

Figure Eight Proposed Project – Draft EIS Comments

Notice concerning citizen comments:

Comments submitted to the U.S. Army Corps of Engineers, Wilmington District (District) regarding the Draft Environmental Impact Statement (DEIS) for the Figure Eight Island Shoreline Management Project (Action ID 2006-41158) in response to the District's May 18, 2012 Public Notice. Personally identifying Information that is considered exempt from release under the Freedom of Information Act (FOIA), 5 U.S.C.A 552 (b)(6) has been redacted.

U.S. Army Corps of Engineers, Wilmington District
Regulatory Division ATTN: File Number 2006-41158

RECEIVED

JUL 20 2012

REG. WILM. FLD. OFC.

69 Darlington Avenue
Wilmington, NC 28403

July 18, 2012

Dear Sirs:

I am writing in reference to the issue of terminal groins and in particular about the proposed one for Figure Eight Island near my home of Wilmington. I am opposed to this project and feel that it's EIS is inaccurate in many respects including:

conflicting estimates of beach renourishment needed

unreasonable expectations of it's ability to protect property and the extent of property it would protect

unrealistically minimal estimates for the damage a major storm or hurricane would cause
unfair skewing of the analysis in favor of the groin option

does not fairly assess the loss of use of the public to adjacent areas and doesn't include
adequate analysis of the damage caused to other nearby areas by the groin for the benefit of a few people

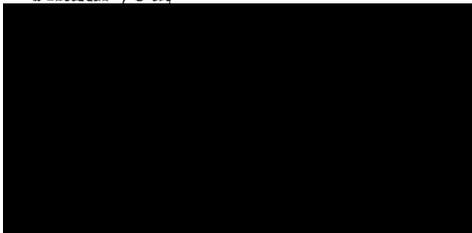
does not show protection of endangered species in the area and adjacent areas

over and under stating costs of alternatives in favor of the groin option over other options
and

MOST IMPORTANTLY FOR ME opens the state up to being sued by other groups not granted one of the four terminal groins and to the judicial result of being forced to grant other groups their own groin. **THIS WILL COST TAXPAYERS** both in defending the lawsuits and in being forced to provide other groins to other groups who demand them.

Please do not grant any permits for terminal groins, there is **PLENTY** of evidence that they will not work long term, costs **WAY TOO MUCH MONEY** and destroy nature's beauty in the meantime. Please protect North Carolina's coasts and beaches the way God made them.

Thank you.





RECEIVED

JUL 17 2012

REC. WILM. FLD. OFC.

US Army Corps of Engineers, Wilmington District
Attn: Mickey T. Sugg, Project Manager
69 Darlington Avenue
Wilmington, NC 28403

July 14, 2012

Dear Mr. Sugg and Corps of Engineers Managers:

We have reviewed the Figure 8 Island Shoreline Management Project Draft EIS and the minutes of the public hearing on June 7. We would like to submit our comments for inclusion to the preliminary public hearing on the environmental impact statement.

We concur with the comments of the individuals who spoke at the public hearing, and we hope you consider those comments carefully.

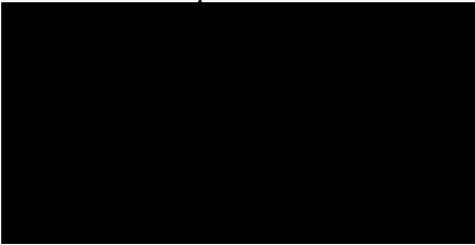
We speak on behalf of users of public beach in North Carolina.

In the past 18 months, we walked every mile of shorefront on the North Carolina coast. We learned much from our journey. One conclusion we formed was that any and every human-made structure on the public beach has a detrimental impact on public use of our beaches. Currently, eight such structures exist on the North Carolina coast. Construction of any other human-made structures should be considered *only if clear evidence of significant public benefit exists*. Clearly, such is not the case with the Figure 8 Island Shoreline Management Project proposal.

The Figure 8 proposal states one of its main purposes is "to ensure the continued use of the oceanfront beach." Construction of a terminal groin would not serve this stated purpose. In fact, a terminal groin would be detrimental to public use of the beach. If you doubt this fact, please walk the Bald Head Island Groin Field on the south end of Bald Head Island. Then walk the unimpeded east beach on Bald Head. No doubt will remain in your mind that terminal groins impede the use of public beach.

The Figure 8 homeowners application also states, "Action is needed to alleviate this threat" (threat of erosion). Public beach will exist wherever ocean meets the shore. The threat occurs whenever a structure is erected on private property. A terminal groin will not protect the public beach; it is designed to protect private property. Action that is harmful to public beach and waters (including inlets, sound, and ocean water) is *not* indicated with the Figure 8 Island Shoreline Management Project. Please do not approve this terminal groin project.

Sincerely,



Comments on EIS for Figure 8 Terminal Groin Project

07 June 2012

My name is [REDACTED]. I live in [REDACTED] and I'm a member of PenderWatch.

The draft EIS seems to be a carefully prepared document. I assume that experts on all sides are checking it out thoroughly.

After reading quickly through it, I focused on the final two pages of the final chapter, which address the question: "How does the construction of the terminal groin relate to Senate Bill 110?" The answer outlines four elements of the Figure 8 Home Owners Assn's legal obligation to set aside funds to make sure the outcome is properly monitored and the groin is fully removed if it doesn't work as hoped. I think their response illustrates how unreal this proposal is. I think all four elements are seriously flawed.

The first element commits \$480,000 for shoreline monitoring. The HOA promises to do 33 detailed studies of the environmental consequences of the groin: two each year for the first three years and annually thereafter until the 30th year. That's a paltry \$14,000 for each of the 33 studies to follow up on all the hundreds of environmental concerns raised by the groin project.

Second is maintenance. There is no allocation at all for repair or maintenance, no matter what the monitoring studies may find. The groin itself would get no maintenance whatever. Nor would neighboring Hutaff Island, which is in Pender County. They say that "Mitigation beach fill for Hutaff Island is not anticipated due to the lack of private property and structures on the island," as if that's all that matters there. So it appears that environmental damage caused by borrowing sand from around Hutaff Island may not be repaired at all.

Third is \$1,821,000 for beach nourishment on Figure 8 Island. The text of the EIS says there will be "periodic nourishment approximately every 5 years at an estimated cost of \$1,821,000 for each operation," which would total \$10,926,000 for six refills over 30 years. I assume they would be doing this whether or not they build the groin.

Finally, they promise to hold \$1 million to remove the terminal groin if it doesn't work. This seems awfully low. They plan to use 16,000 tons of rock -- and pulling that out of the ocean can't be easy or cheap. Also, I'm struck that the tax value of the 558 houses and lots on Figure 8 is reported as \$1.2

billion. That's an average of \$2.1 million per property. Is it reasonable that they would expect to spend only half the cost of a single average house there to completely dismantle and remove this 1600 ft stone groin?

The HOA adds up those four numbers and says they will set aside \$3,301,000 dollars to comply with the law. More than half of that is to pay for just one beach renourishment out of six that the HOA would probably be doing anyway. The remaining \$1 ½ million dollars seems dangerously minimal to me. I certainly hope the State will do its own estimate of what it would really cost to monitor the effects of this project and to take it away when it fails.

Thank you.

[REDACTED]
[REDACTED]
[REDACTED]

July 17, 2012

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

Dear Mr. Sugg,

This letter contains comments on the draft Environmental Impact Statement (DEIS) prepared by the Figure Eight Homeowners' Association (HOA), regarding the proposed terminal groin at Rich Inlet. I am a professor of economics [REDACTED] and speak only to issues pertaining to the evaluation of the expected economic benefits and costs of the proposed action. The views expressed herein are strictly my own, and do not represent the opinions of anyone at [REDACTED] or any other person or organization.

By way of general introduction, I must say that in my nearly two decades of reviewing environmental impact statements for coastal projects in North Carolina and other states, I have never seen one done more poorly. The writing, the organization, the prolixity, the errors and omissions, and the inconsistencies from one section to another, make this document wholly and grossly inadequate as a basis for a permit decision. At the very least, a major supplement should be issued that includes discussion of omitted issues, discussed below. At best, this draft should be jettisoned and the process started anew, with a mandate for clarity, completeness, and a logical structure that allows the non-technical observer to draw well-informed conclusions.

More specifically, my comments are organized as follows: (1) general observations regarding benefit/cost analysis, (2) simple property value issues, (3) storm damage issues, (4) mitigation and maintenance issues, and (5) conclusions.

- (1) General observations regarding benefit/cost analysis
 - a. Organization

It is standard practice in documents of this type to include a separate section for the analysis of economic benefits and costs, and for good reason: only when all of the relevant economic information is gathered in one place in the document can the non-technical reader make well-informed judgements. In the present case, the limited economic information that is included is scattered among many sections, making analysis far more

difficult than it should be. The document should be re-written and/or a supplement issued, with a section dedicated to economic analysis, with ALL of the claimed benefits and costs thoroughly addressed in one place.

b. Benefits

The DEIS claims benefits will accrue to the local economy as a result of the proposed action. While this may be true, nowhere is it justified in any detailed way. Further, the document lacks discussion of any differences in benefits (other than avoided costs) among the various alternatives. It is not likely that the positive impacts are identical among the alternatives. If that is indeed the assumption made in the analysis, that assumption should be clearly discussed and justified. If there are differences in benefits among the alternatives, those differences should be clearly discussed and quantified.

c. Direct cost issues

As I am not an engineer I have very limited ability to judge the validity of the costs cited in the DEIS for building the groin, maintaining the groin, moving houses, performing mitigation, and so on. As noted below, however, many aspects of mitigation are effectively ignored, and the estimated maintenance costs are substantially lower than those observed and anticipated by the CRC study of terminal groins. The omission of reasonable values for mitigation costs, and the deviation of estimated maintenance costs from CRC norms should be thoroughly explained and justified.

d. Issues of uncertainty

The dynamic and unpredictable nature of the NC coast is a given. One hardly needs better evidence for that than the DEIS itself: the project life is 30 years, the presented performance analysis generally extends for only five years. None of us know the specifics of what will happen over that long period of time. Yet, the analysis is presented in terms of point estimates, rather than range estimates, for virtually all of the important performance parameters, as if the outcomes could be predicted not only with certainty, but with great precision as well. Clearly, this is not valid, but that invalidity is not made obvious in any useful way. The analysis should be presented in a way that makes it very clear that few (if any) of the important parameters for future performance can be known with either certainty or precision, and that the resulting estimates of costs and benefits are therefore neither certain nor precise. This can be done one or more ways, including (a) confidence intervals, (b) alternative scenarios with varying assumptions regarding storm activity, sea level rise, and engineering success, and (c) use of different discount rates in the present value analysis, so that less-certain outcomes are discounted more highly than are more-certain outcomes. However it is done, it is essential that the DEIS reflect the fact that our collective experience with coastal engineering has taught us that a very wide range of outcomes are possible.

2. Property value issues

a. 2008 values

The property values of used in damage estimates are those of 2008. The current values are far lower. Typical values of coastal property will presumably increase over the next 30 years. The values that are needed in the analysis are those of the affected properties at the moment when impacts take place. No reason is presented as justification for the use of the 2008 values as estimates of the appropriate values; one doubts that any such reason (other than ease of use) exists. If the 2008 values are indeed appropriate as proxies for the appropriate values, then the reasons for that should be very clearly explained. If there is no such justification available, then those values must not be used. If, due to the inherent uncertainty, the appropriate value are simply unknowable, so that some sort of rough average must be used, then that, too, should be spelled out.

b. Moved structures

I did not find any clear statement(s) as to how the study was treating the values of structures that would be re-located in the cases of the non-structural alternatives. To deal with it properly, one would have to make specific assumptions about which structures were moved, and at what points in time, and to where. One could then make estimates of the value lost in one place, and then the value re-gained in another place, and the present value of those. Rather than doing that, it seems that the issue has been essentially ignored, because the relevant future facts simply cannot be known. While this is not wholly-unreasonable, as our ignorance here is irreparable, the issue should be explicated thoroughly and clearly. Once again, observers need to be made aware of the uncertainty inherent in the undertaking, and the implications of that uncertainty for the validity and precision of the estimates.

c. Affected properties

It is perfectly clear why the properties that are currently sandbagged are considered threatened. In contrast, it was not clear at all that the non-sandbagged properties on Surf Court are threatened in the same way or to the same extent. If indeed they are believed so to be, then the basis for this judgment should be made clear. If no such justification exists, these properties should be excluded from the set of threatened properties. If they are indeed threatened but to a different extent or in a different way, this should be made clear, and the analysis adjusted accordingly.

d. Truncated properties

Also not clear is the manner in which, and the extent to which, the loss of value of

properties that will be truncated (by the seawall and groin) has been analyzed. The properties whose back yards now consists of beach extending into the inlet, and who would soon see that land disappear, and who would now have sheet pile and/or stone mounds where the beach used to be, would suffer considerable loss of value as a result. And as these properties are not imminently threatened, there would be no corresponding gain in value from the structure's protective services. Even if these individuals are compensated in some way, the loss of value has occurred, and should be clearly and explicitly accounted for in the analysis. It may indeed be in there somewhere; I did not find it.

3. Storm issues

Substantial and damaging storms will occur in the vicinity of the threatened properties over the next 30 years; with or without the various alternatives, damage to structures and loss of land will occur as a result of those storms. With the exception of the analysis of mitigation costs, in which it is presumed that up to 800 feet of shoreline retreat will occur without any blame going to the seawall and groin, there seems to be no explicit consideration of storm damage. This is, as a mentor of mine used to say, utterly the sheerest sort of nonsense, and must be corrected. Although it is true that the long-term erosion estimates do include the effects of storms, it is not true that erosion occurs in a simple linear fashion. Further, vast structural damage can occur during storms, even without actual (net) erosion taking place. Ignoring storm issues has two impacts on the analysis that must be corrected by explicit consideration of these issues. First, by excluding storm damages, the relative benefit/cost assessments are skewed for all of the projects. All of them produce less benefit when storm damages are included. Second, because the alternatives differ in terms of which properties receive various forms of protections, there is no particular reason to believe that storm damages will be identical for every property under all alternatives. Proper consideration of these issues may change the economic ranking of alternatives, especially when proper treatment of uncertainty (i.e., confidence intervals and/or alternative damage scenarios). There is a burden on the applicant to demonstrate that the hypothesis of "no difference among alternatives" can be definitively rejected, at a high statistical level of confidence, when these issues are properly considered. I suspect that there would be very substantial overlap of the confidence intervals for net present value of expected economic benefits, in a way that makes rejection of that hypothesis entirely problematic.

4. Mitigation and maintenance

The analysis of mitigation is wholly unrealistic. It seems to be based on four beliefs: that no damage will occur if the groin is built; that even if damage does occur, it will not be the fault of the groin; that even if such damage is the fault of the groin, nobody will ever be able to prove that; and that even if groin-caused damage does occur and is proven, it will be to resources that have no value (biologic or economic). Therefore no mitigation would be required. This portion of the analysis should be rejected in its entirety, with a mandate that a realistic analysis take its place, with reasonable assumptions about the damage that

may occur as a result of the project. Further, that analysis should very explicitly acknowledge the value of such things as (a) piping plover habitat, in all places (even when ephemeral) and at all times of the year; (b) the recreational and habitat value of the sand spits and small islands that would be destroyed; (c) the negative value of the beach access lost by the public; and (d) the costs and benefits of alterations to Hutaff Island consequent to the project. The analysis should include rationally-determined triggers (in terms of nature of impact, size of impact, and duration of impact), in contrast to the present triggers, which apparently were chosen to obviate the need for significant mitigation, period.

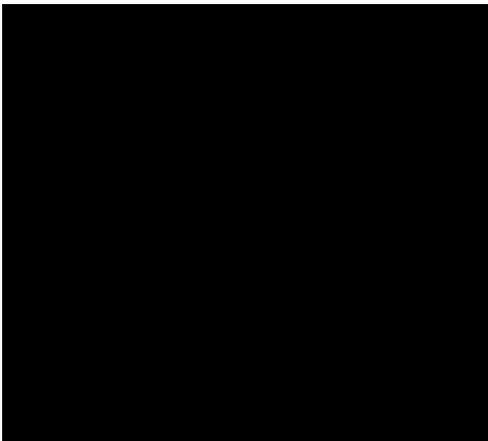
The estimates of maintenance costs likewise seem unduly low, and without justification. One supposes that this project could have substantially lower long-term costs than those observed by the CRC panel, but if that's true, the reader needs to be shown why that's true, and to what extent. Absent justification for the deviance from previously-observed costs, these costs should be adjusted upward in keeping with CRC norms.

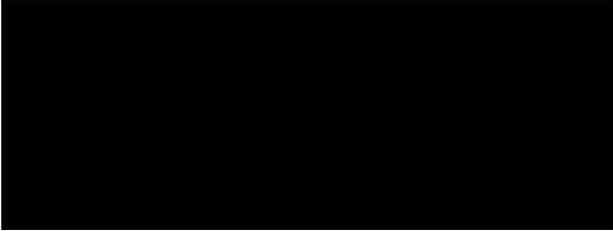
5. Conclusion

The draft EIS for the alteration and management of Rich Inlet is riddled with substantive errors, inconsistencies, and omissions. It is not possible on the basis of the current analysis, as presented in the DEIS, to draw valid conclusions regarding the economic costs and benefits of the various alternatives. It would be entirely unacceptable for any permit judgment or permit decision to be made on the basis of the analysis in its current form. It should be supplemented and/or (my preferred alternative) wholly replaced with an analysis that addresses and/or corrects all of the issues discussed above.

Thank you for consideration of these comments. Please contact me should any need arise for clarification of the views offered.

Sincerely,





June 28th, 2012

We have reviewed the pros and cons of the latest groin design which was recently staked out behind our house at  We have also studied sections of the draft EIS as well as images of the Fort Macon groin.

We have concluded the following.

1. The Board's proposed design is a radical departure from the "terminal" groin we were expecting.
2. A stone jetty is an eyesore at the waterline and seaward.
3. Erosion will occur on the North East side of the groin which would effect our property in an unfavorable manor.
4. The beach at the North end will never be the same if we permit this groin to be built on our property.

We therefore reject the HOA's request for an easement 

Best Regards,



From: [REDACTED]
To: [Sugg, Mickey T SAW](mailto:Sugg.Mickey.T.SAW)
Cc: Carolyn.Justice@ncleg.net; Thom.Goolsby@ncleg.net
Subject: Figure Eight Island Shoreline Management Project - SAW-2006-41158
Date: Thursday, July 19, 2012 4:31:52 PM

July 19, 2012

US Army Corps Of Engineers

Wilmington District

Attn: Mr. Mickey Sugg

69 Darlington Avenue

Wilmington, NC 28403

Re: Figure Eight Island Shoreline Management Project

Terminal Groin Structure

Action ID: SAW-2006-41158

<blockedhttp://www.saw.usace.army.mil/wetlands/Projects/Figure8TerminalGroin/index.html>

Mr. Sugg:

Please consider the following comments opposing the proposal by Figure Eight Island home owners and residents to install a harden structure (aka: terminal groin) along our unique and prized coast.

I am a North Carolina native and for the majority of my life I have called Wilmington my home. For many of my adolescence and adult years I have enjoyed fishing, boating, swimming, and simply experiencing nature around the Rich Inlet area. I truly believe it to be a unique open space our State should protect for future generations.

It is unfortunate that property is damaged by chaotic forces of nature. However, Figure Eight Island now proposes to combat the natural processes that create the very environment which make coastal North Carolina a desirable place to live. The approximately 20 residential structures benefiting from a shoreline management plan, which includes the use of a terminal groin, does not seem to equate to the estimated cost of \$16.9 million over 30 years with no performance guarantee coupled with a guaranteed loss of natural marine ecosystem. Just as an April 1, 2010 NC Coastal Resource Commission recommendation to the NC General Assembly pointing out that "rocky habitat adjacent to an inlet is not natural to NC", one need not be a geologist to know this (<http://dcm2.enr.state.nc.us/CRC/tgs/finalrecs.pdf> <blockedhttp://dcm2.enr.state.nc.us/CRC/tgs/finalrecs.pdf>).

Although there have been harden structures constructed at Masonboro inlet in 1965 (northern jetty) & 1978 (southern jetty), erosion to Masonboro island continues as the inlet migrates in a southerly direction. Additionally, a Feb. 9, 2012 Island Gazette news article shows that a quick allocation of \$6.5 million (FY 2012) went to the repair of the Masonboro jetties caused by just one hurricane in August 2011 (http://www.islandgazette.net/news-server1/index.php?id=15353:wilmington-district-receives-276m-for-hurricane-damage-repairs&option=com_content&catid=1:local-news&Itemid=69 <blockedhttp://www.islandgazette.net/news-server1/index.php?id=15353:wilmington-district-receives-276m-for-hurricane-damage-repairs&option=com_content&catid=1:local-news&Itemid=69>). Just prior to the hurricane repair, the Army Corps of Engineers commenced a maintenance project in early 2011 on the southern jetty "to withstand the onslaught of Mother Nature" according to their news release article on March 10, 2011 (<http://www.saw.usace.army.mil/News/News.asp?id=23> <blocked<http://www.saw.usace.army.mil/News/News.asp?id=23>>). Money vs. Mother Nature is the on-going theme for coastal residents. Who really wins?

I believe there are many factors contributing to shoreline erosion and it is likely that some factors are human-induced. In a losing battle against barrier island migration, I also believe that in this case a terminal groin approach is a last stitch gasping effort to retain a pile of shifting sand for the sake of a few structures. The Army Corps of Engineers may have the duty to protect, but with that duty it has the power to destroy; the power to destroy the natural ecosystem and environment at Rich Inlet.

Ultimately a detriment and a foreseeable burden to the tax payers of the great State of North Carolina, the unintended loss of ecology will be heartfelt along with a punch to the gut. Please do not permit the construction of this additional terminal groin structure on our coast.

Sincerely,

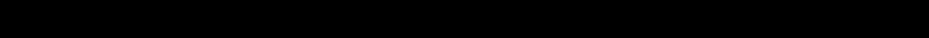
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Mickey Sugg, Project Manager
U.S. Army Corps of Engineers
Wilmington District, Regulatory Division
69 Darlington Avenue, Wilmington, NC 28403
ATTN: File Number 2006-41158

Dear Mr. Sugg!

I write this letter to provide comments on the Draft Environmental Impact Statement (DEIS) for the Seawall and Terminal Groin at Rich Inlet proposed by the Figure 8 Island Homeowners Assoc.

 I find the Figure 8 Island Homeowner's Association preferred alternative: "#5b: 1,600 foot long Terminal Groin and Sea Wall, Renourish north end of island every 5 years (4,000 feet)" to be especially troubling. The DEIS does NOT provide an adequate inventory of impacts from the construction and management of a sea wall and terminal groin.

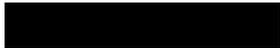
The DEIS does not list any impacts from transporting the thousands of tons of rock that will need to be trucked/barged to the construction site. Many people, including myself, use Rich Inlet for recreation as well as for commercial fishing and their use will be negatively impacted by both the transportation and construction of the terminal groin and sea wall in Rich Inlet.

Impacts of the terminal groin and sea wall to adjoining Hutaff-Lea island are inadequately addressed. This island is one of the few remaining undeveloped barrier islands on the entire coast of the Eastern United States and is therefore an important resource to the quality of life in New Hanover and Pender County.

The DEIS proposes that public trust waters be managed for the benefit of a private community. If this must happen, surely non-structural alternatives that will allow the inlet to migrate naturally, or the repositioning the inlet channel to the middle of the inlet would not be as detrimental to public trust waters as construction of a seawall and terminal groin.

The final EIS must detail impacts to public trust waters of the proposed seawall and terminal groin. Thank you for recording my comments above into the official record of comments on the DEIS for the proposed Seawall and Terminal Groin at Rich Inlet which is adjacent to Figure 8 Island, NC.

Sincerely,



RECEIVED

JUN 27 2012

REG. WILM. FLD. OFC.

June 25, 2012

Re: Figure 8 Island Shoreline Management Project

Attention: Mr. Mickey Sugg
69 Darlington Avenue,
Wilmington, NC 28403

Dear Sir,

I attended the public hearing at Ogden Elementary School and spoke at that hearing. These are expansions on my points.

Porters Neck has over 800 homes and will have over 1000 homes after build-out. These homes, as well as about 100 homes on Bald Eagle Lane, have access to a boat ramp that is located very near the intersection of Nixon Channel and the ICWW. This boat ramp was and is currently advertised as being a deep water access to the ICWW. According to local real estate agents, the value of this access is about \$10,000 per home. So the value or our interest is about \$10,000,000.

This project, and previous dredging of Nixon Channel to preserve Figure 8 property, has and will harm our boat ramp access by continued siltation of our ramp. About 10 years ago, we could launch boats even at low tides. Today, we can launch boats only at high tides, and only kayaks at low tides. I have personally been at our ramp during the previous dredging and you would be amazed at the amount of silt carried in our ramp area during incoming tides and simultaneous dredging. After each dredging, there is a measurable difference. These actions have and will severely diminish the value of our ramp.

We request this to be included in your evaluation and impacts of the proposed project and that mitigation include dredging of our ramp.

Sincerely,

[Redacted Signature]

Cc: [Redacted] of PN HOA
[Redacted] PN HOA

From: [REDACTED]
To: [Sugg, Mickey T SAW](#)
Subject: Fwd: Terminal Groin - Figure Eight Island -- Letter
Date: Friday, June 29, 2012 5:45:51 PM
Attachments: [Figure Eight Terminal Groin - Letter to Board 06292012.pdf](#)

FYI: To Mickey Sugg

[REDACTED]

Begin forwarded message:

From: [REDACTED]
Subject: Terminal Groin - Figure Eight Island -- Letter
Date: June 29, 2012 4:10:16 PM EDT

To: [REDACTED]

Cc: [REDACTED]

Reply-To: [REDACTED]

To: Figure Eight Island Homeowners Association Board of Directors
Frank D. Gorham, III
Frank A. Daniels, Jr.
Dean E. Painter, Jr.
Patricia M. Roseman
Stephen D. Coggins
Earl Johnson, Jr.
C. Edward Pleasants

cc: Figure Eight Island Homeowners Association, Administrator
David C Kellam

Re: Terminal Groin – Figure Eight Island

Please see the attached note from the following parties:

[REDACTED]

Thank you in advance for your attention to this matter.

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MAY 30 2012

May 31 2012

To Mr Mielke Sogg
Wilmington Regulatory Field Office WILM. FLD. OFC.
69 DARLINGTON AVE
WILMINGTON N.C 28403

Dear Sir

I oppose a terminal groin on Figue & Island,

I can attest there has been erosion in the Comda Rd and Inlet Hook area since the early 80's. Those individuals who brought property there were speculators and surely knew the risks they were taking!

The remainder of the Northern half of Figue & Island (except Comda Rd and Inlet Hook) suffers no erod induced erosion and normally does not need beach rearmant except after a severe storm such as FVAV or Floyd. (Fact, not conjecture!)

I walked the northern end many times and observed the ongoing erosion on the northern tip since the early 80's This a fact!

No bailout for speculators, and and also the groin may change the stability farther south down the beach.
It is all about money, Rich told me for Regulatory interest!

Comments to Corps of Engineers on Terminal Groin at Figure Eight Island

Two whom it may concern:

As homeowners on Figure Eight Island, we are strongly AGAINST the construction of a terminal groin on the north end of the island adjacent to Rich Inlet. We believe that it will cause [REDACTED] to erode and devalue in the future. Furthermore, we are concerned that it is harmful to wildlife, particularly threatened beach-nesting shorebirds, and that it also threatens public access to the north end of the island.

Thank you,

[REDACTED]

[REDACTED]

[REDACTED]

Mr. Mickey Sugg
US Army Corps of Engineers
Wilmington, NC 28403

July 6, 2012

RECEIVED

JUL 09 2012

REC'D. WILM. FLD. OFC.

Dear Mr. Sugg:

These comments pertain to SAW-2006-41158, the groin for Rich Inlet. I am a retired NOAA marine biologist, who has lived [REDACTED] for 19 years. Water quality in Futch and the other tidal creeks is critically linked to the functioning of adjacent ocean inlets.

Environmental effects: Tidal exchanges are the life blood of our sounds and tidal creeks. Barrier islands will continue the movement to the south. Likewise, Hutaff Island will continue its movement south and choke off Rich Inlet, if it is constrained by sand buildup and the groin.

Impacts on navigation: Tens of thousands of pleasure and fishing boats transit the natural pathways to and around the inlet. There were probably over a thousand there over the 4th of July weekend. Any alteration to the tidal flows through the inlet would lead to the buildup of sand bars and compromised boating opportunities.

Esthetic: Please Google recent aerial photos of this beautiful pristine inlet. We must be sensitive to any alterations to this natural functioning ocean inlet with a several hundred year history.

I feel for the people with property in jeopardy, but this IS A DANGEROUS EXPERIMENT.

Yours truly,

[REDACTED]

From: [REDACTED]
To: [Sugg, Mickey T SAW](#)
Subject: terminal groin
Date: Friday, June 15, 2012 3:53:13 PM

[REDACTED] I want to voice my objection to the building of a terminal groin. I have listened to the arguments for and against with interest. The financial expenditure will be prohibitive for me but more than that is my belief that we will only move the erosion problems further down the island. The island is static and other solutions must be found. Moving the homes back is one alternative which some homeowners have done. We may soon become aware that building near an inlet is foolhardy. Thank you for hearing my comments. [REDACTED]

[REDACTED]

From: [REDACTED]
To: [Sugg, Mickey T SAW](#)
Subject: File Number 2006-41158, Figure 8 HOA Terminal
Date: Thursday, July 19, 2012 11:53:40 PM

Greetings,

I am completely against the building of this pipe / drainage system for the residents of Figure 8. It will change the eco-system by shifting tidal lines and creeks in our intracoastal waterway. This will cause others of us who live on the ICW lots of money and energy to fix. This is not fair to those of us that have lived on the ICW and have moved or worked with the tides and the various sandbars or holes that it makes. I feel this construction will cause massive erosion in other areas and I do not feel that we need to pay for what others are doing. It will also drastically hurt various sanctuaries for birds and fish that will ultimately cause in declines of populations.

Please note that my husband and I are completely against it!

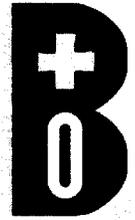
[REDACTED]

Mr. Mickey Sugg
Wilmington Regulatory Field Office, US Army Corps of Engineers
69 Darlington Avenue
Wilmington NC 28403

RECEIVED

JUN 14 2012

REG. WILM. FLD. OFF



June 11, 2012

Dear Mr. Sugg,

Thank you for extending the period to receive comments, and for the opportunity to respond to the draft EIS presentation.

Our family lives in northern New Hanover County, as year-round residents. We own a landscape architecture and architecture practice that pursues a philosophy of minimum disturbance, and thoughtful, forward-thinking site planning. We do not live on waterfront land, but we spend time on friends' boats, and one of our favorite areas is Rich Inlet. We deeply oppose the efforts of the Figure Eight Home Owners' Association to pursue the installation of a terminal groin in this location.

It's time for our development community to recognize (once again) that shorelines are dynamic. It's unfortunate that short-sighted people decided to build enormous and seasonally-used 'houses' (and their required infrastructure) on shifting sand. It's even more unfortunate and embarrassing that the General Assembly has overturned what was a long-standing and forward-thinking ban on hardened structures on our public beaches.

More specifically, as described in the Public Notice, "The stated purpose of the project is to develop a management plan for the central and northern portion of Figure Eight Island so as to preserve the integrity of its infrastructure, provide protection to existing development, and ensure the continued use of the oceanfront beach." The 'existing development' to be protected is private, and the oceanfront beach, while still public, is really only 'continually used' by the residents of Figure Eight Island. The proposal in a nutshell calls for creating and maintaining a structure which will most likely remove sand from (truly continually used) public trust beaches to *allegedly* stabilize a portion of a private island – essentially robbing a public resource for the (most likely very temporary) benefit of a few landowners. (most of whom are, we can't help but add, only part-time residents.)

We hope that you carefully examine the draft EIS, and take into consideration the contradictions and examples of biased data in comments as described by the North Carolina Coastal Federation and others who are well-qualified to provide objective and scientific criticism. Our comments are restricted to addressing the intent of the proposal, but we feel obligated to voice our opinion as educated professionals with a vested interest in our shared ecological and economic land/water resources.

As design professionals whose livelihoods literally depend on thoughtful site-planning, we are shocked at this short-sighted proposal. The USACE should be spending it's time and expertise on important projects that are ecologically democratic, not projects that may *temporarily* benefit a few wealthy (and unfortunately influential) people. Thank you very much for your time and attention.

Regards,

Handwritten signature of Lara Berkley in black ink.

Lara Berkley, ASLA, LEED-AP
partner / landscape architect

Handwritten signature of Scott Ogden in black ink.

Scott Ogden, AIA, LEED-AP
partner / architect

B+O: design studio, PLLC
architecture / landscape architecture
mailbox: 1319-CC Military Cutoff Rd.
Wilmington, NC 28405
tel. 910.821.0084

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JUN 18 2012

REG. WILM. FLD. OFC.

June 14, 2012

Mr. Mickey Sugg
Wilmington Regulatory Field Office
69 Darlington Avenue
Wilmington, NC 28403

Re: Terminal Groin Construction – Rich Inlet

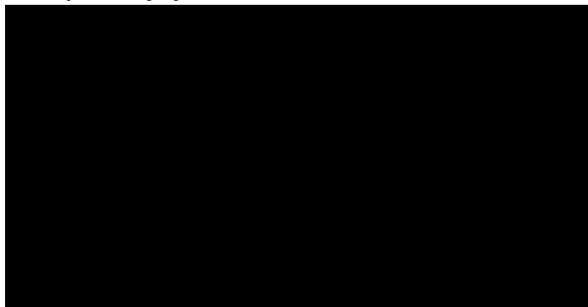
Dear Mr. Sugg:

As a property owner on Figure 8 Island , I have seen many changes in the ocean shoreline, some overnight and others more gradual.

The idea that terminal groins will effect beneficial changes is very much in question. It is possible that there may be temporary changes to properties that may appear beneficial. However, these changes can also be deleterious to other properties. The ocean being what it is, to think that it can be reengineered appears to be a stretch.

Until more detailed and convincing arguments can be presented, I am opposed to spending untold millions of dollars, both private and public, on projects that have so many chances to fail.

Very truly yours,



Comments on the Draft EIS for the Project Known as Figure Eight Island Shoreline Management Project, June 7, 2012

My name is [REDACTED] I have lived at Middle Sound off and on for the past forty years and retired here last year.

Just two days ago, when I first read about this hearing, the shock was like opening the obituary section of the Star News and finding that an old friend had suddenly expired -- which is what I think will happen to Rich Inlet -- it will expire as I know it today if a 700 ft. terminal groin and a 900 ft. rock and sheet metal seawall are built at the northern end of Figure Eight.

Rich Inlet is one of the last great places on the coast of eastern North Carolina -- a stable inlet which is a much beloved gem in our natural infrastructure -- an infrastructure that has been savaged by coastal development for the past 50 years, before and after we had scientific verification of the value of barrier islands and natural inlets in our coastal ecosystem.

In the 1960's and 70's as Figure Eight developed, I watched the dredging and filling behind the island that altered the normal tidal flow in Mason's Inlet and consequently led to the infilling of the Inlet, particularly at the egress into the Intracoastal Waterway.

We all know what happened. As predicted, the southern end of Figure Eight moved southward at a much faster pace than before, and the northern end of Shell Island retreated rapidly right up to Shell Island Resort.

Meanwhile the water in the marsh and Howes Creek became warmer and more polluted as normal flushing could no longer occur and tides had to travel all the way from Wrightsville Sound. Now the temporary solution, dredging Mason's through to the Intracoastal Waterway, considered a very successful project, is already showing signs of failing as the mid section of the inlet is shoaling up again.

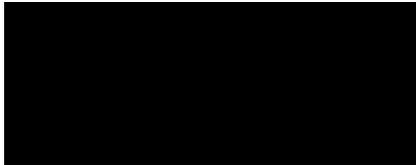
So what will be the unintended consequences to the areas behind Rich Inlet, the Intracoastal Waterway, Pages Creek, Futch Creek, and Lea/ Hutaff, if dredging in Nixon's Channel, removing sand from dredge islands, and creating massive barriers on the northern end of the Figure Eight is carried out as the Figure Eight Shoreline Management Project proposes?

1. How will citizens who cherish this last great place be able to access public trust water and the beach if the end of the island right at the tide line is surrounded by a terminal groin and seawall?
2. The seawall and groin will set a precedent on the coast. When the next plea to manipulate a natural estuary arises, will a judge turn down other home owners who built on compromised sites? I doubt it.
3. And finally, but most importantly, what will the destruction of habitat do to the ecology of the vast estuarine system behind Rich Inlet?

**Comments on the Draft EIS for the Project Known as Figure Eight Island Shoreline
Management Project, June 7, 2012**

It is simply wrong for a small group of home owners to tamper with Rich Inlet!

No! to destroying Rich Inlet, No! to terminal groins, No! to restricting access to public water and beach and No! to the state of NC for recently returning to failed coastal management policies.



RECEIVED

JUN 25 2012

REG. WILM. FLD. OFC.



June 19, 2012

Mr. Micky Sugg
Wilmington Regulatory Field Office
69 Darlington Avenue
Wilmington, NC 28403

Re: Comments in Support of the Figure Eight Island Shoreline Management Project

I wish to give my total support to the effort of establishing an effective Corps of Engineers management plan to preserve and protect Figure Eight Island's oceanside beachfront. Many valuable homes and beach infrastructure are in dire jeopardy from beach erosion, especially on the north end, that has dearly cost property owners and public funds in both expenditures as well as property and tax value.

Sadly, this management action is not timely, since a comprehensive long-term plan had been sought many years ago, but with none forthcoming, beachfront has been lost, homes have been threatened or abandoned and costs for remediation and stabilization of the erosion conditions are much greater today. Nonetheless, now is the time to act, and from my perspective, building the terminal groin on the southern side of Rich Inlet and establishing a reasonable, periodic beach nourishment program seems reasonable and absolutely necessary.

Portions of the proposed management plan's draft Environmental Impact Study that I have reviewed show the significance of the beachfront erosion problem, and



because of the tremendous erosion which cut into the primary beach dune



The physical integrity, stability and health of Figure Eight's beachfront are critical to the maintenance of this community's special character and charm. It is what maintains the tremendously high tax rate there and provides remarkable return to New Hanover County citizens, relative to other communities. This past weekend, I noticed that the north end of the beachfront is rebuilding and the environmentalists had marked off turtle nests. Common sense would tell anyone that if we do all we can do to protect the beaches with groins or other hardened structures, turtles and other sea life will return—action which protects the environment as well as property owners.

I strongly encourage the Corps' full effort to see this management plan through to execution for the good of all concerned.

Respectfully,



To: Mickey Sugg
Project Manager
US Army Corps of Engineers
69 Darlington Avenue
Wilmington, NC 28403

RECEIVED
JUL 20 2012
REG. WILM. FLD. OFC.

From: [REDACTED]
Middle Sound Lookout

July 19, 2012

Mickey,

Middle Sound Lookout (MSL) was organized by Middle Sound residents in 1986 with the stated goal to protect the quality of life and marine environment of Middle Sound for present and future generations. Joining together with the North Carolina Coastal Federation, Northeast New Hanover Conservancy and Pender Watch and Conservancy Middle Sound residents were successful in having Topsail Sound, Middle Sound, Howe Creek and all estuarine waters from New Topsail to Mason Inlet designated as Outstanding Resource Waters. These waters are included in the Rich Inlet EIS.

Rich Inlet is Outstanding Resource Water with exceptional biological resources.

Rich Inlet is the most stable inlet in North Carolina with established navigational channels that do not require dredging for public access.

Rich Inlet is a cultural and environmental asset for all citizens located entirely in public trust waters.

Rich Inlet is a priceless treasure yet has cost multiple generations of North Carolinians zero dollars to utilize and maintain in its natural state.

Dredging in Rich Inlet threatens this resource. Dredging begets future dredging for both mitigation and additional sand supplies (Bank's Channel

and Mason Inlet). When dredging is introduced to undisturbed natural areas the initial dredging operation is used to justify future dredging operations (Nixon Channel). The sand deposits in Rich Inlet have immense value as part of the natural environment and offer long term stability that is absent in most other inlet systems in North Carolina.

Sand mining of these deposits as proposed in this EIS is inappropriate and contrary to the larger public good.

The dredging activities and terminal groin proposed in the Rich Inlet EIS are totally incompatible with long established public right uses. The project as proposed will result in the taking of generational public rights for the benefit of a small number of private property owners who made unwise real estate decisions with fair warning.

Specifically the EIS is deficient in the following ways:

1. Failure to appreciate that Rich Inlet has been stable for hundreds of years through multiple hurricanes and Northeaster's while providing multiple benefits to all citizens at zero cost.
2. Failure to quantify the true value of an undisturbed Rich Inlet and estuarine system to past, present and future generations and implying that the value of temporary housing that will be temporarily protected by the project has greater value than an undisturbed estuarine system.
3. Failure to acknowledge that a similar projections in Bogue Inlet by CPE using similar logic resulted in severe erosion of private property, loss of property values and quality of life for affected property owners along Inlet Drive (See photos).
4. Failure to clearly delineate responsibility of all parties and failure to ensure that realistic mitigation funds are available should similar problems occur in Rich Inlet.
5. Failure to appreciate that navigation in a natural undisturbed Rich Inlet requires no periodic dredging, no cost of private or public funds, does not disrupt the natural environment, does not extend liability to any government or private entities, is superior and safer than dredged Bogue, Topsail and Mason Inlets which regularly shoal when the maintained channels wander yearly.

6. Failure to appreciate that initial dredging of Rich Inlet will lead to continual dredging of Rich Inlet as has been the case for Mason Inlet and Bank's Channel and that any dredging in new areas will be used to justify future dredging as is the case for Nixon Channel.
7. Failure to limit this permit to only one dredging/inlet relocation/groin occurrence and failure to delay any future permitting until the success or failure of this plan is known as an established fact and not just a hoped for projection.
8. Failure to appreciate that Green Channel is presently easy to navigate and that alterations in flow from this project may result in decreased water access through Green Channel for the general public.
9. Failure to appreciate that private property and quality of life on Figure Eight Island will be adversely affected by groin placement and initial and maintenance dredging operations.
10. Failure to include an assessment of how possible changes in the tidal prism caused by increased and recurrent dredging may affect low water boating access to private properties in the Rich Inlet catchment area.

Finally the chronic erosion problems along the northern sections of Figure Eight Island have been persistent and well documented for over 30 years. The best alternative is the present management plan that has given most of these homes decades of use and enjoyment. The general public should not be asked to severely jeopardize their priceless asset of a stable and functional Rich Inlet to provide, at best, a temporary reprieve.

Thank you.



Bogue Inlet: Before project hundreds of feet of high dune protected 13 homes on Inlet Drive. Post project the high dune was replaced by flat beach and some homes required sand bagging. The EIS for this project badly miscalculated the extent of this erosion. Discussion of this project and mitigation costs should be included in Rich Inlet EIS.





Bogue Inlet: Area of project induced erosion. This was predicted in the EIS but extent was significantly underestimated. Who paid for mitigation of project related erosion? Was loss of private property and decrease in home values included in mitigation? Discussion of these questions needs included in Rich Inlet EIS since same engineering company (CPE) is responsible for project design and projection of impacts.

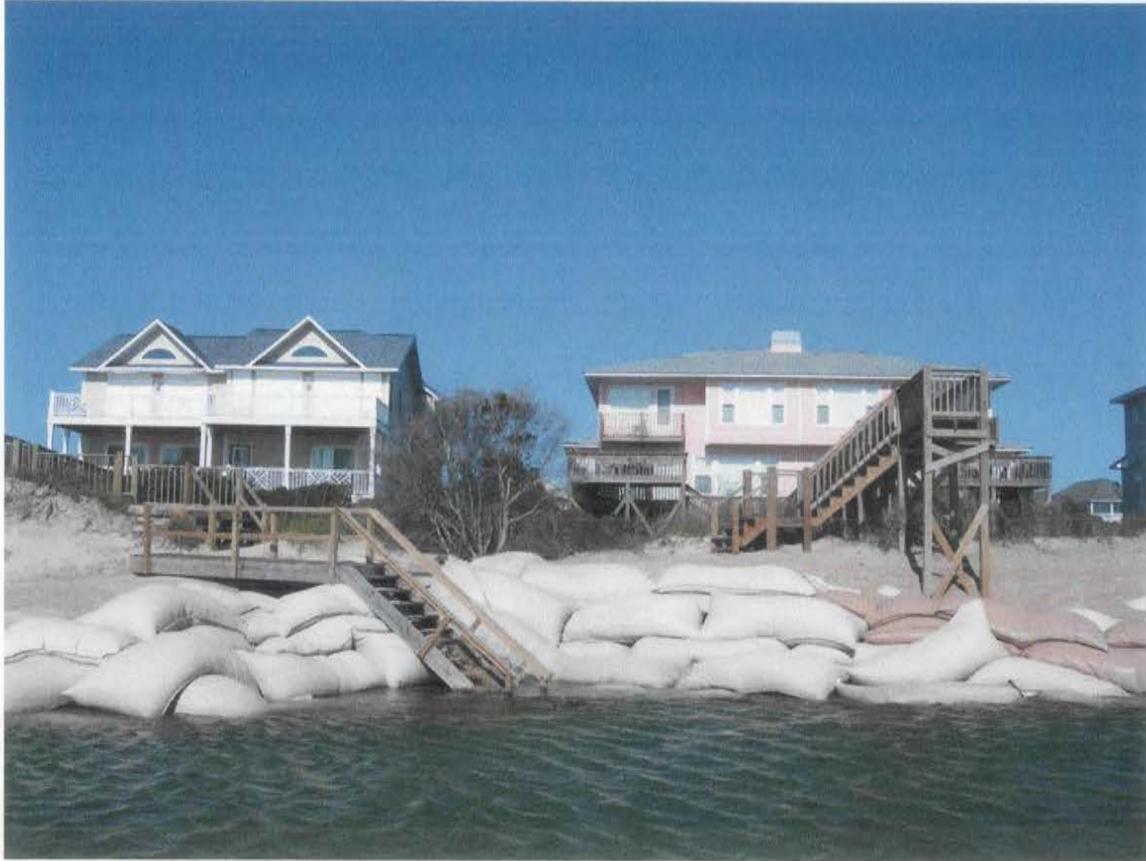
Bogue Inlet: After project flat beach replaced hundreds of feet of vegetated high dune resulting in loss of private property and real estate values.



Bogue Inlet Post Project: Once High Dune Area



Bogue Inlet: These homes lost hundreds of feet of protective high dune and required sand bagging post project.



Bogue Inlet: Post project hundreds of feet of high dune was replaced by flat beach.



From: [REDACTED]
To: [Sugg. Mickey T SAW](#)
Subject: Figure 8 Terminal Groin Comment
Date: Friday, June 08, 2012 9:11:09 AM

Mickey:

After listening to Tom Jarrett's presentation, I request that the Corp. rerun the Delft3 erosion model again with 2012 beach conditions versus 2007. If I understood correctly, Tom's model projected massive erosion at the north end of Figure 8 in two to five years if we did nothing. Then he reran the model with the proposed groin in place and the beach eroded to the same place thereby proving that the groin would have no impact.

Unfortunately, the north end of Figure 8 has accreted significantly since 2007 with a distinctive sand bar stretching from Hutaff Island to Inlet Hook. Tom even mentioned the new conditions in his presentation. If his model inputs were correct in 2007, why didn't his model predict accretion instead of erosion?

Why can't the model inputs be adjusted, starting in 2007, to create the current beach conditions and then, rerun with the groin. I would like to see projections to 2017 based on these new inputs, with and without the groin. If the beach continues to accrete, one can argue that we don't need a groin of this design. If the beach erodes with the new groin, we can then confirm that we don't want this groin.

I hope this makes sense. Models are as good as the inputs. Garbage in, garbage out. The residents of Figure 8 will be dealt a huge disservice if this misinformation based on 2007 data is used to justify a groin of this design.

[REDACTED]

[REDACTED]
6 June 2012

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JUN 11 2012

REG. WILM. FLD. OFC.

Mr. Mickey Sugg
Wilmington Regulatory Field Office
69 Darlington Ave.
Wilmington NC 28403

Re: Draft Environmental Impact Statement for Figure Eight Island Shoreline Management Project in Wilmington, New Hanover County NC (EIS for F8I)

Dear Mr. Sugg,

I am pleased to have the opportunity to address the above (EIS for F8I). It is my opinion that there are a number of very significant considerations:

1. I am a physician who is well aware (as are most scientists) that any new proposals of a scientific bent must demonstrate favorable cost-benefit and risk benefit assessments in order to receive serious consideration. The EIS for F8I demonstrates neither.
2. The proposal was originally conceived in order to protect a half-dozen or so threatened houses on the north end of the island. That, alone, is insufficient justification for such a project. I have [REDACTED] watched that shoreline change dramatically (alternating accretion and erosion) over that time. At present, the area in question is accreting significantly. We have had very high tides here for the past 3 days and none have reached the sandbags "protecting" the "threatened" houses.
3. A discussion of the concept of the pros and cons of terminal groins as protectors of the shoreline was conducted by one of the scientists of Sea Grant who explained that some justification could be made for use of such structures in cases of rapidly migrating inlet shorelines (such as Topsail Island) but would be hard to justify in the case of stable inlets. Rich inlet is probably the most stable inlet in NC (according to maps over the past 100+ years). To attempt modification of that inlet as has been proposed is sheer folly. It brings to mind some of the other projects designed and constructed by the US Army Corp of Engineers (such as the diversion of water from Lake Okeechobee FL with the subsequent destruction of the Everglades). The Corps are good builders but rather poor designers and planners.
4. It seems that the only people that are in favor of this plan are those with a vested interest. The Corp consultants for this project and the EIS stand to derive significant income for the design and construction of the project. The owners of "threatened" houses anticipate relief from what has turned out to be unfortunate investment decisions. The

communities involved are worried about loss of revenue. Those opposed (scientists, environmentalists, the mainstream media etc.) do not have a vested interest.

* I am attaching a copy of the NC Coastal Scientists Position on Terminal Groins.

* NC newspaper investigative reporters and editorialists have consistently and frequently opposed the use of terminal groins and other hardened structures along our coast.

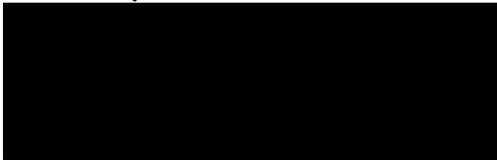
* All of the major environmental groups have clearly stated their opposition to such structures.

5. The EIC grossly underestimates the costs of constructing and maintaining (necessary required beach renourishment) such structures, as detailed by the NC Coastal Resources Commission's terminal groin study, prepared by independent engineers from the firm of Moffit and Nichol and presented in 2011.

In summary, the proposed terminal groin at Figure Eight Island should not be permitted because it falls far short of favorable risk-benefit and cost-benefit analyses.

Thank you for your consideration of this extremely important matter.

Sincerely,



NC Coastal Scientists Position on Terminal Groins

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JUN 11 2012

REG. WILM. FILED. QFG.

[NC Coastal Scientist Position \(PDF\)](#)

North Carolina Coastal Scientists Statement Regarding Senate Bill 832:

The following statement represents the opinions of the vast majority of this state's coastal geologists: Dr. Rob Young (WCU), Dr. Len Pietrafesa (NCSU), Dr. Stan Riggs (ECU), Dr. J.P. Walsh (ECU), Dr. Steve Culver (ECU), Dr. Dave Mallinson (ECU), Dr. Pete Peterson (UNC-CH), Dr. Tony Rodriguez (UNC-CH), Dr. Matt Stutz (Meredith), Dr. Duncan Heron (Duke). We are not anti-development. Nor are we an environmental lobby. We are simply electing to play our role in helping the state develop sound, science-based policy. These opinions do not represent the actual, or implied positions of our host institutions.

1) In 2003, the North Carolina Legislature voted unanimously to ban the construction of new, permanent erosion control structures from North Carolina's ocean shorelines (including inlets) Session Law 2003-427. There were no dissenting votes in either chamber! This unanimity results from the recognition that the CRCs ban on coastal hard structures enacted in 1985 had served the state well. It was, and is, sound fiscal, environmental, and management policy. Overturning or weakening this ban would be a mistake.

2) S832 would permit the construction of "terminal groins". As proposed, these structures could/would be constructed at inlets or "on an isolated segment of shoreline where it will not interrupt the natural movement of sand." In other words not just at inlets.

The following comments argue against permitting this exception to our state's long-standing, hard structure ban from a scientific perspective:

1) Any coastal structure designed to trap or hold sand in one location will, without question, deprive another area of that sand. In simple terms, any structure (including terminal groins) that traps sand will cause erosion elsewhere. Permitting the construction

of terminal groins will harm the coast and place downdrift property at risk.

2) An open letter signed by 43 of the country's top coastal scientists reports: "There is no debate: A structure placed at the terminus of a barrier island, near an inlet, will interrupt the natural sand bypass system, deprive the ebb and flood tide deltas of sand and cause negative impacts to adjacent islands."

3) Proponents of S832 point to the terminal groins at Beaufort Inlet and Oregon Inlet as success stories. These structures have also been referred to as jetties in the past, but we will use the terminology in S832. Our data indicate that beaches in the vicinity of both structures have required huge volumes of beach nourishment for decades (at least 20 million cubic yards of sand at a cost \$43 million, without an adjustment for inflation). Therefore, these two structures have at best, had no impact on the stability of the island adjacent to the structure, and at worst, have caused downdrift erosion necessitating massive renourishment. Dr. Stan Riggs has published detailed analyses indicating that the structure at Oregon Inlet has impacted the stability of Highway 12 on the Outer Banks and required its constant maintenance.

4) The structures proposed in places like Figure 8 Island and Ocean Isle are on the downdrift side of the neighboring inlet. A shore-perpendicular structure, placed at the downdrift side of an inlet, will block the natural flow of sand onto the island where the structure is located. This will cause an increase in shoreline erosion in front of oceanfront homes downdrift of the structure. Protecting homes at the inlet will be at the expense of a larger number of homes down the beach.

5) The unfettered flow of sand through natural inlets is an important mechanism maintaining barrier island health. Blocking this flow of sand will inhibit the ability of the barrier island to respond to rising sea level and storms.

6) Project proponents indicate that the structures will be made "leaky" or permeable so that sand will move to downdrift beaches. This is a classic example of "having your cake

and eating it too.” The principle of conservation of mass indicates that one cannot build a structure that will both trap sand and still allow the constant flow of the original budget of sand down-drift.

7) Groins can impact nearshore circulation by directing currents offshore, especially during storms. Groins can be particularly destructive following storms if a significant portion of the nourishment project is transported offshore, leaving the groin uncovered. During this period, the groin will block all longshore transport until the cell is filled in again.

Additional considerations:

1) One of the many benefits of the hard structure ban to North Carolina coastal communities is the general lack of lawsuits related to erosion control structures. In contrast, the state of Florida which permits coastal hard structures is awash in constant lawsuits (property owner versus property owner, community versus community). This leaves many coastal management decisions up to the courts. This poor method of public beach management is one that we have largely avoided in North Carolina. If terminal groins are built along the North Carolina coast, rest assured that there will be lawsuits and legal battles related to those structures and the erosion that they may, or may not have caused.

2) Because the S832 does not define the size or specific design of a terminal structure, the bill leaves the door open to building structures that go well beyond a simple groin. The design floated for Figure 8 Island is not a terminal groins as much as it is an inlet shoreline seawall. Structures like these would destroy the natural function of the adjacent inlets.

3) In short, we believe that the science overwhelmingly supports maintaining the state’s ban on hard structures. Terminal groins are not new technology. They will harm downdrift property owners.

Date: June 6, 2012

From:



To: U.S. Army Corps of Engineers
Wilmington District, Regulatory Division

Subject: File #2006-41158
Figure Eight Island Inlet and Shoreline Management Project

First, I have to state that I believe that we should continue the regulations set in place in 1985 by the CRC to restrict the use of hardened structures on the NC Coast. I understand the Legislature passed Session Law 2011-387 (Senate Bill 110) in 2011 allowing for the construction of up to 4 terminal groins but I ultimately believe this is a misguided policy that opens our coast to the placement of many more of these groins and other structures that negatively impact the coastal areas surrounding the structures. It should be noted that the seaward end of Rich Inlet, and therefore the south end of the ebb tide delta has been moving back toward Figure Eight recently (see GOOGLE Image below from 2010 – I do not have more recent aerials but hopefully you do), which should help protect the north end of Figure Eight. This further supports the fact that coastal zones, particularly inlets, are dynamic and that any “hard” modification of that coastal zone will require continued and costly maintenance and will likely result in degradation of the coastal ecosystems also. With that as a prelude, I respectfully submit my specific comments related to draft EIS File #2006-41158 concerning the Figure Eight Island Inlet and Shoreline Management Project to you for consideration.

- In my opinion, though I would rather have no action that artificially impacts our coast, I recognize that there is a serious issue with erosion on the north end of Figure Eight. In this regard I believe that Alternative 3 provides the best means of *guaranteeing (though there are no guarantees on the coasts)* the integrity of both Figure Eight and Hutaff Islands on the ocean and back barrier including Nixon Inlet. Additionally, this alternative maintains the natural setting/ecosystems with no artificial barriers. The ebb tide delta margins would protect the north end of Figure Eight and the sand that would be trapped in the channel and flood tide deltas could be utilized to selectively renourish the beaches when needed as well as to maintain the inlet. Sand could also be utilized for nesting habitat improvement. If the inlet area, which as reported is grounded in Oligocene silts, is relatively stable and only migrates N or S in a limited area why not establish it as a more permanent and navigable site?

The costs associated with Alternative 3 seem inflated. The Mason Inlet relocation project in 2002 was completed for ~\$6.9 million. There has been periodic maintenance since the inlet realignment and there has also been some erosion on the south side of the inlet. Overall, however, the project has been a success with a relatively stable inlet, protected island margins, and even a sand habitat for nesting birds. \$61.7 million as stated in the DEIS appears high for this alternative.

- The problem with the terminal groin is that it does trap sand and it therefore will have some impact on the surrounding beach zones. However, even assuming that the terminal groin will allow for sand accumulation as stated there are four other issues with the use of it.
 1. Renourishment, as stated in the DEIS, will be required on a relatively frequent basis on both the ocean and marsh sides of the island. And the amount of sand required will be even larger if the inlet migrates further toward Hutaff Island. The amounts of sand required and the costs discussed do not include contingent amounts for areas south of the areas immediately adjacent to the groin nor does it consider major storm events.
 2. What happens if the inlet migrates all the way to the terminal groin? The groin would effectively become a seawall with loss of beach and marsh and there would be the issue of mitigation of the damages to natural ecosystems or the maintenance or removal of the structure. However, we know that once the groin is in place it will never be removed regardless of what the rules say or that the stated removal cost is only \$1 million.

3. The facts relative to the preferred alternative 5B need more scrutiny. It appears that assumptions of beach protection/renourishment over 30 years are quite generous (2 miles of shoreline) but it is unclear how much sand or area is really involved. The costs may be much higher for the sand. And importantly, since cost is a factor in which alternative is accepted, the actual costs of the terminal groin should be reviewed also with maintenance included.

4. There are also areas that the public currently uses that would be impacted by the placement of the terminal groin such as on the back barrier area – these areas are not owned by the Figure Eight Island residents. Coastal marsh wetlands that include critical habitat are a part of this area of concern/construction also. These areas are clearly shown in DEIS Figures 3.1, 3.2, and 3.4 as well as on the Google Map attached below. The GOOGLE map is from 2010. As mentioned above the seaward end of the inlet is moving south and it is likely that a storm will breach the low area that I have shown in red leading to a natural realignment of the inlet closer to Figure Eight Island.

I believe that a more critical review of the alternatives should be done and that the alternative with the least impact on the environment currently and into the future should be chosen. I do not believe the terminal groin is the best choice to minimize environmental damage of the beach and marshes on the north end of Figure Eight and I believe the costs stated do not accurately represent what will be needed for that project. The inlet relocation and maintenance could protect property while maintaining habitat/ecosystems and this would be a preferable alternative in my opinion, if an engineering solution is adopted.

Thank you for your consideration of my comments.

Sincerely,

[REDACTED]



TO: MR. MICKEY SUGG

FROM: [REDACTED]

SUBJECT: FIGURE EIGHT ISLAND SHORELINE MANAGEMENT PROJECT

DATE: June 8, 2012

My name is [REDACTED] I live at [REDACTED] My telephone number is [REDACTED]

I would like to comment on the terminal groin project for Figure Eight island because it will ultimately affect Sunset Beach island. Our neighboring island, Ocean Isle Beach, is pursuing a terminal groin for their eastern end as well. Since Figure Eight is the first one up to be granted a permit for a terminal groin, any permit granted for Figure Eight will set the precedent for the permits to follow.

Sunset Beach is the only island in North Carolina that is not eroding, has never had beach renourishment, and doesn't need beach renourishment. According to eminent NC coastal scientists, who spoke to our Town Council at a council meeting, that would change with a terminal groin at the eastern end of Ocean Isle. "Erosion would begin about mid island on Ocean Isle, proceed through the western end of Ocean Isle, erode all of Sunset Beach, and a good portion of Bird Island."

I've read the EIS for the terminal groin at Figure 8. It does not address the indirect impacts – the erosion that would happen to the beaches downdrift from the terminal-groin project—those beaches 5, 10, 20 miles, and farther southwest. What the EIS seriously lacks is the important independent opinion of the indirect impact of erosion to downdrift beaches by scientists who've specialized in coastal tide and sand movements.

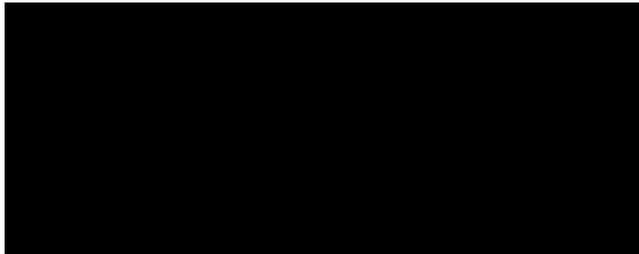
The EIS describes the cost of the property impacted (probably inflated), the project itself, and the various flora and fauna (off the shelf). What it does not do is take into the account the indirect impacts of this project, the erosion, and - what you must consider – the domino impact to the North Carolina coast of other projects like it up and down the coast.

You must know how critical it is to get this decision right. I know you don't want it to be on your watch that horrendous mistakes are made that will cost the North Carolina coast dearly for years to come.

Please insist that the indirect impact of this project on downdrift beaches be carefully researched. Seek opinions outside of those paid to find an answer the permit requester desires. Protect one of North Carolina's most valuable natural resources, and protect the other downdrift property owners under your purview.

Thank you.

[REDACTED]



July 20, 2012

RECEIVED

JUL 23 2012

REG. WILM. FLD. OFC.

Mr. Mickey Sugg
U.S. Army Corps of Engineers
Wilmington District Regulatory Division
69 Darlington Avenue
Wilmington, NC 28403

Re: Figure Eight Shoreline Management Project Draft EIS

Dear Mr. Sugg:

[Redacted]

[Redacted] My concern regarding the above-referenced project is that it might increase flows [Redacted] and increase erosion of the shoreline [Redacted]. I want to make it clear that I am not objecting to the project, which hopefully will benefit many property owners on Figure Eight in proximity to Rich Inlet. Nevertheless I want to ensure that studies of the project's impacts include the potential for erosion impacts along [Redacted] and further include a commitment to mitigative measures if the project causes increased erosion. I am relieved that the DEIS includes a plan to monitor shoreline erosion and to take measures to mitigate any shoreline changes that significantly exceed the historic rate of shoreline change. I have the following comments related to the DEIS's analysis.

- The USACE should be certain that the underlying data and calculations of historic shoreline changes are accurate. This is critical since, as I understand the EIS, these rates will be projected forward to establish the shoreline change threshold for normal erosion which must be significantly exceeded before mitigation will be required.
- Though the DEIS contains much information on historic shoreline changes, it needs to state more clearly in "layman's language" how the beach nourishment mitigation is triggered. I understand the DEIS to mean that the "outside extremes" of the historic erosion rate must be exceeded, but think this should be clarified.
- I want to confirm, and the EIS should make clear, that the maintenance dredging of Nixon Channel and associated spoil deposition will take place every 4-5 years regardless of whether the shoreline change threshold is exceeded.

- The DEIS in some places uses the term “beach fill” to describe periodic nourishment that will take place. It appears in context that this does not mean only ocean beaches but also includes nourishment of the shoreline along Nixon Channel. We ask that the DEIS be made clearer on this point.
- I want to confirm my understanding that the commitments to monitor and mitigate excessive shoreline change that are ultimately made in the final EIS will become conditions of the USACE’s permit(s) for the project and also of the State’s CAMA permit.

I appreciate the opportunity to comment on the EIS and the project. If you have any questions regarding these comments, don’t hesitate to contact me, or you may contact [REDACTED]

Yours truly,

[REDACTED]

cc: David Kellum
Doug Huggett
Glenn Dunn

U.S. Army Corps of Engineers, Wilmington District
Regulatory Division ATTN: File Number 2006-41158
69 Darlington Avenue
Wilmington, NC 28403

RECEIVED

July 18, 2012

JUL 23 2012

Dear Sirs:

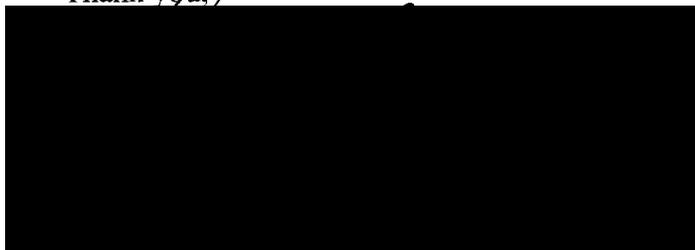
REG. WILM. FLD. OFF.

I am writing in reference to the issue of terminal groins and in particular about the proposed one for Figure Eight Island near my home of Wilmington. I am opposed to this project and feel that it's EIS is inaccurate in many respects including:

conflicting estimates of beach renourishment needed
unreasonable expectations of it's ability to protect property and the extent of property it would protect
unrealistically minimal estimates for the damage a major storm or hurricane would cause
unfair skewing of the analysis in favor of the groin option
does not fairly assess the loss of use of the public to adjacent areas and doesn't include adequate analysis of the damage caused to other nearby areas by the groin for the benefit of a few people
does not show protection of endangered species in the area and adjacent areas
over and under stating costs of alternatives in favor of the groin option over other options
and
MOST IMPORTANTLY FOR ME opens the state up to being sued by other groups not granted one of the four terminal groins and to the judicial result of being forced to grant other groups their own groin. THIS WILL COST TAXPAYERS both in defending the lawsuits and in being forced to provide other groins to other groups who demand them.

Please do not grant any permits for terminal groins, there is PLENTY of evidence that they will not work long term, costs WAY TOO MUCH MONEY and destroy nature's beauty in the meantime. Please protect North Carolina's coasts and beaches the way God made them.

Thank you.



From: [REDACTED]
To: [Sugg, Mickey T SAW](#)
Subject: Terminal Groin Figure 8 Island
Date: Thursday, June 28, 2012 6:17:13 PM

Mr. Sugg:

I have read all documentation prepared for public dissemination [REDACTED] [REDACTED] regarding the installation of a terminal groin at the north end of Figure 8 Island. [REDACTED] and the result of their presentation of photos, studies and tables left us with the feeling our life on Figure 8 Island as we know it today would change dramatically and not for the better!

[REDACTED] my concerns are three fold, first the economic value of my home is at risk, secondly, will the groin impact the ability to obtain insurance coverage and at what rates, third accessibility and views of the ocean [REDACTED] Specifically could I walk with a baby carriage (as I presently can) without obstruction?

[REDACTED]

Thank you for listening.

[REDACTED]

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[REDACTED]

From: [REDACTED]
To: [Sugg, Mickey T SAW](#)
Subject: Comment on potential terminal groin at Rich Inlet/Figure 8 Island
Date: Thursday, June 07, 2012 4:45:59 PM

Mr. Sugg,

I did not have sufficient time to thoroughly review the Draft EIS and Engineering Report prepared by CPE/Shaw/Figure 8 Island. I do have a few comments for consideration in assessing the alternatives presented.

In summary, I have no real opposition to the placement of the hardened structure, nor justification given recent rulemaking; however, in assessment of the relative cost, it seems that Figure 8 is making the case that inlet relocation is cost prohibitive, and I'd like the USACE to require that long-term maintenance and performance of the solution be included in the cost evaluation.

Specifically, the following questions should be addressed:

1. Who will pay for the construction of the hardened structure (I'm assuming this is Figure 8 Island's HOA)?
2. What are the recurring and maintenance costs associated with the hardened structure in Year 2 and beyond? How were those factored into the economic assessment of the alternatives?
3. What are the performance metrics established for the new hardened structure? Who will pay for monitoring the success or failure? If failure, who will remedy and how fast?
4. What organization will be responsible for both routine and unexpected/emergency maintenance of the hardened structure to ensure both unimpeded public access and the safety of the public as these structures are placed in public waterways?
5. What cash reserves will be required to be maintained on-hand (by the organization identified in Question 4) to cover maintenance, re-dredging, and/or re-location of the structure if it fails?
6. As this hardened structure will disrupt the un-impeded flow of sediment, how will Rich Inlet be maintained to be open and accessible for the public? Will another hardened structure be placed on the southern end of Hutaff Island?
7. How was environmental justice addressed? On the surface, there appears to be a situation where one community (Figure 8 Island) has the financial resources to construct a hardened structure that will have impact on the resources of an adjacent community, who is neither organized nor has the financial resources to plan, evaluate, engineering, and construct a parallel corresponding hardened structure to protect their resource.

Thank you,

[REDACTED]