 40 C.F.R. §§ 1502.1, 1502.14); Webster v. U.S. Dep’t of Agric., 685 F.3d 411, 430 (4th Cir. 2012) (“[A]n EIS should provide enough detail concerning the drawbacks and merits of the proposed action to allow for reasoned evaluation and decisionmaking.”). “The assessment of the environmental impacts is the scientific and analytic basis for the comparison of alternatives.” Defs. of Wildlife, 762 F.3d at 394; 40 C.F.R. § 1502.16. In carrying out an alternative analysis, “[a]gencies are entitled to select their own methodology as long as that methodology is reasonable, and we must defer to such agency choices.” Ohio Valley Envtl. Coal., 556 F.3d at 201 (quoting Hughes River Watershed Conservancy v. Glickman (“Hughes River I”), 81 F.3d 437, 446 (4th Cir. 1996)).

“NEPA does not require agencies to adopt any particular internal decisionmaking structure[,] [b]ut NEPA does require agencies to follow a particular decisionmaking process.” Defs. of Wildlife, 762 F.3d at 394. Any EIS must be completed “before decisions are made and before actions are

taken[,]” id.; 40 C.F.R. § 1500.1(b), “to help public officials make decisions that are based on an understanding of environmental consequences.” 40 C.F.R. § 1500.1(c). “[A]n agency must weigh a proposed action’s benefits with its environmental costs.” Webster, 685 F.3d at 430; Ohio Valley Env’tl. Coal., 556 F.3d at 191; Hughes River Watershed Conservancy v. Johnson (“Hughes River II”), 165 F.3d 283, 289 (4th Cir.1999). Misleading economic assumptions contained in an EIS violate NEPA where those assumptions are “‘so distorted as to impair fair consideration’ of the project’s adverse environmental effects.” Webster, 685 F.3d at 430 (quoting Hughes River I, 81 F.3d at 446). However, “the mere fact that certain factors in a cost-benefit analysis are generally imprecise or unquantifiable does not render the result inadequate.” Hughes River II, 165 F.3d at 290.

Plaintiff asserts various challenges to the Project ROD based on the model used to compare alternatives, allegedly unreliable erosion estimates, differences between the economic impacts and environmental impacts analyses, failure to model alternative four, failure to model long-term indirect effects, and inaccurate property loss analysis. The court addresses each of these claims in turn.

a. Delft3D Model

In reviewing an agency’s methodology, “this court does not sit as a scientific body, meticulously reviewing all data under a laboratory microscope.” Nat. Res. Def. Council, Inc. v. U.S. E.P.A., 16 F.3d 1395, 1401 (4th Cir. 1993). Rather, the court defers to an agency’s choice of methodology where use of that methodology is reasonable. Ohio Valley Env’tl. Coal., 556 F.3d at 201. A model need not perfectly fit the facts to be reasonable, and “[t]o require as much would be to defeat the purpose of using a model.” Chem. Mfrs. Ass’n v. E.P.A., 28 F.3d 1259, 1265 (D.C. Cir. 1994).

The Delft3D model “was calibrated for a three year period from April 2007 to April 2010 using input parameters . . . derived from known or observed conditions.” (R. 8203, see R. 8625–49). After calibrating the model to control for coastal conditions and running each alternative, the model identified relative effects of any man-induced changes to the environment. (See R. 8203, 8647). However, the FEIS also identified the limitations of the Delft3D model, cautioning that it “is best suited to estimating general trends, rather than providing exact estimates of erosion rates into the future.” (R. 8203, 8647, 8649).

Plaintiff contends that the model estimated the sand at Ocean Isle Beach would flow west to east, when the net sediment transport direction was generally estimated to be from east to west. (R. 8646). However, the modelers identified this issue and corrected it by adjusting morphological acceleration factors. (R. 8646). In addition, the modelers acknowledged that the model did not predict actual erosion rates. (R. 8203, 8647, 8649). Instead, the model forecasted relative changes that could be used to meaningfully compare alternatives. (R. 8203, 8649). Consequently, use of the Delft3D model was not arbitrary and capricious.

b. Erosion Estimates

To estimate economic impacts in the model arising from beach nourishment, defendant USACE needed to estimate the volume of erosion under each alternative. For alternatives one and two, defendant USACE used the average historical nourishment rate to estimate nourishment costs. (R. 8208–09, 8581). For alternatives three, four, and five, the FEIS needed to predict how the man made changes would affect the volume of erosion before determining the cost of beach nourishment. To estimate the average annual volume of erosion, defendant USACE started with beach profile surveys from 2001–2013, which indicate average volume losses at the eastern end of Ocean Isle

under current beach management practices. (See R. 8539, 8517–20). The Delft3D model accounted for differences in erosion volume caused by “man-induced changes,” and is appropriately used to compare “alternatives relative to a no-action scenario.” (R. 6817, 8647, 8649, 11038). Accordingly, defendant USACE divided the modeled volume of erosion for alternatives three, four, and five by the modeled volume of erosion for alternative one, then multiplied that ratio by historic amounts of erosion. (See R. 8301, 8540, 8560–61, 8570–73). Combining historical results with a comparative analysis of modeling outputs, “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.” (R. 9280, 10901, 11038). Thereafter, defendant USACE used the volume of erosion to determine the frequency of nourishment events.

Plaintiff, citing the Fourth Circuit’s recent decision in Sierra Club, argues that proportionally adjusting historic rate of erosion based on the model was done without explanation. Plaintiff’s reliance upon Sierra Club is misplaced. There, the court reversed an agency action that concluded without elaboration “that the proposed use or occupancy of the NPS-administered lands or waters described herein for the operation and maintenance of the Project, is consistent with the use of these lands for Parkway purposes.” 899 F.3d at 293. In Sierra Club, the National Park Service (“NPS”) failed to consider detrimental effects of a pipeline on observation areas in the Blue Ridge Parkway. Id. at 293–94.

In the present case, defendant USACE rationally explained its analysis. By definition, a proportion is a relative comparison. The Delft3D model results are used for relative comparisons between a no action scenario and other alternatives to estimate the impact of man-induced changes. (R. 8203, 8647, 8649). Therefore, the court defers to the agency’s engineering judgment that

proportionally adjusting the historic rate of erosion to account for the relative differences caused by man-induced changes represents a reasonable method of predicting future erosion volume, and by extension the economic impacts of each alternative. See Ohio Valley Env'tl. Coal., 556 F.3d at 199 (upholding use of stream structure as a surrogate for assessing stream function); Nat. Res. Def. Council, 16 F.3d at 1401.

c. Economic Impacts v. Environmental Impacts

Having determined that it was not arbitrary and capricious for defendant USACE to calculate and apply predicted erosion volumes to assess economic impacts, the court focuses on whether defendant USACE's use of the Delft3D model to assess environmental impacts was arbitrary and capricious.

Indirect environmental impacts were estimated by modeling "changes to the shoreline during post-construction conditions" of each alternative immediately before a second cycle of beach nourishment.<sup>10</sup> (R. 8296–97). The modeled shoreline locations were overlaid upon the baseline habitat map, and "[a]ny portions of the habitats that were located seaward of the [mean higher high water lines ('MHHW')] were also considered to be impacted by the modeled changed position of the MHHW."<sup>11</sup> (R. 8297). Defendant USACE was clear about the limitations of the model, cautioning that the results "are not intended to be a precise prediction of habitat change considering they are in part based on modeling simulations and are therefore only intended to provide insight on potential changes." (R. 8297). Having disclosed such limitations, the FEIS estimated the acres

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<sup>10</sup> Direct environmental impacts were determined by overlaying footprints of project-related activities upon a baseline habitat map. (R. 8297). Plaintiff does not challenge defendant USACE's findings with respect to direct environmental impacts.

<sup>11</sup> MHHW is a measure of the shoreline "determined from a 2013 shoreline survey and entered into Delft3D." (R. 8297).

of habitat indirectly impacted based on Delft3D model results of shoreline position. (See R. 8298).

Use of the model results was not arbitrary and capricious for purposes of comparing environmental impacts. The economic impacts analysis calculated the average annual amount of beach nourishment, and consequently its projected cost, specifically based on the amount of projected erosion. (See R. 8301, 8540, 8560–61, 8570–73). In contrast, the environmental impacts analysis relied upon the model’s estimation of the position of the shoreline to calculate acres of habitat affected by each alternative. (See R. 8297). “Knowing that the inlet and oceanfront shorelines are dynamic,” defendant USACE reasonably concluded that “the only basis to evaluate potential indirect impacts are through the utilization of numerical models.” (R. 9283; see also R. 623, 8297 (describing difficulties associated with comparing shoreline position and habitat acreage affected across alternatives)).

Plaintiff argues that defendant USACE conceded use of two different erosion estimates was arbitrary and capricious, dredging up two draft responses to comments by Tyler Crumbley (“Crumbley”), one of defendant USACE’s engineers. (See R. 5434, 5437). Plaintiff takes Crumbley’s comments out of context. Rather than being a statement of fact, Crumbley was prompting further explanation of the methodology used in the DEIS, which CPE explained to the satisfaction of defendant USACE. (See R. 5434, 5437, 8647, 9278–84). In sum, using the Delft3D model for different purposes was not arbitrary and capricious, where was defendant USACE consistently applied the model across alternatives and disclosed the model’s limitations.

c. Modeling Alternative Four

Alternative four proposes use of targeted dredging in Shallotte Inlet to realign the channel, combined with beach nourishment, in order to reduce erosion along defendant Ocean Isle’s eastern

shoreline. (R. 8213). To model “true channel relocation, material removed during periodic nourishment operations should be derived from the same general area as used for initial construction of the federal storm damage reduction project.” (R. 8308). This is because, “[b]y continuing to use the same general cut area for each nourishment operation, the borrow area should eventually become the dominant flow path for waters exiting through the inlet.” (R. 8308). Accordingly, defendant USACE modeled re-dredging the channel “using the bathymetry at the end of the three-year simulation for alternative [one].” (R. 8214, 8309, 8556). Since the Federal Project initially was designed to include channel realignment, “[t]he ‘re-dredging’ of the channel/borrow area simulated the same dimensions of the channel as that created during initial construction of the [F]ederal [P]roject.” (R. 8214, 8309, 8549, 8556). Following the first simulated re-dredging at year three, defendant USACE ran the model for years four through six. (R. 8556–60). From the model results, defendant USACE assumed that “subsequent re-dredging of the channel would result in similar volume loss reduction,” modeling losses for year six through nine. (R. 8309–10, 10894).

Since “[t]he conditions following the initial implementation of [a]lternative [four] would be identical” to alternative three, defendant USACE used alternative three as a starting point to simulate beach nourishment in the first three years. (R. 8214, 8560). After re-dredging in year three, the average annual volumetric losses under alternative four were compared to the losses under alternative three. (R. 8214, 8560–61). Using the model, and “[a]pplying the 408,000 cubic yard volume limit per nourishment operation,” defendant USACE estimated the amount and frequency of nourishment required over the 30 year project timeline. (R. 8215, 8561). From this data, the FEIS was able to model the costs of alternative four relative to other alternatives. (R. 8215, 8562). As noted above, Kashlan confirmed that alternative four was appropriately modeled to simulate



repetitive dredging and that the methodology was consistent with modeling of other alternatives. (See R. 6972). On the record before it, the court is satisfied that defendant USACE took the requisite hard look at the alternative four by modeling targeted dredging and beach nourishment, and that the assumptions on which the models were based bear a rational relationship to the record.

Plaintiff argues that alternative four cannot be modeled using alternative one as a baseline, contending that none of alternatives actually modeled in the FEIS contained both dredging and beach nourishment. “Especially in matters involving not just simple findings of fact but complex predictions based on special expertise, ‘a reviewing court must generally be at its most deferential.’” Ohio Valley Envtl. Coal., 556 F.3d at 192 (quoting Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, 462 U.S. 87, 103 (1983)). The FEIS articulates a rational basis for why and how alternatives one and three were used to construct a model for alternative four. (See R. 8213–15, 8560–62). Defendant USACE included appropriate modeling of alternative four.

d. Indirect Environmental Effects

Indirect environmental effects are those effects “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). Some examples of indirect effects are “growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” Id.

“[A]gencies must measure the indirect and cumulative environmental effects of proposed actions. Conclusory statements that the indirect and cumulative effects will be minimal or that such effects are inevitable are insufficient under NEPA.” N. Carolina Wildlife Fed’n, 677 F.3d at 602 (internal citations omitted); see Cowpasture River Pres. Ass’n v. Forest Serv., 911 F.3d 150, 173–74

(4th Cir. 2018). However, in fulfilling its obligation to analyze environmental effects, “deciding what details need to be included or omitted in an EIS is generally a matter left to the agency’s discretion.” Webster, 685 F.3d at 425; see Selkirk Conservation All. v. Forsgren, 336 F.3d 944, 962 (9th Cir. 2003) (“NEPA does not impose a requirement that the [agency] analyze impacts for any particular length of time.”). As discussed above, “the mere fact that certain factors in a cost-benefit analysis are generally imprecise or unquantifiable does not render the result inadequate.” Hughes River II, 165 F.3d at 290.

Here, “[i]ndirect impacts were determined by the changes to the shoreline during post-construction conditions as interpreted from the Delft3D modeling results.” (R. 8297). For consistent comparison, the model results showing indirect impacts of each alternative immediately prior to one nourishment cycle were used. (See R. 623, 8297–98). Relying on relevant pieces of literature, defendant USACE determined that long-term modeling of future coastal changes “are too difficult to make due to the absence of the necessary capabilities for those predictions.” (R. 8203). Consequently, the FEIS supplemented its five year model results with additional qualitative analysis of the indirect effects arising generally and from each alternative. (See R. 8314–74). The methodology used to analyze indirect impacts was reasonable and entitled to deference. See Ohio Valley Env'tl. Coal., 556 F.3d at 201.

Plaintiff argues that the FEIS should have discussed indirect effects caused by the Project beyond five years. Plaintiff’s argument fails because indirect effects need only be modeled where they are “reasonably foreseeable.” 40 C.F.R. § 1508.8(b); see Hughes River II, 165 F.3d at 290. Defendant USACE described the limitations of long term modeling of indirect effects, and also provided qualitative discussion of the indirect effects based on the information available. (See, e.g.,

R. 8203, 8323–25, 8329–36, 8344–46, 8359–65, 8368, 8372).

Plaintiff also argues that defendant USACE did not consider comments from the USFWS regarding indirect effects on piping plovers, red knots, and sea turtles. (See R. 11142, 11189, 11196, 11216–17). However, the FEIS discussion of indirect effects identifies those same issues. For example, the FEIS notes that some “shorebirds such as piping plover and red knot[] rely on the dynamic coastal processes such as overwash, to provide optimal foraging, roosting, and nesting habitat. The presence of the groin and other hard structures could influence such processes in the downdrift area.” (R. 8359–61, 8364). Likewise, the FEIS accounts for the fact that, because of the groin, “the survival rate of sea turtle hatchlings could be reduced” and “critical habitat for nesting sea turtles could be impacted.” (R. 8359–60). Defendant USACE’s analysis of indirect effects was sufficient to support reasoned decision making and public discussion under NEPA.

e. Property Loss

As part of its cost-benefit analysis for alternative one, the FEIS concluded that 155 parcels, 45 of which had homes, will suffer erosion damage over the next 30 years if past erosion trends continue. (R. 8206). Plaintiff contends this analysis prevented defendant USACE from taking the requisite “hard look” at the cost of alternatives, and deceived the public by overstating the costs of erosion damage.

In Hughes River I, the Fourth Circuit considered an EIS prepared by National Resources Conservation Service (“NRCS”) evaluating a proposed dam. 81 F.3d at 440. There, the court held that NRCS impaired fair consideration of the project’s adverse environmental effects by including “an inflated estimate of recreation benefits that accounted for a significant portion, approximately thirty-two percent, of the economic benefits.” Id. at 447–48. By using gross recreation benefits

rather than net recreation benefits, the EIS overstated the economic feasibility of the dam and had the potential to mislead the public about the economic benefits that would result. Id. Similarly, in Nat. Res. Def. Council v. U.S. Forest Serv., the United States Forest Service (“Forest Service”) miscalculated the average market demand for Tongass timber to nearly double what was projected by experts, and included such calculations in their EIS for a land management plan. 421 F.3d 797, 801–03 (9th Cir. 2005). The Ninth Circuit concluded such error gave rise to a NEPA violation, reasoning that “[h]ad the decision makers and public known of the accurate demand forecast for Tongass timber, and the concomitant lower employment and earnings potential, the Forest Service may have selected an alternative with less adverse environmental impact, in less environmentally-sensitive areas.” Id. at 812.

The instant case is distinguishable from the agency actions in Hughes River I and Nat. Res. Def. Council. In the instant case, defendant USACE used LiDAR data from 1999 to 2010 to estimate the average annual historical movement of the shoreline, and assumed the shoreline would continue to move landward at the same rate over the next thirty years. (R. 8202, 8206–10, 8528–31). Based on these calculations, the FEIS estimates that 155 parcels would suffer erosion damage over the life of the Project. (R. 8208). Several entities commented that number misstates the estimated property loss caused by erosion. (R. 10737, 10757, 10771, 10789, 10831). In response, defendant USACE reviewed CPE’s property loss data and noted in its ROD that parcels were counted as damaged multiple times if they suffered erosion damage in consecutive five year periods. (R. 10929–33, 11063).

Defendant USACE’s use of the cumulative amount of parcels to measure property loss, standing in isolation, could violate NEPA. However, defendant USACE provided a graphic showing

the projected position of the scarp line, which enables any reader of the FEIS or ROD to see the parcels that will be affected over time. (R. 8207, 11063). More importantly, \$21.36 million is consistently represented as the total cost of property loss over 30 years. (See R. 8206–08, 8531, 10931–33, 11603). The cost, not the number of parcels affected, ultimately was used to provide a meaningful cost comparison among the alternatives. (See R. 8208, 8227 (comparing equivalent average annual cost)). Accordingly, defendant USACE’s use of 155 cumulative parcels affected over separate five year periods was not “so distorted as to impair fair consideration of the project’s adverse environmental effects.” Webster, 685 F.3d at 430 (internal quotations omitted).

### C. CWA

Plaintiff’s third and fourth claims arise under the CWA. The CWA’s purpose “is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). To that end, the CWA allows defendant USACE to “issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites.” 33 U.S.C. § 1344(a), (d); see United States v. Deaton, 332 F.3d 698, 707 (4th Cir. 2003). Pursuant to regulations promulgated under the CWA, “no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences.” 40 C.F.R. §§ 230.10(a), 230.12(a)(3)(i). “An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.” Id. § 230.10(a)(2). “The permitting authority shall determine in writing the potential short-term or long-term effects of a proposed discharge of dredged or fill material on the physical, chemical, and

biological components of the aquatic environment . . . .” 40 C.F.R. § 230.11.

Plaintiff asserts that defendant USACE’s ROD finding the terminal groin to be the LEDPA was arbitrary and capricious because defendant USACE failed to meaningfully evaluate secondary effects, relied upon a beach nourishment frequency limit without rational connection to the facts, and ignored the harms the terminal groin will cause the environment.

a. Secondary Effect Analysis

“Secondary effects are effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material.” 40 C.F.R. § 230.11(h)(1). For the same reasons that the court determined defendant USACE adequately considered indirect environmental effects under NEPA, see 40 C.F.R. § 1508.8(b), the court also concludes that defendant USACE adequately evaluated secondary effects under CWA. (See R. 623, 8203, 8296–98, 8314–74).

b. Beach Nourishment Threshold

“In order to provide an equitable basis for comparing the relative cost of alternatives, including periodic beach nourishment, a maximum volume of 408,000 cubic yards per nourishment operation was adopted.” (R. 8203). The record shows that this number was derived from previous efforts to maintain defendant Ocean Isle’s beaches. In 2001, defendant USACE constructed a beach fill project, placing “1,866,000 cubic yards of material” along the Federal Project shoreline. (R. 8186, 8196–97). Since the initial construction of the Federal Project, “a total of 1,798,600 cubic yards of material has been placed within” the Federal Project area for maintenance. (R. 8197). “[T]his represents an average annual nourishment rate of approximately 136,000 cubic yards/year.” (R. 8197). “The 408,000 cubic yard maximum volume is equal to the approximate volume of

material placed on the Ocean Isle Beach federal storm damage reduction project apportioned over a three year period.” (R. 8197, 8203, 8204–05, 11009).

Plaintiff argues that the 408,000 cubic yards of sand does not accurately reflect the amount of beach nourishment at defendant Ocean Isle’s beaches. (See R. 8198, 11009, 11011). Plaintiff also points to a portion of the engineering report which states without explanation that the maximum nourishment volume per operation was “arbitrarily set.” (R. 8544). However, the FEIS notes that average annual nourishment was not based on initial construction of the Federal Project, which entailed a significant amount of beach nourishment well in excess of 408,000 cubic yards, but instead relied upon the average annual nourishment to maintain the Federal Project, multiplied by three years to conform to the federally budgeted nourishment program. (See R. 8197, 8203). Defendant USACE “has examined the relevant data and articulated a satisfactory explanation” for assigning the maximum nourishment volume per operation value it did. N.C. Wildlife Fed’n, 677 F.3d at 601.

Next, plaintiff argues that the 408,000 cubic yards maximum nourishment volume per operation was not evenly applied across alternatives. Plaintiff is correct that, in the DEIS, defendant USACE exceeded the 408,000 cubic yard maximum nourishment volume per operation to create a two year nourishment cycle for alternative three. (R. 3998). However, after the DEIS was published, defendant USACE revised the projected nourishment requirements for alternative three within the maximum nourishment volume per operation threshold “[d]ue to changes in the model set-up associated with updated bathymetry.” (R. 8544–45, 11012). Therefore, the nourishment cap was evenly applied across alternatives.

Plaintiff also contends that defendant USACE’s ROD was arbitrary and capricious because

it concluded alternative four would require more frequent beach nourishment than alternative five. (See R. 10977). The goal of alternative four is to realign the channel in Shallotte Inlet to create an ebb tide delta that naturally reduces erosion, which would take an estimated six years. (R. 8308–09). Before the ebb tide delta forms, significant beach nourishment along the eastern end of Ocean Isle will be required. (See R. 8215). This frequent beach nourishment in the first few years of the Project will permanently damage habitats within the borrow area, and prevent those habitats from reforming. (See R. 8352–53, 8654). In contrast, defendant USACE estimated that the terminal groin would immediately mitigate erosion, and that recovery of marine intertidal flats and shoals is expected to occur. (R. 8361, 8364–65, 8373, 8654).

Finally, plaintiff asserts that defendant USACE should not be allowed to place weight on the greater up-front cost of alternative four because the Project is expected to last thirty years. The court rejects this assertion. Defendant USACE rationally explained its reasons why alternative four’s more frequent beach nourishment requirements make it less environmentally damaging than alternative five. (See R. 10977, 10979). Therefore, defendant USACE’s analysis of beach nourishment and its potential impacts was not arbitrary and capricious.

c. Environmental Harms

The CWA requires defendant USACE to consider a number of factors in evaluating which alternative is the LEDPA, including “the nature and degree of effect that the proposed discharge will have, both individually and cumulatively, on the structure and function of the aquatic ecosystem and organisms.” 40 C.F.R. § 230.11(e); Ohio Valley Env’tl. Coal., 556 F.3d at 198. In making this determination, “[p]ossible loss of environmental values . . . , and actions to minimize impacts . . . shall be examined.” 40 C.F.R. § 230.11(e).



As noted above in the court’s discussion of beach nourishment, defendant USACE rationally determined that the terminal groin avoids certain environmental damages resulting from increased nourishment activities of the other practicable alternatives.<sup>12</sup> (See R. 8215, 8352–53, 8654, 10976–77, 10979, 11017–18). Defendant USACE also considered the loss of 1.37 acres of soft-bottom habitat and erosion of a sand spit on defendant Ocean Isle’s far eastern beach that the terminal groin will cause. (See R. 8571, 10978–79). However, defendant USACE also determined these losses to be less destructive. See 40 C.F.R. § 230.11(e). With regard to soft-bottom habitat, defendant USACE determined “[p]ermanent losses . . . are expected to be minimal given that there is an abundance of sub-tidal open water habitat along the coastline.” (R. 10978).

Likewise, negative impacts of the terminal groin along the shoreline would be offset in part by new beachfront west of the groin that will provide habitat for shorebirds and sea turtles. (See R. 8318–19, 8345, 8359–64, 10978–79). With regard to erosion specifically, defendant USACE reasonably concluded that the eastern end of the island would stabilize after the terminal groin’s construction. (See R. 8571). In addition, the terminal groin has numerous mitigation requirements that also address these concerns, such as requiring that defendant Ocean Isle lower the terminal groin’s height or place additional sand east of the structure if erosion exceeds expectations. (R. 10985–86).

Plaintiff asserts that defendant USACE failed to consider the environmental harms of the terminal groin. The court rejects this argument. Defendant USACE’s determination that the terminal groin will cause less environmental harm than the other practicable alternatives was not arbitrary and capricious.


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<sup>12</sup> The parties do not dispute that alternatives one and two are not practicable for achieving the purposes of the Project.

## CONCLUSION

Based on the foregoing, plaintiff's motion for summary judgment (DE 47) is DENIED. Defendants' motions for summary judgment (DE 55, 57) are GRANTED. The clerk is DIRECTED to close this case.

SO ORDERED, this the 25th day of September, 2019.

  
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LOUISE W. FLANAGAN  
United States District Judge

## Glossary

APA	Administrative Procedure Act
Clark	Robert J. Clark, USACE Wilmington District Commander
Crumbley	Tyler Crumbley, USACE Engineer
CPE	Coastal Planning and Engineering of North Carolina
CEQ regulations	Council on Environmental Quality Regulations
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
Federal Project	Federal Shoreline Protection Program at Ocean Isle Beach
Forest Service	United States Forest Service
Kashlan	Layla Kashlan, USACE Engineer
LEDPA	Least Environmentally Damaging Practicable Alternative
LiDAR	Light Detection and Ranging
MHHW	Mean Higher High Water Line
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPS	National Park Service
NRCS	National Resources Conservation Service
Ocean Isle Project	Town of Ocean Isle Beach Terminal Groin and Beach Fillet
ROD	Record of Decision
Rosov	Brad Rosov, CPE Engineer
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
Wutkowski	Michael Wutkowski, USACE Engineer