



US Army Corps  
of Engineers®  
Jacksonville District

# SAN JUAN METRO AREA, PUERTO RICO

## COASTAL STORM RISK MANAGEMENT STUDY DRAFT INTEGRATED FEASIBILITY STUDY AND ENVIRONMENTAL ASSESSMENT

JULY 2020

### APPENDIX H: PERTINENT CORRESPONDENCE





DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT  
701 SAN MARCO BOULEVARD  
JACKSONVILLE, FLORIDA 32207-8915

OCT 16 2018

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

To Whom It May Concern:

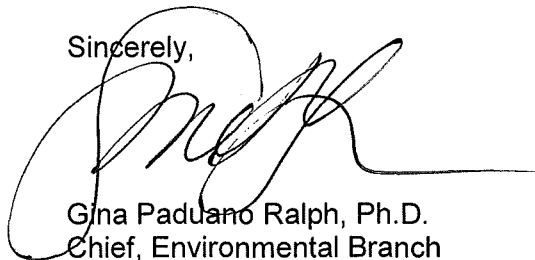
This scoping letter is being promulgated by the U.S. Army Corps of Engineers, Jacksonville District (Corps) in compliance with public coordination requirements of the National Environmental Policy Act (NEPA). The purpose of this correspondence is to formally initiate the scoping process as defined by 40 CFR 1501.7 for the San Juan Metro Area Coastal Storm Damage Reduction Study. The purpose of the scoping period is to commence the public process for the generation of a NEPA document to assess the effects of the potential alternatives to reduce coastal storm damages to infrastructure along the coastline of the San Juan Metro Area extending from El Morro, San Juan Municipality to Boca de Cangrejos, Carolina Municipality, San Juan, Puerto Rico (Attachment 1).

A public scoping meeting will be held on November 8, 2018, at the Colegio de Ingenieros y Agrimensores de Puerto Rico (CIAPR), Calle Antolin Nin Martinez 500 San Juan, Puerto Rico between 5:00 PM to 8:00 PM. Additional information is available on our Environmental Documents Web Page at <<https://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/>>.

Preliminary alternatives under consideration include, but are not limited to, shoreline revetment, breakwaters, and sand placement as well as non-structural measures. We welcome your views, comments and information about environmental and cultural resources, study objectives and important features within the described study area, as well as any suggested improvements. Responses received will aid in determining the scope of the analysis and any potentially significant issues associated with coastal storm damage reduction in the San Juan Metro Area. Letters of comment or inquiry should be addressed to the letterhead address to the attention of the Planning Division, Environmental Branch and received by this office within 30 days of the date of this letter.

If you have any questions, contact Mr. Paul DeMarco at 904 232-1897 or at [paul.m.demarco@usace.army.mil](mailto:paul.m.demarco@usace.army.mil).

Sincerely,



Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch

Enclosure



**US Army Corps  
of Engineers**®  
Jacksonville District

San Juan Metro Area Coastal  
Storm Risk Management Study  
Study Extent

Puerto Rico

 General Study Area

0 3 Kilometers

0 2 Miles





DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT  
701 SAN MARCO BOULEVARD  
JACKSONVILLE, FLORIDA 32207-8915

REPLY TO  
ATTENTION OF

Planning and Policy Division  
Environmental Branch

OCT 16 2018

A quien corresponda:

Esta carta de investigación inicial es publicada por el Distrito Jacksonville del cuerpo de Ingenieros de U.S (Corps) en cumplimiento de los requisitos de coordinación pública de la legislación nacional de política ambiental (NEPA). El propósito de esta correspondencia es iniciar formalmente el proceso de investigación y alcance según lo definido por 40 CFR 1501,7 para el estudio de reducción de daños por tormentas costeras en San Juan Metro Area, Puerto Rico. El propósito del período de investigaciones es iniciar el proceso público para la elaboración del documento NEPA para evaluar los efectos de las alternativas potenciales para reducir los daños causados por tormentas costeras a la infraestructura a lo largo de la costa del área metropolitana de San Juan que se extiende desde El Morro, municipio de San Juan hasta Boca de Cangrejos en el municipio de Carolina, Puerto Rico (Anejo 1).

La reunión de alcance público se llevará a cabo en Noviembre 8, 2018, en el Colegio de Ingenieros y Agrimensores de Puerto Rico (CIAPR), Calle Antolin Nin Martinez 500, San Juan, Puerto Rico, de 5:00 PM a 8:00 PM. Información adicional se encuentra disponible en nuestra página web de documentos ambientales en <http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments/>.

Las alternativas preliminares que se consideraran incluyen, pero no se limitan a, medidas de protección como revestimiento costero, rompeolas, y depósito de arena, así como medidas no estructurales. Recibiremos cordialmente sus opiniones, comentarios e información sobre los recursos ambientales y culturales, los objetivos de estudio y las características importantes dentro del área de estudio descrita, así como cualquier mejora sugerida. Las respuestas recibidas ayudarán a determinar el alcance del análisis y cualquier problema potencialmente significativo asociado con la reducción de daños por tormentas costeras en el área metropolitana de San Juan. Las cartas con comentarios o peticiones deben ser enviadas a la dirección del membrete de esta carta, con atención a la División de Planificación de la Rama Ambiental y deben ser recibidas por esta oficina dentro de los 30 días siguientes a la fecha de la presente carta.

Para preguntas adicionales por favor comunicarse con Ms. Carolina Burnette al 904-232-1428 o enviar correo electrónico a [carolina.burnette@usace.army.mil](mailto:carolina.burnette@usace.army.mil).

Sinceramente,

A handwritten signature in black ink, appearing to read 'Gina Paduano Ralph', written over the printed name.

Gina Paduano Ralph, Ph.D.  
Jefe, Rama Ambiental


Anejo



**US Army Corps  
of Engineers®**  
Jacksonville District

Estudio costero de San Juan Metro Area  
Manejo de riesgos de tormentas costeras  
Localización del área de estudio

Puerto Rico

 Area de estudio

0 3 Kilometros

0 2 Millas





# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Caribbean Ecological Services

Field Office

P.O. Box 491

Boqueron, PR 00622

NOV 15 2018

In Reply Refer To:  
FWS/R4/CESFO/MM-131

Dr. Gina Paduano Ralph  
Chief, Environmental Branch  
US Army Corps of Engineers  
Jacksonville Division  
60 Forsyth St. NW San Marco Boulevard  
Jacksonville, Florida 32207-8915

Re: San Juan Metro Area Coastal Storm Damage  
Reduction Study, San Juan and Carolina, Puerto  
Rico

Dear Dr. Paduano Ralph:

Thanks you for your letter dated October 16, 2018, requesting our agency to be a cooperating agency for the above referenced project in accordance to the National Environmental Policy Act (NEPA; Title 40 of the Code of Federal Regulations, part 1501.6), Executive Order 13807 ("One Federal Decision") and Section 1005 of the Water Resources Reform and Development Act (WRRDA) of 2014. Our comments are issued pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 *et seq.*) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*).

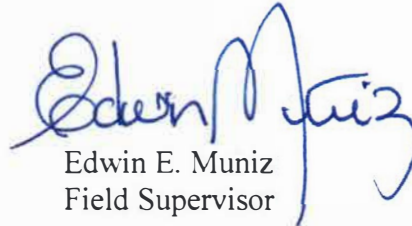
The U.S. Army Corps of Engineers (USACE) is proposing a study for a project to reduce coastal storm damages to infrastructure along the coastline of the San Juan Metro Area extending from El Morro, San Juan, to Boca Cangrejos, Carolina, Puerto Rico. Preliminary alternatives under consideration include, but are not limited to, shoreline revetment, breakwaters, and sand placement as well as non-structural measures.

The study project is within the range of several coastal and marine federally listed species, including the Antillean manatee (*Trichechus manatus manatus*), the hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), green sea turtle (*Chelonia mydas*), roseate tern (*Sterna dougallii dougallii*), piping plover (*Charadrius melodus*) and rufa red knot (*Calidris canutus rufa*). Thus, consultation under Section 7(a)(2) will be required. Also, as part of the feasibility study, the impacts to wetlands and aquatic resources should be quantified. Once these impacts are estimated, a compensatory mitigation plan should be prepared and implemented. The Service will not be able to be a cooperating agency for the

NEPA process; however, the Service will provide technical assistance regarding possible impacts to fish and wildlife resources.

It is our mission to work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of our people. If you have any questions or require additional information, please contact Marelisa Rivera, Deputy Field Supervisor at 787-851-7297 extension 206.

Sincerely yours,

A handwritten signature in blue ink, appearing to read "Edwin E. Muniz". The signature is stylized with a large, looped "M" and a trailing flourish.

Edwin E. Muniz  
Field Supervisor

mtr



**UNITED STATES DEPARTMENT OF COMMERCE**

National Oceanic and Atmospheric Administration

**NATIONAL MARINE FISHERIES SERVICE**

Southeast Regional Office

263 13th Avenue South

St. Petersburg, Florida 33701-5505

<http://sero.nmfs.noaa.gov>

12/21/2018

F:SER/NS

Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch  
U.S. Army Corps of Engineers (USACE), Jacksonville District  
701 San Marco Boulevard  
Jacksonville, Florida 32207-8915

Attn: Paul DeMarco

Dear Dr. Ralph:

NOAA's National Marine Fisheries Service (NMFS) has received the USACE's letter sent via e-mail on December 7, 2018, requesting participation as a cooperating agency for the Puerto Rico Coastal Storm Damage Reduction (CSDR) Study. NMFS agrees to serve as a cooperating agency but due to competing workload, staffing and travel constraints, our participation in this project may be limited to our review and comment on draft National Environmental Policy Act documents, teleconferences, and occasional travel to meetings.

We appreciate your invitation to serve as a cooperating agency for the CSDR study. Please direct Essential Fish Habitat related correspondence to Jose Rivera at (787) 729-6829, or by email at [Jose.A.Rivera@noaa.gov](mailto:Jose.A.Rivera@noaa.gov). Please direct Endangered Species Act related correspondence to Helena Antoun at (939) 438-3123, or by email at [Helena.Antoun@noaa.gov](mailto:Helena.Antoun@noaa.gov).

Sincerely,

STRELCHECK.AND  
REW.J.1365863152

Digitally signed by  
STRELCHECK.ANDREW.J.1365  
863152  
Date: 2018.12.21 10:25:30 -05'00'

for Roy E. Crabtree, Ph.D.  
Regional Administrator

cc: NOAA: NOAA NEPA  
F: NMFS HQ NEPA  
F/SER: Strelcheck, Blough, Silverman  
F/SER3: Bernhart, Lamb, Antoun  
F/SER4: Fay, Dale, Wilber, Rivera



# EO 13807 (“One Federal Decision”) Roles and Responsibilities

## San Juan Metro Area Coastal Storm Damage Reduction Study

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- The Environmental Protection Agency, Region 2 is a Participating Agency under NEPA and EO 13807
- The project is required to reduce storm damages to infrastructure along the coastline of the San Juan Metro Area extending from El Morrow, San Juan, Municipality to Boca de Cangrejos, Carolina Municipality, San Juan, Puerto Rico. Preliminary alternatives under consideration but not limited to include shore revetment, breakwaters, and sand placement as well as non-structural measures.

Agency point of contact to be listed on the Permitting Dashboard and in the CPP:

POC Name	Title	Phone	Email
Michael Poetzsch	Engineer	212-637-4147	Poetzsch.michael@epa.gov

Additional agency points of contact included on the email distribution list for this project:

POC Name	Title	Phone	Email
Lingard Knutson	Environmental Scientist	212-637-3747	Knutson.lingard@epa.gov



Municipio de Cataño  
PO BOX 428  
Cataño, PR 00963

Oficina del Alcalde

November 20, 2018

Mr. Eric P. Summa  
Chief, Planning and Policy Division  
US Army Corps of Engineers  
Jacksonville District  
701 San Marco Boulevard  
Jacksonville, FL 32207

**RE: San Juan Metro Area Coastal Storm Risk Management Study**

Dear Mr. Summa:

The Municipality of Cataño is located along the southwestern shores of the San Juan Harbor and within the San Juan Metropolitan Area. As a result of the above referenced study, the Municipality of Cataño was invited to participate in the initial public meeting held on Engineer's and Surveyors College of Puerto Rico (CIAPR acronym in Spanish) on November 8, 2018. Ms. Ivette Colón-Meléndez, Planning Office Director, participated of this meeting and sadly was informed that the scope of the study did not included the shores within the Municipality of Cataño, severely impacted from recent tropical events. Ms. Colón meet with Eng. Jorge M. Tous and Eng. Millan Mora from the Programs and Project Management Division of the Army Corps of Engineers and explained the devastating effects of the historical swell event of March 4-7, 2018. We provided extensive damage documentation gathered by our Planning Office.

According to National Oceanographic and Atmospheric Administration (NOAA) and National Weather Service in San Juan, Puerto Rico, the Municipality of Cataño had reported most of the damages at the San Juan bay area during the historical swell. The walking pathway along the San Juan Bay was totally destroyed. Hundreds of houses reported some kind of damage due to the flooding from gigantic waves movement, unobstructed through the San Juan Harbor entrance and deep channels. The entire Cataño waterfront was completely destroyed due to the pounding action of the waves. The swell action also adversely affected the Section 1135 Ecosystem Restoration Project constructed by the US Army Corps of Engineers (USACE) at La Esperanza Peninsula. As a result of wave storm impacts to La Esperanza Peninsula, positive drainage of the Malaria Control Channel, constructed by the US Army during the development of Fort Buchanan and operated by the Puerto Rico Department of Natural



**Municipio de Cataño**  
PO BOX 428  
CATAÑO, PR 00963


and Environmental Resources (DNER), has been negatively impacted urban drainage and continues to get much worse requiring more and more pumps to be installed by FEMA and USACE in order to prevent inland flooding.

We have concerns of the effect of the swells on the navigational channels and the whole Toa Baja-Cataño-San Juan coast line.

Therefore, the Municipality of Cataño, respectfully request that the scope of the above referenced study be expanded, just a few miles to the west, to include the severely impacted shores and the sedimentation/erosion problems that continue to impact La Esperanza Peninsula, affecting urban drainage at La Malaria Control Channel of the Municipality of Cataño.

If further information is needed, don't hesitate to contact Ms. Ivette Colón at 787-788-0404 Ext. 4065 or [ivette\\_melendez\\_planificacion@yahoo.com](mailto:ivette_melendez_planificacion@yahoo.com).

Sincerely,



Hon. Félix D. Delgado Montalvo  
Mayor  
Municipality of Cataño



GOBIERNO DE PUERTO RICO  
Administración de Terrenos

November 21, 2018

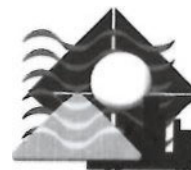
Ms. Gina Paduano Ralph  
Planning Division  
Environmental Branch  
Department of the Army  
Corps. Of Engineers, Jacksonville District 701  
San Marco Boulevard  
Jacksonville, Florida 32207-8915

Esteemed Ms. Paduano Ralph:

By letter dated October 16, 2018, we inform about the beginning of the period of investigación through public process for the elaboration of the document of the national Law of Environmental Policy (NEPA). The foregoing, with the proposition to assess the effects of potential alternatives to reduce damage caused by coastal storms to infrastructure along the coast of the San Juan metropolitan area extending from El Morro, in the municipality of San Juan up to the Boca de Cangrejos in the municipality of Carolina and along certain coastal sectors located in the north, east and west of Puerto Rico.

According to the delimitations of coastal areas included in the documents generated by the US Army Corps of Engineers, Jacksonville District titled, Coastal Study of San Juan Metro Area Coastal Storm Risk Management and coastal study of Puerto Rico Risk Management of Coastal Storms Possible Study Areas, several adjoining properties have been identified with the study area belonging to the Lands Administration. Attached list of properties of the Land Administration adjoining the delimitation included in the coastal study of San Juan Metro Area Coastal Storm risk management.

No.	Property Number	Location	Town	Property Name	Cadastre	Observation
1	1701-000001	Old San Juan Neighborhood (Lat= 18.46, Lon=-66.10)	San Juan	San Juan Municipality	022-093-172-02	Delimitation Adjoins Infrastructure of Restaurant



171 Ave. Carlos Chardon, Suite 101, San Juan, PR 00918 • Apartado 363767, San Juan PR 00936-3767

T. 787.753.9300

787.250.7150



www.terrenos.pr.gov

No.	Property Number	Location	Town	Property Name	Cadastral	Observation
2	7039-001782	North Santurce Neighborhood (Lat=18.45, Lon=-66.06)	San Juan	River Sources Authority	041-031-011-21	Delimitation Adjoins with Recreational Area
3	7105-000412	Cangrejo Neighborhood Arriba (Lat=18.44, Lon=-66.01)	Carolina	Tirso Colon Morales y Mercedes Gonzalez	041-078-006-01	Delimitation Adjoins With Recreational Area

Continuation of the list of properties of the Lands Administration that adjoin with the delimitation included in the study of Puerto Rico Risk Management of Coastal Storms Possible Study Areas, this time along certain coastal sectors located in the north, east and west of Puerto Rico.

No.	Property Number	Location	Town	Property Name	Cadastral	Observation
1	7335-001150	Tierras Nuevas Saliente Neighborhood (Lat=18.47, Lon=-66.43)	Manati	Ramon Guas	016-000-010-02	The coastal study ends just Before the property Owned by the Lands Admins. Thus we request That that the Alternative Include the property

No.	Property Number	Location	Town	Property Name	Cadastré	Observation
2	7302-001148	Tierras Nuevas Saliente Neighborhood (Lat= 18.47, Lon=-66.44)	Manati	Emilia Sanchez	016-000-010-01	The coastal study ends just Before the property Owned by the Lands Admins. Thus we Request that the Alternative Include the Property
3	0429-001111	Pueblo Neighborhood (Lat= 18.37, Lon=-65.71)	Luquillo	Department Of Transportation And Public Works	092-096-007-Varios (01, 02, 03, 04, 05, 07, 08, 09, 10 y 12)	Delimitation Adjoins The development Of the future Property
4	6530-001117	Pitahaya Neighborhood (Lat= 18.37, Lon=-65.71)	Luquillo	Construction Corp. C.	120-000-004-04	Delimitation Adjoins The Rio Sabana And the Lands Admins. That forms part of The NE Ecological Corridor

No.	Property Number	Location	Town	Property Name	Cadastre	Observation
5	7906-000880, 000881, 000872, 000879	Punta Santiago Neighborhood (Lat=18.16, Long=-65.74)	Humacao	Convergent Terra Corp.	282-062-016-17, 282-062-016-24 parte, 282-061-748-19	Delimitation Adjacent to the dock and development of future properties
6	6937-000307	Miradero Neighborhood (Lat= 18.08, Lon=-67.19)	Cabo Rojo	Belvedere	331-000-005-01	Delimitation Adjacent to the Property owned by The Lands Admins. Belonging to the Wetland area
7	6628-001301	Algarrobo Neighborhood (Lat=18.23, Lon=-67.16)	Mayaguez	Domingo Bonet y Otros	207-000-002-11	Delimitation Adjacent with PR-64 And with a portion Of the property Owned by the Lands Admins.

If you require additional information please contact Milagros Martinez Mercado, director of the Engineering Office at 787-753-9300 extension 228

Cordially,



Dalcia Lebron Nieves

Executive Director

Attachments

DAMAGE TO PUBLIC AND PRIVATE PROPERTY DUE TO THE  
ATMOSPHERIC EVENT IN THE MARITIME TERRESTRIAL ZONE IN CATAÑO, PR



20 November 2018

Dr. Gina Paduano Ralph, Ph.D.  
Chief, Environmental Branch  
Department of the Army  
Corps of Engineers  
Jacksonville District  
701 San Marco Boulevard  
Jacksonville, Florida 32207-8915

Dear Dr. Paduano Ralph:

We refer to the letter received from the Corps of Engineers and published at Jacksonville District to begin the process of investigating the scope of damage on the shores of our beloved island. This is done with the intention of studying and reducing the damage caused by the storms that have seriously affected the coast of the entire island.

The public meetings that were made in Aguadilla and San Juan due to professional commitments we could not participate and therefore this initiative to write. The climatic change is affecting a lot causing more storms and stronger hurricanes. Being in the Caribbean and being an island we are not exempt from these changes and atmospheric impacts.

All the coastal municipalities are severely affected and ours is not the exception; we are referring to the municipality of Loiza. The erosion on the shores, the strong swells have left us with little to no space to enjoy the beaches. The perimeter that covers the Suarez plots to the Comuidad Cristiana is a clear example of this erosion. The strong swell has taken buildings, houses, fences and undermined part of the roads.

Projects have been presented in the Chamber of Representatives to identify funds and start working towards protection such as coastal cladding, breakwaters, dunes, area deposits, rocks that limit the loss of the shore and other non-structural.

Our interest is for you to visit our municipality to evaluate the coastline in full and to be included in the studies and appropriation of funds. In this way we will be sure that the properties of this coastline will be protected and safe from the impact and strong swell that is currently being received.

The work is arduous, onerous and very complex because we are talking about the coastal erosion of the entire island. And the main goal is to protect lives, property, heritage, and maintain the economy that is supported by tourism in all these coastal towns. The funds that the U.S. Congress has assigned to the Corps of Engineers is estimated at \$6M and half will be used to examine the coasts, hence our interest to evaluate our municipality.

We are including some photos so you can appreciate the impact of the swell and damage to the shore in front of our resort.

With nothing else to report, we trust you will attend to our writing and take us into consideration in the study you will be doing.

Cordially,

Dr. Ivette Ruiz-Santiago, PhD  
President  
Board of Directors



*Autonomous Municipality of San Juan*  
*Planning and Land Use Office*  
*Director Office*

November 15, 2018

Department of the Army  
Corps of Engineers, Jacksonville District  
701 San Marco Boulevard  
Jacksonville, FL 32207-8916

Attn: Planning and Policy Division, Environmental Branch

To whom it may concern:

This letter is written in response to your October 16, 2018 letter, regarding the start of the scoping process for the San Juan Metro Area Coastal Storm Damage Reduction Study (the Study).

As requested in the letter, we have identified a preliminary list of cultural, historic or environmental resources in the coast of San Juan, as well as important public spaces. These resources can be located and described in the attached map. During the process of development of the Study, additional resources or issues will be identified.

Regarding our concerns for the Study, one of our main concerns is the effect of the future rise in sea level on the coastal areas of San Juan. Specifically, we are concerned about the inclusion of forecasted increases in sea levels in the development of alternatives for storm damage reduction.

We hope this information is useful for the Study. We look forward to continue participating in the process.

Sincerely,

Plan. Jorge R. Hernandez-Favale  
Director

c: Esperanza Ruiz Rios, City Administrator

*Ponce de León Avenue #1050 Street White Roman Corner*  
*Rio Piedras, Puerto Rico Tel. (787) 480-2250 Fax (787) 764-9150*  
*P.O. Box 70179 • San Juan, PR 00936-8179*

Good afternoon:

I include a letter and aerial photos regarding the adjacent properties of the Lands Administration with the delimitations included in the documents generated by the US Army Corps of Engineers Jacksonville District titled, Coastal Study of San Juan Metro Area Risk Management Coastal Storms and Puerto Rico Coastal Study of Coastal Storm Risk Management Possible Areas of Study.

Milagros Martinez Mercado  
Director of Engineering Office  
Lands Administration  
787-753-9300  
Extension: 228

15 Novemeber 2018

Paul DeMarco

USACE

Paul.M.Demarco@usace.army.mil

**RE: Coastal risk Management studies by storms, San Juan Metro**

The Santurcinos Ecosystem Restoration Coalition is a non-profit community organization with a coalition structure with the vision of creating a holistic working network for the creation and analysis of ecosystem restoration plans impacted by natural and/or anthropogenic causes in order to establish a sustainable social-ecological relationship. Through the union with various organizations that have experience and professionals we have focused our plan for the restoration and conservation of coral reefs and dunes, the reforestation and cleanup of the coasts, urban areas and wetlands, and the implementation of an effective recycling system, that in turn these will benefit the quality of life of all.

We consider it necessary to highlight the importance and value of the protection of barriers natural resources present on our shores: Coral reefs, our first barriers in the sea and the dunes and vegetation, our first ground barriers. The ecological services that give us these natural ecosystems must be reestablished through the restoration as a means of reducing our vulnerability and increasing our resilience to events natural. Through the years the coastal communities along with professionals of non-governmental organizations and the University of Puerto Rico have joined together to document, protect and restore coastal and maritime land areas. From coast to coast there are advisory community groups that have analysis of the coastal resources and their benefits. Although the causes of many recent impact events to coastal areas have been for natural causes, we have documented that what has made us more vulnerable are anthropogenic causes. We have documentation of the Costa de Santurce in San Juan, and we are all willing to collaborate and be part of this study.

The historical aspects are important when understanding the current situation of risks faced by coastal communities in PR. The rules of urban and territorial planning In San Juan, Puerto Rico were established for the 1956, when it had already developed and built without any organization much of county, Ocean Park, Punta las Marys, Miramar and some parts of southern Santurce. For this same time they were built the systems of aqueducts and sewers with a level of hauling and technologies adapted to the population of that time. The rainwater and sanitation system has not been expanded or innovated and has not been given the necessary maintenance, so we have become vulnerable to flooding and sea-level rise, and dependent on systems which in turn depend on fossil fuels to work. The causes are varied, historical and multidisciplinary, and in order to work the problem of risks from the root we propose the following actions:

1. To innovate the system of treatment of rainwater and sanitary. All the waters, both storms as sanitary must be treated before reaching the sea. The waters polluted arrive as runoff to the beaches, eroding the terrain and impacting the quality of water that ends on corals, our maritime barriers.
2. Refuel the beach with the sand that comes out of the terrestrial maritime Zone by action of the wind and the sea, deposit it in sand banks (dune). Working with the methods currently used by the local

agencies that are in charge of disposing of the sand, we can save a lot of the one that is currently lost due to poor management. **Establish ecological sand maintenance protocols** on the beach next to the community, where it is understood that sand is a resource and not a contaminant.

3. Coastal sowing for sand accumulation and stabilization in dune areas. The dunes protect the beach, life and property. Vegetation also helps mitigate the impact of the winds on the properties. Delimit areas dedicated to vegetation on the beaches, vegetable architecture.

4. Restore and reinforce coral reef through the propagation of resilient species in coral farms in situ for later transplant to the reef. Insertion of predatory herbivores (*Diadema antillarum*) and other herbaceous fish. You can also work on the planting coral skeletons on the reef to add roughness and new spaces where coral can grow.

5. Delimitation of protected natural areas (no fishing, no boats) off the coast of San Juan, as a method of protection of anthropogenic impacts and preservation of areas resilient reproduction of species that form natural barriers.

6. Moratorium on all buildings on vulnerable shores or coasts under this study until it is certified that it will not be at risk for the next 50 years that will last these funds. All improvements to existing structures should be and apply environmental charges to those who are kept in hazardous areas for the future management of the restoration of natural barriers and structures that remain ruined by natural causes.

CRES and all his collaborators are interested in being able to be part of the study process and implementation of possible jobs to mitigate the risks we face on the coasts to through peaceful interventions in natural ecosystems. We understand that projects that seek to install static, vertical and artificial structures will be further impacting the benefits already provided to us by the natural ecosystems and putting at greater risk the coastal communities and endangered species that reside or visit here. We hope to keep in constant communication with the representatives of this Project in Puerto Rico, and we took the opportunity to request a meeting to present the projects and actions that have been and continue to be carried out on these shores in order to manage the possible coastal risks from storms and other natural and anthropogenic causes.

Gratefully Yours,

Yvette M. Núñez Sepúlveda

Executive Director

CRES PR

**Notes on Public Comments**

1. Ivette Nuñez (Santurce)

- Locals have been documenting for a long time the state of the beaches, erosion occurring, and endangered species in the area
- Prefers natural looking measures
- Advocates for sand dunes, reefs, and re-planting along the coast
- Believes appropriate beach/sand slope would be beneficial
- Existing reefs helped during the storms as a first barrier, but they took a big hit, and are now in danger
- Existing reefs should be restored and monitored

2. Lizzie Rosso (Condado Lagoon)

- There're about 2000 structures/properties (residential and commercial) affected every day by flooding from the lagoon.
- Run-off from flooding events contains trash and gasoline, along with other contaminants, and contributes to the contamination of the lagoon.
- Asks for the study to also include the Condado Lagoon.

3. Vanesa Uriarte (Amigos del Mar)

- Her organization fights against the privatization of the PR coast
- Government won't stop development near the coast
- Advocates for re-planting along the coast
- Advocated for prevention in areas that were not critically affected, but could be in the near future
- Asks for the study to also include other areas
- Asks for the protection of areas that have been rescued by the community
- Certain measures that have proven effective in community projects can be implemented by the government on a bigger scale

4. Frank (Arrecife Condado)

- Advocates for the construction of artificial reefs in the Condado area that would create a submerged artificial beach that would absorb wave energy
- Arrecife Condado planning on constructing 3 segments of reefs (reef balls) with a cost of \$10M.

- Encouraged USACE to follow example, then you can consider sand renourishment and re-planting.
- Reefs help with the creation of marine life
- Condado beach is one of the most dangerous beaches in PR
- Wants to make Condado Beach a safe beach
- Against seawalls and hard structures on the beach/coast but instead advocates for innovative approaches that deal with initial wave energy in the ocean

5. Pedro González (President of Mares Society)

- Study should cover other areas outside of San Juan, like Loiza.
- Poor communities should be considered even though these areas do not have a high economic benefit to the government
- Advocates for replanting/mangroves
- Mentions flooding at Ocean Park.
- Subterranean flooding issues need to be addressed
- Right now pumps are operating 24/7 to prevent flooding

6. Edwin Hernández (UPR)

- Reduce dependence on seawalls and vertical structures.
- Advocated for enhancing/re-establish reefs, perch beaches, coral farming, seagrass conservation/integration.
- Invasive species should be reduced
- USACE should be careful about beach renourishment and its long term impacts on coral reefs

7. Jorge Bausa (Bahía de San Juan)

- Advocates for beach renourishment and reefs
- Reefs depend on water quality, so water quality should be obtained before reef construction
- Consideration of climate change and impacts on rising water levels
- USACE should consider what type of material to be used for reef construction, since some material could have an adverse effect on the environment.

8. Ivette Colón (Cataño City Hall)

- Cataño and other areas should be part of the study
- Barrio Pueblo has been greatly affected

9. Ricardo de Soto (Guarda Mar Craibe)

- Represents surfers and nautical people

- Advocated for natural barriers
- Creation of marine protected area out of the northern coral barrier reef is the best and most cost effective alternative for protecting the coast
- Against seawalls
- \$3M for the study is too little and so is the scope
- First goal of study should be to determine the coral situation
- Any project should be compliant with environmental law

10. Francisco Lopez (Isla Verde)

- Hotel development along the coast has been destroying sand dunes
- Should learn from past mistakes
- Against the construction/rehabilitation of the Noir Hotel (abandoned hotel we saw at the point in Isla Verde). Mentions that the shade the building will generate will affect negatively seagrasses.
- Protect coral by maintaining and monitoring water quality of metropolitan area on a community level to reduce cost

11. Manuel Dalmau (Resident @ Punta Las Marías)

- Has noticed how sand's been shifting
- Advocated from nature oriented measures
- We should use what's already in-place and enhance it instead of new construction.

November 12, 2018

Mr. Paul DeMarco  
U.S. Army Corps of Engineers Jacksonville District  
P.O. Box 4970, Jacksonville, FL 32232-0019

Dear Mr. DeMarco,

As beachfront residents of Almendro Street in Punta las Marías we have been worried and attentive to the progressively deteriorating conditions of the coast in front of our properties. In the last 30 years we have seen the sandy beach retreat to the point where the waves hit our property walls. In the last ten years we have seen the sand shifts bring back the beach periodically, sometimes creating 30 feet of dry beach where there were 3 feet of water two days before. And in the last five years we have seen the abatement of the sea begin to deteriorate our community seawalls, including the undermining and collapse of the road area at the north end of the street, adjacent to the beach.

As many point fingers to assign blame to the advancing coastal erosion and deterioration, we are focused on determining the logical and sustainable cause of action to mitigate the situation and protect our properties. Although we believe that vertical constructions are detrimental to the situation, it is the reality that we inherited when we acquired our properties.

In the last five years, we have been actively involved with our neighbors and the local community, the Municipality, The Department of Natural and Environmental Resources, the U.S. Army Corps of Engineers and several professional consultants in analyzing the situation and determining a course of action. Like most community projects that involve so many inherent parties, progress has been slow and minimal. Efforts to get parties involved, interested, get them to cooperate and respond to their responsibilities have been fruitless.

During this process we have been making conscious observations and taking photos. We have learned to recognize the factors that cause different behaviors in the moving landscape of the beach. We have discussed extensively with professionals (like Fernando Pages, Alfredo Torruellas and Ernesto Díaz) our local observations and the viable alternatives to mitigate the progression of the deterioration. We would like to offer you any information that may help you in the analysis of the situation.

We hope that a solution to the situation is identified and that implementation of this solution is standardized to facilitate any party wishing to cooperate, to easily acquire the knowhow and the processes to execute a part of the solution. Permitting Agencies should be guided to establish consolidated permits to minimize costs and time. We hope your conclusions truly help to mitigate and even reverse the progressing coastal deterioration and that it will streamline future projects to attend the situation.

Feel free to contact us.

Sincerely,



Francisco Pereyó PE  
#5 Almendro, Punta las Marías  
787-525-1532  
[ciscopereyo@gmail.com](mailto:ciscopereyo@gmail.com)



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**DEPARTMENT OF THE ARMY**  
**CORPS OF ENGINEERS, JACKSONVILLE DISTRICT**  
**701 SAN MARCO BOULEVARD**  
**JACKSONVILLE, FLORIDA 32207-8915**

Planning & Policy Division  
Plan Formulation Branch

To Whom it May Concern:

The purpose of this correspondence is to formally provide updates relevant to the scoping process on the San Juan Metro Study. An open house meeting will take place Thursday June 20, 2019, at the conference room facilities of Robinson School in Condado, 5 Nairn Street, San Juan, from 5 p.m. to 8 p.m. This meeting will have posters, a presentation, and a comment session. The study team will be available to discuss the project.

This study will determine if there is Federal Interest in a plan to reduce damages to infrastructure as a result of flooding from storm surge, tides and waves (rather than inland rainfall and stormwater runoff) during coastal storms and hurricanes along the back bay areas in the municipality of San Juan and adjacent communities. The study team will produce a draft report, which will be available for public review and comment in 2020. The report will consider all engineering alternatives and their effects, under the National Environmental Policy Act (NEPA) of 1969.

Your attendance is greatly appreciated and we welcome your views, comments and information about the described study area, as well as any suggested improvements.

Quarterly updates and study documents can be found in the study webpage:  
<https://www.saj.usace.army.mil/SanJuanPuertoRicoCSRMFfeasibilityStudy/>

email: [SJMBackBay@usace.army.mil](mailto:SJMBackBay@usace.army.mil)

Sincerely,

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Kelly J. Keefe  
Chief, Plan Formulation Branch



DEPARTMENT OF THE ARMY  
CORPS OF ENGINEERS, JACKSONVILLE DISTRICT  
701 SAN MARCO BLVD  
JACKSONVILLE, FL 32207-8915

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

MEMORANDUM FOR THE RECORD

SUBJECT: Coordination Act Report for the San Juan Metro Area, Puerto Rico Coastal Storm Risk Management Feasibility Study.

PURPOSE: To document an informal understanding between the U.S. Army Corps of Engineers, Jacksonville District (Corps), and the U.S. Fish and Wildlife Service (USFWS), Caribbean Ecological Services Field Office.

**Background.** The San Juan Metro Area Coastal Storm Risk Management Study will determine if there is Federal Interest in a plan to reduce damages to infrastructure as a result of flooding from storm surge, tides and waves (rather than inland rainfall and storm water runoff) during coastal storms and hurricanes along the back bay areas in the municipality of San Juan and adjacent communities. Division B, Subdivision 1, Title IV of the Bipartisan Budget Act (BBA) of 2018 (Public Law 115-123), authorizes the Corps to conduct the study at full federal expense to the extent that appropriations provided under the Investigations heading of the 2018 BBA are available and used for such purpose.

**Recommended Plan.** The preliminary Tentatively Selected Plan (TSP) proposes Structural, Non-Structural, and Natural/Nature-Based Feature Alternatives for five (5) reaches which consist of:

1	CL – Alt 5	Elevated Living Shoreline
2	WSJB 1B – Alt 1	Seawall + Levee + Elevated Living Shoreline
3	WSJB 2- Alt 3	Small Storm Surge Gate + Partial Levee + Seawall
4	WSJB 3 - Alt 5	Seawall + Living Shoreline + 1.83m Breakwater
5	WSJB 4 – Alt 2	Levee + Seawall

Construction of the proposed TSP would reduce hurricane and storm damage to infrastructure along the back bay areas in the municipality of San Juan and adjacent communities.

**Coordination.** The Fish and Wildlife Coordination (FWCA; 16 U.S.C. 661 et seq., March 10, 1934, as amended 1946, 1958, 1978, and 1995) requires Federal agencies to consult with USFWS regarding project related effects to fish and wildlife resources and proposed measures to avoid, minimize, and/or mitigate unavoidable effects. Additional coordination authorities exist through the review process of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321-4347, January 1, 1970, as amended 1975 and 1982) and the consultations required under the Endangered Species Act of 1973 (ESA; 7 U.S.C. 136, 16 U.S.C. 1531 et seq. December 28, 1973).

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

SUBJECT: Coordination Act Report for the San Juan Metro Area, Puerto Rico Coastal Storm Risk Management Feasibility Study.

The USFWS declined cooperating agency status for this study via letter dated November 18, 2018 but agreed to provide technical assistance regarding possible impacts to fish and wildlife resources. USFWS continues to coordinate and consult with the Corps through NEPA and the ESA in which impacts to fish and wildlife resources will be adequately addressed via these two authorities. USFWS will include comments relevant to FWCA in the USFWS response to the Corps' ESA coordination letter once received.

**Agreement.** The undersigned, the Corps and USFWS, agree to utilize the San Juan Metro Area, Puerto Rico Coastal Storm Risk Management Feasibility Study NEPA review and ESA consultation processes to complete coordination responsibilities under the FWCA. This agreement will avoid duplicate analysis and documentation as authorized under 40 CFR section 1500.4 (k), 1502.25, 1506.4, and is consistent with Presidential Executive Order for Improving Regulation and Regulatory Review, released January 18, 2011.

**EDWIN  
MUNIZ**

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Edwin Muñiz  
Field Supervisor  
Caribbean Ecological Services Field Office

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Angela E. Dunn  
Chief, Environmental Branch