



## Shoreline Repair & Stabilization

• April 2021



### Purpose of this Project

In 2017, Puerto Rico, like much of the Caribbean, sustained extensive damage from the North Atlantic Hurricane Season. During this season, several high intensity storms occurred, to include 6 Major Hurricanes (Category 3 or greater hurricane winds), of which, Hurricane Irma (Category 5 hurricane winds), Hurricane Jose (Category 4 Hurricane winds), and Hurricane Maria (Category 5 hurricane winds) occurred successively in the month of September 2017. During this time period, wave overtopping, wind, and storm surge caused damage to park resources, including the damages to the shoreline at El Cañuelo.

Approximately 300 linear feet of shoreline has experienced severe erosion, and the Fort at El Cañuelo is exposed to wave and high water level events. The current coastal protection system is damaged and needs repair. The National Park Service plans to repair and stabilize the shoreline to provide coastal protection and establish a sustainable setting for long-term use and visitor enjoyment of the shoreline at El Cañuelo.

### Join Us for a Meeting

Please join us to learn more about this project and the efforts to provide coastal protection for El Cañuelo. There will be an opportunity to ask questions following the presentation.

**Date:** April 15, 2021      **Time:** 6:00 pm – 7:30 pm  
**Location:** Raul Gonzalez Basketball Court, Palo Seco,  
Toa Baja,  
<https://parkplanning.nps.gov/canueloshoreline>







## Existing Conditions



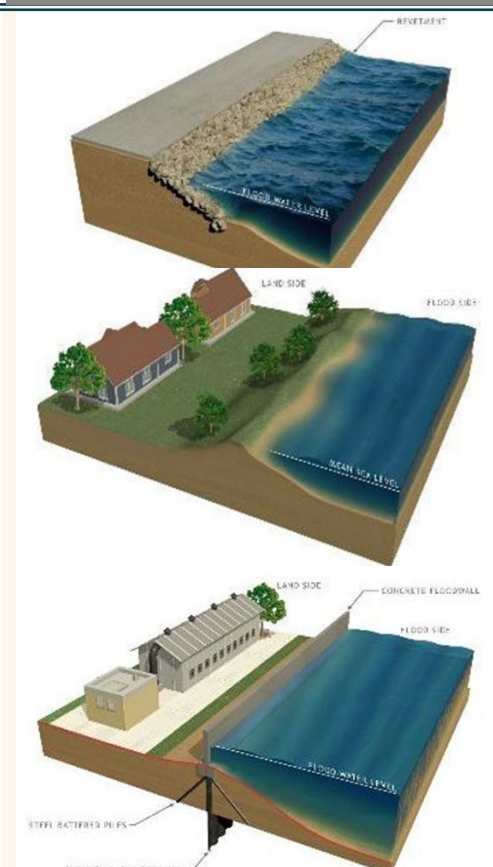
## Alternative Solutions

El Cañuelo Shoreline Repair and Stabilization:

1. **Concept 1. Critical Repairs:** Stabilize, Fill & Elevate the uplands surrounding the Fort.
2. **Concept 2. Upland Protection:** Stabilize, Fill & Elevate the uplands surrounding the Fort, Install a Coastal Barrier, and Vegetate the Shoreline.
3. **Concept 3. Upland & Coastal Protection:** Stabilize, Fill & Elevate the uplands surrounding the Fort, Install a Coastal Barrier, Vegetate the Shoreline, Improve Existing In-Water Coastal Protection.

## Design Solution Examples

## How to Comment



Example  
Revetment

Example  
Shoreline  
Stabilization

Example  
Coastal  
Barrier

Public participation is an important element of the planning process, and we welcome your ideas, concerns, suggestions, and potential topics for consideration.

Please share your comments no later than April 5, 2021 online at <https://parkplanning.nps.gov/canueloshoreline> or mail your comments to:

El Cañuelo Shoreline Project  
SAJU Superintendent,  
Calle Norzagaray #501  
San Juan PR, 00901

*You should be aware that your entire comment, including your personal identifying information, may be made publicly available at any time. You may request that the NPS withhold your name and/or address from public disclosure. If you wish to do this, you must state this prominently at the beginning of your comment and make such a request by checking the box "keep my contact information private" on the website. The NPS will honor such requests to the extent allowable by law, but individuals should be aware that the NPS may still be required to disclose personal identifying information.*