



DEPARTMENT OF THE ARMY  
JACKSONVILLE DISTRICT CORPS OF ENGINEERS  
701 San Marco Boulevard  
JACKSONVILLE, FLORIDA 32207-8175

REPLY TO  
ATTENTION OF

CESAJ-PD-EC (ER 200-2-2)

22 March 2017

MEMORANDUM FOR THE RECORD

SUBJECT: Determination of Appropriate National Environmental Policy Act (NEPA) documentation for the San Juan Harbor Improvements Feasibility Study, San Juan, Puerto Rico

**Project Location:**

The project is located on the north coast of the island of Puerto Rico, about one-third of the distance west along the coast from the northeast corner. San Juan Harbor provides the only natural harbor offering all-weather protection to shipping along the entire north coast.

**Project Description:**

The study area encompasses the Federal channels within the harbor, bar channel, as well as any shorelines and extensions of the water bodies that are potentially impacted by channel enlargement alternatives as well as an ocean dredged material disposal site. The study also defines the routes and locations of waterborne traffic affected by study alternatives but only to the extent needed to develop transportation costs based on distribution portioned distances.

**Project Need and Purpose:**

The purpose of the feasibility study involves recommending a comprehensive group of navigation modifications to reasonably maximize, consistent with protecting the environment, San Juan Harbor's contribution to National Economic Development (NED) benefits (transportation cost savings), which address existing physical constraints and inefficiencies. The need for the modifications to the Federal system of channels results from difficult winds, waves, and currents, limited turning basin widths, and insufficient channel depths which limit the system's ability to safely and efficiently serve the existing shipping fleet and future cargo volumes.

The feasibility study forecasts waterborne cargo volumes, traffic patterns and vessel fleets, and evaluates the need for navigation system improvements over a 50-year period of analysis. It considers a wide range of structural and some non-structural measures within and near the harbor that could address inefficiencies within the system.

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However, it concentrates on potential changes to water-based transportation system components that are within the scope of the study authority described above.

Throughout this study, the main factors influencing the total cargo throughput of San Juan Harbor revolve around land-based factors such as population growth, industrial and manufacturing changes, and regional maritime shipping trends limited by the capacity of the land-based infrastructure to process it.

**Authority:**

House Report 109-738, 109th Congress (2005-2006) December 29, 2006, as reported by the Transportation and Infrastructure Committee contains the study authority for the San Juan Harbor Improvements study (<https://www.congress.gov/109/crpt/hrpt738/CRPT-109hrpt738.pdf>). On page 210 of the pdf (or page 156 of the report), it states:

WATER RESOURCES SURVEY RESOLUTIONS APPROVED BY THE  
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

Specifically, on page 172/210 of the pdf (or page 158 of the report), the report has a line item for San Juan Harbor that states:

Mr. Fortuno: San Juan Harbor, PR, Docket number: 2764, Date filed: February 23, 2006 (navigation project). September 20, 2006. Resolution adopted by the Committee on Transportation and Infrastructure.

**Previous NEPA Documents:** The following is a list of environmental documents related to the San Juan Harbor Federal Navigation Project:

- San Juan Harbor, Puerto Rico Submerged Aquatic Vegetation Mitigation Environmental Assessment (USACE 2015).
- San Juan Harbor Federal Navigation Project Limited Reevaluation Report and Environmental Assessment (USACE 2002).
- San Juan Harbor Navigation Improvement General Reevaluation Report and Environmental Assessment (USACE 1994).

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- Phase 1 General Design Memorandum and Supplement to Final Environmental Impact Statement, San Juan Harbor, Puerto Rico. Survey Review Report – Navigation (USACE 1982).
- Final Environmental Impact Statement, San Juan Harbor, Puerto Rico. Survey Review Report – Navigation (USACE 1975).

### **Analysis Pursuant to NEPA:**

NEPA requires an analysis of impacts using a Categorical Exclusion, an EA when the project would not “significantly” affect the quality of the human environment, or an Environmental Impact Statement (EIS) when the project would “significantly” affect the quality of the human environment. Development of an EIS must result in analytical, rather than encyclopedic, documents that emphasize real issues, while deemphasizing insignificant ones. Both an EIS and an EA evaluate a range of alternatives, determine the least environmentally damaging practicable alternative for the project purpose, and allow for public input.

In determining whether an EA or EIS is appropriate to supplement a prior NEPA document, agencies should consider substantial changes to the proposed action relevant to the human environment or significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts (40 CFR 1502.9). In addition, “proposed changes in projects which increase size substantially or add additional purposes” normally require preparation of an EIS (ER 200-2-2). The paragraphs that follow summarize the NEPA analysis of significance to determine the need for an EA or EIS for review of the San Juan Harbor Improvements Feasibility Study.

### **Review of Impacts on the Human Environment (40 CFR 1508.27):**

An EIS is appropriate to evaluate the impacts of a project if the action would have a “significant” impact on the quality of the human environment. “Significantly,” as used in NEPA, requires consideration of context, as well as an evaluation of the intensity; the degree of severity, controversy, or uncertainty, of the potential impacts on ten factors. *Context* means that the significance of the action must be analyzed in several contexts, such as on society as a whole (human, national), the affected region, the affected interests, and the locality.

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Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend upon the local effects rather than on the world as a whole. Both short- and long-term effects are relevant.

Impact Intensity: For this analysis, the intensity or severity of the impact is defined as follows:

- *Low-Degree*: The impact is localized, temporary, able to be mitigated, or is not significant.
- *Moderate-Degree*: The impact is clearly detectable and could have appreciable effect, or the impact is perceptible and measurable throughout the project area or immediate region.
- *High-Degree*: The impact would have a substantial, highly noticeable influence; the impact is of great magnitude, duration, geographic extent, and/or frequency.

The following ten factors were considered in evaluating the significance of potential impacts on the human environment of the proposed study:

1. Impacts that may be both **beneficial and adverse**. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial (High-Degree/Moderate-Degree/Low-Degree):  
*Moderate-Degree*. As mentioned above, the project objective is to develop a comprehensive group of navigation modifications (management measures) to reasonably maximize San Juan Harbor's contribution to National Economic Development (NED) benefits (transportation cost savings), which address existing physical constraints and inefficiencies. Harbor expansion dredging may cause impacts to sparse (25% cover) patchy [ $<0.4$  ha( $<1$  ac)/bed] *Halophila decipiens* and macroalge habitat located in one of the proposed management measures (Anchorage F expansion); however, the project proposes to mitigate habitat functions lost by filling artificial depressions (dredged holes) in Condado lagoon. Restoration of sea grass beds in Condado Lagoon would support a goal of the San Juan Bay Estuary Program's Comprehensive Conservation and Management Plan.

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Approximately 4 acres of the 32 acre depressions are already approved to receive 46,000cy of dredged material as yet to be constructed mitigation for impacts to approximately 1.2 acres of sparse patchy *H. decipiens* and macroalgae from widening the Puerto Nuevo Channel in San Juan Harbor in 2001. Therefore, approximately 28 acres remains available to receive an additional 184,000cy of dredged material for any additional compensatory mitigation/beneficial use of dredged material from the proposed harbor improvements. Beneficial effects would include transportation cost savings.

2. The degree to which the proposed action affects **public health or safety**. (High-Degree/Moderate-Degree/Low-Degree):

*Moderate-Degree.* A moderate beneficial effect to public health and safety is anticipated. The construction of the project would improve navigational safety in San Juan Harbor for commercial vessels. The project may have a temporary impact to recreational boating and other waterborne recreational activities during the period of construction. The proposed Condado lagoon mitigation would increase seagrass habitat and improve water quality in the high-recreational use area.

3. Unique characteristics of the geographic area, such as proximity to historical or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas (High-Degree/Moderate-Degree/Low-Degree):

*Low-Degree.* The greater San Juan Bay estuary contains habitat for corals, other hard grounds, sea grass and other submerged aquatic vegetation (SAV) and mangroves which support (or potentially could support) associated sport/commercial fish, spiny lobster, fighting conch, and aquarium trade species; however, in the project footprint, only the proposed Anchorage F expansion area contains quality habitat. Extensive dredge and fill in Condado lagoon has left deep depressions or dredge holes which impair the lagoon's water quality and living resources. The District is currently conducting a Cultural Resources survey to identify any potential affect (see 8 below).

4. The degree to which the effects on the quality of the human environment are likely to be highly **controversial** (High-Degree/Moderate-Degree/Low-Degree):

*Low-Degree.* During project scoping and subsequent meetings, there has not been significant public or agency comment opposing the approval of the project. Federal and state agencies with jurisdiction over, and expertise concerning, resources in the project area have reviewed proposed management measures and the benthic survey results, and they have not expressed significant concerns about the project.

5. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks (High-Degree/Moderate-Degree/Low-Degree):

*Low-Degree.* Preliminary benthic surveys used to determine the presence or absence of significant aquatic resources have indicated that only the proposed anchorage F expansion measure contains SAV requiring compensatory mitigation. Since there is always some level of uncertainty with using side-scan sonar and towed video, prior to initial construction in-water diver based surveys may be required of specific areas of interest identified in the preliminary surveys. In addition, although no scleractinian corals have been identified in the expansion footprint, there is potential for temporary effects to listed corals adjacent to the entrance channel from turbidity and sedimentation during dredging and transport of dredged material to the ODMDS. However, significant additional aquatic resources within the project footprint are not anticipated.

6. The degree to which the action may establish a precedent for future actions with significant effects or the degree to which it represents a decision in principle about a future consideration (High-Degree/Moderate-Degree/Low-Degree):

*Low-Degree.* Navigational improvements to San Juan Bay have been ongoing since 1917. Dredged material disposal has evolved from side-casting (la Esperanza) to Ocean Dredged Material Disposal. USACE is currently promoting the use of navigation channels as sand sources through a process called Regional Sediment Management (RSM). Using RSM principles reduces costs associated with dredging, allows navigation channels to remain open, and manages adjacent erosional hot spots and areas susceptible to sea level rise.

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In addition, all navigation projects are evaluated under NEPA and appropriate documentation is developed depending on the unique circumstances of each project. In fact the 1994 GRR and 2002 LRR for previous San Juan Harbor improvements were both evaluated under NEPA using an EA. Therefore, an EA for this feasibility study will not set a precedent for other navigation projects.

7. 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 by breaking it down into small component parts (High-Degree/Moderate-Degree/Low-Degree):

*Low-Degree.* The integrated feasibility study and NEPA document will evaluate secondary and cumulative impacts resulting from larger ships calling on the port (emissions/boat wake erosion/ship strikes) and from infrastructure changes needed to accommodate new and/or additional port throughput. In addition, there is a possibility the San Antonio channel could be extended by the Cruise Ship industry after the Federal channel expansion is complete. However, although significant seagrass habitat does occur at the eastern end of the San Antonio channel, no significant resources were found within the Cruise Ship channel extension. Therefore, at this time no significant cumulative impacts are anticipated.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places (NRHP), or may cause loss or destruction of significant scientific, cultural, or historic resources (High-Degree/Moderate-Degree/Low-Degree):

*Moderate-Degree.* Significant cultural resources, including both underwater and terrestrial resources, are present in the vicinity of the project. Preliminary scoping and coordination has occurred with the National Park Service and the Puerto Rico State Historic Preservation Officer. The USACE preliminary determination is that the channel widening is not likely to adversely affect significant resources located within San Juan Harbor. However, past San Juan

Harbor channel widening projects required the recovery of one historic shipwreck and the recordation of a second historic vessel within the Channel. Therefore, a submerged cultural resource survey of the proposed management measures is currently in process. At this time no rock pre-treatment (confined blasting) is anticipated.

9. The degree to which the action may adversely affect an endangered or threatened species, or its habitat, which has been determined to be critical under the Endangered Species Act of 1973 (High-Degree/Moderate-Degree/Low-Degree):

*Low-Degree.* The project is being coordinated with the resource agencies with jurisdiction over species in the project area. The project will adhere to, or obtain, applicable biological opinions. Conditions are implemented to avoid and minimize impacts to species during construction. Biological opinions have been issued for past San Juan Harbor expansion projects which included rock pre-treatment through blasting. However, at this time no rock pre-treatment (confined blasting) is anticipated. The project mitigation would have a beneficial effect on overall sea turtle and manatee habitat in Condado lagoon through restoration of seagrass beds.

10. Whether the action threatens a violation of Federal, state, or local law, or requirements imposed for the protection of the environment (High-Degree/Moderate-Degree/Low-Degree):

*Low-Degree.* The project must comply with all applicable laws and regulations that may legally assert jurisdiction over the Federal government, or more specifically, the U.S. Army Corps of Engineers (Corps) Civil Works Water Resource projects.

### **Conclusion and Determination:**

Based on the coordination conducted to date, primary public and agency concerns are related to dredge noise, ship strikes, turbidity and sedimentation impacts to corals during dredging and disposal, and increased wave action and costal erosion. No other significant concerns have been raised either by other state and Federal agencies or by the public at this time.

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Pursuant to ER 200-2-2, District Commanders may consider the use of an EA for these types of actions if early studies and coordination show that a particular action is not likely to have a significant impact on the quality of the human environment.

As a whole, the proposed project is not expected to have a significant effect on the quality of the human environment. Previous NEPA analysis addressed the effects of channel expansion through the use of an EA. The Corps' analysis to date and its administrative record indicate that the harbor improvements would not have a significant impact on the quality of the human environment; therefore, the project can be evaluated in an EA. If, upon preparation of an EA, the Corps concludes the project would have a significant effect on the quality of the human environment, it will proceed to prepare an EIS.



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