

# PUERTO RICO

COASTAL STORM RISK MANAGEMENT STUDY

DRAFT INTEGRATED FEASIBILITY REPORT  
AND ENVIRONMENTAL ASSESSMENT

## **APPENDIX E**

### **Real Estate Plan**

November 2020



**US Army Corps  
of Engineers**  
Jacksonville District

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## TABLE OF CONTENTS

SECTIONS	Page No
1. STATEMENT OF PURPOSE	E-2
2. FEDERAL PROJECTS NEAR THE STUDY AREA	E-2
3. PROJECT AND STUDY AUTHORIZATION	E-2
4. PROJECT LOCATION AND STUDY AREA	E-3
5. PROJECT DESCRIPTION	E-7
6. REAL ESTATE REQUIREMENTS	E-11
7. STANDARD ESTATES	E-14
8. NON-STANDARD ESTATES	E-15
9. FEDERALLY GOVERNMENT OWNED LAND	E-15
10. NON-FEDERALLY OWNED LAND	E-16
11. NON-FEDERAL OPERATION/MAINTENANCE RESPONSIBILITIES	E-16
12. NON-FEDERAL SPONSOR'S AUTHORITY TO PARTICIPATE IN PROJECT	E-16
13. NAVIGATION SERVITUDE	E-17
14. ATTITUDE OF THE LANDOWNERS	E-17
15. MINERALS	E-17
16. HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)	E-17
17. INDUCED FLOODING	E-17
18. ZONING ORDINANCES	E-17
19. RELOCATIONS ASSISTANCE (Public Law 91-646)	E-17
20. RELOCATIONS, ALTERATIONS, VACATIONS AND ABANDONMENTS	E-18
21. STANDING TIMBER AND VEGETATIVE COVER	E-18

22. RECREATION RESOURCES	E-18
23. CULTURAL RESOURCES	E-18
24. OUTSTANDING RIGHTS	E-18
25. MITIGATION	E-18
26. ACQUISITION/ADMINISTRATIVE COSTS	E-18
27. SUMMARY OF PROJECT REAL ESTATE COSTS	E-19
28. ACQUISITION SCHEDULE	E-20
29. REAL ESTATE CHART OF ACCOUNTS	E-20
EXHIBIT A: NON FEDERAL SPONSOR'S REAL ESTATE ACQUISITION CAPABILITY ASSESSMENT	E-22
EXHIBIT B: RISK LETTER	E-24

## **LIST OF FIGURES**

FIGURE E-1 - Project Location Map	E-4
FIGURE E-2 - Project Study Area Map	E-5
FIGURE E-3 – San Juan Study Area	E-6
FIGURE E-4 - Rincon Study Area	E-7
FIGURE E-5 Project Map (Condado B)	E-8
FIGURE E-6 Project Map (Condado C)	E-9
FIGURE E-7 Project Map (Ocean Park A)	E-9
FIGURE E-8 Project Map (Ocean Park C)	E-10
FIGURE E-9 Project Map (Rincon)	E-10
FIGURE E-10 Borrow/Sand Sources (San Juan, Loiza, Luquillo Area) Map	E-13
FIGURE E-11 Borrow/Sand Sources (Rincon) Map	E-14

## **REAL ESTATE PLAN**

### **1. STATEMENT OF PURPOSE**

This Real Estate Plan (REP) is in support of the Puerto Rico Coastal Storm Risk Management Study (CSRMS) Integrated Feasibility Report and Environmental Assessment. The study focuses on the determination of Federal Interest in a recommended plan to reduce damages to infrastructure as a result of erosion, wave attack, and flooding from coastal storms and hurricanes along specific areas of the Puerto Rico coastline.

This Real Estate Plan is tentative in nature and is intended for planning purposes only. Both the final real property lines and estimates of value are subject to change even after approval of this report.

### **2. FEDERAL PROJECTS NEAR THE STUDY AREA**

#### San Juan Harbor Federal Navigation Project

San Juan Harbor is in the north coast of the Commonwealth of Puerto Rico. It is the island's principal port, handling over 75 percent of all the Commonwealth's nonpetroleum waterborne commerce. San Juan Harbor is 3 miles long and varies in width from 0.6 to 1.6 miles; the project was completed in 1965.

The Puerto Rico Port Authority is the non-federal sponsor for authorized modifications to the existing Federal Navigation Project. The San Juan Harbor navigation improvements feasibility study report was approved in August 2018. The recommended plan includes deepening of channels with associated channel widening and turning basins.

#### Highway 187 at Piñones, Puerto Rico, Section 103 Shore Protection Project

The project provides shore protection by elevating and armoring a 4,077-foot reach of coastal highway east of Punta Maldonado and a 477-foot reach west of Punta Maldonado. In addition, a 240-foot impervious revetment was constructed at Punta Maldonado. To mitigate for the impacts to mangroves, the project included a mitigation plan constructed in 2012. The shore protection project features were turned over to the Sponsor in Aug 1999.

### **3. PROJECT AND STUDY AUTHORIZATION**

Authority for this study is granted under Section 204 of the Rivers and Harbors Act of 1970, Public Law 91-611, which authorizes the Secretary of the Army, acting through the Chief of Engineers, to prepare plans for the development, utilization and conservation of water and related land resources of drainage basins and coastal areas in the Commonwealth of Puerto Rico.

## SEC. 204:

- (a) The Secretary of the Army, acting through the Chief of Engineers, is authorized to cooperate with the Commonwealth of Puerto Rico, political subdivisions thereof, and appropriate agencies and instrumentalities thereof, in the preparation of plans for the development, utilization, and conservation of water and related land resources of drainage basins and coastal areas in the Commonwealth of Puerto Rico, and to submit to Congress reports and recommendations with respect to appropriate participation by the Department of the Army in carrying out such plans. Such plans that may be recommended to the Congress shall be harmonious components of overall development plans being formulated by the Commonwealth and shall be fully coordinated with all interested Federal agencies.
- (b) The Secretary of the Army, acting through the Chief of Engineers, shall consider plans to meet the needs of the Commonwealth for protection against floods, wise use of flood plain lands, improvement of navigation facilities, regional water supply and waste management systems, outdoor recreational facilities, the enhancement and control of water quality, enhancement and conservation of fish and wildlife, beach erosion control, and other measures for environmental enhancement.

Study funds were appropriated under Bipartisan Budget Act (BBA) of 2018, P.L. 115-123.

## **4. PROJECT LOCATION AND STUDY AREA**

### **Location**

Puerto Rico is an archipelago located between the Caribbean Sea and the North Atlantic Ocean, east of the Dominican Republic and west of the U.S. Virgin Islands. The archipelago of Puerto Rico is composed of 143 islands, with three main inhabited islands, Puerto Rico, Vieques, and Culebra. The most inhabited of the three, Puerto Rico, has a land area of 3,515 square miles, almost three times the size of Rhode Island. Puerto Rico has approximately 800 miles of shoreline distributed in 44 coastal municipalities. The beaches are one of the principal economic engines of the hotel/tourism industry and are a very important source of recreation for the Puerto Rican population. Over 24% of the 800 miles of coastline are occupied or developed.

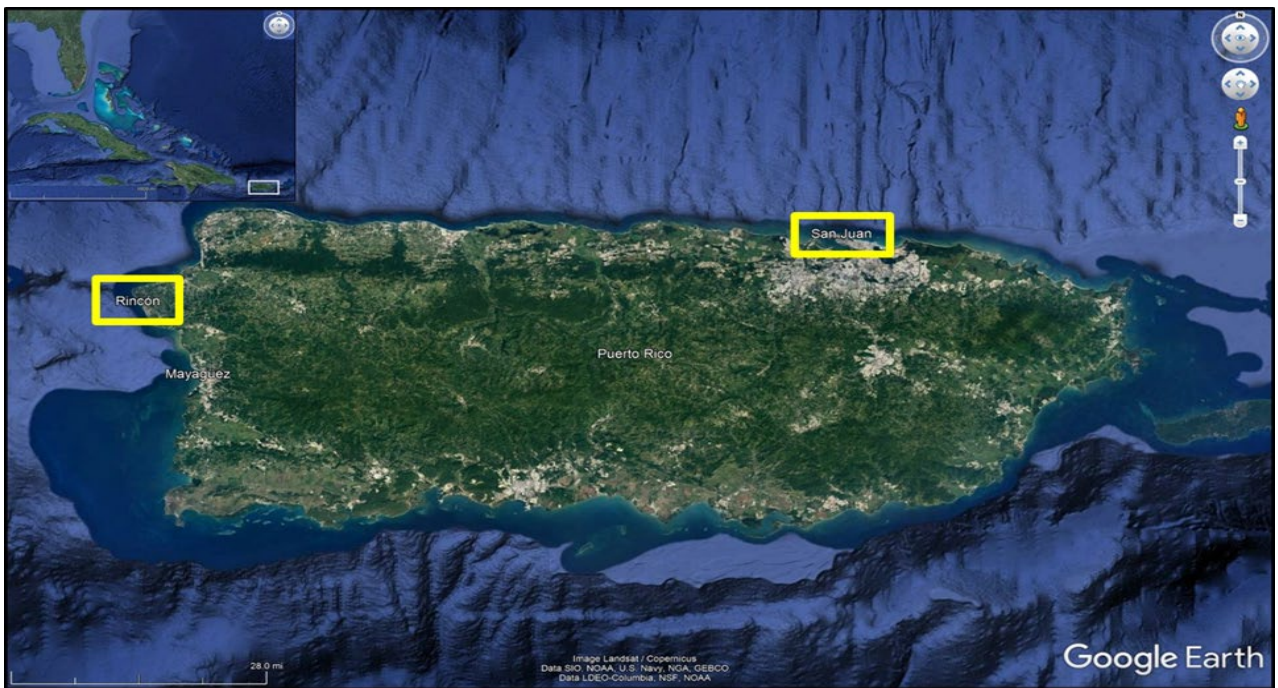


**Figure E-1 Project Location Map**

## **Study Area**

Initially, the Puerto Rico Coastal study assessed the shoreline problems along approximately 30 miles of coastline island-wide in order to provide possible Coastal Storm Risk Management alternatives to reduce risk to infrastructure located in the municipalities of San Juan, Carolina, Vega Baja, Arecibo, Aguadilla, Aguada, Rincon, Añasco, Mayagüez, Cabo Rojo, Loiza, Luquillo, and Humacao.

As a result of the preliminary scoping, the reduced study scope encompasses approximately 7 miles of coastline in San Juan and Carolina municipalities, and approximately 2.4 miles of coastline in Rincon municipality. The San Juan area fronts the Atlantic Ocean on the north coast of Puerto Rico, from el Boqueron to Boca de Cangrejos and it is located in the municipalities of San Juan and Carolina, which are part of Metropolitan San Juan. For study purposes only, this study area will be referenced as “San Juan study area” and it has been divided into four separable focus areas, Condado, Ocean Park, Isla Verde and Carolina. The Rincon study area fronts the Atlantic Ocean on the west coast of Puerto Rico from Punta Ensenada to Corcega Beach, delineated as just one focus area. Further investigations during the forecasting of existing and future without project conditions led to the screening out of the Carolina focus area; therefore, Beach-fx modeling was performed only on the three remaining focus areas in San Juan (Condado, Ocean Park and Isla Verde) and the Rincon focus area.



**Figure E-2 Project Study Area Map**

During plan formulation, the San Juan focus areas have been divided into seven planning reaches to align with the headland and pocket beach features, where unique alternatives could be implemented to reduce damages (Condado West Headland, Condado Pocket Beach, Punta Piedrita Headland, Ocean Park Pocket Beach, Punta Las Marias Headland, Isla Verde Pocket Beach, and Punta El Medio Headland). The Rincon focus area is comprised of two planning reaches geographically separated by a stream, Quebrada Los Ramos, to the north (Rincon A) and south (Rincon B). These planning reaches are considered separable elements. **Figure E-3** and **Figure E-4** show the extent of the San Juan and Rincon planning reaches.

Further investigations led to five planning reaches being carried forward into formulation of alternatives (Condado Pocket Beach, Punta Piedrita Headland, Ocean Park Pocket Beach, west side of Punta Las Marias, and Rincon B) while the West Condado Headland, Isla Verde Pocket Beach, Punta El Medio Headland and Rincon A planning reaches were screened out from further analysis. The study now focuses on the San Juan and Rincon planning reaches most likely to experience damages from erosion, wave attack and flooding.

Following, there is a brief description of the five focus areas:

- Condado: This reach extends from El Boqueron, at the entrance of Laguna Condado, east about 1.1 miles to Punta Piedrita. Condado Beach contains the smallest area of dry beach out of the four San Juan areas. The western



0.5 miles from El Boqueron to La Ventana al Mar Park contain virtually no dry beach. Waves break directly on exposed nearshore reef and rock revetments. This area is highly developed with hotels, condominiums, residential, and commercial buildings.

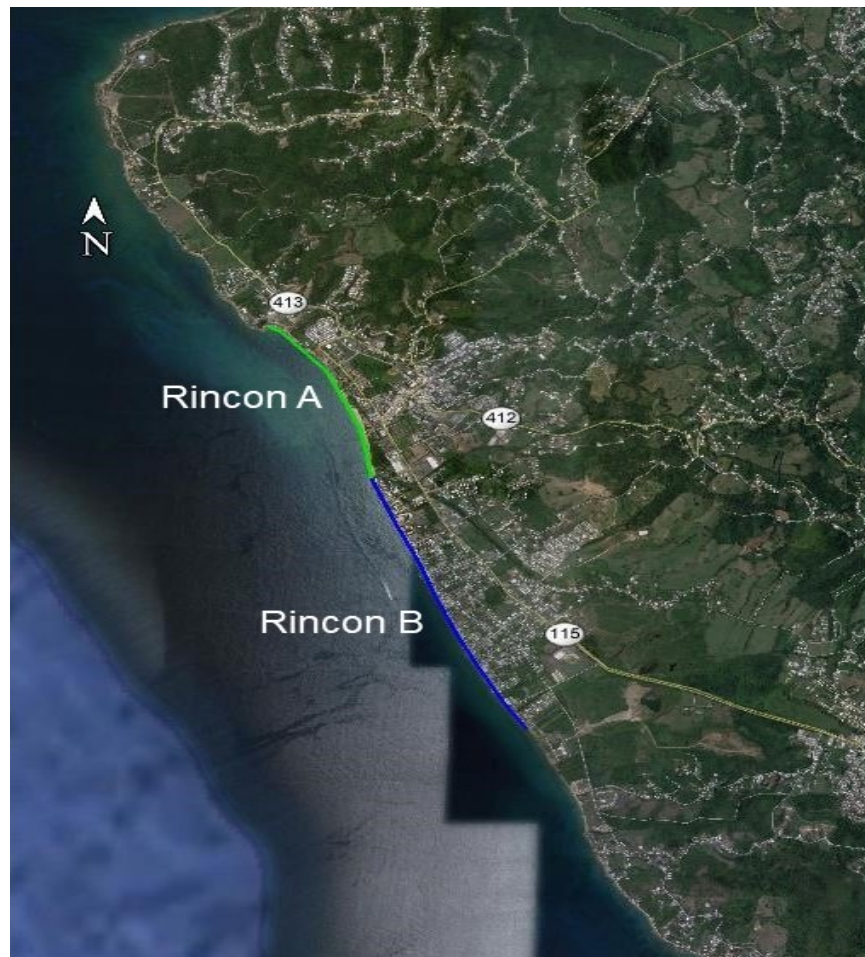
- Ocean Park: This reach extends from Punta Piedrita east about 1.8 miles to Punta Las Marias. The eastern and western extents of Ocean Park Beach contain little to no dry beach with prevalent nearshore hardbottom and a wider central beach expanse. This area is a mixture of single family homes, condominiums, commercial structures, and hotels. The middle section of this reach includes a public park (Barbosa Park, colloquially known as the Ultimo Trolley), which is historically known for extensive coastal inundation, as storm surge and wave attack may focus on this unimpeded stretch of coast.
- Isla Verde: This reach extends from Punta Las Marias east about 1.8 miles to Punta El Medio. Generally, there is a wider beach in the center portion of this reach and there is no dry beach to the west close to Punta Las Marias. Similar coastline conditions are observed at each side of Punta El Medio, which segregates Carolina Beach to the east and Isla Verde Beach to the west. The Isla Verde reach primarily consist of hotels, condominiums, and single family homes, as well as commercial businesses and a public skate park.



**Figure E-3 – San Juan Study Area**

- Rincon: This reach extends from Punta Ensenada south about 2 miles to Corcega. The area around Faro Punta de Higuero, north of the Tres Palmas marine reserve, is one of the most famous surfing destinations in Puerto Rico and very well known around the world. The Rincon focus area generally

contains wider beaches and elevated berm crests to the north and narrower beaches with damaged/abandoned homes, some physically in the water, to the south (Corcega). This area is a mixture of single family homes, condominiums, commercial structures, and hotels. Seawalls, revetments, and non-engineered armoring protection in front of homes and hotels represent the majority of the coastal protection structures already in place.



**Figure E-4: Rincon Study Area**

## **5. PROJECT DESCRIPTION**

### **Tentative Selected Plan**

The TSP consists of a combination of structural features in specific locations designed to reduce the risk of damages as a result of wave attack, coastal flooding, and erosion in the San Juan and Rincon study areas. Overall, The TSP includes:

- Beach nourishment (1,910 ft) along Condado Pocket Beach shoreline;



- 
- Legend**
- 2018 CRIM
  - Access Route
  - Staging Area - 0.74 acres
- Notes:**  
TSP is still pending, maps will be updated once TSP is finalized.
- Department of the Army South Atlantic Division  
Jacksonville District Corps of Engineers
- REAL ESTATE**
- Condado Pocket Beach  
Puerto Rico Coastal Study  
San Juan, PR**
- Mapper: G. Torres  
Reviewer: D. Santiago  
Map Date: 10/5/2026
- Document Name: Condado\_PocketBeach\_RE  
Page 1 of 1
- IMAGERY:  
Main Frame - 2018 USGS Color Imagery  
Location Map - ESRI OpenStreetMap
- Document Path: \\FS-IT\GIS\Coastal\_Study\_Estate\_Maps\CondadoPocketBeach\Condado PocketBeach\_RE.mxd

E-8





Figure E-6 - Project Map (Punta Piedrita)



Figure E-7 - Project Map (Ocean Park Pocket Beach)



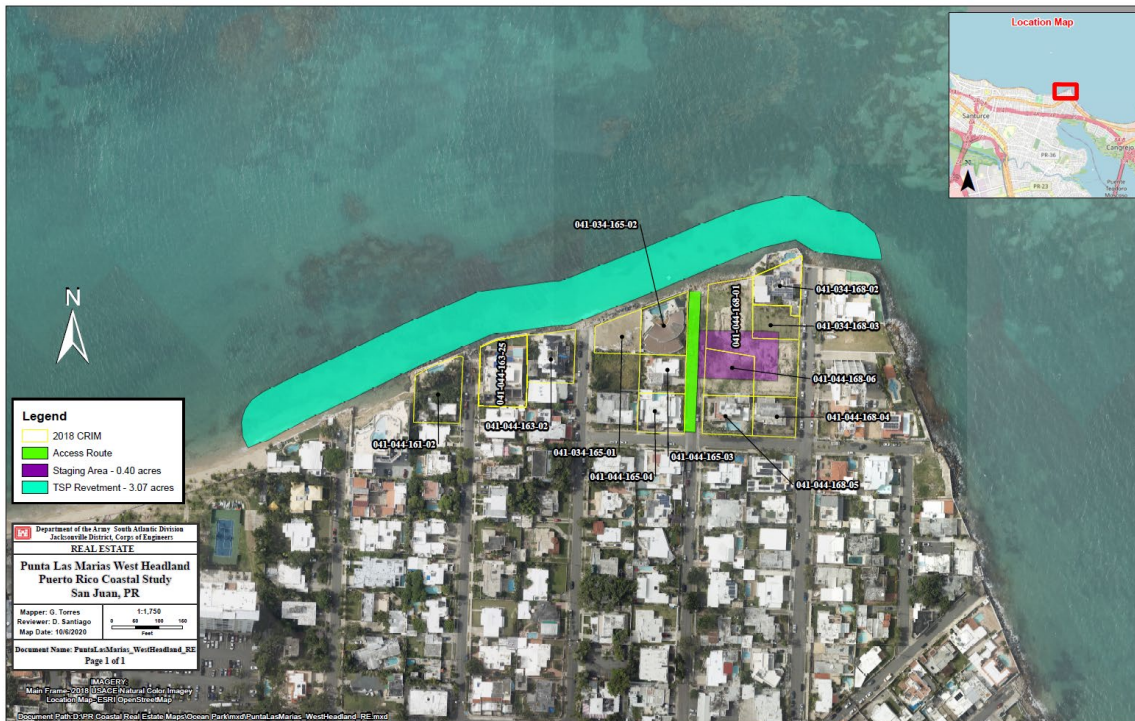


Figure E-8 - Project Map (Punta Las Marias)

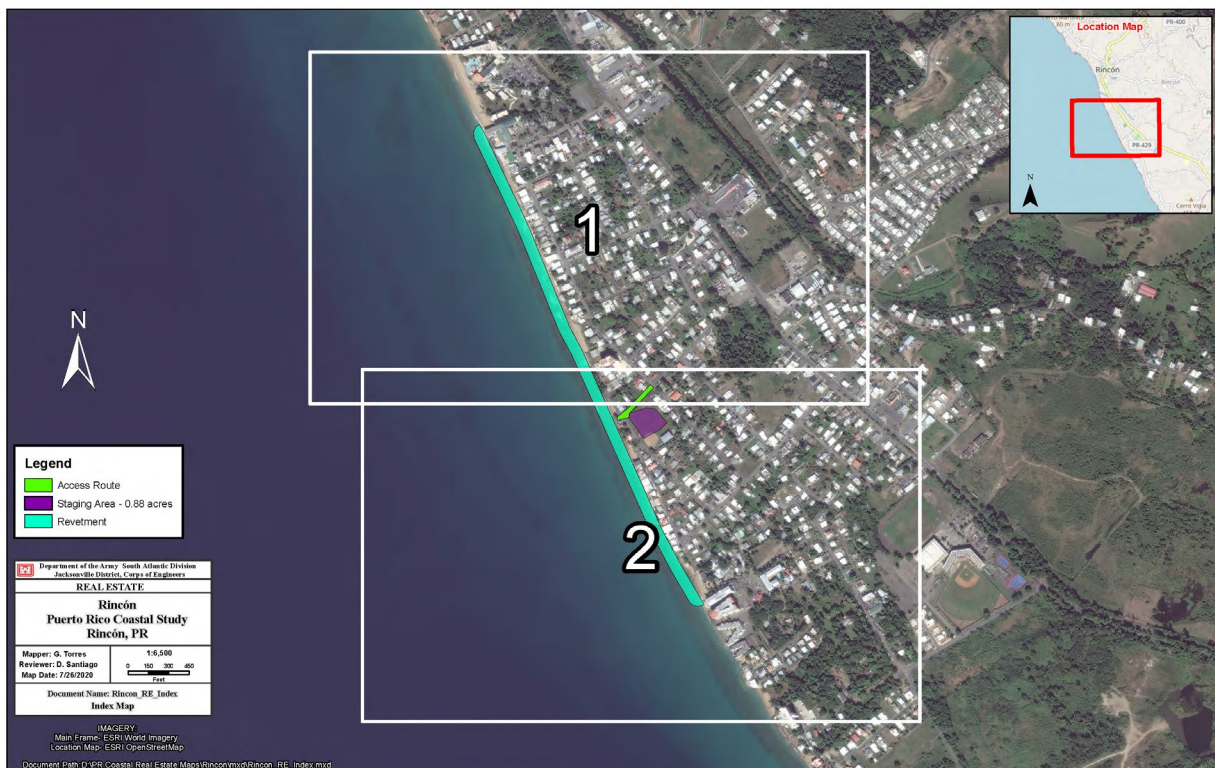


Figure E-9 - Project Map (Rincón)

## 6. REAL ESTATE REQUIREMENTS

This Real Estate Plan (REP) is prepared in accordance with applicable Engineering Regulations and presents preliminary and estimated real estate requirements for the Puerto Rico Coastal Storm Risk Management project, based on the information and resources available at this time with multiple assumptions.

This REP is an appendix to the Feasibility Study and describes the lands, easements, rights of way, relocation, and disposal areas (LERRD) anticipated, identified or estimated at this time, that appear to be required for construction, operation and maintenance of the proposed Project; including estimated acreage, estates, ownerships, and preliminarily and roughly estimated values and identified assumptions. The Puerto Rico Department of Natural and Environmental Resources is the non-Federal sponsor (NFS) for the study and shall provide the LERRDs.

The following Project features have related real estate requirements that are necessary to provide adequate construction room to build proposed shore protection management features and secure lands needed for Operations and Maintenance (O&M):

**Revetments.** Revetments have been placed on similar beaches to protect critically damaged or eroding areas. This measure would involve placement of large rock designed to withstand the wave environment along the existing dune line. The engineered structure would start at the elevation of the bluff, to tie into existing elevations, and have a sloped profile. The structure would be imbedded under the beach elevation to a depth below expected scour and future erosion. In-place materials from the excavation would be used for backfill behind the structure. Along the shoreline, the revetment should be continuous to avoid erosional features at gaps and should include tie back features at the ends. Existing armor can either be incorporated into the structure or demolished to provide a seamless structure.

Total area for the Revetments is 17.06 acres and the real estate interests required are Perpetual Beach Storm Damage Reduction Easements. The lands are located, within the Maritime Terrestrial Zone (MTZ) that is owned or controlled by the NFS (see paragraph 11 below for further information regarding MTZ lands). No additional lands need to be acquired by the NFS.

**Beach/Dune Nourishment.** This management measure includes initial construction of a beach fill and future re-nourishments at regular intervals. Re-nourishment of the beach would be undertaken periodically to maintain the recreational and erosion control features within design dimensions. Dimensions of the beach fill would be based on economic optimization of benefits provided with consideration to cost, as well as the potential environmental impacts. Beach nourishment material is anticipated to be available in adequate quantities from offshore and/or upland borrow areas.

Total area for Beach/Dune Nourishment is 6.43 acres and the real estate interests required are Perpetual Beach Storm Damage Reduction Easements. The lands are located within the Maritime Terrestrial Zone (MTZ) which is owned or controlled by the NFS (See paragraph 11 below for further information regarding TMZ lands) so no additional lands will need to be acquired by the NFS.

**Breakwaters.** The construction of breakwaters offshore along the study focus areas is considered as a management measure to stabilize the existing beach and reduce damages to shorefront properties. Such structures reduce the amount of wave energy reaching the shoreline behind them. As a result, the rate of annual erosion could decrease. The breakwaters would be constructed in segments separated from each other to prevent infilling between the existing beach and the breakwaters.

Total area consists of 13.94 acres and the real estate interests required are a perpetual interests. The lands are, located within submerged lands owned or controlled by the NFS (See paragraph 11 below for further information regarding submerged lands) so no additional lands will need to be acquired by the NFS.

**Staging Areas** - Five staging and storage areas have been identified for the P, comprising a total of 2.64 acres. The required real estate interests are Temporary Work Area Easements. Of the five staging areas, three are owned by municipalities and two by private owners, so the NFS will have to acquire the easements.

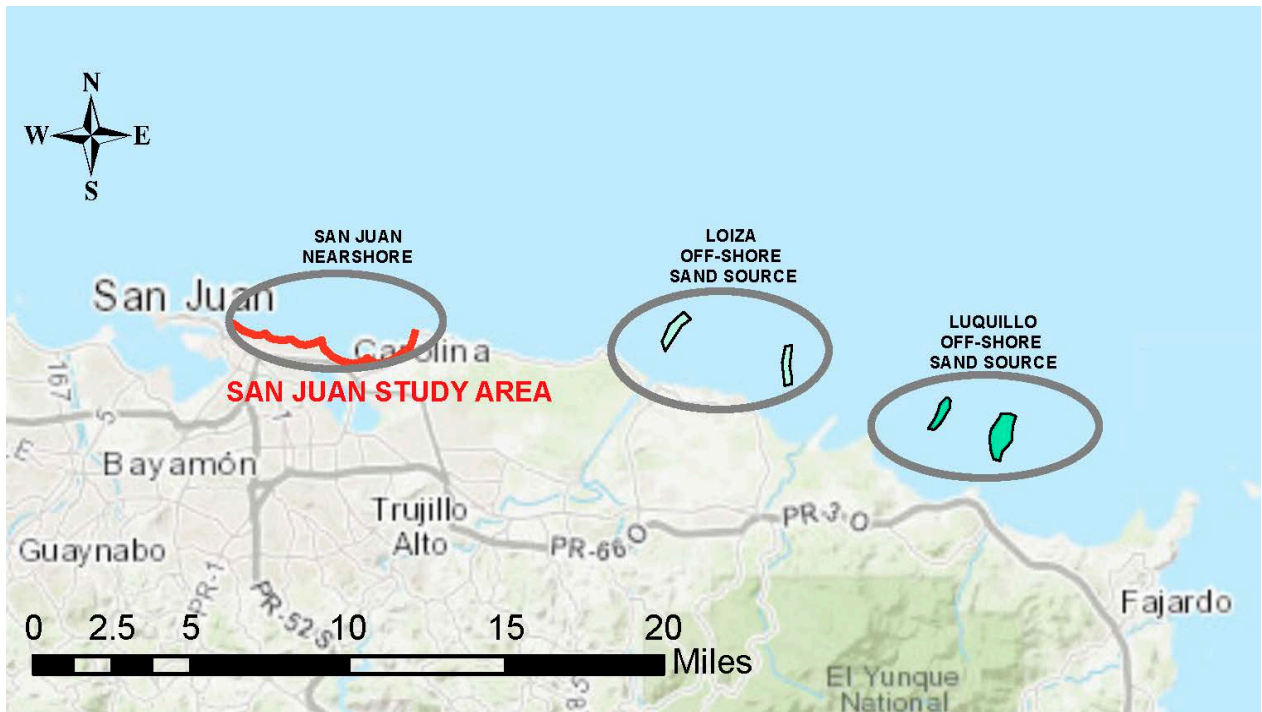
**Disposal** – At this feasibility phase, no disposal area for ground or marsh material has been determined as required. If later during the Planning, Engineering and Design (PED) phase, it's determined that disposal of material is needed, local landfill will be identified for this purpose. Lands would not need to be acquired by the NFS.

**Borrow Area/Sand Sources** - Offshore sand sources and upland sand mines were identified for both study areas (See Figures E- and E- for near and offshore sand sources). Puerto Rico has no specific requirements for the beach fill quality. However, from an environmental and sustainability point of view, the sand placed on the beach should be similar to the sand of the existing beach and free of foreign matter, like rock, debris, toxic material. Near shore and offshore sand sources are on submerged lands owned or controlled by the NFS. In case Upland sand sources (privately owned sand mines) are used, sand material will be purchased from the mine. No lands will need to be acquired by the NFS.

**Mitigation** – Mitigation areas are anticipated to be used as remediation for Projects impacts on submerged lands owned or controlled by the NFS; however, the exact location and size of the areas will be determined later during the PED phase. The real estate interest required is fee. The mitigation areas will be located within submerged lands owned or controlled by the NFS so no additional lands will need to be acquired by the NFS.

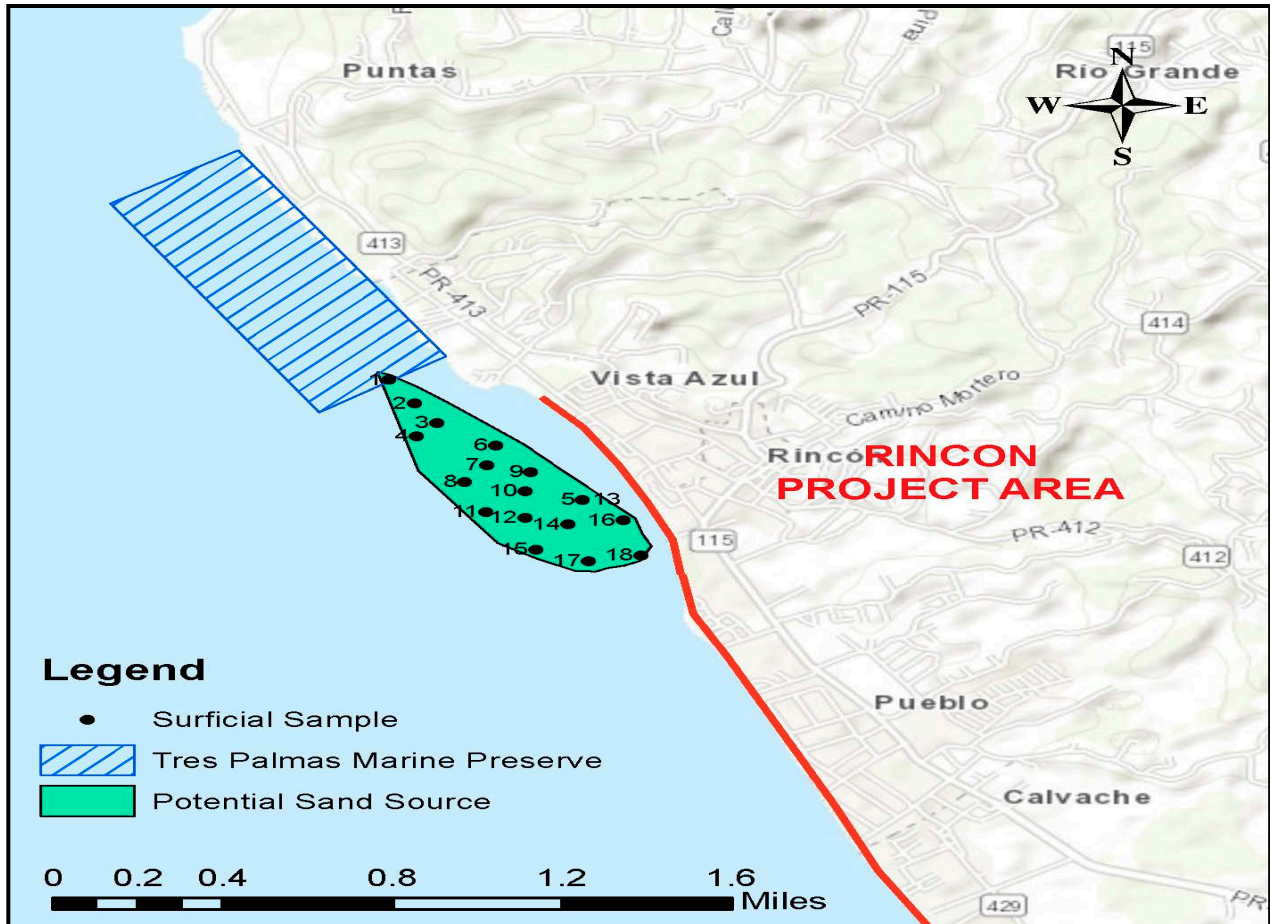
**Road Access** – Road access would be over public roads and highways. Land will not be needed to be acquired by the NFS.

**Operation and Maintenance** – After construction is completed, O&M of the Project features will be conducted within lands owned or controlled by the NFS.



**Figure E-10 – Borrow/Sand Sources (San Juan, Loiza, and Luquillo Area) Map**





**Figure E-11 – Borrow/Sand Sources (Rincon Area) Map**

## 7. STANDARD ESTATES

The following estates are required:

### Temporary Work Area Easement

A temporary easement and right of way in, on, over and across (the land described in Schedule A) (Tracts Nos. \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_), for a period not to exceed \_\_\_\_\_, beginning with date possession of the land is granted to the (Project Sponsor), for use by the United States, its representatives, agents, and contractors as a (borrow area) (work area), including the right to (borrow and/or deposit fill, spoil and waste material thereon) (move, store and remove equipment and supplies, and erect and remove temporary structures on the land and to perform any other work necessary and incident to the construction of the \_\_\_\_\_ Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or obstacles within the limits of the right of way; reserving, however, to the landowners, their heirs and assigns, all such rights and privileges as may be used

without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

### **Perpetual Beach Storm Damage Reduction Easement**

A perpetual and assignable easement and right-of-way in, on, over and across (the land described in Schedule A) (Tract No. \_\_) for use by the (Project Sponsor), its representatives, agents, contractors, and assigns, to construct; preserve; patrol; operate; maintain; repair; rehabilitate; and replace; a public beach, a dune system and other erosion control and storm damage reduction measures together with appurtenances thereto, including the right to deposit sand; to accomplish any alterations of contours on said land; to construct berms and dunes; to nourish and renourish periodically; to move, store and remove equipment and supplies; to erect and remove temporary structures; and to perform any other work necessary and incident to the construction, periodic renourishment and maintenance of the (Project Name), together with the right of public use and access; to plant vegetation on said dunes and berms; to erect, maintain and remove silt screens and sand fences; to facilitate preservation of dunes and vegetation through the limitation of access to dune areas; to trim, cut, fell, and remove from said land all trees, underbrush, debris, obstructions, and any other vegetation, structures and obstacles within the limits of the easement (except\_\_\_\_); reserving, however, to the grantor(s), (his) (her) (its) (their) (heirs), successors and assigns, the right to construct dune overwalk structures in accordance with any applicable Federal, State or local laws or regulations, provided that such structures shall not violate the integrity of the dune in shape, dimension or function, and that prior approval of the plans and specifications for such structures is obtained from the designated representative of the Project Sponsor and provided further that such structures are subordinate to the construction, operation, maintenance, repair, rehabilitation and replacement of the project; and further reserving to the grantor(s), (his) (her) (its) (their) (heirs), successors and assigns all such rights and privileges as may be used and enjoyed without interfering with or abridging the rights and easements hereby acquired; subject however to existing easements for public roads and highways, public utilities, railroads and pipelines.

## **8. NON-STANDARD ESTATES**

Based on preliminary information, non-standard estates will not be needed for the Project. If it is determined that a non-standard estate is needed during the PED phase, the District Real Estate Office will seek a waiver of the standard estates and approval for the non-standard estate or measure from HQ USACE through the USACE South Atlantic Division (SAD).

## **9. FEDERALLY GOVERNMENT-OWNED LAND**

There are no known Federal Government lands in the Project area.

## **10. NON-FEDERALLY OWNED LAND**

The non-Federal lands are owned or controlled by the NFS, private landowners and commercial landowners.

Regarding the submerged lands of Puerto Rico, 48 U.S. Code § 749. Harbors and navigable waters transferred; definitions states:

"The harbor areas and navigable streams and bodies of water and submerged lands underlying the same in and around the island of Puerto Rico and the adjacent islands and waters, owned by the United States on March 2, 1917, and not reserved by the United States for public purposes, are placed under the control of the government of Puerto Rico, to be administered in the same manner and subject to the same limitations as the property enumerated in sections 747 and 748 of this title."...

## **11. NON-FEDERAL OPERATION AND MAINTAINANCE RESPONSIBILITIES**

The NFS will be responsible for all costs of operation, maintenance, repair, rehabilitation, and replacement of Project features.

## **12. NON-FEDERAL SPONSOR'S AUTHORITY TO PARTICIPATE IN PROJECT**

The Puerto Rico Department of Natural and Environmental Resources (DNER) is responsible for the administration of Puerto Rico's coastal trust lands, the maritime terrestrial zone (MTZ), territorial waters and submerged lands thereunder through PR Law 23, Art.5(h). DNER also serves as the lead agency for the implementation of the Puerto Rico Coastal Zone Management Program (PRCZMP). The PRCZMP was adopted in 1978 as the coastal element of the Island-wide Land Use Plan.

This Plan is a partnership between the United States Federal Government through the National Oceanic and Atmospheric Administration (NOAA) and the Government of Puerto Rico (DNER and PR Planning Board). Authorized by the Coastal Zone Management Act (CZMA) of 1972 to address national coastal issues, this act provides the basis for protecting, restoring, and responsibly developing the United States' diverse coastal communities and resources. The principles of the PRCZMP include developing guidance for public and private development within the coastal zone, active management of coastal and marine resources, promoting scientific research, education and public participation, as well as coordinating state and federal actions.

The DNER has jurisdiction over the coastal maritime zone-out to its jurisdictional limit and has promulgated guidelines through Regulation No. 4860, as amended.

### **13. NAVIGATION SERVITUDE**

In accordance with CECC-R Bulletin 14-05, Availability of the Navigation Servitude for Coastal Storm Damage Reduction Projects dated April 9, 2014, navigation servitude is not applicable to this project.

### **14. ATTITUDE OF THE LANDOWNERS**

Stakeholders consist of the communities in the municipalities of San Juan, Carolina and Rincon. Federal environmental agencies, state and local agencies, NGO's, and the NFS. The study team has met with the communities during the study and has monthly meetings with the NFS.

### **15. MINERALS**

Preliminary assessment indicates no known present or anticipated mineral or sub-surface mineral extraction activities within the vicinity of the proposed area which may affect construction, operation, or maintenance of the project. In Puerto Rico, the Commonwealth owns all subsurface mineral rights.

### **16. HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE (HTRW)**

No hazardous or toxic materials or waste have been identified within the project footprint. No known hazardous, toxic, or radioactive waste has been encountered or released in the project area. Sediments from the San Juan Harbor navigation channel typically have traces of heavy metals, Polychlorinated biphenyls (PCBs), pesticides, Polycyclic Aromatic Hydrocarbons (PAHs), and petroleum products, at low levels that do not affect the sediment quality or the water quality in the project area.

### **17. INDUCED FLOODING**

There is no anticipated induced flooding directly associated with this project.

### **18. ZONING ORDINANCES**

Preliminary investigations indicate that no enactments of zoning ordinances are proposed in lieu of or to facilitate, acquisition in connection with the project.

### **19. RELOCATION ASSISTANCE (PUBLIC LAW 91-646, as amended)**

The purpose of PL 91-646 is to ensure that owners of real property to be acquired for Federal and federally assisted projects are treated fairly and consistently and that persons displaced as a direct result of such acquisition will not suffer disproportionate injuries as a result of projects designed for the benefit of the public

as a whole.

While one of the alternatives considered during plan formulation included the acquisition of real property, this is not part of the Recommended Plan. Therefore, this project does not involve any real property acquisition or displacement of property owners or tenants. Therefore, this Act is not relevant to this project.

## **20. RELOCATIONS, ALTERATIONS, VACATIONS, AND ABANDONMENTS (UTILITIES, STRUCTURES AND FACILITIES, CEMETERIES, AND TOWNS).**

Preliminary investigations indicate that there are no structural facilities to be affected by the construction of the project.

## **21. STANDING TIMBER AND VEGETATIVE COVER**

Based on current design level, there are no future mineral/timber activities or other subsurface minerals identified within the scope of the study area.

## **22. RECREATION RESOURCES**

There are no separable recreational lands identified for this project.

## **23. CULTURAL RESOURCES**

Cultural resources include prehistoric and historic sites, structures, districts, or any other physical evidence of human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason.

Documentation of historic properties and cultural resources is important for this project, as the cultural resources in the Rincon and San Juan area are significant to the history of Puerto Rico, the broader Caribbean, the United States, and world events. The area is rich in precolonial and historic human activity, with the potential for significant resources from the last several thousand years.

The analysis of impacts to cultural resources relies on existing information primarily from documents prepared by the Puerto Rico State Historic Preservation Officer (SHPO), GIS data of resources from SHPO, and properties listed in the National Register of Historic Places (NRHP). The area of potential effects (APE) for cultural resources is defined as the areas where structural measures are implemented, and non-structural measures are applied to historic properties as defined in 36 C.F.R. §800.16(l). An effect is an alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP (36 CFR 800.16(i)). Effects may be direct or indirect.

Though background research documented no cultural resources and historic properties within the areas for direct effects, a full inventory has not yet been conducted. Each of the alternatives has the potential to affect cultural resources. The direct footprint of construction may disturb archaeological sites, be a visual intrusion in historic districts, or alter the appreciation of historic structures. The potential exists for archaeological sites in submerged areas, shipwrecks, and additional visual intrusion altering the character of historic districts or structures. The conceptual nature of the plans, lack of clear staging and access areas, and planning timeline prevent a full accounting of effects to cultural resources.

The improvement of resiliency of these areas may serve to protect cultural resources, such as historic structures, as well as the continued use of areas. By protecting the infrastructure and housing, Rincon may remain a haven for surfing and Condado a key arts and tourism area.

As project designs are refined and optimized, impacts to cultural resources be minimized and avoided where possible. Consultation with SHPO and coordination with the Instituto de Cultura Puertorriqueña and interested parties is ongoing, including review of the APE prior to TSP and SHPO concurrence on the use of a programmatic agreement (PA). The Corps has initiated a survey of the offshore sand areas to assess if it is feasible to use the areas identified in Figure E-10. These efforts are ongoing. Due to the lack of detailed project designs during the current feasibility stage, it will not be possible to conduct fieldwork to identify and evaluate cultural resources or to determine the effects of the TSP on historic properties. In consultation with SHPO, pursuant to 54 USC 306108, § 800.4(b)(2), and 36 CFR 800.14(b)(1)(ii), USACE is deferring final identification and evaluation of historic properties until after project approval, when additional funding and design details are available. Because the USACE cannot fully determine how the project may affect historic properties prior to finalization of this feasibility study, a PA will be used to ensure compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA). Specifically, the scope and diversity of potential effects of the project and constraints of the USACE planning policy make a PA for compliance with Section 106 essential. The PA will allow the USACE to complete the necessary archaeological surveys during the follow on Preconstruction Engineer and Design (PED) phase of the project, and it will also allow for the identification of historic properties, assessment of effects, and inclusion of measures to avoid, minimize, and mitigate effects to historic properties to be completed after project features have been clearly defined and sited.

## **24. OUTSTANDING RIGHTS**

There are no known outstanding rights in the Project Area.

## **25. MITIGATION**

Mitigation areas are anticipated to be used as remediation for Project impacts on

submerged lands owned or controlled by the NFS. Location and area needed will be determined later during the PED phase. (see section 6 for more discussion on Mitigation areas)

## **26. ACQUISITION/ADMINISTRATIVE COSTS**

Acquisition for the Project will involve an estimated 5 tracts. The acquisition includes approximately 40.07 acres for a total cost, including contingency (30%), of **\$3,875,793**. This amount includes an estimated combined Federal/Non-Federal administration cost to acquire these lands \$368,289.

The purpose of this preliminary cost estimate is to estimate the real estate values for the alternatives associated with the Project. The scope of work for this estimate is commensurate with that of a reconnaissance level study. It does not comply with USPAP and should not be construed to be an appraisal. This estimate is made in accordance with USACE Real Estate Policy Guidance Letter No. 31-Real Estate Support to Civil Works Planning Paradigm (3x3x3) dated January 10, 2013.

Due to a short suspense time, physical inspection of the sites was not possible. Inspection of the Project areas was made using aerial photography with project alignments; Google Earth and PDF project maps that are on file and available for review. It is assumed that project features will be altered such that only vacant land, and no improvements, will be acquired for construction of the Project. Temporary staging and access areas are valued for an assumed term of 4.5 years. It is further assumed that all lands within the MTZ, submerged lands, water bottoms, etc., will be made available to the Project at no cost.

## **27. SUMMARY OF PROJECT REAL ESTATE COSTS**

Lands and Damages:

1) Rincon:	
a) Staging Area (0.88 acres)	\$ 184,800
b) Revetment	\$ 0
c) Access	\$ 0
2) Condado Pocket Beach	
a) Staging Area (0.74 acres)	\$1,056,720
b) Dune Nourishment	\$ 0
c) Access	
	\$ 0
3) Punta Piedritas	
a) Staging Area (0.24 acres)	\$ 342,720
b) Revetment	\$ 0
c) Access	\$ 0

4) Ocean Park Pocket Beach		
a) Staging Area (0.38 acres)	\$ 545,782	
b) Breakwaters	\$ 0	
c) Access	\$ 0	
5) Punta Las Marias		
a) Staging Area (0.40 acres)	\$ 568,058	
b) Revetment	\$ 0	
c) Access	\$ 0	
Sub Total Lands & Damages		\$2,698,080
Contingency 30%		\$ 809,424
Total Lands & Damages		\$3,507,504
Administrative Costs		
1) Federal	\$ 94,433	
2) Non-Federal	\$188,866	
Sub Total Adm. Costs		\$283,299
Contingency 30%		\$ 84,990
Total Adm. Costs		\$ 368,289
<b>Total Real Estate Costs:</b>		<b>\$ 3,875,793</b>

\*\*\*Note: Access to project area will be from public roads.

## 28. ACQUISITION SCHEDULE

The NFS is responsible for certifying that lands are available for Project advertisement and construction. For scheduling purposes, 10 to 12 months has been established to accomplish real estate certification, after final plans and specs have been completed, funds have been provided, and the Project Partnership Agreement (PPA) has been executed.

The NFS, Project Manager and Real Estate Technical Manager will formulate the milestone schedule upon Project approval to meet the date for advertisement and award of the construction contract. The NFS will be advised by letter of the risks associated with land acquisition prior to the execution of the PPA or prior to the Federal Government's formal notice to proceed with the acquisition. A copy of the



Risk Letter is attached as Exhibit C of this REP.

## 29. REAL ESTATE CHART OF ACCOUNTS

<b>Codes for Chart of Accounts</b>	<b>Lands and Damages</b>	<b>Federal</b>	<b>Non-Federal</b>	<b>Totals</b>
01b20	<b>Acquisition:</b> By NFS	\$0	\$188,886	\$188,886
01b40	<b>Acquisition:</b> Review of NFS	\$94,433	\$0	\$ 94,433
01c20	<b>Condemnations:</b> By NFS	\$0	\$0	\$0
01c40	<b>Condemnations:</b> Review of NFS	\$0	\$0	\$0
01F20	<b>PL 91-646 Relocation Assistance:</b> By NFS, if any	\$0	\$0	\$0
01R1	<b>Real Estate Payments:</b> Land Payments	\$0	\$2,698,080	\$2,698,080
N/A	<b>Total Real Estate Cost Excluding Contingency</b>	<b>\$94,433</b>	<b>\$2,886,946</b>	<b>\$2,981,379</b>
N/A	<b>Contingency (30%)</b>	\$28,330	\$866,084	\$ 894,414
N/A	<b>Total Project Real Estate Cost Estimate</b>			<b>\$3,875,793</b>

## EXHIBIT A

### ASSESSMENT OF NON-FEDERAL SPONSOR'S REAL ESTATE ACQUISITION CAPABILITY FOR PUERTO RICO COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY AND ENVIRONMENTAL ASSESSMENT

#### I. Legal Authority:

- a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes? **YES**
- b. Does the sponsor have the power of eminent domain for this project? **YES**
- c. Does the sponsor have "quick-take" authority for this project? **No, Eminent domain must be exercised through a sister Commonwealth agency.**
- d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary? **NO**
- e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn? **NO**

#### II. Human Resource Requirements:

- a. Will the sponsor's in-house staff require technical training to become familiar with the real estate requirements of Federal projects including P.L. 91-646, as amended? **NO**
- b. If the answer to IIa. is "yes," has a reasonable plan been developed to provide such training? **N/A**
- c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project? **YES**
- d. Is the sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule? No, acquisition work is outsourced to a contractor.
- e. Can the sponsor obtain contractor support, if required in a timely fashion? **YES**
- f. Will the sponsor likely request USACE assistance in acquiring real estate? **NO**

#### III. Other Project Variables:

- a. Will the sponsor's staff be located within reasonable proximity to the project site? **YES**
- b. Has the sponsor approved the project/real estate schedule/milestones? **YES**

#### IV. Overall Assessment:

- a. Has the sponsor performed satisfactorily on other USACE projects? **YES**
- b. With regard to this project, the sponsor is anticipated to be: highly

capable/fully capable/**moderately capable**/marginally capable/insufficiently capable. HIGHLY CAPABLE

V. Coordination:

- a. Has this assessment been coordinated with the sponsor? YES/NO
- b. Does the sponsor concur with this assessment? YES/NO

Date: \_\_\_\_\_

Prepared by:

\_\_\_\_\_  
Edgardo Carrasquillo  
Realty Specialist  
Real Estate Division  
Jacksonville District

Reviewed by:

\_\_\_\_\_  
Thomas H. Gulihur  
Chief, Supplemental Branch  
Real Estate Division  
Jacksonville District

Reviewed and approved by:

\_\_\_\_\_  
Timothy H. McQuillen  
Chief, Real Estate Division  
Real Estate Division  
Jacksonville District  
Real Estate Division

## EXHIBIT B

Hon. Rafael A. Machargo Maldonado  
Secretary  
Government of Puerto Rico  
Department of Natural and Environmental Resources  
P. O. Box 366147  
San Juan, Puerto Rico 00936

Dear Secretary Machargo Maldonado:

The intent of this letter is to formally advise the Department of Natural and Environmental Resources as the non-Federal sponsor for the Puerto Rico Coastal Storm Risk Management Feasibility Project, of the risks associated with land acquisition prior to the execution of the Project Partnership Agreement (PPA) or prior to the Government's formal notice to proceed with acquisition. If a non-Federal sponsor deems it necessary to commence acquisition prior to an executed PPA for whatever reason, the non-Federal sponsor assumes full and sole responsibility for any and all costs, responsibility, or liability arising out of the acquisition effort.

Generally, these risks include, but may not be limited to, the following:

- a. Congress may not appropriate funds to construct the proposed project;
- b. The proposed project may otherwise not be funded or approved for construction;
- c. A PPA mutually agreeable to the non-Federal sponsor and the Government may not be executed and implemented;
- d. The non-Federal sponsor may incur liability and expense by virtue of its ownership of contaminated lands, or interests therein, whether such liability should arise out of local, state, or Federal laws or regulations including liability arising out of CERCLA, as amended;
- e. The non-Federal sponsor may acquire interests or estates that are later determined by the Government to be inappropriate, insufficient, or otherwise not required for the project;
- f. The non-Federal sponsor may initially acquire insufficient or excessive real property acreage which may result in additional negotiations and/or benefit payments under P.L. 91-646 as well as the payment of additional fair market value to affected landowners which could have been avoided by delaying acquisition until after PPA execution and the Government's notice to commence acquisition and performance of LERRD; and

g. The non-federal sponsor may incur costs or expenses in connection with its decision to acquire or perform LERRD in advance of the executed PPA and the Government's notice to proceed which may not be creditable under the provisions of Public Law 99-662 or the PPA.

We appreciate the Government of Puerto Rico participation in this project. Should you have questions or concerns pertaining to this letter please feel free to contact Mr. Hansler Bealyer at (904) 232-1178.

Sincerely,

Timothy H. McQuillen  
Chief, Real Estate Division

Signatures:

Appendix E prepared by:

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Realty Specialist  
Real Estate Division  
Jacksonville District

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Alexis Alejandro  
Realty Specialist  
Real Estate Division  
Jacksonville District

Appendix E reviewed by:

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Thomas H. Gulihur  
Chief, Supplemental Branch  
Real Estate Division  
Jacksonville District

Appendix E approved by

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Timothy H. McQuillen  
Chief, Real Estate Division  
Real Estate Division  
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