



August 15, 2014

Mickey Sugg
Project Manager
U.S. Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403-1343

Dear Mr. Sugg:

Please accept the following comments on the Figure Eight Beach Homeowners Association's terminal groin project proposal on behalf of the N.C. Coastal Federation.

This letter is a follow up on your response, sent October 4, 2013, to our previous letter sent to you on September 6, 2013. In that letter we asked that the U.S. Corps of Engineers develop a supplement to the draft Environmental Impact Statement (DEIS) discussing the newly proposed alternative for Rich Inlet. You responded that at the time the applicant had not formally presented to you its new preferred alternative and that you could not make any determination as to whether a supplement to the DIES was warranted or not.

The federation recently learned from the official minutes of the April 2014 Figure Eight Homeowners Association's (Association) meeting that it has chosen the newly developed, more northern alternative as its preferred alternative. The Association stated in its minutes that the Corps is in the process of developing the final environmental impact statement in the next 3-6 months. I have attached a copy of the minutes to this letter and request that they become part of the official agency record for the DEIS process (Appendix 1).

I. Newly Proposed Alternative Mandates Supplement to the draft EIS

As we stated in our previous letter, the new preferred alternative design is significantly different from any of the alternatives described and evaluated in the original DEIS. Some of the major differences between the new preferred alternative and the previously preferred alternative include:

- (1) The new structure is longer, bigger and more expensive.
- (2) The portion of the structure that has six feet of elevation is longer and more substantial.
- (3) The footprint of the structure is new and angled.
- (4) Modeling for the new alternative is misleading because it is based on the shoreline position in 2006-07, rather than on the newly accreted and current shoreline position.



- (5) The direct disruption of the federally designated “critical habitat” is greater than it was with the previous preferred alternative given the proposed location of the groin right in the midst of prime nesting and foraging habitat.

The 40 C.F.R § 1502.9(c) states that Agencies:

- (1) *Shall prepare supplements to either draft of final environmental impact statements if:*
- (i) *The Agency makes substantial changes in the proposed action that are relevant to environmental concerns; and*
 - (ii) *There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.*

Based on the differences outlined above and taking into account the regulations of the Council of Environmental Quality, we believe that the newly proposed preferred alternative constitutes a “substantial change” and mandates a separate analysis to be added to the final EIS in the format of a supplement.

Furthermore, the supplement is warranted by the significant new circumstances of information (40 C.F.R § 1502.9(c)(ii) described more in detail in the next section. These new circumstances refer to the dramatic changes in shoreline position between the time the DEIS was published and the present.

II. Current Shoreline and Inlet Configuration Needs To Be Used As Baseline

Federation believes that the modeling used to indicate future shoreline positions (i.e. Delft 3D) should not be the sole or preeminent factor in the Corps’ decision-making. However, if done, such modeling should be based on the *current and best available data*, rather than on the “*worst-case scenario*” as stated by the CPE-NC in its report presented at the Association’s meeting in April, 2014 (Appendix 1).

CPE-NC states:

“In order to maintain relative comparisons in differences ... all of the alternative modeled within the DEIS were rerun in Delft3D using the same initial conditions and same input parameters (tide, waves, winds etc.). The initial conditions used in the model tests were based off the 2006-07 shoreline and inlet configuration which represent “the worst-case” conditions in terms of erosion impacts on the north end of Figure Eight Island as opposed to the current conditions.”

The shoreline and inlet configuration have significantly changed from the 2006-07 configuration that the CPE used as a baseline for its modeling. Figure 1 illustrates the substantial breadth of change and the natural accretion of about 60 acres in the sand spit at the northern end of the island. The current shoreline and inlet configuration were not predicted to occur by the original Delft3D model under the No Action alternative (see

Figure 2) which begs the question as to why these models are considered to be of any value in making management decisions regarding the inlet. Figure 2 illustrates the configuration of Rich Inlet in 2011 and 2012 if no action was taken to control erosion. The illustration based upon the computer simulation indicates that the entire beach would be eroded away in front of the houses at the inlet. The model failed to predict that the beach would in fact not erode, but gain sand and contain approximately 60 acres of new land that the computer model failed to predict.



Figure 1: Shoreline changes between 2008 and 2013 at north end of Figure Eight Island. Source: Google Earth.

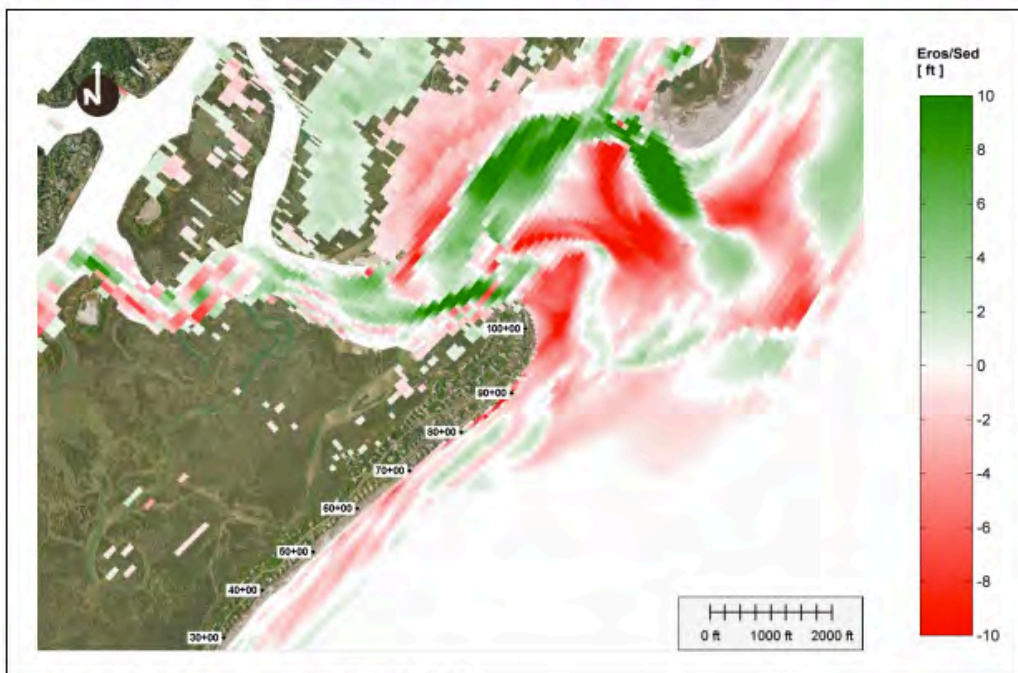


Figure 6: Alternative 2, erosion/sedimentation after 5 year simulation.

Figure 2: This is "Figure 6" from the supplement to the Engineers' Report in Appendix B of the draft Environmental Impact Statement.

Furthermore, the current shoreline and inlet position invalidates the project's stated purpose and needs among which are:

- Reduce or mitigate erosion along 3.77 km of Figure Eight Island oceanfront shoreline.
- Provide reasonable short-term protection to imminently threatened residential structures.
- Maintain existing recreation resources.

The newly formed inlet configuration has eliminated most erosion issues at the northern end Figure Eight Island, and therefore no structures or infrastructure on the beachfront are currently threatened, and the recreation resources have increased in area. Thus, there is no current need for protection of these resources. The purpose and needs of the project need to be updated based on the present conditions.

Therefore, a terminal groin is not needed anymore. However, if the Association and the Corps still insist on pursuing this unnecessary, expensive and destructive project, they need to provide new analysis based on the existing shoreline configuration. This new analysis also needs to redo the alternatives that are evaluated in the draft EIS since they are now based upon a condition that no longer exists at the inlet. In specific, the channel relocation alternative is not accurate. That alternative needs to eliminate the need for moving the channel, and instead focus on maintaining the channel in its preferred location (as it is positioned today).

III. Property Rights Need to be Secured

As we stated in our previous letter, if the groin were permitted it would have to be built on private property since the beach is privately owned to the mean high tide line. The historic shoreline movements of the inlet, documented in the DEIS show there has never been an erosion threat to most of the houses located next to the inlet, and the ones that are located near the shore at the backside of the island wouldn't receive any substantial protection from the groin anyway. Most of the property owners at the inlet have been gaining property while the north end accretes. At least some of these owners now understand the lack of need for this project, the high financial risk associated with it, and the availability of effective alternatives (such as channel relocation) that exists if/when these properties are ever in serious risk of erosion.

Permission must be obtained from all property owners before permits can even be requested. Permit applications are not complete without required authorization from the people who own the property where the project will be built.

The Association's board has spent valuable Corps' and other state agencies' staff resources and time pursuing this project without taking the initial, basic step of securing the required

permission from the property owners whose property would be taken and impacted by the project.

IV. Section 7 Consultation is Required Under the Endangered Species Act

Section 7 of the Endangered Species Act mandates that all federal agencies consult with the U.S. Fish and Wildlife Service and National Marine Fisheries Service about the effect of the federal project on the federally listed endangered and threatened species. In addition, Section 7 also mandates inclusion of those species proposed to be listed.

This process includes composing a coherent list of affected species and completion of the required Biological Assessment. These and other steps were put in place in order to ensure coordinated and concurrent work of the multiple federal agencies involved as early in the process as possible.

This mechanism allows the federal agencies to examine and publish the factual biological vulnerabilities of endangered species affected by the proposed projects.

40 C.F.R § 1502.25 mandates:

*To the fullest extent possible, agencies shall prepare draft environmental impact statements **concurrently with and integrated with** environmental impact analyses and related surveys and studies required by the Fish and Wildlife Coordination Act ([16 U.S.C. 661](#) et seq.), the National Historic Preservation Act of 1966 ([16 U.S.C. 470](#) et seq.), the Endangered Species Act of 1973 ([16 U.S.C. 1531](#) et seq.), and other environmental review laws and executive orders.*

Furthermore, 50 CFR 402.14(a): Requirement for formal consultation, mandates:

*Each Federal agency shall **review its actions at the earliest possible time** to determine whether any action may affect listed species or critical habitat. If such a determination is made, formal consultation is required...*

The DEIS for Figure Eight Island mentioned a reference that the Section 7 Consultation process will occur, but it did not include the description, timeline and the decision of the consultation, nor a mutually agreed upon with other resource agencies list of affected, federally listed and proposed to be listed species.

In addition, in the email on September 26, 2011 to the third party consultants that we obtained through the Freedom of Information Act request you state (Appendix 2):

"I don't plan on sending the BA to FWS & NOAA until the end of the DEIS Notice of Availability commenting period. That way we can make any necessary changes to the BA in response to comments received on the DEIS."

The intent of the above mentioned laws was not to make the process easier for the Corps but to ensure the proper and early communication among the federal agencies with the goal of protecting the endangered species affected by the proposed project. Issuing a supplemental draft EIS provides a new opportunity to provide for this required on-going coordination with these resource agencies. Given that the U.S. Fish and Wildlife Service has already recommended denial of the project in its letter of comment of the DEIS, determining if the project is consistent with the designated "critical habitat" at the inlet is vital.

It is our position that a terminal groin placed in the middle of the federally protected habitat will never be allowed under the requirements of the federal Endangered Species Act.

We request that the Corps updates the public as to its plans and the overall timeline and the current status of the Figure Eight Island project, and that it either retire this process or issue a new supplement to the draft Environmental Impact Study.

Sincerely,



Ana Zivanovic-Nenadovic
Program and Policy Analyst

CC:
Todd Miller, N.C. Coastal Federation
Mike Giles, N.C. Coastal Federation
Derb Carter, Southern Environmental Law Center

Appendix 1



Figure "8" Beach Homeowners' Association, Inc.

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April 23, 2014

RICH INLET MANAGEMENT and PROPOSED TERMINAL GROIN

Update

Frank D. Gorham, III, President

As you are aware, the Association's Board of Directors has been studying the various options to help stabilize the north end of Figure Eight with a focus on Rich Inlet. In 2007, we began a very detailed long term study to determine the best option combined with the regulatory requirements, through what is called an Environmental Impact Statement (EIS). The U.S. Army Corps of Engineers (Corps) was the lead regulatory agency. We utilized the nationally known consulting engineering firm, Coastal Planning and Engineering (CPE).

In 2012 the Corps released the first phase of this process, a Draft Environmental Impact Statement (Draft). In the Draft, the Corps identified several alternatives for north end stabilization. Based on the recommendations from CPE, the Association's preferred alternative was to consider installing a Terminal Groin on the north shoulder of the Inlet. The Terminal Groin alternative was preferred over relocating Rich Inlet or continuing to dredge the Nixon Channel area of Rich Inlet and placing sand on the northern beach. All of us have seen that the alternative of placing sand on the north end beach has only short term benefit at a considerable cost.

Once the Draft EIS was released, all of the many interested parties including regulatory agencies and environmental groups had an opportunity to submit their comments to the Corps. The Corps is now in the process of addressing comments.

The Draft EIS showed a proposed location of a Terminal Groin. Once this proposed location was released in the Draft, the Board held several meetings with the north end property owners who would be most locally impacted by any alternative for addressing erosion near Rich Inlet. Several homeowners asked the Board to attempt to relocate the proposed location further north. The Board explored the possibility of an alternative location through meetings with the CORP and the consulting engineers. This new location had to meet a very difficult balancing act of having an effective engineering design, meeting the environmental concerns, and trying to address concerns of property owners. CPE did complete additional extensive modeling and identified a new site which is located in excess of 400 feet more northerly. This new location is now our preferred alternative.

The Board attempted to hold a meeting over Easter Weekend with owners of lots at Rich Inlet but only a very few were available. We now want to provide all homeowners with the latest information from the engineers. Please find enclosed CPE's report summarizing the proposed location. This location will be in the FINAL EIS which will be released by the CORPS in the next 3-6 months. **We urge all homeowners to study this summary very carefully.**

Once the FINAL EIS is released, the Board will be in a position whether to decide to pursue a permit for a possible terminal groin. **IF A PERMIT IS OBTAINED, THE BOARD WILL BE ABLE TO DETERMINE MORE SPECIFIC COSTS. ONCE WE KNOW THE COSTS, WE WILL SCHEDULE EXTENSIVE INFORMATIONAL BRIEFINGS FOR HOMEOWNERS. THE BOARD WILL THEN SUBMIT A PROPOSED PROJECT AND CORRESPONDING ASSESSMENT TO THE FULL MEMBERSHIP. YOU, THE MEMBERSHIP, WILL DECIDE IF WE PROCEED WITH THE PROPOSED PROJECT.**

**Recommendation for Preferred Alternative
Figure Eight Island
2014**

CPE-NC has completed its evaluation of various alternatives to address the inlet and shoreline problems affecting the north end of Figure Eight Island. During the review of the Draft EIS, which was released in January 2012, some of the property owners on the extreme north end of Figure Eight Island had comments on the proposed position and alignment of the terminal groin included in Alternatives 5A and 5B in the DEIS. As a result, the property owners requested the Board investigate a possible new location for a terminal groin located 300 to 400 feet north of the position shown in the Draft EIS. The Figure Eight Island Board agreed to reconsider the location of the terminal groin which prompted the need for additional Delft3D numerical model simulations of the terminal groin alternatives. In order to maintain relative comparisons in differences in the indicated impacts or changes associated with each alternative, all of the alternatives modeled within the DEIS were rerun in Delft3D using the same initial conditions and same input parameters (tides, waves, wind, etc.). The initial conditions used in the model tests were based off the 2006-07 shoreline and inlet configuration which represent the "worst-case" conditions in terms of erosion impacts on the north end of Figure Eight Island as opposed to the current conditions. We would not recommend attempting to move the groin further north beyond the setting of Alternative 5D.

Figure I shows the position of the terminal groin presented in the DEIS and the position and alignment of the modified terminal groin used in the latest set of model simulation, which will be referred to as Alternative 5D in the Final EIS. The centerline of the seaward portion of the modified terminal groin (Alternative 5D) is approximately 420 feet north of the terminal groin presented in the DEIS.

Following the most recent round of model simulations of project alternatives, CPE-NC believes Alternative 5D is the optimum solution to address the erosion problems previously experienced on the north end of Figure Eight. As such, it has been determined that this alternative will provide the most protection to the property on the north end of the island. Figure 2 shows the complete layout of Alternative 5D, which includes a 1,500-foot terminal groin, beach fill along the ocean shoreline extending south from the terminal groin to approximately 322 Beach Road North (total distance 4,500 feet), and beach fill along 1,400 feet of the Nixon Channel shoreline. Material for the beach fills would be obtained from the area in Nixon Channel that has been used by the HOA for past nourishment operations along the north end of the island.

The length of the terminal groin for Alternative 5D is 100 feet shorter than the terminal groin presented in the DEIS while the beach fill volume is the same. Five-year periodic nourishment requirements for 5D indicated by the new round of model tests were slightly higher than the nourishment requirements presented in the DEIS, however, this difference was due to some differences in the initial model conditions used in the two sets of model simulations- not the position of the terminal groin. In terms of overall impacts, moving the terminal groin farther north and closer to Rich Inlet did not significantly change the relative impacts of the terminal

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groin option presented in the DEIS. Also, the modified terminal groin was still able to provide the desired degree of beach stability along the north end of Figure Eight Island. Finally, the modified location would only cross approximately 300 feet of coastal wetlands on the north end of the island (Figure 1) compared to over 600 feet impacted by the original terminal groin layout presented in the DEIS. Moving the terminal groin farther north beyond the location of Alternative 5D would likely have a negative impact and would have greater environmental concerns. We would not recommend attempting to move the structure further north beyond the current location of 5D.

The terminal groin would include a 995-foot shore anchorage section constructed with sheet piles. The top of the sheet piles would be below the existing ground elevation and would not be visible under normal circumstances. Although the final design of the sheet pile portion of the groin has not been completed, the preliminary assessments indicate that it would penetrate to a depth of -20 to -20 NAVD in an attempt to reach bedrock. The seaward 505 feet would be constructed as a rubblemound with a top elevation of +6 feet NAVD which is essentially the same elevation of the upper portion of the beach near Rich Inlet. A profile or side view of the terminal groin is provided in Figure 3.

Most of the stone in the seaward section would be placed below ground level by excavating a trench down to an elevation of -5.5 feet NAVD as shown in the typical section in Figure 4. A 30-foot scour protection apron would be provided on the inlet side of the rubblemound to guard against undermining in the unlikely event the inlet channel migrates up to the structure. Under normal conditions, the landward 350 feet to 400 feet of the rubblemound structure would be below ground level while the seaward most 200 to 250 feet of the rubble structure could project one to two feet above ground level.

In summary, moving the terminal groin north towards the shoulder of Rich Inlet did not significantly change the impacts of the terminal groin compared to the impacts presented in the DEIS. The length of the modified structure is 100 feet shorter than the one presented in the DEIS. Also, the modified layout would only impact 300 feet of the coastal wetlands on the north end of the island compared to 600 feet for the DEIS layout. Most important, moving the terminal groin to this more northerly location did not impact its ability to provide a relatively stable beach along the extreme north end of the island. Moving the terminal groin north of the location designed in Alternative 5D would likely have a negative impact and would result in greater environmental concerns.

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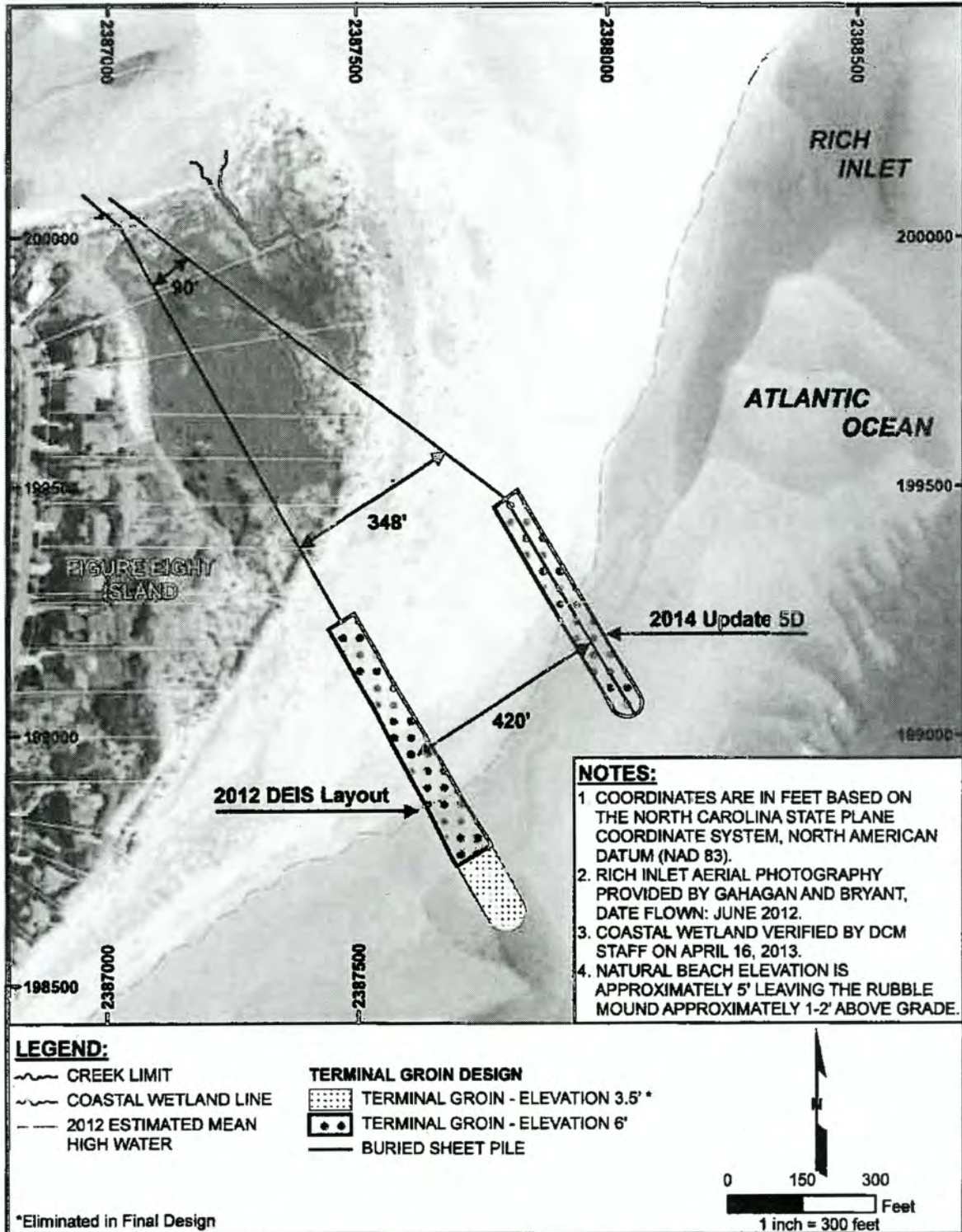


Figure 1. DEIS and modified terminal groin layout 5D.

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Figure 2. Alternative 5D; Recommended Alternative

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Preliminary Terminal Groin Design - Alternative 5D

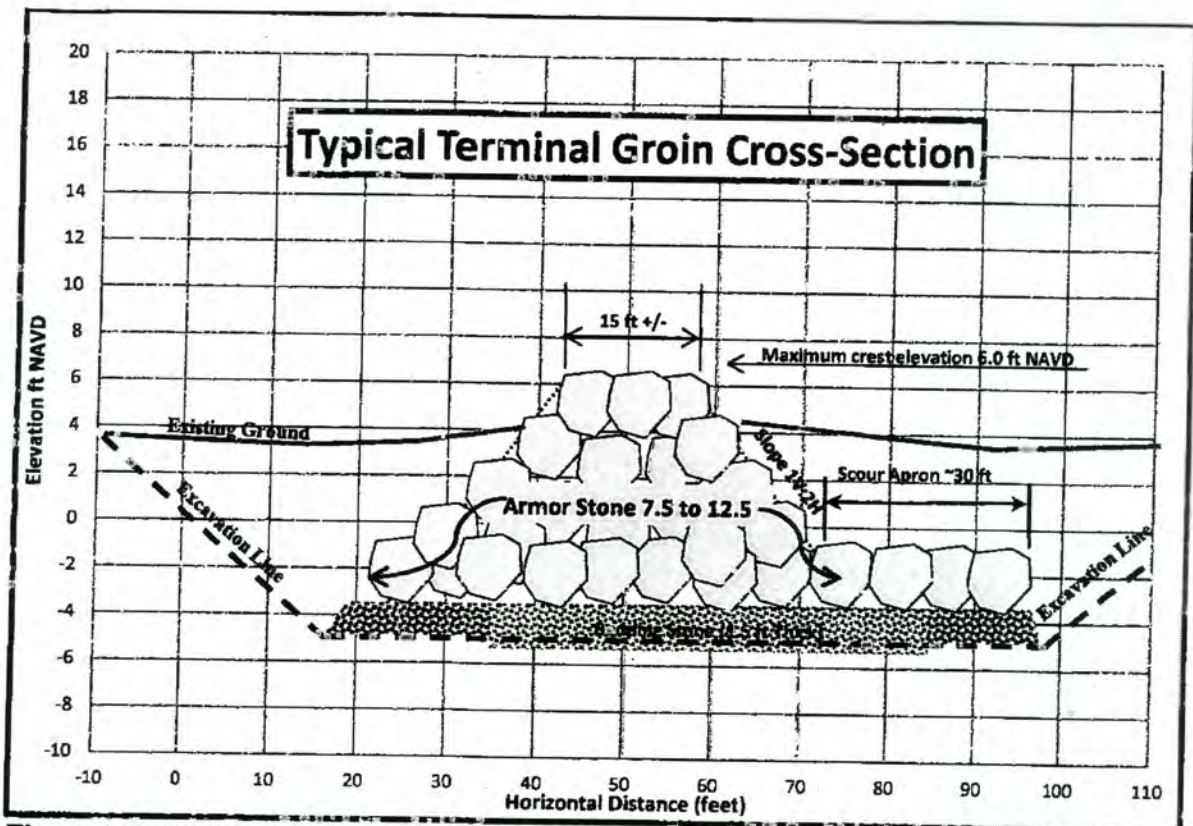
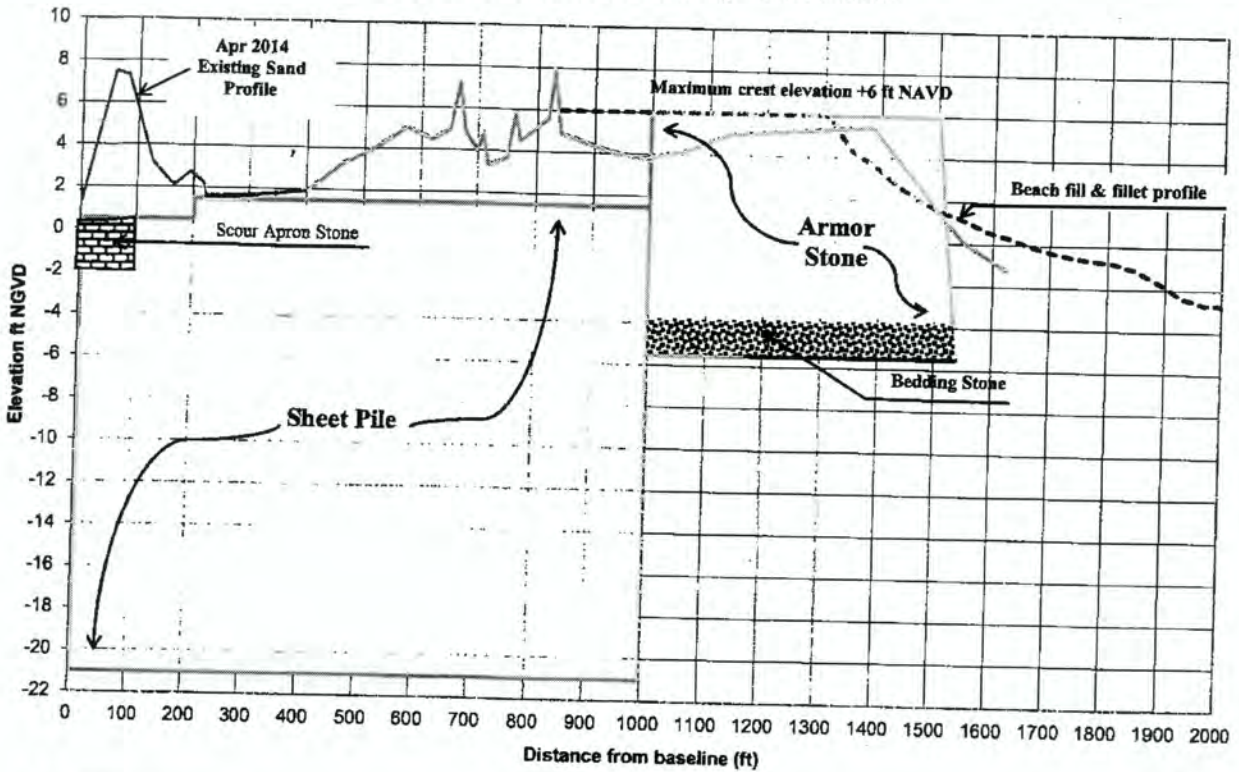


Figure 4. Rubblemound cross-section (preliminary).

Appendix 2

From: Sugg, Mickey T SAW
To: "Rosov, Brad"
Subject: RE: Atlantic Sturgeon listing
Date: Monday, September 26, 2011 9:27:00 AM

Yes sir. It appears that the listing will happen. Will add the critical habitat if that is included in the permit area, which I would be surprise if it was.

Mickey Sugg, Project Manager
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(910) 251-4025 (fax)

-----Original Message-----

From: Rosov, Brad [<mailto:Brad.Rosov@shawgrp.com>]
Sent: Monday, September 26, 2011 8:35 AM
To: Sugg, Mickey T SAW
Subject: RE: Atlantic Sturgeon listing

So you think it's pretty much a done-deal that the species will be listed? I held off on adding it just in case it wasn't going to be listed... I'll start to incorporate the info into it now. Of course, there is no critical habitat designation as of yet, so that will need to be added in once it is identified come October, I'm sure. Agreed?

BR

-----Original Message-----

From: Sugg, Mickey T SAW [<mailto:Mickey.T.Sugg@usace.army.mil>]
Sent: Monday, September 26, 2011 8:32 AM
To: Rosov, Brad
Subject: RE: Atlantic Sturgeon listing

Brad-

There is no reason to delay not putting it in the BA since it will have to be addressed eventually. My guess is that the listing will probably be finalized prior to the BA being sent out for concurrence (I think NOAA is looking to list it in October). I don't plan on sending the BA to FWS & NOAA until the end of the DEIS Notice of Availability commenting period. That way we can make any necessary changes to the BA in response to comments received on the DEIS.

-mickey

Mickey Sugg, Project Manager
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-----Original Message-----

From: Rosov, Brad [<mailto:Brad.Rosov@shawgrp.com>]
Sent: Monday, September 26, 2011 8:18 AM
To: Sugg, Mickey T SAW
Subject: RE: Atlantic Sturgeon listing

Mickey,

At this point, the Atlantic Sturgeon has yet to be listed, correct?

Therefore it wouldn't warrant a section in the BA as of now (although, from what I gather, it is likely to be listed within the month or so), right?

Are you suggesting that I simply include some discussion in the BA that the listing is currently being proposed (opposed to adding an entire section on Atlantic Sturgeon, for now, at least)?

Thanks,

BR

From: Sugg, Mickey T SAW [mailto:Mickey.T.Sugg@usace.army.mil]
Sent: Monday, September 26, 2011 8:12 AM
To: Rosov, Brad
Subject: Atlantic Sturgeon listing

Info on new endangered listing for Atlantic Sturgeon, <http://www.nmfs.noaa.gov/pr/pdfs/fr/fr75-61904.pdf>
<<http://www.nmfs.noaa.gov/pr/pdfs/fr/fr75-61904.pdf>> . Apply this to BA for Figure 8 project.

-mickey

Mickey Sugg, Project Manager

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