



**Everglades
Law Center, Inc.**
*Defending Florida's Ecosystems
and Communities*

**Shepard Broad Law Center
Nova Southeastern University**
3305 College Avenue
Ft Lauderdale, Florida 33314
Phone: (954) 262-6140
Fax: (954) 262-3992

Board of Directors

President
Thomas T. Ankersen, Esq.

Treasurer
Richard Hamann, Esq.

Secretary
Joel A. Mintz, Esq.

Laurie Ann Macdonald

Janet Reno, Esq.

David White, Esq.

John H. Hankinson, Esq.

**Executive Director
General Counsel**
Richard Grosso, Esq.

**Regional Director
Senior Counsel**
Lisa Interlandi, Esq.

Trial Counsel
Robert N. Hartsell, Esq.

Staff Counsel
Jason Totoiu, Esq.

December 3, 2010

Eric Reusch
U.S. Army Corps of Engineers
4400 PGA Boulevard, Suite 500
Palm Beach Gardens, FL 33410

**RE: COMMENTS ON DRAFT ENVIRONMENTAL
ASSESSMENT FOR SINGER ISLAND BREAKWATERS
PROJECT (SAJ-2006-05344)**

Dear Mr. Reusch:

On behalf of the **Surfrider Foundation, Sea Turtle Conservancy, and Florida Wildlife Federation**, we are submitting these comments on the Draft Environmental Assessment for the Singer Island Breakwaters Project.

The Surfrider Foundation ("Surfrider") is a nonprofit environmental grassroots organization dedicated to the protection and enjoyment of the world's oceans, waves and beaches for all people, through conservation, activism, research and education. The Sea Turtle Conservancy (formerly Caribbean Conservation Corporation) is a not for profit organization dedicated to the protection of marine turtles and the habitats they rely on. Florida Wildlife Federation (FWF), is a not for profit organization dedicated to preserving, managing, and improving Florida's fish, wildlife, soil, water, and plant life. FWF is active in many aspects of coastal conservation policy and its membership enjoys a variety of sustainable outdoor recreation activities on Florida's coast.

For the reasons explained below, the draft Environmental Assessment fails to meet the legal requirements of the National Environmental Policy Act (NEPA). We urge the Corps to prepare an Environmental Impact Statement (EIS) that analyzes the direct, indirect and cumulative effects of the Singer Island Project when added to the other past, present and future breakwater projects Palm Beach County and other local governments have planned for the region. Specifically, the Corps must analyze the impacts and alternatives to the Singer Island Project, the proposed Reach 7 Breakwater project, the Palm Beach County Erosion Control Project, the Jupiter Beach Erosion Control Project, and the proposed Boca Raton Breakwater Projects in a single, comprehensive Environmental Impact Statement.

The National Environmental Policy Act

An Overview

The National Environmental Policy Act (“NEPA”) is America’s “basic national charter for protection of the environment.” 40 C.F.R. § 1500.1(a). NEPA ensures that federal agencies “will have available, and will carefully consider, detailed information concerning significant environmental impacts” and that such information “will be made available to the larger [public] audience.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989).

To this end, NEPA requires federal agencies to prepare a detailed Environmental Impact Statement (EIS) for any “major federal action significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C).¹ To determine whether the environmental impact of a proposed project is significant enough to warrant the preparation of an EIS, the agency will often prepare an Environmental Assessment (EA). An EA is “a concise public document that briefly provides evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact.” 40 C.F.R. § 1508.9. *See also* 33 C.F.R. § 230.10. The Eleventh Circuit has held that when an EA is performed on a project, the Corps must take a “hard look” and “must make a convincing case” for a Finding of No Significant Impact and decision not to perform an EIS. *Hill v. Boy*, 144 F.3d 1446 (11th Cir. 1990). *See also, Save the Yaak Committee v. Block*, 840 F.2d 714, 717 (9th Cir. 1988) (stating that an agency must supply a “convincing statement of reasons” to explain why a project’s impacts are insignificant). If “substantial questions as to whether a project...may cause significant degradation of some human environmental factor,” an EIS must be prepared. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1149 (9th Cir. 1998).²

When NEPA Requires the Preparation of an EIS

The Council on Environmental Quality (“CEQ”) has promulgated regulations to guide agencies in determining whether a proposed project will have “significant” impacts to the environment. *See* 40 C.F.R. § 1508.27. Whether an action will have a “significant” impact on the environment, thus warranting the preparation of an EIS, requires considerations of both “context” and

¹ The issuance of a Section 404 permit by the Corps is a “federal action” to which NEPA applies. *United States v. South Florida Water Management District*, 28 F.3d 1563 (11th Cir. 1994); *Sierra Club v. Sigler*, 695 F.2d 957, 964 (5th Cir. 1983); *Fla. Wildlife Fed’n v. Army Corps of Eng’rs*, 401 F.Supp.2d 1298 (S.D. Fla. 2005).

² It must also be noted that for a court to find that an EIS is warranted, “a plaintiff need not show that significant effects will in fact occur” only that there are “substantial questions whether a project may have a significant effect on the environment.” *Id.* at 1150.

“intensity.” “Context” means that the significance of an action must be analyzed in several different contexts (i.e. national, regional, and local significance of the action). “Intensity” refers to the severity of the impact. The CEQ regulations set forth several factors for the Corps to consider when evaluating intensity, including, but not limited to:

- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or breaking it down into small component parts;
- The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks;
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

40 C.F.R. § 1508.27 (emphasis added).

Courts have held that a plaintiff need not show that significant effects will in fact occur, but if a plaintiff raises substantial questions whether a project *may* have a significant effect, an EIS must be prepared. *Idaho Sporting Congress*, 137 F.3d at 1150 (emphasis in original). As the court in *Klamath Siskiyou Ctr. V. Boody*, 468 F.3d 549, 562 (9th Cir. 2006) observed, “**this is a low standard.**” *Id.* (emphasis added).

THE CORPS MUST PREPARE AN EIS DUE TO THE PRESENCE OF A NUMBER OF SIGNIFICANCE FACTORS

All of the aforementioned “significance factors” are present here and as explained below, the Corps’ preliminary decision to prepare an Environmental Assessment and not an EIS stands in clear violation of NEPA.

1. Cumulatively Significant Impacts

Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. 40 C.F.R. § 1508.27 (b)(7) (emphasis added).

NEPA defines “cumulative impact” as:

The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7.

The Singer Island Breakwaters project will have significant cumulative effects on the coastal environment. In addition to the Singer Island Breakwater Project there are numerous other breakwater projects that have been and will be constructed all along the beaches of Southeast Florida, and particularly those of Palm Beach County. These projects include:

- The existing Palm Beach County Prefabricated Erosion Prevention (PEP) Reef; • The Vero Beach PEP Reef;
- 32nd Street Breakwaters in Miami Beach;
- Sunny Island Breakwaters also in Miami Beach;
- Three planned breakwater projects in Palm Beach County;
- The Central Palm Beach County Comprehensive Erosion Control Project (consisting of up to 18 individual projects);
- The Jupiter Beach Erosion Control Project, and
- Additional breakwater projects slated for Boca Raton.

The draft EA further states that “[i]n addition to breakwater construction, there are numerous existing groin fields, seawalls, and other past shoreline stabilization projects in Palm Beach County.” Draft EA at 28.

Despite this staggering number of breakwater projects planned for the Southeast Florida region, and specifically for Palm Beach County, the Corps appears to have no intentions of preparing an EIS for this project. This is a clear violation of NEPA. Courts have made clear that even where substantial questions exist as to whether a project may have a significant (in this case cumulative) impact on the environment, an EIS must be prepared. *See Anderson v. Evans*, 371 F.3d 475, 488 (9th Cir. 2004). In this instance, not only is the Singer Island Project likely to have significant environmental impacts but when those impacts are added to the individual impacts of all these aforementioned breakwater projects, it will also likely have significant, if not severe, cumulative impacts.

The Singer Island project will consist of a 1.1 mile long stretch of eleven submerged rubble mound breakwaters on submerged land approximately 270 feet offshore of Singer Island. Draft EA at 7. According to a recent Corps notice, the Central Palm Beach County Control Project consists of 18 different **emergent breakwaters** and 4 groins extending from the Town of Palm Beach south approximately 1.3 miles through Lantana and into the Town of Manalapan. *See Notice of Intent to Prepare a Draft Environmental Impact Statement (EIS) for the Central Palm Beach County Comprehensive Erosion Control Project in*

Palm Beach County, Florida, 75 Fed. Reg. 23253 (May 3, 2010). The Jupiter Beach Erosion Control Project would consist of an additional ½ miles of emergent and/or submerged breakwaters from south of the Jupiter Inlet to Jupiter Beach Resort. See Draft EA at 28. Together these three projects would consist of nearly 3 miles of armoring.

The potential cumulative impacts of these projects may be significant, particularly when it comes to endangered and threatened sea turtles. Palm Beach County beaches support approximately one-quarter of the overall sea turtle nesting along the east coast of Florida. A total of 13,443 loggerhead, green, and leatherback sea turtle nests were recorded last year along the 43.1 miles of Palm Beach County beaches. As the National Marine Fisheries Service observed:

As stand-alone projects on a limited stretch of beach, a breakwater might not jeopardize any listed sea turtle species. However, the cumulative impact of multiple such projects along significant stretches of nesting beach on Florida's east coast, such as the proposed Jupiter Beach breakwater, in conjunction with impacts from other beach protection and nourishment projects, may cumulatively present significant adverse impacts to sea turtle species." NMFS Biological Opinion on Permit for the Construction of 1.1 miles of rubble-mounded breakwaters off Singer Island, at 50-51.

The construction of nearly three miles of emerged and submerged breakwaters within a small geographic area that has the potential for significant cumulative impacts to endangered and threatened sea turtles, necessitates the preparation of an EIS for this project.³ The Corps has failed to make a "convincing" case that an EIS is not warranted. See *National Park and Conservation Ass'n v. Babbitt*, 241 F.3d 722 (9th Cir. 2001) (stating that the action agency bears the burden of producing "a convincing statement of reasons" showing why the impacts are insignificant).

2. Uncertainty of Impacts

In addition to the Corps' cursory treatment of all the past, present and reasonably foreseeable armoring projects slated for Palm Beach County, it contends that "impacts from these projects are difficult to predict, and are contingent on site specific avoidance and minimization measures and the engineering design of the breakwaters." The very fact that these impacts are uncertain and are contingent on unspecified avoidance and minimization measures and engineering designs, is enough alone to warrant an EIS. The CEQ regulations make clear, a factor in determining whether an EIS is warranted is

³ See *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1312 (9th Cir. 1990) (holding that where several foreseeable similar projects in a geographical region have a cumulative impact, they should be evaluated in a single EIS).

“the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.” 40 C.F.R. § 1508.27 (b)(5). As the Court in *National Park and Conservation Ass’n v. Babbitt*, explained:

An agency must generally prepare an EIS if the environmental effects of a proposed action are highly uncertain...Preparation of an EIS is mandated where uncertainty may be resolved by further collection of data...or where the collection of such data may prevent speculation on potential...effects. The purpose of an EIS is to obviate the need for speculation by insuring that available data are gathered and analyzed prior to the implementation of the proposed action. *Id.* at 732 (internal citations omitted).

In that case, the National Park Service prepared an EA on cruise ship impacts to wildlife in and around a Glacier Bay characterized such impacts as “unknown” because there was an absence of information about the effect of increased vessel traffic on the Bay and its wildlife and the lack of information on mitigation measures to offset these impacts. *Id.* at 722. Nevertheless, the Park Service proposed to develop a park research and monitoring program to eventually obtain this information and to assist in the prediction, assessment and management of the potential effects. *Id.* at 733. The Court rejected this “backwards” approach stating that this “is precisely the information and understanding that is required before a decision that may have a significant adverse impact on the environment is made, and precisely why an EIS must be prepared in this case.” *Id.*

In this instance, the Corps’s treatment of these “unknown” impacts is even more egregious in that the agency doesn’t even make the slightest effort to study the individual and collective effects of all these breakwater projects at some later time. The Corps simply concludes that “impacts from these projects are difficult to predict,” and defers to unspecified “avoidance and minimization measures,” engineering designs, mitigation plans and other agency reviews to address any and all impacts that may occur. Draft EA at 27-28. The Corps’ attempts to deal with these impacts in such a cursory manner flies in the face of the “hard look” test required under NEPA. *National Park Conservation and Assn*, at 733. As the Fifth Circuit remarked in *Fritiofson v. Alexander*, 772 F.2d at 1225, 1244 (5th Cir. 1985) when the Corps argued that it need not provide a cumulative impacts analysis for a canal system when no studies were readily available, “the Corps cannot avoid NEPA responsibilities by cloaking itself in ignorance.”

3. Precedent for Future Actions With Significant Effects

“Significance” is also established where it can be demonstrated that the proposed project establishes a precedent for future actions with significant effects or represents a decision in principle about a future consideration. The Corps’ reliance on an EA to address the environmental impacts of the proposed project is improper because the Singer Island Project appears to be the first of numerous

projects aimed at armoring Palm Beach County's coastline. In such instances, an EIS, not an EA, must be prepared.

NEPA regulations further provide that where "proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement." 40 C.F.R. § 1502.4; *see also* 1508.25 (explaining that the scope of an EIS must be determined with reference to whether actions are connected, cumulative, or similar).

Here, it appears that Palm Beach County either is or will be the permittee for the Singer Island Project, the proposed Reach 7 Breakwater project, the Palm Beach County Erosion Control Project, and the Jupiter Beach Erosion Control Project. These projects are all part of a comprehensive strategy and plan developed by Palm Beach County to armor several miles of its coastline for the ostensible purpose of erosion control. Thus, the Singer Island Project must be treated not as a discrete, independent project, but rather as a part of this larger series of breakwaters being proposed by Palm Beach County.

In this case, it appears that while the Singer Island Project is not geographically contiguous to the planned breakwater projects in the Palm Beach County Erosion Control Project and Jupiter Erosion Control Project, the County views this project as an important part of, and first step in its armoring plans for the region. Therefore, as an action that "may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration" the Corps must prepare an EIS. *See* 40 C.F.R. §§ 1508.25 (a)(1); 1508.27(b)(6).

4. Significant, adverse impacts to endangered species.

The construction of numerous emergent and submerged breakwater structures all along Palm Beach County's coastline, when coupled with the construction of the Singer Island Breakwater project, will likely have significant impacts to endangered and threatened sea turtles.

As noted earlier, the National Marine Fisheries Service has already explained that "the cumulative impact of multiple such projects along significant stretches of nesting beach on Florida's east coast... in conjunction with impacts from other beach protection and nourishment projects, may cumulatively present significant adverse impacts to sea turtle species." NMFS Biological Opinion, at 50-51.

Further, the draft EA recognizes that marine turtle nesting and swimming impacts may result from these projects and that these projects would likely go through numerous additional consultations. Draft EA at 28. The draft EA adds that the "incremental cumulative effect of the proposed breakwaters on sea turtles would be negative with respect to restricting the species' movement through the project area, loss of foraging habitat, and increased hatchling

predation.” Draft EA at 29. It then goes on to list numerous additional impacts. These impacts include incidental take in the form of:

- disturbance to nesting females due to construction activities or the presence of breakwaters;
- behavior modification of nesting females and hatchlings due to escarpment formation;
- destruction of nests from escarpment leveling;
- behavior modification of nesting sea turtles or hatchlings due to the presence of breakwaters which may act as barriers to movement or cause disorientation, and
- predation of hatchlings due to the presence of breakwater segments.

Draft EA at 29.

While the Fish & Wildlife Service fails to quantify the level of anticipated take, the draft EA notes that the National Marine Fisheries Services anticipates the proposed project will take 7 swimming juvenile green sea turtles and result in an additional 26 percent increase in the loss of hatchlings annually to predation. Draft EA at 40.

Despite these direct and indirect impacts to both swimming and nesting sea turtles and the potentially significant cumulative impacts associated with the construction of numerous additional breakwater projects, the Corps concludes that the project “would not result in ‘significant adverse impacts’ via sea turtle impacts.” Draft EA at 44.

The Corps provides no explanation of how it reached this determination. The draft EA, does however, strongly suggest that the Corps has determined that these impacts would be insignificant because any impacts stemming from this project would be minimized through the reasonable and prudent measures contained in the Services’ biological opinions and the applicant’s adherence to certain term and conditions in those biological opinions (Draft EA at 29, 32-33, 40, 44).

However, there is no support under the law for the Corps’ apparent attempt to justify its decision not to prepare an EIS by pointing to the Services’ “no jeopardy” opinions, and the conditions contained therein. The “jeopardy of extinction” standard under the ESA is a much higher threshold than “may adversely affect an endangered or threatened species” (the standard for preparing an EIS under NEPA) and the courts have been clear that a finding of “no jeopardy” does not avoid the need for an EIS where a project may nonetheless affect a species. In *Makua v. Rumsfeld*, 163 F. Supp. 2d 1202, 1218 (D. Ha. 2001), the Court noted that the “no jeopardy” opinion by FWS under the ESA is not equivalent to a finding of no potential impact under NEPA. A Finding of No Significant Impact (FONSI), by contrast, must be based on a review of the potential for significant impact, including impact short of extinction. As the

court explained, “clearly, there can be a significant impact on a species even if its existence is not jeopardized.” *Id.*⁴

For the same reasons, the Corps’ attempt to dismiss the significant cumulative effects this project would have on sea turtles (for purposes of NEPA) by suggesting that the impacts of these projects would be addressed by future biological opinions and reasonable and prudent alternatives,⁵ also has no support under the law. (Draft EA at 28).

In light of the numerous direct, indirect and cumulative effects the project may have on endangered sea turtles, the Corps must prepare an EIS for this project.

THE DRAFT EA VIOLATES NEPA

In addition to the fact that the Corps has violated NEPA by not preparing an EIS in this instance, the Draft EA also runs afoul of NEPA because it fails to adequately consider and analyze the environmental effects and alternatives to the proposed action.

⁴ See also *Greater Yellowstone Coalition v. Flowers*, 359 F.3d 1257, 1275 (10th Cir. 2004) (acknowledging that simply because an area is not “critical habitat” under the ESA does not mean destruction is not significant and noting the distinction between finding “no jeopardy” and “significance”); *Sierra Club v. Norton*, 207 F. Supp. 2d 1310, 1335 (S.D. Ala. 2002) (stating that the “jeopardy” analysis is distinct from the “significant impact” standard of NEPA and explaining the importance of preparing an EIS where there is uncertainty about impacts to listed species); *National Wildlife Federation v. Babbitt*, 128 F. Supp. 2d 1274, 1302 (E.D. Cal. 2000) (requiring an EIS even though mitigation plan satisfied the requirements of the ESA); *Portland Audubon Society v. Lujan*, 795 F. Supp. 1489, 1509 (D. Or. 1992) (rejecting agency's request for the court to “accept that its consultation with the United States Fish and Wildlife Service under the Endangered Species Act constitutes a substitute for compliance with NEPA.”).

⁵ The Corps’ statement that that “future projects would also be reviewed by FWS and NMFS pursuant to the Endangered Species Act and project specific reasonable and prudent measures would likely be required” is also entirely presumptuous considering “reasonable and prudent measures” are reserved for “no jeopardy opinions.” Should either NMFS or FWS determine that any of these future projects would “jeopardize” a listed species, “reasonable and prudent alternatives” (RPAs) not “reasonable and prudent measures” (RPMs) would be implemented. Compare 50 C.F.R. § 402.14(i)(1) with 50 C.F.R. § 402.14(h)(3). Thus, the Corps’ attempt to otherwise avoid a finding that the cumulative effects on sea turtles would not be “significant” for purposes of NEPA, is not only improper for the reasons explained above but appears to be based purely on the speculation that the Services will not issue a “jeopardy” opinion for any one of these future projects.

1. The Draft EA Fails to Provide An Accurate and Well Supported Statement of the Project's Purpose and Need.

NEPA planning begins with an identification of the purpose and need for a project. NEPA's implementing regulations provide that an environmental document should specify the underlying purpose and need to which the agency is responding in proposing the alternative including the proposed action. 40 C.F.R. § 1502.13 (emphasis added). An agency must exercise independent judgment in defining the purpose and need of a project and cannot rely exclusively on the statements and opinions of the applicant. See *Simmons v. Untied States Army Corps of Eng'rs*, 120 F.3d 664, 669 (7th Cir. 1997) (stating that "an agency cannot restrict its analysis to those alternative means by which a particular applicant can reach his goals").

The purpose and need statement for this proposed action is entirely inadequate. There is no clearly identified "purpose and need" statement but it appears the Corps is contending that the purpose of the project is shoreline stabilization and storm protection (Draft EA at 8) and the project "is needed to serve the public's interest by providing shoreline stabilization to reduce damages to private development and public beaches and protect upland structures from shore erosion and storm surges, storm tidal flooding, and wave effects." Draft EA at 36. The draft EA, however, provides little support for the Corps' position that this project is needed to control erosion.

A March 19, 2010 analysis by the Corps's Engineer Research and Development Center indicated that the shoreline within the project area "has historically been and is expected to remain relatively stable." Draft EA at 17 (emphasis added). While the Corps attempts to downplay this finding by arguing that "the shoreline has undergone recent erosional pressure and infrastructure is vulnerable to storm induced damages," the Corps provides no discussion of just how at risk the shoreline and infrastructure is to future storms other than speculating that "it is highly probable that the project area would be subject to more intense shoreline erosion events leaving valuable private property more vulnerable to potentially catastrophic damage during storm events." Draft EA at 17. Information on just how much damage these properties suffered following the 2004 and 2005 storm seasons would certainly help enlighten the public's understanding of the agency's concerns and provide support for these rather bold assertions, yet no such information is provided in the draft EA. The document contains additional conflicting statements on this issue. For instance on page 1, the Corps asserts that the project area has experienced "periodic" beach and dune erosion, yet in the same breath the agency concludes that the area has been deemed "critically eroded" by the Florida Department of Environmental Protection. These conflicting statements beg the question: Just how eroded is the project area?

Another problem with the purpose and need statement is the Corps' characterization of the project as being in the "public interest." Yet, by the Corps' own admissions the project is aimed largely at protecting "valuable private property" (Draft EA at 17, 31, 45). Taking such drastic action to protect a few beachfront homes to the potential detriment of the public's safety and marine environment (a resource held in the "public trust" by the federal government and the State of Florida) is hardly in the "public interest." Under the Corps' own regulations, a section 404 permit cannot be issued if it is contrary to the public interest, an analysis that involves the balancing of a variety of factors and a host of environmental considerations. The consideration of private economic interests and erosion control are just a few of the many factors the Corps considers in its analysis. See 33 C.F.R. § 320.4. Numerous other public interest factors must be considered by the Corps before it issues a permit, including the extent to which the structure will affect public health and safety, adversely affect fish and wildlife values, navigation, recreation, and other environmental concerns. See *id.* Therefore to otherwise suggest that the need for the proposed project is in the "public interest" based almost solely on the benefits it may offer to a limited number of private landowners, is misleading and skews the Corps analysis of the reasonable alternatives to the proposed action.

It is critical that the Corps provides an accurate and well-supported purpose and need statement because the purpose and need of a project necessarily dictates the range of reasonable alternatives. See *City of Carmel-By-the-Sea v. Dept. of Transp.*, 123 F.3d 1142, 1155 (9th Cir. 1997). It is imperative that the Corps develops an accurate statement of the purpose and need for this action so as not to rule out additional, and perhaps more environmentally benign alternatives from further consideration. See *Citizens Against Burlington, Inc.*, 938 F.2d at 196. In this instance, it would appear that the evidence suggests that the area is relatively stable, and that the purported need for this project is not as great as the applicant claims. This in turn, would strongly support the selection of a "no action" alternative or at a minimum, a less drastic alternative than the proposed action.

2. The Draft EA Fails to Adequately Define the Environmental Baseline.

The Corps is required to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 C.F.R. § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. In *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), the court stated that "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA." Further, "[t]he concept of a baseline against which to compare predictions of the effects of the proposed action and reasonable alternatives is critical to the NEPA process." Council of Environmental Quality, *Considering Cumulative Effects under the National*

Environmental Policy Act (May 11, 1999).

The Corps describes the existing site conditions as follows:

The project area is bordered by John D. MacArthur Beach State Park to the north, Ocean Reef Park to the south and condominiums and SR A1A to the west. Much of the native dune system within the project area has been lost to upland development. A natural dune and stable beach is present adjacent to John D. MacArthur Beach State Park where vegetation includes seagrape (*Coccoloba uvifera*), sea oats (*Uniola paniculata*), inkberry (*Scaevola plumieri L.*), bitter Panicum grass (*Panicum amarum*), bay cedar (*Suriana maritima*), and seashore elder (*Iva imbricata*). South of MacArthur State Park, Palm Beach County has restored the dune in front of the condominiums and re-vegetated with sea oats, railroad vine (*Ipomea pes-caprae*) and seagrape. Dunes do not exist in front of several seawalls which front structures constructed on top or in front of the dune. The project area has experienced periodic beach and dune erosion and is designated as “critically eroded” by the Florida Department of Environmental Protection. The average shoreline retreat from R-61 to R-66 between 2003 and 2008 was 41 feet.

The submerged bottom consists of a matrix of nearshore hard bottom, sediment over hard bottom and sand bottom. The hard bottom in this area is generally low profile and is largely ephemeral, although a small area within the project area is persistently exposed. The dynamics are largely storm driven and related to high-energy events such as tropical storms and hurricanes. Surveys conducted in June 2008 included twelve transects with eight transects perpendicular to the FDEP Range monuments R-61 through R-68, two reference transects located north of the project area, and two reference transects located south of the project area. *Padina* spp. and turf algae are the dominant macroalgae in the area, while scleractinian corals and other fauna accounted for low percent cover throughout the hard bottom habitat. The fish assemblage (including cryptic fishes) found in association with the hard bottom habitat was comprised of 27 families and 60 taxa and was dominated by grunts (Haemulidae) and most of the individuals observed were early life stages.

The Draft EA’s environmental baseline is wholly inadequate. While the Corps makes vague references to certain “several seawalls” there is no other specific information as to just how many of these seawalls are currently in place, where they are located, their size, their effectiveness or any other information about their environmental impacts. Only later in the Draft EA does the Corps reference these structures and even then it provides very little additional information about these structures. For instance, on page 18 of the Draft EA the Corps states that “twelve of seventeen properties in the project area either have existing seawalls, permits to construct seawalls, or pending applications to construct seawalls.” On page 28 the draft EA states, “in addition to breakwater

construction, there are numerous existing groin fields, seawalls and other past shoreline stabilization projects in Palm Beach County.” Viewed together, these statements present as many questions as they do answers and fail to provide a full accounting of all of the existing projects in the area. A full, accurate accounting of these existing structures provides the necessary foundation for the draft EA’s cumulative effects analysis so that the Corps can accurately analyze the effects these existing projects when added to the proposed project will have on the environment.

In addition to failing to provide a full accounting of all the existing projects in the project area, the Corps fails to adequately discuss the existing environmental conditions. For instance, only a passing reference is made to fish assemblage in association with the hard bottom habitat. The fact that most of the individuals observed were in early life stages suggests that the area may be a productive spawning area for some species. Yet, the draft EA remains silent on this point. There is also no mention of the extent of sea turtle nesting in the area, despite the fact that Palm Beach County beaches support approximately one-quarter of the overall sea turtle nesting along the east coast of Florida. In addition to these omissions, no information is provided on the extent to which people utilize the project area for recreational, boating, fishing, diving, surfing and other beach related uses. Considering that NEPA requires a statement on the project’s impacts to the “human environment” and that term is to be interpreted comprehensively to include the natural and physical environment and “the relationship of people with that environment,” *see* 40 C.F.R. § 1508.14, the environmental baseline must contain this information. Such information is necessary to inform the Corps’ analysis of the impacts this project will have on these human activities as well as public safety.

Unless and until a complete and accurate environmental baseline is established, the Corps’ analysis of the effects of the proposed action and the alternatives to the proposed action are fundamentally flawed as they are based on incomplete and insufficient information.

3. The Draft EA Fails to “Rigorously Explore and Objectively Evaluate” All Reasonable Alternatives.

NEPA requires a “detailed statement” of “alternatives to the proposed action.” 42 U.S.C. § 4332(2)(c). The alternatives analysis should address “the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for the choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14. This analysis must “rigorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R. § 1502.14(a).

The purpose of this section is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing

the same result by entirely different means.” *Environmental Defense Fund v. Corps of Engineers*, 492 F.2d 1123, 1135 (5th Cir. 1974). The Council on Environmental Quality describes the alternatives requirement as the “heart” of the environmental impact statement. 40 C.F.R. § 1502.14. While an agency is not obliged to consider every alternative to every aspect of a proposed action, reviewing courts have insisted that the agency “consider such alternatives to the proposed action as may partially or completely meet the proposals goal.” *Natural Resources Defense Council, Inc. v. Callaway*, 524 F.2d. 79, 93 (2d Cir. 1975).

The Corps has failed to “rigorously explore” and “objectively evaluate” all reasonable alternatives to the project.

a. The No Action Alternative

The Corps’ treatment of the “no action” alternative is inadequate and the Draft EA provides little support for the Corps’ decision to reject this alternative because it would not meet the project’s purpose.

As explained earlier, significant questions remain as to the “need” for the proposed project. Therefore, at this point the Corps’ dismissive treatment of the “no action” alternative is at the very least premature. A more detailed analysis of the current conditions of the project site would likely reveal that a project of this nature is not warranted, thus providing support for the selection of the no action alternative.

Furthermore, there is little factual support for the Corps’ assertions that “the no action alternative would likely result in the construction of additional seawalls along the shoreline in the project area.” Draft EA at 18. As it stands now, the Corps’ believes as much as 71% of the County’s coastline either has existing seawalls, permits to construct seawalls or are in the permitting process. *Id.* There is no evidence to support the argument that any of these actions would be abandoned if and when the Singer Island project is constructed. Thus, the Corps’ rejection of the “no action alternative” on these grounds is based on agency speculation and is without adequate justification.

Lastly, while the Corps argues that the “no action” alternative would likely lead to “the continued loss of valuable beach habitat utilized by nesting sea turtles,” and that the proposed project would minimize the effects of erosion on sea turtle nesting habitat, (Draft EA at 17-18), the Corps fails to quantify these benefits or otherwise provide additional support for this statement. The Corps also fails to consider the extent to which the benefits of not having breakwaters in the area might outweigh any potential losses to nesting habitat.

b. Other Reasonable Alternatives

The applicant's alternatives analysis only briefly discusses options such as a sand transfer plant, other structures, and dune restoration projects, but does not fully analyze these alternatives. In addition to failing to fully analyze these alternatives, the draft EA rejects all but the proposed action, stating that these alternatives (much like the no action alternative) would not meet the project's purpose.

Yet, the very same options the applicant has rejected as alternatives are currently being implemented throughout the state and Palm Beach County with greater success and significantly lower costs than is expected from the proposed breakwaters. In 2008, the Florida legislature passed the Inlet Management Bill to give Counties like Palm Beach County the opportunity for greater project ranking and funding for projects focused on inlet management. Examples include the North Lake Worth Inlet Sand Transfer, South Lake Worth Inlet Sand Transfer and Fort Pierce Sand Transfer (which is currently in design).

In the Corps' comments on the project application, the agency stated that a robust dune project would provide sufficient protection to upland structures and prevent the need for nearshore breakwaters. *See Coastal and Hydraulics Laboratory Technical Review of Singer Island Erosion Control Project Coastal Processes Analysis, Numerical Modeling, and Design Development.*

In addition, the Corps' rejection of all other alternatives based on the results of the County's modeling studies is not the product of a rigorous analysis. While the analysis suggests an annual reduction from a rate of 8 feet to 2 feet a year, this is probably only under "typical" conditions, but not under the conditions that have historically caused erosion. "Typical conditions" are not what drives the sediment process; a common adage is that "90 % of sediment transport occurs over 10% of the time." So based on the fact that this particular model will only attenuate at most 10% of the wave action, we fully expect the analysis ignores "nor'easters and hurricanes" during which the structure would likely increase erosion in its lee. This historical data is proven in the area per the Mid-Town Project and Vero PEP reef project as well as the "reef literature" cited in the Surfriider Foundation original letter.

The draft EA does not adequately take into consideration the Corps' ERDC Coastal and Hydraulics Laboratory recommendations:

"The following recommendations are suggested for consideration in regard to modification of the project design to alleviate the above described potential project—hazards induced.

1. *Positioning of the detached breakwaters further offshore such that the ratio of structure length to distance offshore is no greater than 0.67. For the proposed structure length of 240 ft the distance offshore (from the 2006 shoreline position) **should be at least 350 ft** as opposed to the*

*proposed 270 to 300 ft. This design modification will reduce the risk of tombolo formation to a more acceptable level, and **does not change** the potential environmental hazard in regard to sea turtles.*

Based on the current design, the burden of proof still has not been met by the applicant that there will be no downdrift impacts to the littoral system and sea turtles since the project is designed to be 270ft from shore.

2. Reduce the crest elevation of the proposed detached breakwaters such that they remain submerged by at least 2 feet at low tide. This modification may require an associated increase in crest width to achieve the desired wave attenuation but is achievable. The uncertainty of the numerical prediction of shoreline response to submerged detached breakwaters is, in this reviewer's opinion, no greater for submerged breakwaters than it is for emergent detached breakwaters as the only difference between the two is the assigned wave transmission coefficient for the breakwaters in the numerical model. The design of the breakwater cross-section to achieve the target wave transmission, on the other hand, may be more difficult but there are means, including physical model testing, to achieve a robust design for the breakwater cross—This design modification will reduce both the risk of tombolo formation and the potential environmental hazard to sea turtles.

Based on the current design, there still remains a grave uncertainty in the numerical prediction of shoreline response. Currently, the preferred alternative only has a .8 to .9 wave transmission coefficient. This means a \$25.7M would only diminish at most 10-20% of the wave energy on the beach, if it actually works and does not cause the need for another project south. This is not a cost efficient project. It is our recommendation that additional physical model testing is absolutely necessary by an independent third party.

3. Alternatively, at least in this reviewer's opinion, sufficient protection to upland infrastructure could be provided through committed restoration and maintenance of a robust dune feature on the backshore of the beach within the project area. The exposure of the existing hardbottom is expected to stabilize the shoreline or at least prohibit the continuation of the high rates of shoreline erosion experienced during the 2001 to 2005 interval documented in review document I."

If the Corps' expert opinion states that a dune only project would meet the necessary shore protection at a cost of \$1.5M, why are taxpayers asked to spend \$25.7M for a project designed with a number of flaws plus the cost of an additional \$1.5M for the dune project?

In addition to the Corps' failure to rigorously examine these other alternatives, the agency also fails to objectively evaluate the proposed project. On

page 5 of the Draft EA the Corps states that the submerged breakwaters of today are not like the submerged PEP reefs constructed in the 1980s and 1990s and that the many problems associated with the PEP structures are not indicative of the general performance of submerged breakwaters. Yet, aside from referencing the Sunny Isles Breakwater site and stating that submerged breakwaters “have been documented at project sites throughout the world and under a wide variety of environmental conditions” and that the proposed design is “time tested,” (Draft EA at 5) the Corps provides no scientific references or any quantifiable data to support its position. As the Court in *Idaho Sporting Congress*, noted, “NEPA’s implementing regulations require agencies to ‘identify any methodologies used and []make explicit reference by footnote to the scientific and other sources relied upon for conclusions.’” *Id.* at 1150 (quoting 40 C.F.R. § 1502.24). Clearly, the Corps has not done this and the public is left to wonder whether there really is any support for these rather bold assertions and conclusions. In any event, the Corps reliance on the Sunny Island Breakwater site as support for the proposed project is belied by statements later on in the draft EA where the Corps notes that the County’s consulting engineers provided an assessment of the Sunny Island project design and “indicated that it would not be as effective at Singer Island.” (Draft EA at 9).

The Corps’ alternatives analysis hardly amounts to a rigorous examination and objective evaluation of all reasonable alternatives and fails to satisfy the requirements of NEPA.

4. The Draft EA Fails to Analyze the Proposed Project’s Direct and Indirect Impacts.

“NEPA imposes procedural requirements designed to force agencies to take a ‘hard look’ at [the] environmental consequences” of their actions. *Earth Island Inst. v. United States Forest Serv.*, 351 F.3d 1291, 1300 (9th Cir. 2003). “This includes considering all foreseeable direct and indirect impacts. *Id.* See also 40 C.F.R. § 1508.25 (c).

This draft EA fails to consider a wide range of foreseeable direct and indirect impacts on the area’s resources. In addition, many of the Corps’ discussions on direct and indirect impacts are contradictory and inconsistent with past findings. The Corps must correct these and other deficiencies and provide a thorough and well-reasoned discussion of all direct, indirect and reasonably foreseeable environmental impacts.

Direct Impacts

The proposed Singer Island Breakwater project will negatively impact marine species ranging from federally listed sea turtles, manatees, and sawfish to the invertebrate organisms living in the beaches. The draft EA fails to adequately analyze impacts to these species.

Sea Turtles

If the Singer Island Breakwaters are constructed, endangered sea turtles will be forced to navigate and adjust to the structures in each stage of their life. Nesting female turtles will have difficulty maneuvering around the breakwaters and onto the beaches. Once on the beaches, suitable nesting sites may be altered due to changes in littoral sand flow. Hatchlings will also face increased difficulty of survival due to the rock structures. Hatchlings will be forced to navigate around the breakwaters in order to reach open water in addition to avoiding predation by larger marine species that will artificially inhabit the breakwaters. The proposed project will destroy nearshore turtle foraging habitat as well as present an opportunity for hatchlings and juvenile turtles to become trapped inside the breakwaters. The Draft EA provides little if any analysis of these impacts.

The Draft EA also fails to discuss a number of additional impacts. Hard structures like breakwaters attract fish, which in turn may increase hatchling predation. There is no discussion about nearshore predation rates and to the extent the Corps implicitly draws from the Biological Opinions to support any such conclusion that nearshore predation would not be significant, the studies briefly referenced in those documents were done in natural areas that are unlike the proposed project area. The Corps failure to address this issue is significant given the permanent presence of these structures and the perpetual nature of nearshore predation around these structures.

With respect to adult sea turtles, female loggerhead turtles will not have easy access over these structures, especially if there is wave action. Having the top of the structure 2 feet below the mean low tide level, +/-1 foot means turtles may encounter little more than a foot of water at low tide. Considering wave actions, which does not appear to be considered by the Corps, approaching female sea turtles could be significantly injured by these structures as their skin is quite delicate.

In the Biological Opinion prepared by the U.S. Fish & Wildlife Service, the Service addresses the potential for forced high density nesting if turtles prefer to enter the beach between the structures; if nesting density is high enough, subsequent females may dig up and destroy existing nests. The example the Service uses for a beach is MacArthur Beach State Park, which “is currently experiencing nest densities high enough to produce density-dependent mortality effects.” (FWS Biological Opinion, at 34). The nesting density in MacArthur Beach State Park is 610 nests per mile, but the nesting density in the project area is $774/1.1=704$ nests per mile. The project area already has a higher density than FWS considers free of density-dependent mortality effects; the addition of the project structures can only make things worse. The structures will front 0.54 miles of the 1.1 miles of beach leaving 0.56 miles of beach between the structures; this could potentially result in a nesting density of 1382 nests per mile in that

smaller area, if average nesting continues in the project area. The EA fails to account for high density-dependent mortality effects.

There is also no discussion on of the impacts rock structures may have on sea turtle mating behavior, no mention of potential disruptions in inter-nesting movements immediately offshore, no assessment of the viability of adjacent beaches for turtle nesting, or the potential impacts from concentration of nesting sites on adjacent beaches.

The Loggerhead sea turtle is now being monitored and classified based on “Distinct Population Segments” determined by their nesting beaches and geographical region. Distinct Population Segments provide a benefit to scientists and managers when creating management plans because they allow for regional specific management of the species to ensure an overall healthier population. Management tools and techniques must be included and considered when analyzing impacts to sea turtles from the proposed project.

The National Marine Fisheries Service and U.S. Fish and Wildlife Service have determined that the loggerhead sea turtle is composed of nine distinct population segments (DPS) and that seven now qualify for endangered status and two qualify as threatened under the federal Endangered Species Act. This finding was issued for public comment March 16, 2010. (Fed. Reg. Vol. 75, No. 50, p. 12598.) Thus, the biological status of this species has been found to be in a more precarious condition than previously determined and even greater caution must be taken to assure the continued survival and recovery of each DPS.

In light of the Deepwater Horizon oil spill in the Gulf it is vital that we look at the loss of turtles occurring in this southeast/gulf region to ensure proposed take in this area will not further jeopardize this species. The Services and the Corps must take additional time to take this into consideration and/or maximize protection of these nests due to this extreme threat.

The significant impacts this project and other similar projects will have on these listed species, necessitates the preparation of an EIS for this project. *See* 40 C.F.R. § 1508.27 (providing that the degree to which the action may adversely affect an endangered or threatened species is an indicator of the project’s “significance” for purposes of determining whether an EIS must be prepared).

Sawfish and Manatee Impacts

There is very limited discussion regarding impacts to manatees and sawfish, both listed endangered species, from the proposed project. Issues such as impacts to feeding sites and migration from the project site have not been adequately addressed. Moreover, as explained earlier, to the extent the Corps has chosen not to analyze these impacts because the National Marine Fisheries Service has “concurred” with the Corps’ determination that the project would “not likely adversely affect” these species under the Endangered Species Act (*see*

draft EA at 37; 39), in no way excuses the Corps from having to analyze impacts to these species under NEPA. *See infra* discussion, page 8; *Portland Audubon Society* 795 F. Supp. at 1509 (rejecting agency's request for the court to "accept that its consultation with the United States Fish and Wildlife Service under the Endangered Species Act constitutes a substitute for compliance with NEPA.").

Impacts to Nearshore Hard Bottom

Nearshore hard bottom is an extremely important habitat for both inshore and offshore marine species. The permit application and supporting documents lack a determination of location and extent of nearshore hard bottom habitat for the project area. Additionally, impacts to Essential Fish Habitat have not been fully considered within the project analysis. The UMAM analysis is primarily a qualitative analysis by DEP and does not fully or adequately account for the cumulative impacts to the ecosystem.

Impacts to Nearshore and Beach Dwelling Microorganisms

The proposed project has not taken into consideration the impacts breakwaters will have on the nearshore and beach dwelling microorganisms. These organisms rely on high wave energy to provide food sources. A loss of wave action will diminish food sources for species of worms, crustaceans, shrimps, clams, snails, and others. This loss of food will indirectly impact many species of fishes and shorebirds. The proposed project will directly impact more than 1-mile long area; this will provide little opportunity for adjacent beaches to repopulate diminished beach dwelling organisms.

Noise Impacts

There is absolutely no mention of noise impacts resulting from the placement of approximately 181, 468 tons of limestone along a 1.1-mile stretch of coastline. There is the potential that underwater noise could harm marine mammals such as dolphins and manatees, particularly when the project is expected to take two years to complete. Marine mammals, sea turtles and fish are sensitive to underwater noise, which can travel large distances underwater. Many of these species rely on noise perception for communication between individuals, navigation and foraging. *See National Research Council, Ocean Noise and Marine Mammals* (2003). The Corps must analyze these potential impacts.

Navigational Hazard

The revised permit application states that breakwaters will now be submerged. This will continue to create a navigational hazard. Boaters unaware of breakwater structures will risk damage to property and person; this risk will increase if rough seas exist and breakwaters are temporarily exposed. The Coast Guard needs to be consulted again on this revised permit application.

Impacts to Park Resources

The draft EA states that the project area is bordered by John D. MacArthur State Park to the north and Ocean Reef Park to the South (Draft EA at 1) but there is absolutely no discussion of how this project may impact these parks, their dunes systems, nesting sea turtles within those parks, and park users. This is a serious concern as the draft EA suggests the potential for erosion caused by this project at the southernmost end-the area that borders Ocean Reef Park. See Draft EA at 16. Under the Corps' own regulations, it is required to consider the effect proposed structures may have on values associated with state parks and other protected resources, *see* 33 C.F.R. § 320.4(e), and a project's proximity and impacts to nearby park lands is yet another factor the agency must consider in assessing the significance of a proposed action for purposes of preparing an EIS under NEPA. *See* 40 C.F.R. § 1508.27(b).

Impacts to Recreational Users (Surfers, Divers, and Swimmers)

Significant questions still remain regarding the project's impacts to public safety, and specifically the risk posed to swimmers, divers, surfers and other recreational users by rip currents. Comments submitted by the Corps to County Engineers on October 14, 2010 indicated:

There remains some concern regarding the generation of rip currents and overall public safety throughout the project area. Specifically, recently-provided analyses indicate that potentially hazardous rip currents could be generated approximately 2% of the time, based on a relatively small set of input wave height and direction parameters. A more detailed examination of incident wave conditions versus resulting current velocities is recommended. Effects of wave period on rip current generation should be examined as well...

A more detailed discussion of rip current generation throughout the project and adjacent areas should be provided, including anticipated impacts on sediment movement and on public safety.
(Draft EA at 16-17).

It is entirely unclear what, if any, additional information has been provided by the applicant regarding these issues. *See* Draft EA at 17. The draft EA references comments submitted by the applicant's consultants on October 28, 2010 and a teleconference the following day but provides absolutely no additional information and in fact contains a large "blank" where it appears information would be provided. *See id.* There is also no investigation of how ocean currents and storm frequency will be affected by climate change. Without this information, and no technical support to support the applicant's findings that the risk would be minimal ("2%"), the Corps fails to provide a complete and thorough analysis of the project's impacts to human safety. *See Idaho Sporting*, 137 F.3d

1146 (finding an EA inadequate where the agency failed to identify the methodologies used and the scientific sources relied upon for its conclusions).

Visual Impacts

The Corps' cursory and rather dismissive treatment of visual impacts (that it depends on the person) is wholly inadequate. *See* Draft EA at 31. What the Corps seems to ignore is that the visual impacts are not just those created by the proposed project but the cumulative visual impact created by miles of breakwater structures all along Palm Beach County's coastline. NEPA demands a "hard look" at these impacts and what if any measures can be taken to reduce these impacts.

Sea Level Rise

In 2009, the Corps released a comprehensive policy to require that projects under its jurisdiction be designed with higher sea levels in mind. This policy (USACE Circular No. 1165-2-211) is a stand-alone document that describes how engineers should design for sea level rise, incorporating the direct and indirect physical effects of projected future sea-level change in managing, planning, engineering, designing, constructing, and maintaining Corps projects and systems of projects. While the policy does not specify a water depth, it does lay out a procedure engineers must follow to estimate low, medium and high sea level projections. The draft EA does not address this policy, much less discuss how the proposed project will be constructed and maintained in accordance with Corps policy.

Hurricanes

While the purported purpose and need for the project is to protect shorelines from erosion caused by hurricanes and other storm events, there is no discussion of how these breakwaters will respond to hurricanes, tropical storms and other major storm events. Thus, there are significant questions as to whether these structures would even provide the level of protection as purported by the applicant.

Tombolo Formations

Tombolos can occur when a breakwater becomes attached to the mainland by a narrow piece of land such as a spit or sandbar. Tombolos are formed by wave refraction. As waves approach the breakwater they are slowed down and refract or bend around the breakwater to the opposite side as they approached. The wave pattern created by this water movement causes a convergence of longshore drifting on the opposite side of the breakwater. These waves sweep sediment together from both sides. Over time, when enough sediment has built up, the beach shoreline will connect to the breakwater and form a tombolo.

There is little discussion about the potential for tombolo formations other than a brief statement that tombolo formation was very likely to occur with the originally proposed emergent structures (Draft EA at 4), tombolo formation at the 32nd Street Breakwaters in Miami Beach location caused extensive downdrift erosion (*id.*), the Sunny Island Breakwaters were designed to preclude tombolo formation, (Draft EA at 5) and that the four northernmost breakwater segments were shifted slightly offshore to reduce the potential for tombolo formation at the updrift end of the project. (Draft EA at 3). The Corps provides no other analysis or discussion of tombolo formations and in fact, concedes towards the end of the draft EA that the structures could cause the creation of tombolos. Significant questions remain. For instance, is the 32nd Street Breakwaters project also a submerged breakwater, and if so, why would this project not have similar tombolo effects? Is there any support for the position that by moving the four northernmost breakwater segments offshore, the potential for tombolo formations would be reduced? NEPA demand an actual analysis of these impacts and the draft EA fails to take a hard look at this very important issue.

Indirect Impacts

The draft EA fails to adequately address the indirect impacts of this project and specifically, what if any impact this project (along with all the other planned breakwater projects slated for Palm Beach County) will have on growth and development patterns in the region. Under the CEQ regulations, an agency must consider the direct, indirect, and cumulative impacts on the environment when determining whether a federal action is “significant.” 40 C.F.R. §§ 1508.8, 1508.27(b).

An EA must analyze “indirect effects”, which:

“are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. 40 C.F.R. §1508.8(b).

One of the purported benefits of the proposed project is “the positive impact on the local economy.” Draft EA at 31. The draft EA contends that construction activities would generate jobs, protect valuable private coastal property, improve the local economic base, and increase the area of beach used for recreation. Yet, nowhere in the draft EA does the Corps discuss how these indirect effects could negatively impact the environment. For instance, the prospect that all these breakwater projects could shield miles of coastline from the effects of hurricanes and other storm events could promote additional beachfront development and spur tourism. No consideration is given to these potential “growth-inducing”

effects. As Courts have routinely held, NEPA requires the Corps to analyze these impacts.⁶

In this case, the location, pattern and rate of development along Palm Beach County's coastline could be significantly altered, including its land uses and transportation and utility infrastructure. The land use changes and the infrastructure extensions made for this project may be the catalyst for several other developments to support the increase in residential development. Considering the applicant has listed the Palm Beach County Tourist Development Council bed tax and ad valorem funds as a "partner" in another proposed breakwater project (the Central Palm Beach County Comprehensive Erosion Control Project) we do not believe such growth inducing effects are anyway speculative. To the contrary, it appears that the use of such funds would support the argument that the desire for increased development and tourism is in fact a driving force behind the applicant's plans.

5. The Draft EA Fails To Adequately Address the Project's Cumulative Effects.

As discussed from the onset, NEPA regulations compel the preparation of an EIS where the proposed action is related to other actions with individually insignificant but cumulatively significant impacts. The fact there are numerous other breakwater projects planned for the area and that these projects may have a cumulatively significant impact to the environment, requires the Corps to prepare an EIS for this project.

⁶ See *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) (requiring the agency to prepare an EIS on effects of a proposed freeway interchange on a major interstate highway in an agricultural area and to include a full analysis of both the environmental effects of the exchange itself and of the development potential that it would create.); *Florida Wildlife Federation v. United States Army Corps of Eng'rs*, 401 F.Supp.2d 1298 (S.D. Fla. 2005) (holding that the agency failed to take a "hard look" at the growth inducing impacts of a biomedical facility planned for western Palm Beach County); *TOMAC v. Norton*, 240 F. Supp.2d 45, 50-52 (D.D.C. 2003) (holding that the Bureau of Indian Affairs failed adequately to analyze the potential impacts of a casino upon local growth and development patterns); *Friends of the Earth v. United States Army Corps of Eng'rs*, 109 F. Supp.2d 30, 43 (D.D.C. 2000) (holding that an EIS was required for a series of shoreline casinos that would spur development, and rejected the Corps' determination that the effects of shoreline casino development would be minimal, as there was no analysis to support the conclusion); *Mullin v. Skinner*, 756 F. Supp. 904, 925 (E.D.N.C. 1990) (enjoining the agency from proceeding with a bridge project which induced growth in island community until it prepared an adequate EIS identifying and discussing in detail the direct, indirect, and cumulative impacts of and alternatives to the proposed project).

Notwithstanding this fact, the draft EA's grossly inadequate treatment of these projects and their individual and collective effects, further supports the argument that the Corps must prepare an EIS that analyzes the incremental impact of all these actions when added to the Singer Island Project.

The draft EA's cumulative impacts analysis is a scant one page and fails to *analyze* how this project, when added to all of these other projects, will impact the environment. The entire cumulative effects analysis consists of (1) vague references to most (but not all) of the past, present and future projects, (2) a disclaimer that "impacts from these projects are difficult to predict, and are contingent on site specific avoidance and minimization measures and the engineering design of the breakwaters" and (3) conclusory statements that even in light of these uncertainties as well as the failure of some of these existing projects to achieve their stated purpose of erosion control, "the incremental cumulative effect of the proposed breakwaters on sea turtles would be negative," (and even positive), that "adverse cumulative impacts to hardbottom resources would be minimized and offset with appropriate mitigation," "cumulative water quality impacts will be discountable," "cumulative wildlife and fisheries impacts would also be discountable," and "no other measurable cumulative impacts are expected for any other resource."

By no means is this a satisfactory analysis of the cumulative effects of the proposed project. NEPA requires federal agencies to take a "hard look" at the cumulative effects of the proposed action. *See Florida Wildlife Federation v. United States Army Corps of Eng'rs*, 401 F.Supp.2d 1298 (holding that the agency failed to take a "hard look" at the cumulative effects of the proposed action in its EA). To accomplish this, the Corps must not only catalogue past, present and future projects but also *assess* the cumulative environmental impacts of those projects with the proposed project and *analyze* the additive cumulative impact of all these actions. *See City of Carmel-By-The-Sea*, 123 F.3d at 1160 (rejecting cumulative impacts analysis that referred generally to other past projects and did not discuss the additive impacts of foreseeable future projects). Further, NEPA requires that a cumulative impacts analysis provide "some quantified or detailed information" because without such information, neither the courts nor the public can be assured that the agency took the necessary hard look at the project. *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1998) (stating that "very general" cumulative impacts information violates NEPA).

The Corps' analysis fails to describe the size, location, or type of the numerous future breakwaters projects it recognizes are planned for the region. If this wasn't bad enough, the Corps states that with respect to two of the biggest projects- the Central Palm Beach County Comprehensive Erosion Control Project and Jupiter Beach Erosion Control Project-these projects include an "unspecified number of emergent or submerged breakwater structures" along a nearly 2 mile stretch of coastline. Not only does this conflict with a recent Corps notice acknowledging that the Central Palm Beach County Comprehensive Erosion

Control Project will consist entirely of emergent breakwater structures (as many as 18) and given that the National Marine Fisheries Service has already prepared a “draft Biological Opinion” finding that the construction of certain emergent breakwaters would “jeopardize” the continued existence of the loggerhead sea turtle, it is mindboggling how the Corps can nonchalantly say that an unspecified number of these structures could be emergent and conclude that in any event there are no cumulative effects.

The vague generalities the Corps employs in this draft EA are akin to the type of statements the Court in *City of Carmel* found to be “insufficient to permit adequate review of their cumulative impacts.” *City of Carmel*, 123 F.3d at 1160. In that case, the EIS for a highway project referred generally to “other development projects,” “ongoing urbanization,” and “substantial growth” in the area. *Id.* Here, the Corps refers to the existing and reasonably foreseeable projects in the area as an “unspecified number of emergent or submerged breakwater structures” and “numerous existing groin fields, seawalls, and other past shoreline stabilization projects in Palm Beach County.” Such “perfunctory references do not constitute analysis useful to a decisionmaker in deciding whether, or how, to alter the program to lessen cumulative environmental impacts.” *Natural Resources Defense Council v. Hodel*, 865 F.2d 288, 299 (D.C. Cir. 1988).

The Corps’ reliance on future, unspecified mitigation plans to support its position that cumulative effects would be insignificant also runs afoul of NEPA. As numerous courts have held, perfunctory descriptions of mitigation measures without any supporting analytical data is insufficient to support a finding of no significant impact. *See Idaho Sporting*, at 1151; *Neighbors of Cuddy Mountain*, 137 F.3d at 1380. The Corps merely states that “mitigation would be required for all impacts to hardbottom communities associated with these planned projects,” (see draft EA at 28) and fails to provide any additional information or analytical data to support the claim that these “unknown” cumulative impacts can be addressed through such measures.

Lastly, the Corps’ statements that even in light of these uncertainties, the cumulative effects would be “negative,” “discountable,” and non-existent, so as to warrant the issuance of an EA and Finding of No Significant Impact, epitomize arbitrary and capricious decision-making.⁷ There is no sound justification for concluding that the impacts will be insignificant when the Corps prefaces its whole discussion on the notion that the individual and collective impacts of all these projects is “unknown.” Moreover, the fact that the National Marine Fisheries Service had already determined that certain emergent breakwater structures would jeopardize the loggerhead sea turtle undermines any claim by

⁷ Violations of NEPA are brought under the Administrative Procedure Act, which allows courts to set aside final agency actions that are “arbitrary and capricious.” *See* 5 U.S.C. § 706 (2)(a).

the Corps that the cumulative effect of all these future projects (many of which are emergent breakwaters) would be “insignificant.”

Thus, in light of the numerous reasonably foreseeable future breakwater projects proposed all along Southeast Florida’s coastlines, and particularly along those of Palm Beach County, and the draft EA’s grossly inadequate treatment of these projects and their individual and collective effects, the Corps must prepare an EIS that analyzes the incremental impact of all these actions when added to the Singer Island Project. *See Cuddy Mountain*, 137 F.3d at 1378; *City of Tenakee Springs*, 915 F.2d at 1312 (holding that where several foreseeable similar projects in a geographical region have a cumulative impact, they should be evaluated in a single EIS).

6. The Draft EA Fails to Adequately Discuss the County’s Mitigation Plans.

“The discussion of steps that can be taken to mitigate adverse environmental consequences plays an important role in the environmental analysis under NEPA.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 351; *see also* 40 C.F.R. § 1502.16(h) (stating that an EIS must contain “means to mitigate adverse environmental impacts”). There must be a “reasonably complete discussion of possible mitigation measures.” *Robertson*, at 352. Courts have required mitigation measures to be supported by substantial evidence in order “to avoid creating a temptation for federal agencies to rely on mitigation proposals as a way to avoid preparation of an EIS.” *National Audubon Soc’y v. Hoffman*, 132 F.3d 7, 17 (2d Cir. 1997)(emphasis added).

Mitigation measures may be found insufficient when the agency fails to study the efficacy of the proposed mitigation, fails to take certain steps to ensure the efficacy of the proposed mitigation (such as including mandatory conditions in permits), or fails to consider alternatives in the event that the mitigation measures fail. *Id*; *see also National Parks & Conservation Ass’n*, at 734-35 (holding that the agency could not issue a FONSI based upon mitigation measures because it “did not conduct a study of the anticipated effects of the mitigation measures, nor did it provide criteria for an ongoing examination of them or for taking any needed corrective action”); *Sierra Club v. Norton*, 207 F. Supp. 2d 1310 (S.D. Ala. 2002).

The Corps’ discussion of the proposed mitigation measures for this project is inadequate. There is little if any discussion of the efficacy of the proposed mitigation and few if any assurances that the proposed mitigation would be successful. All that is provided is the summary of a UMAM analysis, which purports to quantify the amount of mitigation needed. Does the Corps have any past experiences with this type of mitigation proposal? Have similar mitigation projects been proposed and/or utilized in the past? If so, have these projects been successful in mitigating the impacts of similar breakwater projects? The

lack of analytical data to support the Corps' conclusion that this mitigation plan will adequately offset the project's impacts renders the EA deficient. *See Idaho Sporting*, at 1151.

Moreover, given the extent of impacts the proposed project will have on the environment, it does not appear that the proposed mitigation plan—a plan focused solely on offsetting the project's impacts to hardbottom habitat—adequately offsets all of the project's impacts. The proposed mitigation fails to offer any mitigation measures for wildlife, endangered and threatened species, public safety, recreational impacts, and noise and visual impacts.

In closing, the Corps must discuss these and other mitigation measures, study the efficacy of the proposed mitigation, and consider alternatives in the event that the mitigation measures fail. *See generally, National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722. Only then will the Corps be able to accurately determine whether the impacts of this project can be effectively mitigated so as to avoid a significant effect on the environment.

7. A Substantial Public Controversy Exists.

In determining the significance of a proposed action's effects on the environment, an agency must evaluate “[t]he degree to which the effects on the quality of the human environment are likely to be highly controversial.” 40 C.F.R. § 1508.27(b)(4).

A controversy sufficient to require preparation of an EIS occurs “when substantial questions are raised as to whether a project...may cause significant degradation of some human environmental factor, or there is a substantial dispute [about] the size, nature or effect of the major Federal action.” *Protect Our Water v. Flowers*, 377 F.Supp.2d 844, 861 (E.D. Cal. 2004) (quoting *Nat'l Parks Conservation Ass'n*, 241 F.3d at 736. A substantial dispute exists when evidence, raised prior to the preparation of an EIS or FONSI casts serious doubt upon the reasonableness of an agency's conclusions. *Protect Our Water*, 377 F. Supp.2d at 861. “An outpouring of public protest” has been held to satisfy the requirement of “substantial dispute.” *Pub. Citizen v. Dep't of Transp.*, 316 F.3d 1002, 1027 (9th Cir. 2003).

Once a substantial controversy arises, NEPA places a burden on the agency to come forward with a “well reasoned explanation” demonstrating why those responses do not suffice to create a public controversy. *Nat'l Parks Conservation Ass'n*, 241 F.3d at 736.

There is a substantial public controversy in this case. Since 2006, numerous organizations, concerned taxpayers, and homeowners of adjacent properties to the project have submitted comments, concerns and have requested additional meetings with elected officials, local, state and agency staff, especially after the project was arbitrarily changed from an EIS to EA evaluation. Indeed,

the draft EA recognizes that a number of concerned citizens and conservation organizations including Surfrider, Sea Turtle Conservancy, Florida Wildlife Federation, and Defenders of Wildlife have submitted significant public comment on the project. Draft EA at 4, 11. Despite these concerns, there has been no official public hearing on this project (other than the 2006 scoping meeting). Concerned citizens have nevertheless attended several other project related meetings, however they have been required to limit their comments to only the specific issues raised at those project meetings. Most of the technical meetings have been closed to the public. Despite the tremendous amount of public outcry over this project, the draft EA makes absolutely no mention of the existence of any degree of public controversy. The facts clearly demonstrate that a substantial dispute exists under 40 C.F.R. § 1508.27(b)(4) and an EIS is warranted for this project.

Conclusion

“NEPA emphasizes the importance of coherent and comprehensive up-front environmental analysis to ensure informed decision making to the end that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.” *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989). An EIS is required of an agency in order that it explores, more thoroughly than an EA, the environmental consequences of a proposed action whenever “substantial questions are raised as to whether a project *may* cause significant [environmental] degradation.” *Blue Mts. Biodiversity Project*, 161 F.3d at 1216 (quoting *Idaho Sporting*, 137 F.3d at 1149).

As evidenced by these comments, substantial questions have been raised as to whether this project may cause a significant impact on the environment. Therefore, the Corps must prepare an EIS for this project before a decision is made and it is otherwise too late.

Thank you for the opportunity to comment on this proposal. Please make these comments and the attached documents part of the official record for this project. Also, please send me all future notices, announcements, EAs, EISs, decision notices and bid announcements, and contracts for this project.

Sincerely,

/s/

Jason Totoiu
Staff Counsel
Everglades Law Center

cc:

Ericka D'Avanzo
Florida Regional Manager
Surfrider Foundation

Greg Lyon
Palm Beach County Chapter Chair
Surfrider Foundation

Gary Appelson
Policy Coordinator
Sea Turtle Conservancy

Manley Fuller
Executive Director
Florida Wildlife Federation

(Via electronic mail only):

Roy E. Crabtree, Ph.D.
Regional Administrator
National Marine Fisheries Service
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701-5505
Roy.Crabtree@noaa.gov

Paul Souza
Field Supervisor
South Florida Ecological Services Office
U.S. Fish & Wildlife Service
1339 20th Street
Vero Beach, Florida
Paul_Souza@fws.gov

Dr. Merrie Beth Neely
Florida Department of Environmental Protection
Bureau of Beaches & Coastal Systems
5050 W. Tennessee Street
Building B
Tallahassee, Florida 32304
Merrie.Neely@dep.state.fl.us

Kipp Frolich
Florida Fish & Wildlife Conservation Commission
620 South Meridian Street
Tallahassee, FL 32399
Kipp.Frolich@fwc.state.fl.us