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Via U.S. and Electronic Mail

Braxton C. Davis
Director
Division of Coastal Management
400 Commerce Avenue
Morehead City, NC 28557-3421
Braxton.Davis@ncdenr.gov

Re: Ocean Isle Beach Terminal Groin Proposal

Dear Mr. Davis:

Please accept these comments on Ocean Isle Beach's application for a Coastal Area Management Act ("CAMA") permit to construct a 750-foot terminal groin near Shallotte Inlet. The Southern Environmental Law Center submits these comments on behalf of the North Carolina Coastal Federation.

As described below, the Division of Coastal Management ("DCM") cannot lawfully issue a permit for the proposed groin for two primary reasons. First, the final environmental impact statement ("FEIS") submitted in support of the proposed terminal groin violates the National Environmental Policy Act ("NEPA"), does not meet the requirements of the North Carolina Environmental Policy Act, and cannot satisfy the requirements of N.C. Gen. Stat. § 113A-115.1(e). Second, even if the EIS is accepted, it plainly demonstrates that Alternative 5, the proposed terminal groin, will dramatically increase costs borne by Ocean Isle Beach over the 30-year period. Further, the EIS demonstrates that Alternative 4, Channel Relocation, is a lower-cost alternative, meets the purpose and need, and maintains the recreational beach and wildlife habitat that currently exists east of the proposed groin location.

I. The EIS Included as Part of the Application Violates NEPA.

As described above and more fully in the attached comments of May 31, 2016, from SELC to the U.S. Army Corps of Engineers, the FEIS violates NEPA and cannot be accepted. For those same reasons, it violates the North Carolina Environmental Policy Act, which similarly requires a thorough, objective analysis of alternatives and a full explanation of the basis for the conclusions reached. Rather than restate the multitude of errors in the FEIS, we attach our comments to the Corps regarding the FEIS and incorporate them by reference.

II. If the Erroneous FEIS Analysis Is Accepted, the Terminal Groin Cannot Be Permitted.

If the FEIS is accepted, however, the proposed terminal groin cannot be permitted. As the FEIS concedes, inlet realignment is not only a practicable alternative that would address

erosion on the east end—it is significantly cheaper than building the proposed terminal groin. Alternatives 1, 2, and 4 are all significantly cheaper than the proposed terminal groin when the actual cost to Ocean Isle is evaluated.

DCM cannot approve the proposed terminal groin if “considering engineering requirements and all economic costs there is a practicable alternative that would accomplish the overall project purposes with less adverse impact on the public resources.” N.C. Gen. Stat. § 113A-120(a)(9), N.C. Gen. Stat. § 115.1(e) (requiring compliance with CAMA). Here, it is clear that Alternative 4, Channel Relocation, is feasible from an engineering perspective, is the cheapest alternative available to Ocean Isle, accomplishes the overall project purpose, and would have significantly less adverse impact on public resources than the proposed terminal groin.

First, it cannot be disputed that Alternative 4 is feasible “considering engineering requirements.” Alternative 4 differs from alternatives 1-3 in that it requires more focused dredging to maintain a specific channel orientation.¹ Such dredging is plainly feasible and would accomplish the desired effect. The FEIS concludes that as a result of Alternative 4, “the shoreline on the east end of Ocean Isle Beach should respond in much the same manner as was observed between 1954 and 1965 during which time the east end of the island accreted.”²

Second, the FEIS concedes that Alternative 4 is cheaper than building the proposed terminal groin when only non-federal costs are considered. The FEIS summarizes the cost of each alternative as follows:³

Table 3.12 Summary of 30-year implementation costs of alternatives

Alternative	Total 30-Year Beach Nourishment/Implementation Cost	Federal Share	Non-Federal Share
1- No New Action	\$66,440,000 ⁽¹⁾	\$43,190,000	\$23,250,000
2 – Abandon/Retreat	\$66,440,000 ⁽¹⁾	\$43,190,000	\$23,250,000
3 – Beach Nourishment	\$108,768,000	\$43,190,000	\$65,578,000
4 – Channel Relocation	\$53,150,000	\$30,866,000	\$22,264,000
5 – 750-ft terminal groin	\$45,864,000	\$23,034,000	\$22,830,000

⁽¹⁾Nourishment of federal storm damage reduction project only, does not include demolition, relocation, or sandbags.

Clearly, the Channel Relocation alternative is not only feasible, but it is the lowest-cost option when federal funding is excluded. That this alternative would require a greater federal contribution is immaterial. The FEIS assumes the federal government will continue to fund nourishment under each alternative as part of the federal storm damage reduction project.⁴ Moreover, there is no plausible explanation why the additional federal share of \$7,832,000 over the 30-year span is impracticable. The FEIS does not assert that it is impracticable.

¹ See FEIS at 33.

² FEIS at 34.

³ FEIS at 47.

⁴ *Id.*; see also FEIS at 28 (Alt. 1), 32 (Alt. 3), 35 (Alt. 4), 44 (Alt. 5).

Further, the costs reported in the FEIS do not represent the actual cost to Ocean Isle Beach. The non-federal portion for alternatives 1-4 would be eligible for state funding.⁵ Therefore, Ocean Isle would pay as little as 25% of the eligible costs. As presented in the table below, for Alternative 1 and Alternative 2, the cost to Ocean Isle Beach is \$5,813,500. For Alternative 4, the cost is higher at approximately \$9,823,633. By comparison, total cost of building the groin would be approximately \$13,531,351, because none of the funding for the terminal groin is eligible for state cost share. That represents 130% greater cost than maintaining the status quo and nearly a 40% greater cost than Alternative 4.

Alternative	Federally Authorized Nourishment Cost (total)	Federal Share (65%)	Eligible State Share (26.25%)	Required Local Share (8.75%)	Additional Local Costs for Alternative	Total Local Costs
No Action	\$66,440,000	\$43,190,000	\$17,433,856	\$5,813,500	\$0	\$5,813,500
Abandon	\$66,440,000	\$43,190,000	\$17,433,856	\$5,813,500	\$0	\$5,813,500
Beach Nourishment	\$66,440,000	\$43,190,000	\$17,433,856	\$5,813,500	\$42,330,644	\$48,144,144
Channel Relocation	\$47,486,154	\$30,866,000	\$12,460,367	\$4,155,038	\$5,668,595	\$9,823,633
750-ft Groin	\$35,436,923	\$23,034,000	\$9,298,649	\$3,100,731	\$10,430,620	\$13,531,351

Critically, any reduction in beach nourishment costs would be significantly less than the cost of building the terminal groin. The FEIS rejected the 250-foot groin proposal on that very basis, finding that because of “the inability of the 250-foot structure to reduce periodic nourishment requirements that would offset the cost of constructing and maintaining the structure . . . [it is] not considered to be a viable option.”⁶ Because the 750-foot groin also fails that test, it is not a “viable option.”

Third, Alternative 4 meets the purpose and need. Critically, Alternative 5 does not, as discussed in further detail below. The purpose and need described in the FEIS has four parts:

- To reduce or mitigate erosion along 3,500 feet of Ocean Isle Beach oceanfront shoreline west of Shallotte Inlet;
- To maintain the Town’s tax base by providing long-term protection of property and infrastructure through reduced storm damage and erosion on the oceanfront shoreline of Ocean Isle Beach between Shallotte Inlet and the western terminus of the Federal Project;
- Maintain existing recreational resources;

⁵ See N.C. Beach Inlet Management Plan, Final Report at XII-23, <https://ncdenr.s3.amazonaws.com/s3fs-public/Coastal%20Management/documents/PDF/BIMP/BIMP%20Section%20XII%20-%20Funding%20Prioritization%20Formatted.pdf>.

⁶ FEIS at 44.

- Balance the needs of the human environment with the protection of existing natural resources.⁷

The FEIS goes on to identify “the development of a shoreline protection project that would mitigate chronic erosion” as the “particular” purpose and need of the project.⁸ The document concludes that “Alternative 4 would prevent long-term erosion damage to development along the east end of Ocean Isle Beach in the area east of baseline station 30+00,”⁹ thereby satisfying the “particular” purpose and need identified by the Town. Moreover, as discussed in further detail below, only the non-groin alternatives meet the “purpose and need” statements with respect to recreational resources and the existing natural environment.

Finally, as discussed in additional detail below, Alternative 4 has significantly less adverse impact on public resources. Alternative 4 would maintain the beach east of the proposed groin location for both recreation and wildlife. As described in the FEIS, after six years under projections under Alternative 4, “sediment [would continue] to accumulate west of Shallotte Inlet which is one of the desired results associated with the channel relocation alternative.”¹⁰ Therefore, implementation of the cheapest alternative would result in a larger beach on the east end of Ocean Isle.

III. The Application Does Not Adequately Evaluate Indirect Effects.

Ocean Isle Beach is required to submit with its application “[a]n environmental impact statement that satisfies the requirements of GS 113A-4.” N.C. Gen. Stat § 113A-15.1(e). Here, that includes an EIS that fully evaluates the indirect effects of the proposed groin. *See* 1 N.C. Admin. Code 25.0603 (describing contents of EIS).

The indirect effects of this project are not only insufficiently analyzed, but the limited analysis presented is misleading. As discussed in the attached comment letter on the FEIS, the two- to-five-year analysis of indirect effects of alternatives is indefensible and incomplete. As detailed in our FEIS comments to the Corps, which are incorporated here by reference, CPE scaled the erosion rates predicted by the Delft3D model in order to justify building the terminal groin. For example, when the model predicted erosion between the location of the proposed groin and station OI 30 to be 24,000 cy/yr—which would be more than compensated for by nourishment—CPE assumed without explanation that erosion would nonetheless continue at the previously observed rate of 91,000 cy/yr and that any increased erosion greater than 24,000 cy/yr would indicate a proportional increase in the previously observed rate.¹¹ CPE proportionally increased beach nourishment need estimates based on that assumption, dramatically increasing nourishment requirements.¹²

⁷ FEIS at 16

⁸ *Id.*

⁹ FEIS at 35.

¹⁰ FEIS at 129.

¹¹ *See* FEIS, Appendix G at 22, response to comment 184 (stating 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”).

¹² *See* FEIS at 31 (summarizing determination that Alternative 3 would require fill to offset 140,000 cy/yr erosion based on Delft3D modeling that predicted 37,000 cy/yr erosion).

East of the groin, however, CPE did not proportionally increase the modeled erosion rates and has therefore dramatically underestimated the effect of the proposed groin on the existing beach. If the Delft3D model under-estimates erosion west of the groin,¹³ it must also be considered to under-estimate erosion east of the groin, or CPE must provide a credible scientific explanation for the discrepancy. As predicted by the Delft3D model, the proposed groin will increase erosion rates east of the groin by 4.5 times the rates predicted under Alternative 1.¹⁴ Given CPE's assumption that the modeled rate for Alternative 1 of 24,000 cy/year is equivalent to 91,000 cy/year, the proposed terminal groin will cause Ocean Isle Beach east of the groin to erode by hundreds of thousands of cubic yards per year—eliminating the recreational beach and available wildlife habitat.¹⁵

IV. Elimination of the Recreational Beach and Wildlife Habitat East of the Proposed Groin Cannot Be Permitted.

The substantially increased erosion predicted east of the proposed groin both fails to meet the project's purpose and need and violates applicable law. First, the purpose and need as described in the FEIS includes both maintaining the existing recreational beach and reaching a balance between protecting property and natural resources. Alternative 5 fails to satisfy either of those stated purposes and needs. As described in the FEIS, the beach east of the proposed terminal groin will be eliminated. CPE failed to evaluate adequately the indirect effects of the project by arbitrarily limiting its analysis to five years of a 30-year project, thereby intentionally understating its effects, but even that limited analysis demonstrates that the existing recreational beach will be lost. In addition, the elimination of that beach will have a significant adverse effect on wildlife that could be avoided with Alternative 4, thereby failing to strike an appropriate balance.

Beyond failing to meet the purpose and need, Alternative 5 violates applicable law. Under CAMA, DCM cannot issue a permit for a terminal groin project unless it finds that:

[c]onstruction and maintenance of the terminal groin will not result in significant adverse impacts to private property *or to the public recreational beach*. In making this finding, the Commission shall take into account the potential benefits of the project, including the protection of the terminus of the island from shoreline erosion and inlet migration, beaches, protective dunes, wildlife habitats, roads, homes, and infrastructure, and mitigation measures, including the accompanying beach fill project that will be incorporated into the project design and construction and the inlet management plan.

N.C. Gen. Stat. § 113A-115.1(f)(4) (emphasis added).

¹³ To be clear, the Corps' decision to inflate erosion rates without providing any rationale is arbitrary and capricious. That said, if it inflates erosion rates as described in an attempt to justify building the groin, it must do so east of the proposed groin as well.

¹⁴ See FEIS at 41 (showing that a 750-ft terminal groin will increase erosion between station -5 and station -20 from 11,000 cy/yr to 49,900 cy/yr).

¹⁵ See FEIS, Appendix G at 22, response to comment 184 (stating 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").

In addition, CAMA's other provisions still apply. For example, DCM cannot issue a permit that would "jeopardize the public rights or interests" in public trust waters, *id.* 113A-120(a)(5), such as the ocean beaches east of the proposed groin. Rules make clear that "[t]he public has rights in these areas including . . . recreation." 15A N.C. Admin. Code 07H .0207(b). The objective in identifying public trust areas such as the beaches east of the proposed groin is "[t]o protect public rights for navigation and recreation and to conserve and manage the public trust areas so as to safeguard and perpetuate their biological, economic and aesthetic value." *Id.* 07H .0207(c). Crucially, "[p]rojects which would . . . increase shoreline erosion . . . are considered incompatible with the management policies of public trust areas." *Id.* 07H.0207(d) (emphasis added), *see id.* 07H .0306(g) ("Development shall not interfere with legal access to, or use of, public resources, nor shall such development increase the risk of damage to public trust areas.").

The CRC's policy statements with respect to erosion control measures are unequivocal: "protection of the recreational use of the shorelines of the state is in the public interest." 15A N.C. Admin. Code 07M .0201. Those policies continue, stating:

The public right to use and enjoy the ocean beaches must be protected. The protected uses include traditional recreational uses (such as walking, swimming, surf-fishing, and sunbathing) as well as commercial fishing and emergency access for beach rescue services. Private property rights to oceanfront properties including the right to protect property *in ways that are consistent* with public rights should be protected.

Id. 07M.0202(a) (emphasis added). "Erosion response measures designed to minimize the loss of private and public resources to erosion should be economically, socially, and environmentally justified." *Id.* 07M .0202(b).

The dredge and fill law similarly directs DCM to "deny an application for a dredge or fill permit upon finding: (1) that there will be significant adverse effect of the proposed dredging and filling on the use of the water by the public; . . . or (3) that there will be significant adverse effect on public health, safety, and welfare; . . . or (5) that there will be significant adverse effect on wildlife or fresh water, estuarine or marine fisheries." N.C. Gen. Stat. § 113-229(e); *see* N.C. Gen. Stat. § 113A-120(a)(2).

The effect of the proposed groin on both human recreational and wildlife use of the east end of Ocean Isle Beach are intertwined. Because the proposed groin will cause significantly increased erosion, the recreational beach and the available wildlife habitat will be eliminated.

The significant, adverse effect of the proposed groin on wildlife is clear. Here, the U.S. Fish and Wildlife Service 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 the project not be authorized.¹⁶ 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.¹⁷

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.¹⁸ 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.”¹⁹

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.²⁰

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.”²¹ 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.”²² 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. U.S. Forest Serv.*, 2012 U.S. Dist. LEXIS 84943, 36 (D. Cal. 2012).

¹⁶ See letter from P. Benjamin, FWS, to T. Crumbley, USCOE (May 20, 2016) (Attachment 1 to SELC comments to Corps, attached hereto); letter from P. Benjamin, FWS, to T. Crumbley, USCOE (March 12, 2015) (Attachment 2 SELC comments to Corps, attached hereto).

¹⁷ Email from W. Laney, FWS, to C. Weaver, NCDENR (Dec. 19, 2011) (Attachment 3 to SELC comments to Corps, attached hereto).

¹⁸ See May 20, 2016 letter at 5.

¹⁹ *Id.*

²⁰ Biological Opinion at 63.

²¹ FWS, Endangered Species Glossary, www.fws.gov/nc-es/es/glossary.pdf.

²² *Id.*

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.**”²³ 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....”²⁴

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

Past and ongoing stabilization projects fundamentally alter the naturally dynamic coastal processes that create and maintain beach strand 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.²⁵

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.²⁶

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.

V. Conclusion

In sum, the lowest-cost alternative as described in the FEIS not only meets the stated purpose and need—it preserves the recreational beach and wildlife habitat formed by the natural inlet processes. Therefore, Channel Relocation as described in Alternative 4 is the only alternative that can be permitted. The proposed terminal groin simply does not meet the legal requirements outlined above and cannot be permitted.

²³ Biological Opinion at 30 (emphasis added).

²⁴ *Id.* at 30-31.

²⁵ *Id.* at 98.

²⁶ Biological Opinion at 99.

We appreciate the opportunity to submit these comments and request to be notified if any action is taken with respect to Ocean Isle Beach's application.

Sincerely,



Geoffrey R. Gisler
Senior Attorney

GRG/rgd

Enclosures

Cc: