# SAN JUAN HARBOR, PUERTO RICO NAVIGATION IMPROVEMENTS STUDY

## Final Integrated Feasibility Report & Environmental Assessment

## APPENDIX J Pertinent Correspondence

June 2018



of Engineers Jacksonville District

## <u>Appendix J</u> <u>Pertinent Correspondence</u>

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

REPLY TO ATTENTION OF

Planning Division Environmental Branch OCT 0 1 2015

To Whom it May Concern:

This office is starting a Feasibility Study and Environmental Impact Statement concerning navigational improvements to San Juan Harbor in San Juan, Puerto Rico. One alternative is to widen the main channels by 50 feet and deepen them up to 50 feet. Lesser increments of widening and deepening would also be evaluated (see enclosed figure). The dredged material is expected to be suitable for placement in the Ocean Dredged Material Disposal Site located a few miles from the harbor entrance. Some material may be suitable for placement in dredged holes and for other purposes.

This letter initiates the scoping process for the Environmental Impact Statement. The scoping process starts prior to preparation of the Environmental Impact Statement and is intended to aid in determining the scope of the analysis and significant issues. This process is also intended to help identify alternatives and information needed to evaluate alternatives.

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. 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.

Prior to a public scoping meeting, a Planning Charette with the sponsor and the resource agencies will be held on November 4, 2015, in the Puerto Rico Convention Center, 100 Convention Boulevard, San Juan, Puerto Rico at 9:00 am in Salón Las Olas.

A public scoping meeting will be held on November 5, 2015, in the Puerto Rico Convention Center, 100 Convention Boulevard, San Juan, Puerto Rico at 9:00 am in Room 101. Additional information is available on our Environmental Documents Web Page at

<a href="http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#SJH>">http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/EnvironmentalDocuments.aspx#SJH></a>.

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

Sincerelv **Iric P** Summa Chief, Environmental Branch

Enclosure





DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT CORPS OF ENGINEERS 701 San Marco Boulevard JACKSONVILLE, FLORIDA 32207-6175

Planning Division Environmental Branch

EPLY TO

0 1 007 2015

A quien corresponda:

Esta oficina se propone iniciar un Estudio de Viabilidad e Impacto Ambiental sobre, mejoras a los canales de navegación de la Bahía de San Juan. Una alternativa es la de ensanchar los canales principales hasta 50 pies adicionales y de llevarlos hasta 50 pies de profundidad. Una ampliación menor también será evaluada, ver anejos. El material dragado se espera sea apropiado para ser depositado en el "Sitio Marítimo de Disposición de Material Dragado", aprobado para este uso y localizado a varias millas de distancia de la entrada de la bahía. Parte del material puede ser apropiado para el depósito en cavidades de otros fondos acuáticos y otros usos.

Esta carta inicia el proceso de consulta pública, previo a la preparación del Estudio de Impacto Ambiental y tiene el propósito de asistir en la determinación del enfoque de análisis y asuntos significativos. También este proceso tiene la intención de ayudar a identificar alternativas e información necesaria para su adecuada evaluación.

Apreciamos sus comentarios, perspectivas e información sobre recursos ambientales y culturales, objetivos de estudio y detalles sobre el área de estudio descrita. También sugerencias sobre otras mejoras necesarias. Los comentarios o peticiones deben ser enviadas a la dirección postal impresa al timbre de esta carta, con atención a la División de Planificación de la Rama Ambiental y deben ser recibidos dentro de 30 días posteriores a la fecha de esta carta.

OCT 0 5 2015 ENTADORA HICACIONES

La reunión de consulta pública será el jueves, 5 de noviembre de 2015 en el Salón 101 del Centro de Convenciones de Puerto Rico, 100 Convention Boulevard, San Juan, Puerto Rico de 9:00 am a 12:00 pm.

Puede acceder información adicional en nuestra página web de Documentos Ambientales en

<http://www.saj.usace.army.mil/About/DivisionsOffices/Planning/EnvironmentalBranch/ EnvironmentalDocuments.aspx#SJH >.

Para cualquier otro detalle puede comunicarse con el Sr. Milan A. Mora, P.E. al 904-232-1454 o enviar correo electrónico a millan.a.mora@usace.army.mil.

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Anejos



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#### Allision La Princesa ATM Ferry

-Date: 08MAY2015

-Location: Pier #2 ATM Facility San Juan side

Passenger Ferry LA PRINCESA had an allision with pier 2 in San Juan Harbor. The Captain stated that he was coming into dock and when he put the engines in neutral the starboard side engine did not respond causing the vessel to hit the pier causing minor damage. Final report indicates that the cause of the casualty was a few faulty sensors (gear harness, gear temperature and gear oil pressure sensors). All sensors were replaced and tested. Sea trials were conducted. All pressures and temperature of the transmissions were within the parameters of the manufacture specifications.

LA PRINCESA: Passenger Ferry, Length: 70 feet, gross tons: 74 Year: 2009 Hull Material: Aluminum, Propulsion: Diesel

#### **Collision V.I. Pride – Sabre Spirit (Both are freight vessels)**

-Date: 01SEPT2010

-Location: In the vicinity of Pier 10 in San Juan Harbor

-The M/V VI PRIDE during cargo maneuvering operations (shifting berths) in San Juan Harbor collied with the M/V Sabre Spirit that was moored in Pier #10. The M/V Sabre Spirit received est. damages of 45,000.00. Noticeable damage to the starboard bow was seen. No injuries and pollution reports.

V.I PRIDE: Freight Vessel (RO/RO), length: 165 feet, Gross tons: 646, Year: 1977, Propulsion: Diesel Hull Material: Steel

SABRE SPIRIT: Freight Vessel (RO/RO), length: 178 feet, Gross tons: 684, Year: 1981, Propulsion: Diesel Hull Material: Steel

#### Collision S/S El Morro (container RO/RO) – UTV Honcho

Date: 19MAR2012

Location: San Juan Harbor Graving Channel around buoy #4

UTV HONCHO collided with S/S EL MORRO. UTV HONCHO was assisting the S/S EL MORRO outbound from San Juan Harbor when the tug captain placed both engines ahead to clear of the vessel. While making the already mentioned maneuver the UTV HONCHO made contact with S/S EL MORRO, damaging its bow. After a thorough assessment, it was determined that UTV HONCHO was too close to the S/S EL MORRO, creating a Venture effect (suction). This hazardous condition touched the S/S EL MORRO's hull and damaged its starboard engine transmission coupling and propeller.

EL MORRO: Container RO/RO, gross tons: 28137, year: 1974, propulsion: steam, hull material: steel

HONCHO: Towing vessel, gross tons: 180, length: 96 feet, year: 1975, Propulsion: Diesel, Hull Material: Steel

#### Allision Amelia with USCG Buoy #2

Date: 01JAN2011 Location: San Juan Harbor Graving Channel around buoy #2 (USCG) Ferry allied with USCG Bouy #2 on the starboard side of the ferry.

AMELIA: Passenger Ferry, Length: 75, gross tons: 87, Year: 1990, Propulsion: Diesel, Hull Material: Aluminum.

#### Allision ATM Ferry La Decima with a wooden log

Date: 100CT2010

Location: Entering Martin Peña Canal

P/V LA DECIMA allided with a floating wooden log, 10 feet in length (1/2 feet in diameter), during the transit from San Juan into Martin Pena Canal (Catano). The incident caused vessel's starboard propeller to noticeably vibrate.

LA DECIMA: Passenger Ferry, Length: 45, gross tons: 28, year built: 2009, Propulsion: Diesel, Hull Material: Aluminum

### Allision STI Battery (Chemical Tanker) with Cataño Oil Dock northern fender

Date: 08AUG2015

Location: Cataño Oil Dock northern fender

08AUG2015: M/V STI BATTERY allied with Cataño Oil Dock during berthing operations. Vessel allied with mooring dock not with the facility pier. There is not damage to the vessel other than paint scrapings.

STI BATTERY: Chemical Tanker, length: 183 feet, gross tons: 29,785, year: 2014, Propulsion: Diesel, Hull Material: Steel

#### Collision MV Elandra Lion – M/V Arcturus Both vessels are Oil/Chem tankers Date: 13JUN2014

Location: Cataño Oil Dock Terminal #1

During outbound transit M/V ELANDRA LION made contact with M/V MR. ARCTURUS. The pilot and the tug captains stated that the contact caused only paint damage. Investigators on scene did not see any obvious damage other than minor scrapes and a cut mooring line. Factor: Wind took place: E/SE 20-25 knots

ELANDRA LION: Oil/Chem Tanker, gross tons: 29, 727, length: 183, year: 2014, propulsion: diesel, hull material: steel.

ARCTURUS: Oil/Chem Tankers, length; 183, gross tons: 30,092, year: 2006, Propulsion: diesel, Hull Material: Steel

#### Grounding UTV McAllister

Date: 22JAN2010

Location: Army Terminal Channel Buoy #5

The UTV JANE McALLISTER ran aground while assisting the tug CENTURION with the deck barge JAX-SAN JUAN BRIDGE outbound from Army Terminal Pier west. The JANE McALLISTER stayed close to buoy # 5 of the Army Terminal Channel while assisting the barge when the tug grounded and the working line attached to the barge parted. Master of JANE McALLISTER went full astern in an attempt to refloat the vessel. After approximately 20 seconds, the Master was able to free vessel from grounding situation and continued assisting the barge. MCALLISTER: Towing Vessel, length: 106 feet, gross tons: 292, Year: 1968, Propulsion: Diesel, Hull Material: Steel

#### Grounding UTV McAllister

Date: 04MAR2010

Location: Army Terminal Channel Buoy #5

The UTV JANE McALLISTER ran aground in the vicinity of the Army Terminal Channel buoy #5 while assisting M/V COLOMBIAN STAR.

MCALLISTER: Towing Vessel, length: 106 feet, gross tons: 292, Year: 1968, Propulsion: Diesel, Hull Material: Steel

#### Allision Amelia ATM Ferry

Date: 26AUG2015

Location: Cataño Dock, Ferry Terminal

At approximately 1520 on August 26, 2015, the ferry AMELIA was approaching the Cataño dock in order to moor and disembark 33 passengers that were on board. Vessel experience engines problems and vessel ran up on the dock. Engineer had to go down into the engine room to manually turn off the starboard engine and place the port engine in neutral. Handrails on the pier were damaged. Vessel was attended by CG personnel immediately following the incident for investigation, and damage assessment, and the following day for more thorough examination of vessel hull for damage. Approximately \$10000 in damage was done to the Cataño dock. Two dents were noted in vessel hull but a requirement was not issued for their repair.

AMELIA: Passenger Ferry, Length: 75, gross tons: 87, Year: 1990, Propulsion: Diesel, Hull Material: Aluminum.

#### Allision Covadonga ATM Ferry

Date: 01JAN2010

Location: Cataño Dock, Ferry Terminal

M/V COVADONGA allided with the east side of the Catano Pier. Vessel's Master was waiting for the waves to clear when the chains on the tire fendering at the pier detached a piece of the rub rail on the starboard side stern of the vessel. Factor: Medium waves and windy (12 knots)

COVADONGA: Passenger Ferry, Length: 75, gross tons: 87, year: 1990, Propulsion: Diesel, Hull Material: Aluminum

#### Grounding UTV Handy Three

Date: 130CT2015

Location: Puerto Nuevo Channel near Buoy #3, San Juan, PR

Vessel was transiting from Puma Pier to Puerto Nuevo when they ran soft aground on a mud bottom. They did not become restricted and sustained no hull damage and continued to dock at Puerto Nuevo. No reports of taking on water, pollution or personnel injuries.

HANDY THREE: Towing Vessel, length: 70, gross tons: 90, year: 2012, hull material: steel.

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ESTADO LIBRE ASOCIADO DE <u>PUERTO RICO</u> Junta Reglamentadora de Telecomunicaciones Oficina del Presidente

9 de octubre de 2015

Mr. Eric P. Summa Planning Division Chief Environmental Branch Department of the Army Jacksonville District Corps of Engineers #701 San Marco Boulevard Jacksonville, Florida 32207-8175

# Tipo de Expediente:REA-Estudio de Viabilidad e Impacto AmbientalAsunto:Ensanches Canales de NavegaciónBahía de San Juan

La Junta Reglamentadora de Telecomunicaciones de Puerto Rico (JRTPR) evaluó el documento en referencia. Tal delegación surge de la Ley 416 – 2004, según enmendada, y la Ley 161 – 2009, según enmendada. También se consideraron los artículos aplicables del Reglamento Conjunto para la Evaluación y Expedición de Permisos Relacionados al Desarrollo y Uso de Terrenos; y el Reglamento de Evaluación y Trámite de Documentos Ambientales de la Junta de Calidad Ambiental (JCA).

La JRTPR evalúa aspectos ambientales propios de los poderes estatutarios, delegados de acuerdo a nuestra experiencia, y conocimiento técnico. Como parte de ese deber, para todo proyecto evalúa la necesaria interconexión a la red de telecomunicaciones y televisión por cable, disponible para nuestro territorio. La acción propuesta no debe representar un impacto que requiera modificaciones a la planta externa de telecomunicaciones.

Desde el punto de vista ambiental, la JRTPR no tiene comentarios al proyecto propuesto. Conforme a su solicitud para que ofreciéramos nuestros comentarios, le informamos que de acuerdo a nuestro conocimiento y experiencia en el campo de las telecomunicaciones, por el área donde se sugieren los Ensanches de Canales para Navegación de la Bahía de San Juan no discurren facilidades de telecomunicaciones, por el lecho marino.

Presidencia

500 Ave. Roberto H. Todd (Parada 18 - Santurce) San Juan, Puerto Rico 00907-3941 Tel: (787) 756-0804 Fax: (787) 999-6132 www.jrtpr.gobierno.pr Ensanches Canales de Navegación Bahía de San Juan 8 de octubre de 2015 Página 2

No obstante, en cuanto al impacto del proyecto, en relación a cualquier identificación, remoción, modificación y relocalización de las instalaciones de telecomunicaciones existentes (teléfono o televisión por cable), deberá ser coordinada con los proveedores de estos servicios. Estas compañías procederán, según dispone la Sección 3.09 del Reglamento para el Endoso de Planos de Infraestructura y Servidumbres para Facilidades de Telecomunicaciones y Televisión por Cable (Reglamento Número 7393, según revisado), donde se indican los requerimientos, para proyectos de relocalización de planta.

Con la urgencia que amerite, el Proponente se comunicará con los siguientes proveedores de servicio, para, de esta manera, obtener cualquier información necesaria:

Ing. David Colón Cruz Gerente de Ingeniería Claro P. O. Box 360998 San Juan, P.R. 00936-0998 787-782-8282 dcolon@claropr.com

Sr. Arnaldo Acosta Project Coordinator World Net 90 Carr. Est. PR-165, Suite 201 Centro Internacional de Mercadeo Guaynabo, P.R. 00968 787-705-7014 <u>aacosta@worldnetpr.com</u> Sr. Juan E. Orellana Gerente de Construcción Liberty CableVision P. O. Box 719 Luquillo, P.R. 00773 (787) 444-2071 juanore@libertypr.com

Ing. Juan Medero Director de Ingeniería de Redes de ATT P. O. Box 71514 San Juan, P.R. 00936 787-641-8841 dl-pr-att-jrtpr@att.com

Una vez se incorporen los comentarios de los proveedores a los planos, la Parte Proponente preparará un plano final con la infraestructura de telecomunicaciones. En esta etapa, se impone la obligación de tramitar una Solicitud de Endoso a Proyectos de Relocalización de Infraestructura propiedad de las compañías de telecomunicaciones y televisión por cable a través de la División de Infraestructura de la Oficina de Gerencia de Permisos (OGPE), mediante la forma JRTPR F-104, que está disponible en nuestra página de Internet, accediendo a: http://www.jrtpr.gobierno.pr/ download.asp?cn\_id=1373, sección de Endosos.

En el ejercicio del poder de fiscalización, la Junta recibirá el plano final de infraestructura de telecomunicaciones y los documentos complementarios. Este trámite, ante la JRTPR, es de

500 Ave. Roberto H. Todd (Parada 18 – Santurce) San Juan, Puerto Rico 00907-3941 Tel: (787) 756-0804 Fax: (787) 999-6132 www.jrtpr.gobierno.pr



Ensanches Canales de Navegación Bahía de San Juan 8 de octubre de 2015 Página 3

estricto cumplimiento y constituye un requisito mandatorio, para que la Parte Proponente pueda obtener un Permiso de Construcción. Para agilizar el proceso de evaluación, la Parte Proponente podrá presentar en la JRTPR, de manera concurrente, evidencia de la radicación ante el Sistema Integrado de Permisos (SIP) de la OGPE, de la Solicitud de Servicios para Recomendaciones, Memorial y Plano Final de Infraestructura de Telecomunicaciones, en formato electrónico, con certificación suficiente para demostrar que es copia fiel y exacta del plano radicado ante las agencias concernidas.

En el descargue de los deberes delegados, la JRTPR pasará juicio en torno a la veracidad de los hechos que surjan de los expedientes administrativos. Más adelante, a solicitud de parte, con la previa inspección, certificará la obra construida. Se notificarán las acciones administrativas que correspondan, de acuerdo a cada etapa del proyecto en referencia.

Cualquier duda el respecto, se puede comunicar a nuestras oficinas, al (787) 756-0804, exts. 3056 o 3047, durante el horario de operaciones, de lunes a viernes, de 7:30 a. m. a 12:00 m. y de 1:00 p. m. a 4:00 p. m.

Cordialmente,

Lcdo. Javier Rúa Jovet Presidente

c: Secretaría Lcdo. Miguel Reyes Arq. Héctor Barriera Ing. David Colón Sr. Arnaldo Acosta Sr. Juan E. Orellana Ing. Juan Medero

Anejos

500 Ave. Roberto H. Todd (Parada 18 - Santurce) San Juan, Puerto Rico 00907-3941 Tel: (787) 756-0804 Fax: (787) 756-0814 www.jrtpr.gobierno.pr



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15 de octubre de 2015

Junta Reglamentadora de Telecomunicaciones de Puerto Rico 500 ave. Roberto H. Todd (Pda. 18-Santurce) San Juan PR 00907-3941

Asunto: Recomendación Estudio de impacto, proyecto de ensanche de canales de navegación en la bahía de San Juan

Proyecto: Estudio de impacto, proyecto de ensanche de canales de navegación en la bahía de San Juan Caso número:

Estimados Señores (as):

Adjunto acompañamos la copia del plano (Site Plan) suministrada por la JRTPR vía electrónica para la orientación al proponente en relación a la localización de nuestra infraestructura existente aérea y/o soterrada.

Según los planos enviados, nuestra compañía no tiene infraestructura en el área a trabajarse. Para este proyecto en particular no tenemos recomendación alguna.

Quedo a su disposición para cualquier duda o detalle sobre este particular.



Rethink Possible 🥌

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 2 290 BROADWAY NEW YORK, NY 10007-1866

### OCT 1 6 2015

David A. Tipple Interim Chief, Planning and Policy Division Jacksonville District Corps of Engineers Department of the Army 701 San Marco Boulevard Jacksonville, FL 32207-8175

### Re: San Juan Harbor Navigation Project

Dear Mr. Tipple:

This is in response to an October 8, 2015 letter requesting that the Environmental Protection Agency (EPA) serve as a cooperating agency for the San Juan Harbor Navigation Project. EPA is pleased to accept the Jacksonville District Corps of Engineers' invitation. Please note that due to resource constraints, EPA will be limited in our ability to physically attend project meetings. If conference lines are made available, we would be happy to participate by telephone or webinar.

We would like to remind you that our participation does not preclude our review under the National Environmental Policy Act and comment authority under Section 309 of the Clean Air Act. We look forward to working with you on this project, and to reviewing any preliminary environmental documents.

If you have any questions, please contact me at (212) 637-3738 or musumeci.grace@epa.gov.

Sincerely yours,

thace Musumer

Grace Musumeci, Chief Environmental Review Section

cc: Kenneth Dugger, USACE

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#### 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

F/SER:NS

Mr. David A. Tipple Deputy Chief, Planning and Policy Division Department of the Army Jacksonville District Corps of Engineers 701 San Marco Boulevard Jacksonville, FL 32207-8175

OCT 28 2015

Dear Mr. Tipple,

Thank you for inviting the National Oceanic and Atmospheric Administration's National Marine Fisheries Service Southeast Region (SERO) to participate as a cooperating agency in the development of the Environmental Impact Statement (EIS) for the San Juan Harbor Navigation Project. We accept your invitation and look forward to working with the US Army Corps of Engineers on this project. We expect we will be able to provide technical assistance for the project. Our involvement will be limited to reviewing early drafts of the document and participating in meetings and conference calls. We hope that our involvement will help to avoid and minimize impacts to natural marine resources at the project site.

When available, please send background materials and a project timeline, so that we can manage our office's workload for this project. Thank you for inviting SERO to participate in the EIS development. SERO's points of contact for this project will be Dr. Lisamarie Carrubba, <u>lisamarie.carrubba@noaa.gov</u> (787) 851-3700 for Endangered Species Act related assistance; and, Jose Rivera, jose.a.rivera@noaa.gov (787) 405-3605 for Essential Fish Habitat related assistance.

Sincerely,

Roy E. Crabtree, Ph.D. Regional Administrator

cc: F/SER-Blough, Silverman, Strelcheck F/SER3-Bernhart F/SER4-Fay, Wilber F-Leathery PPI-Kokkinakis, Krasna



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Listos para otro nivel; ¡Clase Mundial!



28 de octubre de 2015

Sr. Eric P. Summa Cuerpo de Ingenieros del Ejército de los Estados Unidos 701 San Marco Boulevard Jacksonville, Fl 32207-8175

#### Estudio de Viabilidad e Impacto Ambiental sobre mejoras a los canales de navegación de la Bahía de San Juan

Estimado señor Summa:

Hacemos referencia a la carta recibida en la Autoridad de Acueductos y Alcantarillados de Puerto Rico (AAA) el 1 de octubre de 2015, solicitando comentarios o información que pueda ser pertinente para la evaluación del proyecto propuesto.

En esta carta adjuntamos dos imágenes con la infraestructura de agua potable y alcantarillado existente en el área de estudio. Actualmente, no tenemos infraestructura nuestra en la zona demarcada a ser impactada por el proyecto propuesto. Sin embargo, de modificarse el ámbito del proyecto, o si fuera necesaria la intervención en un área donde nuestra infraestructura pueda verse impactada directa o indirectamente será necesario que se realice la coordinación necesaria para proteger la infraestructura impactada; esto a costo del dueño del proyecto.

Esperamos que la información provista le sea de utilidad. De requerir información adicional, favor de comunicarse con la Ing. Lourdes M. Morales, Directora de Planificación, al (787) 999-1717 extensión 1125.

Cordialmente,

nette M. Ramírez, PE

Directora Ejecutiva de Infraestructura

Cc: Ing. Lourdes Morales, AAA



ESTADO LIBRE ASOCIADO DE PUERTO RICO

SEDE INFRAESTRUCTURA #618 Avenida Barbosa, Hato Rey - PO Box 7066, San Juan, PR 00916-7066 787.999.1717 / FAX 787.993.9140 ♦ www.acueductospr.com





## Infraestructura Agua Potable Oficina Planificación AAA

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## Infraestructura Alcantarillado Sanitario Oficina Planificación AAA

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2 de noviembre de 2015

Mr. Eric P Summa Planning Division Chief Environmental Branch Department of the Army Jacksonville District Corps of Engineers #701 San Marco Boulevard Jacksonville, Florida 32207-8175

## RE: Estudio de Viabilidad e Impacto Ambiental Ensanches Canales de Navegación Bahía de San Juan.

#### Estimado señor Summa:

Basado en la información recibida de la Junta Reglamentadora de Telecomunicaciones de Puerto Rico (JRPR) para la evaluación de la existencia de infraestructura telefónica en el área que se realizará el ensanche de los canales de navegación de la Bahía de San Juan, le notificamos que luego de revisar nuestros records no encontramos infraestructura telefónica en el área que será impactada.

Cordialmente,

por: Ing. David Colon

Gerente Ingeniería de Planta Externa

cc: Ing. José Vázquez Maldonado

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## United States Department of the Interior

NATIONAL PARK SERVICE Southeast Regional Office Atlanta Federal Center 1924 Building 100 Alabama St., SW. Atlanta, Georgia 30303



November 3, 2015

Paul DeMarco U.S. Army Corps of Engineers Planning Division, Environmental Branch P.O. Box 4970 Jacksonville, FL 32232–0019

Dear Mr. DeMarco:

The National Park Service has reviewed the U.S. Army Corps of Engineers (USACE) Notice of Intent to Prepare a Draft Feasibility Study and Environmental Impact Statement (EIS) for Navigational Improvements to San Juan Harbor in San Juan, Puerto Rico, and offers comments for consideration in the EIS.

The USACE proposed navigational improvements to San Juan Harbor include deepening the main channels up to minus 50 feet and widening main channels up to an additional 50 feet. The USACE is the lead federal agency responsible for preparing the EIS along with the non-federal sponsor Puerto Rico Ports Authority.

The San Juan National Historic Site is a unit of the National Park Service as well as a World Heritage Site and includes forts San Cristobal, San Felipe del Morro, and San Juan de la Cruz (also known as El Canuelo), Paseo del Morro National Recreation Trail, plus bastions, powder houses, and three fourths of the city wall and Isla de Cabras. All these fortifications surround the old, colonial portion of San Juan, Puerto Rico. Fort San Juan de la Cruz is located at Isla de Cabras at the western end of the entrance to San Juan Bay.

The NPS recommends that the EIS include analysis of the potential for the proposed undertaking to adversely affect San Juan National Historic Site and affiliated areas. In particular we are concerned about potential impacts from increased wave energy and erosion from changed channel configurations and increased shipping traffic to the existing structural integrity and current riprap which protects the sites. The proposed undertaking could result in changes in shipping traffic due to the deeper channel, as well as sediment transport. The NPS is concerned that sediment transport changes will result in increased erosion and potential effects on the long-term structural integrity of NPS resources. The NPS requests that the USACE initiate modeling with NPS involvement in the development and review of model output as well as a monitoring plan and program to evaluate changes in the wave climate in San Juan Harbor before and after

IN REPLY REFER TO: ER 15/0561 the proposed undertaking. The NPS also recommends that the modeling address the extent to which climate-change associated parameters (e.g., sea level rise, storm surge) impact NPS resources at San Juan National Historic Site in combination with the proposed deepening project. The EIS should also include potential effects to cruise ship traffic and visitation to Old San Juan from the undertaking.

We recommend coordinating with the Puerto Rico historic preservation office to have a qualified archeologist formally survey underwater archeological resources and to include a commitment to monitor during the dredging activities in the vicinity.

Thank you for the opportunity to provide comments concerning the recognition and protection of the San Juan National Historic Site in the development of the EIS. For additional information or for clarification about our comments, please contact: Anita Barnett, Environmental Protection Specialist, National Park Service Southeast Regional Office, 404-407-5706; Félix J. López, Chief of Cultural Resources, San Juan National Historic Site, 787-729-6777, ext. 267; Eric López, Park Historian, San Juan National Historic Site, 787-729-6777, ext. 243.

Sincerely, Ben West

Chief, Planning and Compliance Division

cc: Superintendent, San Juan National Historic Site

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#### ASOCIACION DE NAVIEROS DE PUERTO RICO PUERTO RICO SHIPPING ASSOCIATION

"Transportación Marítima...Eslabón que une a Puerto Rico con el Mundo."

November 5, 2015

Eng. Milan A. Mora, P.E Project Manager Programs & Project Management Division Department of the Army Jacksonville District Corps of Engineers PO Box 4970 Jacksonville, FL 32232-0019

RE: Public Hearing – Dredging 2015

Dear Eng. Mora:

The Puerto Rico Shipping Association thanks the USACE the invitation for attending the public hearing. Our Association represent the 80% of the stakeholders of Port of San Juan. We understand that dredging of Port of San Juan of fifty feet of deep is in the best interest of our industry. The main reason of this is the expected increase of vessels in the next couple year due in part to the expansion of Canal of Panama. We have seen during the last ten years that vessels that use to work as feeder vessel have been replaced by larger ocean going vessels, and that trend will continue. Also the necessity of the Island of Puerto Rico to bring alternative type of fuels such as LNG and others, which require deeper draft.

> PO Box 9022714, San Juan, PR 00902 Tel: 787.722.1105 / Fax: 787.724.4234/ Mobile: (787) 510.6085 hfayalajr@ayacol.com Email:PRSA@prtc.net/ www.navierospr.org

Hernán F. Ayala Rubio *Presidente* 

Eduardo Pagán *Vicepresidente* 

Ramón Umpierre Director Ejecutivo

Michael Latimer Secretario

José A. Vázquez *Tesorero* 

José O. Busto Pasado Presidente Inmediato

Miembros Asociados a: Caribbean Shipping

Association

Privado

Cámara de Comercio de Puerto Rico

Asociación de Industriales de PR.

Florida Caribbean Cruise Association Coalición del Sector Hon. Eduardo Bhatia, Presidente Senado Hon. José Nadal Power Hon. Rafael "Tatito" Hernández 16 de septiembre de 2015 Página 2

We respectfully request additional time to present the evidence of this necessities and the data corresponding to validate our request. For this data we have to communicate to the shipping line that some of us operate and/or represent and also with our fuels providers in order to have their input.

The PRSA is available to cooperate and help to this process. Thank again for the invitation.

Respectfully Submitted,

Hernan F. Ayala President
Estado Libre Asociado de Puerto Rico Gobierno Municipal de Cataño José A. Rosario Meléndez, Alcalde



Oficina de Planificación

# COMENTARIOS ESTUDIO DE NAVEGACION PUERTO DE SAN JUAN, PUERTO RICO 12 DE NOVIEMBRE DE 2015

I Municipio de Cataño participó en la reunión y vista pública del Estudio de Navegación y mejoras propuestas para el Puerto de San Juan presentado por el Cuerpo de Ingenieros de los Estados Unidos.

El Municipio se localiza en la parte sur y parte este del sistema de canales de la Bahía de San Juan. Nuestras preocupaciones van dirigidas a los siguientes aspectos:

- Las mejoras a realizarse deben considerar los usos alrededor de la Bahía, que no solo se circunscriben a transporte de mercancías, turismo, sino a que también existen usos residenciales como es en el Sector La Puntilla en el Municipio de Cataño que ya está confrontando problemas por el aumento en el oleaje y aumento del nivel del mar.
- Toda mejora a realizarse debe considerar y debería prestar especial atención a que toda alteración de las condiciones de calado, ampliación, mejoras generales, podría tener un efecto en las costas. Esto incluye que en el Municipio de Cataño tiene residencias adyacentes a la costa. Recomendamos que los estudios deben considerar el cambio climático y los efectos que ha tenido en la costa en los últimos años y los que se proyectarían, la subida del nivel del mar, aumento en la fuerza del mar a las costas, erosión costanera ya prevalecientes y como podría o no promoverse otras situaciones relacionadas por las mejoras a ser realizadas.
- Los contaminantes que podrían removerse por el método a utilizarse para el dragado y el efecto en la calidad de las aguas, pudiendo afectar la pesca, así como que llegue a las costas basura generada por el movimiento y obras a realizarse. Cordialmente,

Hon. José A. Rosario Meléndez Alcalde Municipio de Cataño





Cataño Municipality Office of Planning Comments Navigation Study San Juan Harbor 12 November 2015

The municipality of Cataño participated in the public meeting for the Navigation Study of San Juan Harbor presented by USACE.

The municipality is located to the south and west of the San Juan Bay. Our concerns are the following:

- The improvements to the Harbor should consider use around the Bay, which not only pertain the transport of commodities, and tourism, but also residential, in areas as La Puntilla Sector, in Cataño. This sector is confronting issues due to increase of wave action and sea level changes.
- All improvements should consider that any alteration to draft, widening, and other general improvements could affect the coast. This includes the municipality of Cataño, which have multiple residences adjacent to the coast. We suggest that any study should consider climate change and its effects on the coast the last few years, and future projections relating raise in sea-level, coastal erosion, and increase of wave-action, and how these effects could be influenced by the improvements.
- Any contaminants that could be released related to the dredging performed, and the effect on water quality that could affect fishing and other maritime activities, as well as potentially, trash reaching the coast due to sediment stir-up and any improvement activity.

Hon. José A. Rosario Meléndez

Mayor

Municipality of Cataño



# TOTAL PETROLEUM PUERTO RICO CORP.

November 16, 2015

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

### **RE: San Juan Harbor Navigation Project**

Dear Mister DeMarco and Mister Mora:

For your information, Cataño Oil Dock, known as COD, is situated between the TRAILER BRIDGE's Army Terminal and the dock of PREPA, in the area of the Army Terminal Turning Basin.

COD is owned by Puerto Rico Land Authority. That governmental agency through a Lease Agreement allows to the oil related companies to use COD. Those companies are TROPIGAS, BTB PLACCO, PUMA ENERGY, PUMA CARIBE and TOTAL PETROLEUM PUERTO RICO CORP. (TPPRC). PUMA and TPPRC are bringing barges and ships up to MR class ships handling gasoline, jet fuels and diesels. TROPIGAS and BTB PLACCO are bringing in smaller ships Propane and Bitumen, respectively.

TPPRC is designated by contract between those companies as the Administrator of the dock. As Administrator, TPPRC is in charge of security, maintenance, finance management, permitting and establishing operation procedures for COD on behalf of the users.

COD is designed to handle ships up to MR class type. Currently, the draft limitation of the COD and San Juan Port does not allow the entrance of fully loaded ships, leading to 5% to 10% dead freight. In order to solve this issue, the alternative is to dredge the COD and the Port down to 44 feet, considering and including a 2 feet under keel clearance. To dredge COD from the current 38 ft to such objective, geological data is requested to asses that the integrity of current structure, when receiving fully loaded MR ships, will remain the same

Moreover, current mooring patterns need to be improved including a mooring buoy or a new dolphin as showed in the sketch attached as Exhibit A. This modification should allow having full MR ship better moored and able to operate with less meteorological constrains. But installing this new dolphin or mooring buoy would require letting sufficient space in the Army Terminal turning channel. As consequence, we request that the Harbor Navigation Project

City View Plaza Torre 1, Carr. PR - 165, Km. 1.2, #48, Suite 803, Guaynabo, PR 00968 P.O. Box 362916, San Juan, PR 00936-2916 **Tel. (787) 783-4625 \* (787) 792-2920** www.total.com.pr

1/2



includes this new mooring equipment. We are at your entire disposal to explain more in detail our comments.

Should you have any questions, please do not hesitate to contact the undersigned.

Sincerely, Antoine Effendiantz **Operations Director** 

C: Vivian Suarez, GBT Terminal Manager Daniel Pérez, Technical Manager Denise Rodríguez Flores, Legal Manager

# **EXHIBIT A**

# **Current mooring patterns**



CN 078-04495 REV. 01/13

### COMMONWEALTH OF PUERTO RICO PUERTO RICO ELECTRIC POWER AUTHORITY

### SAN JUAN, PUERTO RICO



GPO BOX 364267 SAN JUAN, PR 00936-4267

www.prepa.com

November 23, 2015

Mr. Eric P. Summa, Chief Environmental Branch Department of the Army Jacksonville District Corps of Engineers 701 San Marco Boulevard Jacksonville, FL 32207-8175

Dear Mr. Summa:

# RE: San Juan Harbor Navigational Improvements Project Request for Information

On October 8, 2015, the Puerto Rico Electric Power Authority (PREPA) received your letter regarding the above mentioned project. As a result of the evaluation of the information submitted by the US Army Corps of Engineers (CoE), PREPA submits the following information regarding the impact of the proposed Project, as presented, in PREPA's operations and infrastructure.

PREPA is fully supportive of the proposed Project, since for the efficient and reliable operation of the electric system of Puerto Rico, some of the generating units on the north coast of the Island must use natural gas instead of the oil fuels used today. This requires the construction of an LNG receiving, storage and re-gasifying infrastructure, and the dredge of the navigational channels within the San Juan Harbor, in order for it to have the required depth for the LNG Carriers. Notwithstanding its support for the Project, PREPA also has some concerns that will require the Corps' attention during the dredging activities.

The electrical system in Puerto Rico is operated by PREPA, a public corporation created by Law No. 83 of 1941. To supply the electrical system demand of the Island, PREPA operates several generating units located at different geographical areas. Among them are the Palo Seco and San Juan Complexes, located on the north coast of the Island, specifically in the Toa Baja and San Juan municipalities, respectively. Palo Seco has a total generation capacity of 722 megawatts (MW), while San Juan has 840 MW. These units are essential in ensuring the reliable and stable operation of the electric system, and therefore, critical for its operation.

To supply the fuel (Bunker C and Diesel) demand of both power complexes, PREPA contracts suppliers to ship the fuel in vessels that dock in the Puerto Rico Port

Mr. Eric P. Summa Page 2 November 4, 2015

Authority's (PRPA) Terminal-ABC in order to transfer it to PREPA's onshore storage tanks located at each facility. Therefore, special consideration shall be taken during the Project's planning and execution to avoid any fuel supply disruption to these power stations. Otherwise, it may result in an adverse impact on the electrical system operation and reliability, as well as the people of Puerto Rico's wellbeing and national security stability.

The San Juan Complex seawater intake structures are located near the proposed Project's area. During the proposed dredging activities, there is the potential of impacts to the quality of the seawater pumped into the condensers circulation water system, which may affect the power stations compliance with the regulatory agencies water quality requirements. Also, it may limit the generating units' thermal efficiency, reducing their maximum generation capacity and availability, and increasing the maintenance costs associated to additional condensers cleaning activities. Therefore, the implementation of best management practices during the Project execution are required to prevent and reduce the impact of the proposed dredging activities to PREPA's operations and infrastructure at the San Juan Complex.

Regarding PREPA's future plans, in order to provide natural gas to some of its generating units in Palo Seco and San Juan, PREPA has performed a Feasibility and Option Study through which it preliminarily concluded that there are two feasible options. The preferred feasible option is a Storage and Vaporization Infrastructure at the San Juan Complex, which includes a shore side LNG receiving terminal with storage and vaporization ashore and cargo provided through LNG carrier. The LNG carriers are expected to require a depth of up to 40.2 feet through the Army Terminal Channel and the Turning Basin. The required width of the channel is 400 ft. Due to the need of this infrastructure, it is important that these specifications are considered for the proposed Project.

For additional information, please contact engineer Rafael Marrero Carrasquillo, Environmental Protection and Quality Assurance Division Head, at (787) 521-4960.

Cordially,

Sonia Miranda Vega

Planning and Environmental Protection Director



# **United States Department of the Interior**



# FISH AND WILDLIFE SERVICE

Caribbean Ecological Services Field Office P.O. Box 491 Boqueron, PR 00622

In Reply Refer To: FWS/R4/CESFO/72127-002

DEC 01 2015

Mr. David A. Tipple Interim Chief, Planning and Policy Division US Army Corps of Engineers Jacksonville District 701 San Marco Boulevard Jacksonville, Florida 32207-8175

> Re: Feasibility Study for the San Juan Harbor Navigation Project, San Juan, Puerto Rico

Dear Mr. Tipple:

This is in reply to your October 15, 2015, Notice of Intent to carry out a dredging project in San Juan Harbor, and your letter dated October 8, 2015, inviting the Service to become a cooperating agency for an Environmental Impact Statement (EIS) associated with a feasibility study for the San Juan Harbor Navigation Project. Our comments are provided in accordance to the Endangered Species Act (87 Stat. 884, as amended; 16 United States Code 1531 <u>et seq</u>.) and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 <u>et seq</u>.). The Service has been coordinating with the Corps for dredging actions in San Juan Bay since 1993.

As we discussed during the project scoping meeting, our comments are focused on the need to assess possible effects of the dredging and future disposal of dredged materials to aquatic resources and the Antillean manatee.

# Ocean Disposal:

At present time, the Corps will examine measures to improve navigation in the San Juan Harbor by deepening and widening certain channels and anchorage areas within the harbor. Specific dredging areas and how much material will be dredged have not yet been determined. The dredged material is expected to be suitable for placement in the Ocean Dredged Material Disposal Site (ODMDS) located a few miles from the harbor's entrance. Based on the preliminary information in your communication, some material may be suitable for placement in dredged holes and for other mitigation purposes.

In addition, the new dredging being contemplated in the inner harbor may re-suspend or expose layers of contaminated sediments currently not available to marine organisms.

The quality of the sediments to be dredged needs to be evaluated for potential impacts and suitability for disposal in the San Juan ODMDS.

### Antillean manatee:

The San Juan Harbor is located within the range of the Antillean manatee. Although quality of manatee habitat within the San Juan Bay has decreased over time, manatees continue to use the San Juan Bay. Due to the high turbidity of the waters of San Juan Bay, manatee counts during aerial surveys are low. However, the use of the San Juan Bay area by manatees has been documented by public reports, dredging and construction project reports, mortality reports and USCG anecdotal reports from their dock area. Manatees have been reported at the entrance to San Juan Bay, Condado Lagoon, Coast Guard station, and in the Rio Puerto Nuevo, and are not limited to these areas.

In 2012, the Service, under contract, completed the study titled Science Summary in Support of Manatee Protection Area Design in Puerto Rico (Drew et al 2012). This study identified areas and characterized the three key ecological attributes (i.e. seagrass, freshwater, shelter) necessary to support manatee populations and identified areas where take can be reduced from watercraft related threats. The San Juan Bay area was described to provide a high shelter value for manatees, having at least one or more freshwater sources, having a high motorized watercraft threat, and was not associated with a seagrass hotspot.

The only mass manatee mortality event that has occurred in Puerto Rico took place within the San Juan Harbor/Bay area. On August 16 to August 18, 2006, four males and one female adult Antillean manatees were found dead in the San Juan Harbor/Bay area. The cause of death for these animals was determined to be human related due to a watercraft impact. Carcasses showed signs of blunt trauma and large boat propeller scars. It is believed these manatees were forming a mating herd and the accident could have been prevented by following idle speed zones within the San Juan Harbor/Bay and/or having observers on board while transiting in that area.

Both the Service and the Corps have developed manatee conservation measures to avoid and minimize potential in-water project effects on the manatee. These conservation measures can be used for the proposed project as appropriate. Some example measures include: manatee observers before and during construction, manatee awareness, and appropriate signage, among others.

As previously mentioned, the Service is interested on collaborating with the Corps for the designing and implementing of proactive conservation measures for the Antillean manatee in accordance with Section 7(a)(1) of the Act. Some examples of Section 7(a)(1) opportunities for the conservation of the manatee that could be implemented on this project include:

- Develop and implement a navigational aids plan for the San Juan Bay focused on avoiding and minimizing watercraft threats on the manatee.
- Support ongoing efforts to study manatee use within the San Juan Bay. The Service has a project with the PR Manatee Conservation Center and the DNER to

assess the health of manatees within the San Juan Bay and track manatees to study movement patterns and habitat use within the San Juan Bay.

• Develop a manatee specific education campaign using existing and new alternatives and media sources.

The San Juan Bay also harbors in-water habitat for the federally listed hawksbill (*Eretmochelys imbricata*) and green (*Chelonia mydas*) sea turtles. There is also the potential for a hawksbill nesting in the area of the Palo Seco peninsula that needs to be considered when evaluating potential effects of the proposed project. In addition, as for the manatee, there are a number of already described measures for avoiding and minimizing effects on sea turtles in the water for the proposed project. Please contact the NOAA Fisheries Caribbean Field Office regarding possible effects on sea turtles in the water.

### Aquatic resources:

While San Juan Harbor has been extensively modified as a commercial port, there are patches of aquatic vegetation and other habitats that remain in the area. The proposed channel widening and expansion of the Army Terminal turning basin has the potential of impacting remaining sea grasses and hardgrounds within the San Juan Bay area. Based on our preliminary assessment of the NOAA benthic habitat maps (2001) and the drawings of the proposed actions, the expansion of the turning basin may impact a 69 acre area of sea grasses. Seagrass beds provide foraging opportunities for the Antillean manatee within San Juan Bay, in addition they serve as important habitats for commercially important fish species and other marine organisms.

However, the distribution and extent of seagrass and other benthic habitats within San Juan Bay are not well documented because of the turbidity of the waters or outdated information. Thus, there is a need to better document the extent of marine habitats within San Juan Bay to be affected by the project. As part of the feasibility study, benthic surveys along the proposed project site should be conducted to quantify the project impacts on marine habitats. Once project impacts are identifies, appropriate mitigation measures should be developed to compensate for those impacts.

The Corps and the Service have formally committed to work together to conserve, protect, and restore fish and wildlife resources while ensuring environmental sustainability of our Nation's water resources under the January 22, 2003, Partnership Agreement for Water Resources and Fish and Wildlife. Accordingly, the Service would be pleased to serve as a cooperating agency in developing the Environmental Impact Statement (EIS) for the proposed project in accordance with applicable NEPA/Council on Environmental Quality guidance. Our participation will be specifically limited to:

(1) participating in meetings and field trips to obtain baseline information on project-area fish and wildlife resources;

(2) evaluating the proposed project's impacts to wetlands and associated fish and wildlife resources, and assisting in the development of measures to avoid, minimize, and/or compensate for those impacts (including project alternatives); and, (3) providing technical assistance in the development of a Biological Assessment describing the impacts of the proposed activity to federally listed threatened or endangered species and/or their critical habitat.

Agreeing to be a cooperating agency does not preclude the Service from providing comments on the draft and final NEPA documents and does not ensure our support of the final selected plan.

If you have any questions regarding our comments please feel free to contact Marelisa Rivera at 787 851-7297 x 206.

Sincerely yours,

Edwin E. Muniz

Field Supervisor

cc: COE, Planning, Jacksonville DNER, San Juan EPA, New York NMFS, Boquerón NMFS, San Juan



#### DEPARTMENT OF THE ARMY

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

REPLY TO ATTENTION OF

DEC 1 7 2015

Planning and Policy Division

Puerto Rico Ports Authority Executive Director ATTN: Ms. Ingrid C. Colberg-Rodríguez Post Office Box 362829 San Juan, Puerto Rico 00936-2829

Dear Executive Director:

Pursuant to the requirements of Section 1002 of the Water Resources Reform and Development Act of 2014, enclosed please find a copy of the San Juan Harbor Improvement Study draft project schedule. This schedule was compiled based upon the best available information, however, due to unforeseen or unanticipated future circumstances, this schedule may require modification. We request your written concurrence on the enclosed schedule and look forward to working closely with you to complete this important study.

If you have any questions or need clarification, please contact the project manager, Milan Mora, at 904-232-1454.

Sincerely,

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Jason A. Kirk, P.È. Colonel, U.S. Army District Commander

Enclosures

U.S. Department of Homeland Security

United States Coast Guard



Commander U.S. Coast Guard Sector San Juan Prevention Department

5 Calle La Puntilla San Juan, PR 00901-1819 Phone: (787) 729-2376 Fax: (787) 729-2377

16610 December 24, 2015

Department of the Army Jacksonville District CORPS of Engineers Planning and Policy Division-Environmental Branch Attn: Mr. David A. Tipple 701 San Marco Boulevard Jacksonville, FL 32207-8175

Dear Mr. Tipple,

This is in response to your letter dated December 7, 2015 requesting U. S. Coast Guard participation in the Environmental Impact Statement (EIS) study for the San Juan Harbor Navigation Project.

Your letter states there is a strict time frame for developing the feasibility study and EIS (WRRDA 2014) and in order to comply with your request, I am appointing as the primary point of contact Mr. Efrain Lopez from Preventions and Waterways Division. Mr. Lopez can be reached at 787-289-2097 or by email at <u>Efrain.lopez1@uscg.mil</u>. The alternate point of contact will be LCDR M. Randolph, Waterways Division Chief with phone number 787-729-2374 or by email at <u>Marc.a.randolph@uscg.mil</u>.

Sincerely,

M. B. Zamperini Captain, U.S. Coast Guard Acting Commander, Sector San Juan

Copy: Unit file Chief, Preventions and Waterways Division

From:	Powell, Richard B SAJ
To:	Antoine Effendiantz
Subject:	Re: [EXTERNAL] RE: San Juan Harbor - Potential Widening and Deepening Measures
Date:	Tuesday, May 31, 2016 7:42:34 AM
Attachments:	image001.png
	image002.png
	image003.png
	image004.png
	image005.png
	image006.png
	image007.png
	image008.png
	image009.jpg
	image010.jpg

Yes, we will integrate the 150-foot limit to the stern of the LNG tanker shown.

Sent from my BlackBerry 10 smartphone.
From: Antoine Effendiantz
Sent: Saturday, May 28, 2016 4:08 PM
To: Powell, Richard B SAJ
Cc: Daniel PEREZ CRUZ; Denise RODRIGUEZ
Subject: [EXTERNAL] RE: San Juan Harbor - Potential Widening and Deepening Measures

Dear Mr. Powell,

I starting evaluated the document you summated, but I would need an additional information to properly answer.

On the plan, I see the "orange line" representing the exclusion zone, but without any limit when it comes to COD.

Could you integrate this "west" limit as per following example if

1- vessel berth as proposed

2- rigourously at point A and detail distance of this limit to our berthing line in COD East?

For COD user, it is highly critical we keep having access to CODEast at every time, and we want to formalize our answer that way. Having this required info would help modulate the answer.

thanks

Antoine EFFENDIANTZ Operations Director

Tél : +1(787) 749-8994

Cel: +1(787) 567-0706 Fax: +1(787) 793-4754 Email: antoine.effendiantz@tpprc.com <<u>mailto:antoine.effendiantz@tpprc.com</u>>

Total Petroleum Puerto Rico Corp.

City View Plaza Tower#1,

#48, Road PR-165 Suite803, Guaynabo, PR 00968

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-----Original Message-----From: Powell, Richard B SAJ [<u>mailto:Richard.B.Powell@usace.army.mil]</u> Sent: Thursday, May 26, 2016 6:02 PM To: Antoine Effendiantz Subject: San Juan Harbor - Potential Widening and Deepening Measures

Dear Mr. Antoine Effendiantz,

The U.S. Army Corps of Engineers (USACE), Jacksonville District, requests

your review of the enclosed drawing, which contains proposed widening and deepening measures for San Juan Harbor, Puerto Rico. Please provide a response by 3 Jun 2016.

The USACE received the initial recommendation for the attached widening measures from the Puerto Rico Ports Authority, the San Juan Bay Pilots, and U.S. Coast Guard representatives at a Planning Charrette on 4 Nov 2015 for the San Juan Harbor Improvements study at the Puerto Rico Convention Center. Subsequent coordination with terminal operators and the U.S. Coast Guard San Juan Sector resulted in the enclosed drawing. We plan to use this drawing as the with-project condition for ship simulation testing pending your comments.

The location of the Liquefied Natural Gas (LNG) tanker shown southwest of point "A" with the pipeline extending from the mid-ship section of the docked vessel, based on the location taken from the 29 May 2015 Puerto Rico Electric Power Authority report, would probably eliminate the need for widening Army Terminal Turning Basin. Locating the LNG tanker's bow at point "B" would require widening the Army Terminal Turning Basin using either widening measure "1" or "2". The orange line around the docked LNG tanker represents a 50 yard or 150-foot safety zone required by the U.S. Coast Guard.

We appreciate your letter of November 16, 2015, outlining the draft constraints experienced by your Medium Range (MR) class tankers and the requested new mooring dolphin in the area of the Army Terminal Turning Basin. Our staff will continue to evaluate your concerns and will contact you with requests for additional information concerning the location of the mooring dolphin. If you have any questions for us contact the project

manager, Milan Mora at (904) 232-1454 or our Planning Technical Lead Richard

Powell at 904-232-1694.

Sincerely,

Richard B. Powell

U.S. Army Corps of Engineers CESAJ-PD-PN

Richard.B.Powell@usace.army.mil <<u>mailto:Richard.B.Powell@usace.army.mil</u>>

Phone: 904-232-1694

Fax: 904-232-3442

Dear Mr. Francis,

From all pilots from San Juan Bay, thank you for the opportunity for meeting with you on 1 March. As you know, one of the subjects discussed in our meeting was your request to explore the possibility of bringing bigger-than-usual ships to transit the San Juan Bay canals. As part of your request, you presented a document titled: Mooring analysis for limits associated with 100,000 DWT vessels at the terminal, with date of January 2016. On page 15 of such document, and as a conclusion it is stated:

"The vessel's beam is larger than the recommended maximum for the navigational channels to the terminal based on PIANC Approach Channel Guidelines. Puma Energy therefore will require consent of the Port Authority and their pilots to bring the vessel to the berth."

According to the information provided, conversations with pilots, USACE, and others, we have determined a minimum channel width required of 380 ft. The Army Terminal Channel currently has 350 ft. of width, which results in having to reject your request.

As you know, USACE is conducting a feasibility study for the potential further dredging of the San Juan Bay. For this reason, we encourage you to contact such entity to present your needs and explore how feasible would be to increase the channel's width so that the proposed maritime traffic can be accommodated.

Again, thank you for the opportunity to discuss your needs, and we reassure our availability to address any current or future requests or needs we might be able to assist.

Sincerely,

Capt. S. Rivera President



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

REPLY TO ATTENTION OF

Planning and Policy Division Plan Formulation Branch

0 7 JUN 2016

Mr. Efrain Lopez U.S. Coast Guard Sector San Juan Prevention Department #5 Calle La Puntilla San Juan, PR 00901-1819

Dear Mr. Lopez,

The U.S. Army Corps of Engineers (CORPS), Jacksonville District, requests your review of the enclosed drawing, which contains proposed widening and deepening measures for San Juan Harbor, Puerto Rico. Please provide a response by Jun 10, 2016.

The Corps received the initial recommendation for the attached widening measures from the Puerto Rico Ports Authority, the San Juan Bay Pilots, and U.S. Coast Guard representatives at a Planning Charrette on Nov 4, 2015 for San Juan Harbor Improvements study at the Puerto Rico Convention Center. Subsequent coordination with terminal operators and the U.S. Coast Guard San Juan Sector resulted in the enclosed drawing. We plan to use this drawing as the with-project condition for ship simulation testing pending your comments. Also, please provide any Coast Guard regulations that apply to Liquefied Natural Gas (LNG) ships transiting the channel and docking as shown in the drawing. This includes transit speed limitations, closest point of approach, under keel clearance requirements, and other applicable rules.

We appreciate the assistance provided at the Planning Charrette and the detailed PowerPoint presentation illustrating casualty incidents and the need for widening measures. For additional information contact the project manager, Milan Mora at (904) 232-1454 or our Planning Technical Lead Richard Powell at 904-232-1694.

Sincerely, Eric P Summa Chief, Planning and Policy Division

Encl

Allen/CESAJ-PDP-P/1619 RBP Powell/CESAJ-PD-PN 6-2-/6 //2\_Lucas/CESAJ-PD-PN 6-2-/6 MMm Mora/CESAJ-PM-WM 6-2-16 Tipple/CESAJ-PD 6/2//6 Summa/CESAJ-PD

\\saj-netapp2\common\San\_Juan\_Harbor\2015-018\_Feasibility\_Study\Correspondence

From:	Lopez, Efrain CIV
To:	Powell, Richard B SAJ
Cc:	Lehmann, Paul D CIV; Randolph, Marc A LCDR; Espino-Young, Janet D CDR; Benson, Kailie J CDR
Subject:	[EXTERNAL] RE: San Juan Harbor - Proposed Widening and Deepening Measures
Date:	Thursday, June 9, 2016 2:29:54 PM
Attachments:	MSIB 32-12 Under Keel Clearance (Final).pdf
Importance:	High

Hello Mr. Powell,

As previously communicated by email, I sent you an email on 02JUN16, but it did not go through for some unknown reason. Additionally, I'm away from Puerto Rico and won't be returning until next Monday. Please find my evaluation below:

I do not have any recommendations or changes to the enclosed drawing. I believe all concerns have been addressed. LNG safety zones are covered by 33 CFR 165, and we utilize 100 yards while the vessel enters and departs the SJ Harbor (moving safety zone), and 50 yards while the vessel is docked to the terminal or facility (fixed safety zone). The regulation has other information, but we are in the process of updating the rule to the information mentioned above. The guidance for under keel clearance for the SJ Harbor is 1 FT for double-hull vessels and 2 FT for single-hull vessels. We have communicated this via a Marine Safety Information Broadcast (MSIB 32-12) which I have included in this email. We are also in the process of updating our MSIB's for the Sector San Juan (Puerto Rico and USVI), the SJ Harbor will not be affected by any of these changes.

Let me know if you have any questions and please accept my apologies for the email mix-up.

Thanks!

Best Regards,

Mr. Efrain Lopez, MNCM Marine Information Specialist Waterways Management Division Prevention Department USCG Sector San Juan 5 La Puntilla Final San Juan, PR 00901 : (787) 289-2097 Fax: (787)729-2377 24 HR: (787)289-2041 e-mail: efrain.lopez1@uscg.mil

"All our dreams can come true, if we have the courage to pursue them." Walt Disney

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information and is not to be released to the public or other personnel who do not have a valid "need-to-know" without prior approval of an authorized DHS official.

-----Original Message-----From: Powell, Richard B SAJ [<u>mailto:Richard.B.Powell@usace.army.mil</u>] Sent: Tuesday, May 24, 2016 3:43 PM To: Lopez, Efrain CIV Cc: Lehmann, Paul D CIV; Randolph, Marc A LCDR; Espino-Young, Janet D CDR; Benson, Kailie J CDR Subject: San Juan Harbor - Proposed Widening and Deepening Measures

Dear Mr. Lopez,

The U.S. Army Corps of Engineers (USACE), Jacksonville District, requests your review of the enclosed drawing, which contains proposed widening and deepening measures for San Juan Harbor, Puerto Rico. Please provide a response by 3 Jun 2016.

The USACE received the initial recommendation for the attached widening measures from the Puerto Rico Ports Authority, the San Juan Bay Pilots, and U.S. Coast Guard representatives at a Planning Charrette on 4 Nov 2015 for San Juan Harbor Improvements study at the Puerto Rico Convention Center. Subsequent coordination with terminal operators and the U.S. Coast Guard San Juan Sector resulted in the enclosed drawing. We plan to use this drawing as the with-project condition for ship simulation testing pending your comments. Also, please provide any Coast Guard regulations that apply to LNG ships transiting the channel and docking as shown in the drawing. This includes transit speed limitations, closest point of approach, under keel clearance requirements, and other applicable rules.

We have requested the Puerto Rico Electric Power Authority to confirm the location of the LNG tanker shown southwest of point "A" with the pipeline extending from the mid-ship section of the docked vessel based on the location taken from the 29 May 2015 PREPA report, which would probably eliminate the need for widening Army Terminal Turning Basin. Locating the LNG tanker's bow at point "B" would require widening the Army Terminal Turning Basin using either widening measure "1" or "2". The orange line around the docked LNG tanker represents a 50 yard or 150-foot safety zone.

We appreciate the assistance provided at the Planning Charrette and the detailed PowerPoint presentation illustrating casualty incidents and the need for widening measures. For additional information contact the project manager, Milan Mora at (904) 232-1454 or our Planning Technical Lead Richard Powell at 904-232-1694.

The original copy of this letter will be sent by regular mail.

Sincerely,

Richard B. Powell U.S. Army Corps of Engineers CESAJ-PD-PN Richard.B.Powell@usace.army.mil Phone: 904-232-1694 Fax: 904-232-3442

# COMMANDER U.S. COAST GUARD SECTOR SAN JUAN CAPTAIN OF THE PORT 5 CALLE LA PUNTILLA SAN JUAN, PR 00901

# MARINE SAFETY INFORMATION BULLETIN (MSIB) #32-12

# UNDER KEEL CLEARANCE REQUIREMENTS FOR PUERTO RICO AND THE U. S. VIRGIN ISLANDS

# December 12, 2012

Effectively immediately, the Under Keel Clearance requirements for all ports in Puerto Rico and the U.S. Virgin Islands are as follows:

- 2 feet for single hull tank vessels carrying oil or other hazardous material products.
- 1 foot for double hull or double bottom tank vessels carrying oil or other hazardous material materials.
- 1 foot for all other vessels.

It is the responsibility of the vessel's Master and servicing pilots to know the depths of the areas in which they operate. This Marine Safety Information Bulletin supersedes all other previous U.S. Coast Guard Captain of the Port policies.

DREW W. PEARSON Captain, U.S. Coast Guard Captain of the Port

JOSE VAZQUEZ VERA
Powell, Richard B SAJ
Roberto Acosta Acosta
[EXTERNAL] RE: San Juan Harbor - PREPA Cooling Water Discharge
Monday, June 27, 2016 9:25:20 AM
Drainage CSJ.tif

Dear Mr. Powell, attached is a drawing of both intakes and the discharge channel. The discharge channes discherges directly to the Cataño Oil Dock, next to the Army Terminal.

Also, attached is our transmission line arrangement for the area. There are no underground powerlines in the channels.

Please let me know if you need anything else.

Regards,

José C. Vázquez Vera Superintendente Administración de Proyectos División de Ingeniería y Servicios Técnicos Autoridad de Energía Eléctrica de Puerto Rico

Dirección Física: Calle Mercado Central Lote #28 Zona Portuaria Puerto Nuevo, PR 00920

-----Original Message-----From: Powell, Richard B SAJ [<u>mailto:Richard.B.Powell@usace.army.mil]</u> Sent: Friday, June 24, 2016 2:40 PM To: JOSE VAZQUEZ VERA Cc: Roberto Acosta Acosta Subject: FW: San Juan Harbor - PREPA Cooling Water Discharge

Dear Mr. José C. Vázquez Vera,

I sent the following message to Roberto Acosta and realized I should have included you. Please forgive me.

Does the PREPA cooling water discharge pipeline for the San Juan Power Plant cross the berthing area or Federal channel? If the San Juan Plant cooling water discharge pipeline crosses or extends into the Federal channel, could you provide a pdf drawing of the location of the utility line?

If a utility pipeline or electrical power cable runs under a Federal channel we have to account for the cost of relocation of that utility as a result of deepening the channel. The utility would have to pay for the actual relocation cost of the pipeline or cable crossing, which we include as an associated cost of the project.

Do you know of any pipelines or cables that cross the Federal system of channels in San Juan Harbor?

We will need to identify potential utility crossings on the attached drawing.

Thank you for your time, Dick Powell
Richard B. Powell U.S. Army Corps of Engineers CESAJ-PD-PN

Richard.B.Powell@usace.army.mil Phone: 904-232-1694 Fax: 904-232-3442

-----Original Message-----From: Powell, Richard B SAJ Sent: Friday, June 24, 2016 11:03 AM To: 'ROBERTO.ACOSTA@aeepr.com' <ROBERTO.ACOSTA@aeepr.com> Subject: San Juan Harbor - PREPA Cooling Water Discharge

Mr. Acosta,

Does the PREPA cooling water discharge pipeline for the San Juan Power Plant cross the berthing area or Federal channel? If the San Juan Plant cooling water discharge crosses or extends into the Federal channel, could you provide a pdf drawing of the location of the utility line?

If a utility pipeline or electrical power cable runs under a Federal channel we have to account for the cost of relocation of that utility as a result of deepening the channel. The utility would have to pay for the actual relocation cost of the pipeline or cable crossing, which we include as an associated cost of the project.

Do you know of any pipelines or cables that cross the Federal system of channels in San Juan Harbor?

We will need to identify potential utility crossings on the attached drawing.

Thank you for your time, Dick Powell

Richard B. Powell U.S. Army Corps of Engineers CESAJ-PD-PN

Richard.B.Powell@usace.army.mil Phone: 904-232-1694 Fax: 904-232-3442

Verified by Puerto Rico Electric Power Authority McAfee Email and Web Security System (SCM1).

Verified by Puerto Rico Electric Power Authority McAfee Email and Web Security System (SCM1).







Via First Class Mail and E-Mail

May 27, 2016

Paul DeMarco U.S. Army Corps of Engineers, Planning Division Environmental Branch P.O. Box 4970 Jacksonville, FL 32232 paul.m.demarco@usace.army.mil

# **Re: Intent to Prepare a Draft Feasibility Study and Environmental Impact Statement (EIS)** for Navigational Improvements to San Juan Harbor in San Juan, Puerto Rico [FR Doc. 2015-25574]

Dear Mr. DeMarco:

The Center for Biological Diversity submits these comments in response to the U.S. Army Corps of Engineers' (Corps) notice of intent to prepare an environmental impact statement for navigational improvements to San Juan Harbor in San Juan, Puerto Rico (Project).

In its environmental impact statement (EIS), the Corps must consider the significant impacts arising from increased shipping noise and risk of ship strikes to marine species resulting from increased traffic calling at the San Juan Harbor (Harbor). In addition, it must consider the potential for significant indirect impacts to corals due to increased sedimentation caused by harbor dredging.

### I. The Corps Must Analyze How the Project-Related Increase in Ship Noise Will Harm Marine Species

The Corps must consider the impacts of increased shipping noise on marine species. Any deepening and widening that increases the capacity or the "efficiency" of the Harbor will lead to an increase in the number of vessels calling at the Harbor when compared to current Harbor traffic. In its EIS, the Corps must recognize this and discuss resultant noise impacts accordingly.

### A. Human-Caused Ocean Noise Harms Marine Species

In its environmental review, the Corps must consider the impacts of increased ship noise during the operation of the Harbor as a result of the Harbor widening and deepening.

Oceans are much louder today than they were a century ago, primarily due to increased anthropogenic noise.<sup>1</sup> The National Oceanic and Atmospheric Administration (NOAA) has recently began mapping marine noise levels using its SoundMap and CetMap mapping tools.<sup>2</sup> These maps show that human-caused cumulative and ambient ocean noise pollution has increased ambient sound levels to over 100 decibels (dB) across the majority of the Pacific and Atlantic oceans (see figure 2, below).<sup>3</sup> This sound level is equivalent to attending a live rock concert or standing next to a running chainsaw.<sup>4</sup>

Marine mammals use different song, chirp, and whistle frequencies for a variety of purposes, including echolocation for feeding, long-distance communication, environmental imaging, individual identification, and breeding.<sup>5</sup> Odontocetes, or toothed mammals such as dolphins and killer whales, produce broad-spectrum clicks and whistles that can range between 1 and 200 kilohertz (kHz).<sup>6</sup> Mysticetes, or baleen whales such as blue and right whales, have much lower-frequency calls, ranging between 0.2 and 10 kHz.<sup>7</sup>

<sup>&</sup>lt;sup>1</sup> *Phase 1-CetSound*, NOAA, http://cetsound.noaa.gov/cetsound (last accessed Oct. 29, 2014). <sup>2</sup> *Id*.

<sup>&</sup>lt;sup>3</sup> Summed Outputs—Sound Field Data Availability, NOAA,

http://cetsound.noaa.gov/SoundMaps/NorthAtlantic/Basin/Chronic/NA\_OceanBasin\_Chronic\_Sum/NorthAtlantic\_S um\_ThirdOctave/Atl\_Sum\_0050Hz\_0005m\_ThrdOct.png (last accessed Oct. 29, 2014) (Atlantic Ocean noise pollution levels); *Summed Outputs—Sound Field Data Availability*, NOAA,

http://cetsound.noaa.gov/SoundMaps/NorthPacific/Basin/Chronic/NP\_OceanBasin\_Chronic\_Sum/NorthPacific\_Su m\_ThirdOctave/Pac\_Sum\_0050Hz\_0005m\_ThrdOct.png (last accessed Oct. 29, 2014) (Pacific Ocean noise pollution levels).

<sup>&</sup>lt;sup>4</sup> Comparative Examples of Noise Levels, INDUSTRIAL NOISE CONTROL, INC. (Feb. 2000),

http://www.industrialnoisecontrol.com/comparative-noise-examples.htm.

<sup>&</sup>lt;sup>5</sup> OCEAN NOISE AND MARINE MAMMALS, NAT'L RES. COUNCIL 42-44 (2003), available at

http://www.nap.edu/openbook.php?record\_id=10564&page=R1; Jason Gedamke, Ocean Sound & Ocean Noise: Increasing Knowledge Through Research Partnerships, NOAA 2 (2014), available at

http://cetsound.noaa.gov/Assets/cetsound/documents/MMC%20Annual%20Meeting%20Intro.pdf; Clark, C.W. et al., *Acoustic Masking in Marine Ecosystems as a Function of Anthropogenic Sound Sources*, at \*1, *available at* https://www.academia.edu/5100506/Acoustic\_Masking\_in\_Marine\_Ecosystems\_as\_a\_Function\_of\_Anthropogenic \_Sound\_Sources (last visited Oct. 29, 2014).

<sup>&</sup>lt;sup>6</sup> OCEAN NOISE AND MARINE MAMMALS, NAT'L RES. COUNCIL 41-42 (2003), available at

http://www.nap.edu/openbook.php?record\_id=10564&page=R1.

 $<sup>^{7}</sup>$  *Id*. at 42.



Figure 1: CetSound Map of Summed Noise Outputs in the Atlantic Ocean<sup>8</sup>

Anthropogenic ocean noise can severely impact marine species. Anthropogenic noise pollution can mask marine mammal communications at almost all frequencies these mammals use.<sup>9</sup> "Masking" is a "reduction in an animal's ability to detect relevant sounds in the presence of other sounds."<sup>10</sup> Ambient ship noise can cover important frequencies these animals use for more complex communications.<sup>11</sup> Some species, such as the highly endangered right whale, are especially vulnerable to masking.<sup>12</sup> Ship noise can completely and continuously mask right whale sounds at all frequencies.<sup>13</sup> NOAA has recognized that this masking may affect marine mammal survival and reproduction by decreasing these animals' ability to "[a]ttract mates,

<sup>10</sup> OCEAN NOISE AND MARINE MAMMALS, NAT'L RES. COUNCIL 96 (2003), *avai* 

<sup>&</sup>lt;sup>8</sup> Image reproduced from NOAA's CetSound website,

http://cetsound.noaa.gov/SoundMaps/NorthAtlantic/Basin/Chronic/NA\_OceanBasin\_Chronic\_Sum/NorthAtlantic\_S um\_ThirdOctave/Atl\_Sum\_0050Hz\_0005m\_ThrdOct.png (last accessed Nov. 4, 2014).

 <sup>&</sup>lt;sup>9</sup> See, e.g., John Hildebrand, Impacts of Anthropogenic Sound on Cetaceans, in MARINE MAMMAL RESEARCH: CONSERVATION BEYOND CRISIS (Reynolds, J.E. III et al., eds. 2006); L. S. Weilgart., The Impacts of Anthropogenic Ocean Noise on Cetaceans and Implications for Management, 85 CANADIAN J. ZOOLOGY 1091-1116 (2007).
 <sup>10</sup> OCEAN NOISE AND MARINE MAMMALS, NAT'L RES. COUNCIL 96 (2003), available at

 $http://www.nap.edu/openbook.php?record_id{=}10564\&page{=}R1.$ 

<sup>&</sup>lt;sup>11</sup> *Id.* at 42, 100 ("An even higher level, an understanding threshold" may be necessary for an animal to glean all information from complex signals.")

<sup>&</sup>lt;sup>12</sup> Clark, C.W. at al., *Acoustic Masking in Marine Ecosystems: Intuitions, Analysis, and Implication*, 395 MARINE ECOLOGY PROGRESS SERIES 201, 218-19 (2009), available at http://www.int-

res.com/articles/theme/m395p201.pdf; Clark, C.W. et al., Acoustic Masking in Marine Ecosystems as a Function of Anthropogenic Sound Sources, at \*17, fig. 8, available at

https://www.academia.edu/5100506/Acoustic\_Masking\_in\_Marine\_Ecosystems\_as\_a\_Function\_of\_Anthropogenic \_Sound\_Sources (last visited Oct. 29, 2014).

 $<sup>^{13}</sup>$  Id (showing anthropogenic noise masking 100 percent of the frequencies right whales used over the majority of a six-hour study).

[d]efend territories or resources, [e]stablish social relationships, [c]oordinate feeding, [i]nteract with parents, or offspring, [and] [a]void predators or threats."<sup>14</sup>

In addition to masking effects, marine mammals have displayed a suite of stress-related responses from increased ambient and localized noise levels. These include "rapid swimming away from [] ship[s] for distances up to 80 km; changes in surfacing, breathing, and diving patterns; changes in group composition; and changes in vocalizations."<sup>15</sup> Some avoidance responses to localized marine sounds may even lead to individual or mass strandings.<sup>16</sup> Louder anthropogenic sounds may also lead to permanent hearing loss in marine mammals.<sup>17</sup>

### 1. Sources of Human-Caused Marine Noise

The greatest source of human-caused marine noise is ship propeller cavitation—the sound poorly designed propellers make as they spin through the water.<sup>18</sup> Cavitation accounts for as much as 85 percent of human caused noise in the world's oceans.<sup>19</sup> Cavitation may also increase due to hull designs that create non-homogenous wake fields behind ships.<sup>20</sup> However, even well-designed propellers and hulls may begin to cavitate if they are not regularly cleaned and smoothed.<sup>21</sup>

<sup>&</sup>lt;sup>14</sup> Jason Gedamke, Ocean Sound & Ocean Noise: Increasing Knowledge Through Research Partnerships, NOAA 2 (2014), available at

http://cetsound.noaa.gov/Assets/cetsound/documents/MMC%20Annual%20Meeting%20Intro.pdf; Clark, C.W. et al., *Acoustic Masking in Marine Ecosystems as a Function of Anthropogenic Sound Sources*, at \*3, *available at* https://www.academia.edu/5100506/Acoustic\_Masking\_in\_Marine\_Ecosystems\_as\_a\_Function\_of\_Anthropogenic \_Sound\_Sources (last visited Oct. 29, 2014).

<sup>&</sup>lt;sup>15</sup> OCEAN NOISE AND MARINE MAMMALS, NAT'L RES. COUNCIL 94 (2003), *available at* http://www.nap.edu/openbook.php?record\_id=10564&page=R1.

<sup>&</sup>lt;sup>16</sup> *Id.* at 132; BRANDON L. SOUTHALL ET AL., FINAL REPORT OF THE INDEPENDENT SCIENTIFIC REVIEW PANEL INVESTIGATING POTENTIAL CONTRIBUTING FACTORS TO A 2008 MASS STRANDING OF MELON-HEADED WHALES 3 (*PEPONOCEPHALA ELECTRA*) IN ANTSOHIHY, MADAGASCAR, INT'L WHALING COMM'N 4 (2013), *available at* http://iwc.int/private/downloads/4b0mkc030sg0gogkg8kog4o4w/Madagascar%20ISRP%20FINAL%20REPORT.pd f.

<sup>&</sup>lt;sup>17</sup> Kastak, D. et al., *Noise-Induced Permanent Threshold Shift in a Harbor Seal*, 123 J. ACOUSTICAL SOC'Y OF AM. 2986 (2008); Kujawa, S.G. & Liberman, M.C, *Adding Insult to Injury: Cochlear Nerve Degeneration After "Temporary" Noise-Induced Hearing Loss*, 29 J. NEUROSCIENCE 14,077.

<sup>&</sup>lt;sup>18</sup> Joseph J. Cox, *Evolving Noise Reduction Requirements in the Marine Environment*, MARINE MAMMAL COMM'N: CONGRESSIONAL BRIEFING ON OCEAN NOISE, at 12 (2014), *available at* 

http://www.mmc.gov/special\_events/capitalhill\_briefing/cox\_capitalhill\_briefing\_0914.pdf; GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 1-2 (2014) (definition of cavitation).

<sup>&</sup>lt;sup>19</sup> Joseph J. Cox, *Evolving Noise Reduction Requirements in the Marine Environment*, MARINE MAMMAL COMM'N: CONGRESSIONAL BRIEFING ON OCEAN NOISE 12 (2014), *available at* 

http://www.mmc.gov/special\_events/capitalhill\_briefing/cox\_capitalhill\_briefing\_0914.pdf.

<sup>&</sup>lt;sup>20</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 4 (2014).

<sup>&</sup>lt;sup>21</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 5 (2014) (definition of cavitation).

Another significant source of anthropogenic marine noise is on-board machinery, especially diesel engines.<sup>22</sup> Other onboard machines may also cause vibrations that migrate underwater.<sup>23</sup> Finally, ship noise increases at higher ship speeds, as this increases the degree and volume of cavitation and onboard machine sounds.<sup>24</sup>

### B. The Corps Should Conduct Sound Mapping Near the San Juan Harbor

As part of its environmental review, the Corps should conduct sound mapping of the area surrounding the Harbor, as well as the Harbor's shipping lanes to determine an accurate baseline for marine noise. Sound mapping has become an established practice in marine waters.<sup>25</sup> In order to better and more accurately understand the sound landscape of the waters surrounding the Harbor and its shipping routes, the Corps should conduct its own mapping of the Harbor. Such mapping would be able to give the public and the scientific community a more accurate baseline of the Harbor's sound profile, and it would allow the Corps to more accurately estimate the sound impact the Project may have on that sound profile, as well as more accurately describe the effects any proposed mitigation on marine sound levels.

# II. The Corps Must Evaluate How Increased Ship Size and Traffic Will Increase the Risk of Ship Strikes

The Corps must also consider the effect of increasing the size and number of ships calling at the Harbor as is relates to the increased risk of harm from ship strikes. Ships striking and killing or maiming marine species is a serious, prevalent problem that the Project may worsen in the Harbor area as a result of this project.

Higher traffic volumes of larger ships in the shipping lanes leading up to and within the Puerto Rico area will increase the risk of collisions with marine species. Larger vessels account for a disproportionate number of ship strikes—especially fatal ship strikes.<sup>26</sup> Partly due to their greater weight and partly because of their decreased maneuverability, "most, if not all, lethal

<sup>&</sup>lt;sup>22</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 4 (2014) (definition of cavitation).

<sup>&</sup>lt;sup>23</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 4 (2014).

<sup>&</sup>lt;sup>24</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 5 (2014) (definition of cavitation).

<sup>&</sup>lt;sup>25</sup> See, e.g., Cetacean & Sound Mapping: Underwater Noise and Marine Life, NAT'L OCEANIC & ATMOSPHERIC ADMIN., http://cetsound.noaa.gov (last accessed Jan. 15, 2016); Rob Williams et al., *Quiet(er) Marine Protected Areas*, 100 MARINE POLLUTION BULLETIN 154, 155 (2015).

<sup>&</sup>lt;sup>26</sup> Laist et al., *Collisions Between Ships and Whales*, 17 MARINE MAMMAL SCI. 35, 54 (2001); Silber et al., *Hydrodynamics of a Ship/Whale Collision*, 391 J. EXPERIMENTAL MARINE BIOLOGY & ECOLOGY 11, 18-19 (2010) (ship size correlated to risk and severity of ship strike)

collisions are caused by large ships rather than small vessels."<sup>27</sup> For instance, most large ship strikes to whales result in death.<sup>28</sup>

Ship strikes pose a serious threat to marine mammals, such as the Puerto Rico population of Antillean manatees. The U.S. Fish and Wildlife Service (USFWS) has estimated that, over the past thirty years in in Puerto Rico, "37% of manatees died of natural causes, 26% die[d] of human-related causes, and 36% of [unknown] causes."<sup>29</sup> USFWS lists boat strikes as the primary cause of human-caused manatee deaths in Puerto Rico.<sup>30</sup> Naturally, the number of ship strikes is related to the number of ships navigating in Puerto Rico's waters. A busier harbor will increase the likelihood that Puerto Rico manatees will suffer ship-related injury or death. Because the Puerto Rico manatee population is small and geographically isolated, any increase in impacts to this population is significant, and the Corps must mitigate these impacts accordingly.

As part of its environmental review, the Corps must consider how lowering the speed of ships entering into the Harbor may reduce the likelihood of fatal and injurious ship strikes. In addition, the Corps should require marine observers to search for manatees within any of the shipping channels. In addition, the Corps should recommend that, once a manatee sighted, ships should take precautions, such as stopping their vessel to allow the manatee to pass, stopping the vessel's propellers, and taking any necessary steps to avoid colliding with manatees.

## III. The Corps Must Account for the Risk of Coral-Smothering Sedimentation Arising from Navigation Improvements

San Juan Harbor is near at least two large coral communities, one off the coast of the Puerta de Tierra beach, and another off of the coast of the Parque Nacional Isla de Cabras.<sup>31</sup>

<sup>&</sup>lt;sup>27</sup> Laist et al., *Collisions Between Ships and Whales*, 17 MARINE MAMMAL SCI. 35, 54 (2001); Silber et al.,

*Hydrodynamics of a Ship/Whale Collision*, 391 J. EXPERIMENTAL MARINE BIOLOGY & ECOLOGY 11, 18-19 (2010). <sup>28</sup> A.S. Jansen & G.K. Silber, *Large Whale Ship Strike Database*, NOAA Technical Memorandum, NMFS-OPR-25, U.S. DEP'T COMMERCE 9, fig. 4 (2004).

 <sup>&</sup>lt;sup>29</sup> USFWS, Antillean Manatee Fact Sheet (Apr. 2, 2013), http://www.fws.gov/caribbean/es/manatee\_factsheet.html.
 <sup>30</sup> Id.

<sup>&</sup>lt;sup>31</sup> Location of Coral Reefs—Reef Basemap, Reefbase, http://reefgis.reefbase.org/ (last accessed May 4, 2016).



Figure 1-Coral Presence near San Juan Harbor

Before approving any Harbor improvements that may involve blasting, dredging, or offshore disposal of dredged materials, the Corps must first conduct a thorough survey of corals in the areas that any Harbor improvements stand to directly or indirectly impact. If these studies reveal that ESA-listed corals are present in or near the Harbor, the Corps must initiate formal ESA consultation with the National Marine Fisheries Service and receive an Incidental Take Statement prior to authorizing any Harbor-improvement activities.<sup>32</sup> In addition, the Corps must analyze and mitigate any indirect impacts to nearby corals arising from dredging-related sedimentation. As the Corps learned during the deepening and widening of the port channels at the Port of Miami, sedimentation from harbor improvement projects can spread great distances away from the dredging locations, harming corals and other marine species. At the Port of Miami, dredged material migrated hundreds of meters away from the dredging and blasting sites.<sup>33</sup> This sedimentation smothered corals, causing widespread total and partial coral mortality by preventing photosynthesis, filtering, and increasing the risk of stress-related diseases.<sup>34</sup> If the

<sup>&</sup>lt;sup>32</sup> See 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). The Corps should also initiate section 7 consultation regarding potential impacts to manatee populations and any other ESA-listed species the Project may harm.

<sup>&</sup>lt;sup>33</sup> Dial Cordy Delineation of Potential Sedimentation Effect Area Within Middle and Outer Reef Habitats at 42 (August 2015) (sedimentation-related mortality occurred in excess of 650 meters from construction activities); NMFS, Examination of Sedimentation Impacts to Coral Reef along the Port of Miami Entrance Channel, December 2015, Final Report at 35, 47 (April 2016) (noting sedimentation impacts in excess of 700 meters north of the port channel).

<sup>&</sup>lt;sup>34</sup> Dial Cordy Delineation of Potential Sediment Effect Area Within Middle and Outer Reef Habitats at 3 (August 2015); FDEP Report on Sites Visited in Port of Miami Expansion Project February 9, 2015; June 17, 2015, NOAA Port of Miami Field Observations from May 19, 2015; NMFS, Examination of Sedimentation Impacts to Coral Reef along the Port of Miami Entrance Channel, December 2015, Final Report at 8 (April 2016); Pollock, F. J., Larnb, J.

Corps decides to approve any harbor improvements at San Juan Harbor, it must take these potentially serious impacts into account and plan accordingly.

### **IV.** Conclusion

In order to ensure the Corps has adequately considered Project-related impacts, it is imperative that the Corps discuss impacts related to increased ship noise and the increased risk of ship strikes. Thank you for considering our comments. If you have any questions, please contact Nicholas Whipps at the contact information provided below.

Sincerely,

Nicholas Whipps Legal Fellow CENTER *for* BIOLOGICAL DIVERSITY 1212 Broadway, Suite 800 Oakland, CA 94612 *Tel*: (510) 844-7131 *E-mail*: nwhipps@biologicaldiversity.org

Mary Ann Lucking CORALations PO BOX 750 Culebra, PR 00775 *Tel*: (787) 556-6234 *E-mail*: coralations@gmail.com

<sup>8,</sup> Field, S. N., Fleron, S. F., Schaffelke, 8., Shedrawi, G., & Willis, B. L. (2014). Sediment and turbidity associated with offshore dredging increase coral disease prevalence on nearby reefs. PloS ONE, 9(7), e102498 (corals exposed to dredging-related sedimentation are twice as likely to develop disease); DERM Report on Opportunistic Hardbottom/Reef Inspections (July 2014) (dredging-related sedimentation can "increase diseases in corals").

Saludos Paul,

We don't have any official reports for sea turtles nests in the near-shore of La Esperanza. However, there is always a possibility of an occational nest by hawksbill, which is the species that have nested in areas similar to that habitat. In addition, we have received reports of juvenile green turtles transiting the entrance of the bay and strandings of green and hawksbill turtles in both sides of the San Juan Bay. Therefore, you should exercise cautious and have observers during the process of the dredging to prevent incidental strandings.

gracias!

Carlos

Carlos E. DIEZ Programa de Especies Protegidas-DRNA-PR P.O. Box 366147 San Juan, PR 00936 Ofi 787-230-5560 Cel 787-453-6484 (personal) email: cdiez@drna.gobierno.pr email alternos: cediez@yahoo.com; cediez@caribe.net

From: "DeMarco, Paul M SAJ" <Paul.M.DeMarco@usace.army.mil> To: Carlos Diez <cediez@yahoo.com> Sent: Tuesday, July 12, 2016 9:02 AM Subject: RE: [EXTERNAL] Re: La Esperanza Sea Turtle nesting data?

Carlos, please see attached plan sheets for the areas to be dredged at La Esperanza. These are the same areas we coordinated in 2013-2015 (see link below to Final EA/FONSI). We are looking for any information on historic and current (2016) sea turtle nesting in this area. Thanks, Paul DeMarco

Blockedhttp://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/

-----Original Message-----

From: Rivera, Marelisa [mailto:marelisa\_rivera@fws.gov <mailto:marelisa\_rivera@fws.gov>] Sent: Monday, July 11, 2016 4:14 PM To: DeMarco, Paul M SAJ <Paul.M.DeMarco@usace.army.mil <<u>mailto:Paul.M.DeMarco@usace.army.mil</u>>> Cc: Carlos Diez <cediez@yahoo.com <<u>mailto:cediez@yahoo.com</u>> ; Jan Zegarra@fws.gov <<u>mailto:jan\_zegarra@fws.gov</u>> ; Felix Lopez <felix\_lopez@fws.gov <<u>mailto:felix\_lopez@fws.gov</u>> > Subject: [EXTERNAL] Re: La Esperanza Sea Turtle nesting data?

Paul:

Please contact Carlos Diez (cc'd here) who is the PRDNER Sea Turtle Coordinator. He coordinates all sea turtle

projects in Puerto Rico. Please send us the latest plan to check about sea turtles and consultation.

Thanks, Marelisa

On Mon, Jul 11, 2016 at 3:08 PM, DeMarco, Paul M SAJ <Paul.M.DeMarco@usace.army.mil <<u>mailto:Paul.M.DeMarco@usace.army.mil</u>> <<u>mailto:Paul.M.DeMarco@usace.army.mil</u>> > wrote:

Hello Marelisa, at the planning charrette last year there was discussion of sea turtle nesting habitat along La Esperanza peninsula. Does anyone monitor those beaches during the nesting season? Reason I am asking is the 2016 maintenance dredging and mitigation construction project has been advertised. As previously planned, material to fill the Condado Lagoon dredge holes is to come from La Esperanza and we need to insure there are no sea turtle (or shorebird) nests in the way. Please let me know. Thanks, Paul DeMarco

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Marelisa Rivera Deputy Field Supervisor U.S. Fish and Wildlife Service Caribbean Ecological Services Field Office P.O. Box 491 / Road 301, Km 5.1 Boquerón, Puerto Rico 00622

(787) 851-7297 x 206 (direct)
(787) 851-7440 (fax)
(787) 510-5207 (mobile)
Email: marelisa\_rivera@fws.gov <mailto:marelisa\_rivera@fws.gov> <mailto:marelisa\_rivera@fws.gov>>

There are three constants in life...change, choice and principles. Stephen R. Covey

NOTE: This email correspondence and any attachments to and from this sender is subject to the Freedom of Information Act (FOIA) and may be disclosed to third parties.

### Royal Caribbean Cruises Ltd.

Federico González-Denton Associate Vice President Government Relations-Latin America & Caribbean

1050 Caribbean Way Miami, FL 33150 P 305-539-6113 F 305-539-6026 E fgonzalez@rccl.com

October 17th, 2016

Mrs. Courtney G. Jackson Economist U.S. Army Corp of Engineers Jacksonville District

Dear Mrs. Jackson,

Hope this letter finds you well. Please be informed that we have been recently in contact with the San Juan Bay Pilots and the Puerto Rico Ports Authority regarding the Feasability Study currently underway for the San Juan Harbor by the U.S. Army Corp of Engineers.

As you may know the volume of calls and passenger movement in San Juan by Royal Caribbean Cruises Ltd. (RCL) has been growing steadily over the last few years. In fact, our deployment plans contemplate the possibility of bringing larger ship for turn round operations (home port) in San Juan at the Pan American Cruise Terminals I and II. These plans envision the short term possibility of bringing a Freedom Class ship and the long term possibility of bringing Oasis Class or Quantum Class ships to San Juan for home port operations.

To this end, we would like to coordinate a meeting to share with you our plans and all technical information you may need to make sure your Feasability Study takes into consideration RCL's shorth and long term deployment plans.

Awaiting for your comments, I remain,

Cordially Federico González-Denton

cc: San Juan Bay Pilots PRPA Capt. Mal Bardsnes Capt. Emmanouil Alevropoulos



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

REPLY TO ATTENTION OF

Lui o I 2000

Planning and Policy Division Environmental Branch

Ms. Nydia A. Préstamo Torres Deputy State Historic Preservation Officer Office of the Governor P.O. Box 9023935 San Juan, Puerto Rico 00902-3935

Re: San Juan Harbor Feasibility Study, San Juan, Puerto Rico

Dear Ms. Préstamo Torres:

The U.S. Army Corps of Engineers (Corps), Jacksonville District, is continuing to study the environmental effects of the San Juan Harbor Improvements Feasibility project. The Corps would like to reinitiate consultation with your office to discuss various changes to the study focused on new proposed channel modifications. When we previously met, the proposed design involved the widening of the entrance channel and our discussion focused on the numerous cultural resources around and adjacent to the channel. The currently proposed plan changed based upon shipping needs and will likely require expansion of the channel and turning basin with no planned expansion of the entrance channel (See Figure 1 for specific areas). The Corps requests the assistance of your office with the identification of additional cultural resources we have not already documented within the newly proposed expansion and deepening project areas for consideration of effects.

In line with our continued study of the proposed project changes, the Corps is planning to conduct a cultural resource survey in critical portions of the project area. Prior to implementing this work, we request a meeting with your office to discuss project parameters so that surveys can best meet any standards required by your office. If there are any questions, please contact Dr. Dan Hughes at 904-232-3028 or e-mail at daniel.b.hughes@usace.army.mil who is the current staff assigned to this project.

Sincerely

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





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

REPLY TO ATTENTION OF

Nov 6 7 2016

Planning and Policy Division Environmental Branch

Mr. Ben West Chief, Planning and Compliance Division National Park Service Office Atlanta Federal Center 1924 Building 100 Alabama St., SW. Atlanta, Georgia 30303

Re: San Juan Harbor Feasibility Study, San Juan, Puerto Rico

Dear Mr. West:

The U.S. Army Corps of Engineers (Corps), Jacksonville District, is continuing to study the environmental effects of the San Juan Harbor Improvements Feasibility project. The Corps requests formal consultation with your office on this project, which focuses on proposed channel modifications. We would like to provide you with an update on the project and discuss concerns raised in your November 3, 2015 letter. The initial proposed design of the project involved widening of the San Juan Harbor entrance channel. Our cultural resources evaluation associated with the proposed plan focused on the numerous cultural resources around and adjacent to the channel, including the World Heritage site and fortifications associated with historic San Juan. Based upon shipping needs, the original plan has been modified and now the plan will likely require expansion of the channel and turning basin. Within the modified plan, there is no planned expansion of the entrance channel (see Figure 1 for specific areas). The Corps requests the assistance of your office with the identification of additional cultural resources that we have not already documented within the newly proposed expansion and deepening areas for consideration of effects. While the current work is not expected to have any effects to San Juan or Isla de Cabras, any additional information regarding resources within the areas indicated would be most appreciated.

In line with our continued study of the proposed project changes, the Corps is planning to conduct a cultural resource survey in critical portions of the project area. Prior to implementing this work, we request any additional information that may be available from your office. If there are any questions, please contact Dr. Dan Hughes at 904-232-3028 or e-mail at daniel.b.hughes@usace.army.mil.

Sincerely,

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

Enclosure:

CC:

Ms. Nydia A. Préstamo Torres, Deputy State Historic Preservation Officer. Office of the Governor. P.O. Box 9023935, San Juan, Puerto Rico 00902-3935

Felix Lopez, Chief of Cultural Resources, San Juan National Historic Site. 501 Norzagaray Street, San Juan, PR 00901



Good Day Mr. de Marco,

Regarding the San Juan Harbor, PR Navigation Improvement Study, it will be possible to include in the study, the creation of additional docking spaces for mega cruise ships in the opposite shore of Old San Juan area. That is in Cataño or Guaynabo shores.

In the next 3 or 4 years Puerto Rico will lose its leadership in being the principal port for cruises in the Caribbean area to the Dominican Republic.

The Dominican Republic has 5 ports that will be able to receive more cruise ships than the port of San Juan. DR is also planning to build 2 new cruise ports in the Puerto Plata area.

These are the ports that are already functioning or under renovations to expand their facilities.

Puerto Plata - Amber Cove. (North coast) Samana - will be renovated and expanded (North east coast) Cap Cana - (East Coast) new, started operations La Romana - (South east coast) Santo Domingo / Sans Souci - (South coast) Already in function but is under renovation to greatly expand its size and docking spaces.

Under discussion 2 more port sites in Puerto Plata area (Bergantin and La Piedra de Sosua)

For the above reason is very important the navigational improvements to the port of San Juan, also includes to expand its cruise ship docking spaces. Thus using port areas that are not in use right now.

Thank You for your attention to this request

Regards

Jeronimo Lectora

Mr. Eric Summa Planning Division Chief Environmental Branch Department of the Army Jacksonville District Corps of Engineers 701 San Marco Blvd Jacksonville FL 32207-8175

File type: REA-Feasibility Study and Environmental Impact Subject: Widening of navigation channels San Juan Bay

The Telecommunication Regulation Board of PR (JRTPR, in Spanish) has evaluated the referenced document. Such task falls under Laws 416 of 2004 as amended, and law 161 of 2009, as amended. Considered as well were the Evaluation and Permit Expedition Related to Development and Use of Lands Ruling, and the Evaluation and Transmittal of Environmental Documents Ruling of the Environmental Quality Board (JCA, in Spanish).

The JRTPR evaluates environmental aspects regarding estuaries according to our experience and technical knowledge. As part of this duty, the board evaluates the interconnection needs to the telecommunications network and television available in the territory. The proposed action should not represent an impact that could require modifications to the telecommunications external plant.

From an environmental point of view, the JRTPR doesn't have any comments to the proposed project. Conforming the request to offer any comments, we inform you that to the best of our knowledge and experience in the telecommunications field in the area, there are no telecommunication facilities on the sea bed, running along the proposed widening of the navigation channels of the San Juan Bay.

However, in terms of impacts to the project, any removal, modification, and relocation of existing telecommunication installations (telephone or cable television) shall be coordinated with the corresponding service providers. These companies shall proceed according to Section 3.09 of the Rules for approval of infrastructure and servitude plans for telecommunication and cable television (Ruling number 7393, as amended), where the relocation requirements are detailed.

The Proposal of changes, shall communicate with the following service providers for any necessary information:

Eng. David Colón Cruz Engineer Manager Claro P.O. Box 360998 San Juan PR 00936-0998 787-782-8282 Dcolon@claropr.com

Mr. Juan Orellana Construction Manager Liberty Cable Vision P.O. Box 719 Luquillo, PR 00773 787-444-2701 juanore@libertypr.com Mr. Arnaldo Acosta Project Coordinator, World Net 90 Carr Est PR-165 Suite 201 Centro Internacional de Mercadeo Guaynabo, PR 00968 787-705-7014 aacosta@worldnetpr.com Eng. Juan Medero Engineering Director ATT networks P.O. Box 71514 San Juan PR 00936 787-641-8841 <u>dl-pr-att-jrtpr@att.com</u>

Once any comments from the service providers are included in the plans, the Proposal Entity shall prepare a final plan with the FINAL telecommunications infrastructure. At these stage, an approval request shall be submitted to the Infrastructures Division of the Permit Management Office (OGPE), by using the JRTPR F-104 form, which is available online at our website: http: www.jrtpr.gobierno.pr/download.asp?cn\_id=1373, Approval section.

For fiscal purposes, the JRTPR shall receive the final infrastructure plans of telecommunications and ancillary documents. This transmittal is a strict requirement so that the Proposal Entity can receive their Construction Permit. To ease the process, the Proposal Entity can present concurrently, evidence of permit submittal to the Integrated Permit System (SIP) of the OGPE, a Memo and Final Plans of telecommunications infrastructure in electronic format, with sufficient evidence that the plans are true and exact copies of the ones submitted to SIP.

The JRTPR would then evaluate the accuracy and veracity of the submitted documentation. Once the infrastructure is constructed, the Board will certify. Required actions shall be notified according to the stage of the project.

Any questions or concerns, can be addressed by communicating to our offices: 787-756-0804, Xt. 3056, or 3047, during working hours of 7:30-12:00 and 1-12 pm, Monday through Friday.

Cordially,

Lcdo Javier Rúa Jovet

CN 078-04495 REV. 02/14

### COMMONWEALTH OF PUERTO RICO PUERTO RICO ELECTRIC POWER AUTHORITY

SAN JUAN, PUERTO RICO



GPO BOX 364267 SAN JUAN, PR 00936-4267

www.prepa.com

July 26, 2017

Mr. Eric Summa Chief, Planning and Policy Division Jacksonville District Corps of Engineers 701 San Marco Boulevard Jacksonville, Florida 32207-8175

Dear Mr. Summa:

#### Re: LNG Receiving, Storage & Gasification Facilities at San Juan

The Puerto Rico Electric Power Authority (PREPA) is working on the diversification of fuel by means of using natural gas to comply primarily with the US Environmental Protection Agency (EPA) regulations, such as the Mercury and Air Toxic Standards (MATS). Also, the use of natural gas will help reduce and stabilize Puerto Rico's electricity rates, contributing to the economic growth potential of Puerto Rico, as it has been shown in PREPA's Integrated Recourses Plan (IRP) study results. PREPA has already converted generating units at Costa Sur Steam Plant to use natural gas and started a project for the construction of an offshore natural gas port at the Aguirre Generating Complex, including the conversion of its generating units to natural gas at that location.

Given the benefits of using natural gas for energy production, PREPA is also pursuing the use of natural gas at the northern power plants of San Juan and Palo Seco. Hence, PREPA has evaluated the construction of a new terminal for receiving liquefied natural gas (LNG) located at the vicinity of San Juan Steam Plant, including related infrastructure for its storage and gasification for providing natural gas to the northern power plants (Project). PREPA consultants' evaluation of the Project has shown that it is viable and will help PREPA comply with EPA regulations and achieve lower electricity rates.

During PREPA's evaluation of the Project, we have been in contact with technical personnel from the US Army Corps of Engineers (USACE). Recently, we received a request from USACE to provide our estimate to date for the capital cost investment of the Project. In response to this request, PREPA's estimate is as follows:

"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information." Mr. Eric Summa Page 2

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Item	Description	Capital Cost Estimate
1	160,000 m <sup>3</sup> Full Containment Tank <sup>1</sup>	\$153,600,000 <sup>2</sup>
2	Tank pile foundation	\$5,460,000 <sup>3</sup>
3	LNG Facility BOP (Balance-Of-Plant)	\$39,765,000 <sup>4</sup>
4	Seven percent (7%) of above cost for insurance, bonds & taxes	\$13,917,750
5	New Docks A, B, C & D	\$125,000,000 <sup>5</sup>
6	Pipeline between San Juan and Palo Seco Steam Plants (4 mile route)	\$8,560,000 <sup>2</sup>
	Total capital cost estimate:	\$346,302,750

This cost estimate was prepared by our project team and seeks to fulfill the USACE's request. If you need more information or would like to further discuss this or other matters related to the Project, please contact engineer José C. Vázquez at (787) 521-7749 or by email at jvazquez12333@aeepr.com.

Sincerely,

Éftan Paredes Maisonet Acting Director Planning and Environmental Protection

c Mary C. Zapata Acosta José C. Vázquez Vera

<sup>1</sup> This is the case-study capacity and is the largest that could be achieved as per the studies.

<sup>2</sup> Cost is based on an engineering, procurement and construction (EPC) approach.

<sup>3</sup> Cost includes engineering design services.

<sup>4</sup> Cost includes, among others, gasifiers, piping, valves, controls, and engineering design services.

<sup>5</sup> Cost includes engineering services, demolition, new construction, LNG unloading arms, cranes, and related infrastructure.



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

REPLY TO ATIENTION OF

Planning and Policy Division Environmental Branch

AUG 08 2017

To Whom It May Concern:

This office has prepared a Draft Feasibility Study and Environmental Assessment concerning navigational improvements to San Juan Harbor in San Juan, Puerto Rico. The Tentatively Selected Plan consists of deepening Cut-6 to 46 feet, widening the Army Terminal Channel by 100 feet and deepen Anegado and Army Terminal Channels and the Army Terminal Turning Basin to 44-feet (see enclosed figure). Lesser increments of widening and deepening were also evaluated. In addition, the San Antonio Channel would be deepened to 36-feet. The dredged material is expected to be suitable for placement in the Ocean Dredged Material Disposal Site located a few miles from the harbor entrance. Some material may be suitable for placement in dredged holes and for other beneficial purposes.

Pursuant to the National Environmental Policy Act and U.S. Army Corps of Engineers Regulation (ER 200-2-2), this letter constitutes the Notice of Availability of the enclosed Draft Finding of No Significant Impact. This letter (along with its enclosures and referenced documents) also follows the public notice requirement of Section 404(a) of the Clean Water Act. Evaluation of the impact of the proposed action on the public interest includes application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, pursuant to Section 404(b) of the Clean Water Act (40 CFR part 230). Any person may request, in writing, within the comment period specified herein, that a public hearing be held to consider the proposed action (which involves the placement of dredged or fill material into wetlands or other waters of the United States). Requests for a public hearing shall state, with particularity, the reasons for holding a public hearing.

The comment period ends 30 days from the date of this notice. Questions and comments concerning this letter should be directed to Paul DeMarco, Environmental Branch, at the letterhead address, 904-232-1897, or fax 904-232-3442. A copy of the Environmental Assessment, high resolution drawings, and other information is available on our Environmental Documents web page

<<u>http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/</u>>.

A public meeting to present the Tentatively Selected Plan will be held on August 22, 2017, in the Puerto Rico Convention Center, 100 Convention Boulevard, San Juan, Puerto Rico at 9:00 am. Additional information is available on our Environmental Documents Web Page at

<<u>http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/</u>>.

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

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

Enclosure

### SAN JUAN HARBOR, PUERTO RICO INTEGRATED FEASIBILITY STUDY & ENVIRONMENTAL ASSESSMENT



### MAXIMUM PROPOSED WIDENING

Widen Army Terminal Channel from 350' to 450'

### MAXIMUM PROPOSED DEEPENING (counterclockwise)

- Cut 6 to 46'
- Anegado Channel to 44'
- Army Terminal Channel to 44'
- Army Terminal Turning Basin to 44'
- San Antonio Channel to 36'
- Cruise Ship Basin East to 36'

### **CONSTRUCTION**

- Mechanical clamshell dredge with bottom-dump barge transport to offshore Ocean Dredged Material Disposal Site (ODMDS)
- ~ 2.1M cubic yards of material



DEPARTMENT OF THE ARMY JACKSONVILLE DISTRICT CORPS OF ENGINEERS 701 SAN MARCO BOULEVARD JACKSONVILLE, FLORIDA 32207-0019

REPLY TO ATIENTIONOF

Planning and Policy Division Environmental Branch

AUG 08 2017

A quien pueda interesar,

Esta oficina ha preparado un Estudio Integrado de Viabilidad e Impacto Ambiental (borrador) concerniente a las mejoras de navegacion en el Puerto de San Juan en San Juan, Puerto Rico. El Plan Tentativamente Seleccionado consiste de profundizar a 46 pies el Corte 6 (Cut-6), ensanchar 100 pies adicionales el Canal del Terminal de la Army, y profundizar a 44 pies los canales Anegado y el Terminal de la Army y la cuenca de viraje del Terminal de la Army (ver figura adjunta). Incrementos menores de ensanche y profundizara a 36 pies. Se espera que el material de dragado sea adecuado para ser depositado en el Area Oceanica para Disposicion de Material de Dragado, localizada a varias millas de la entrada de la bahia. Tambien es posible que algun material de dragado sea adecuado para propositos beneficiosos como rellenar hoyos de dragado.

Acorde a la Ley Federal de Politica Publica Ambiental (NEPA, por sus siglas en ingles) y la Reglamentacion del Cuerpo de Ingenieros (ER 200-2-2), esta carta constituye la Notificacion de Disponibilidad del Borrador de Hallazgo de Impactos No Significativos. Esta carta (sus anejos y documentos de referencia) tambien satisface el requisito de aviso publico acorde a la Seccion 404(b) de La Ley Federal de Agua Limpia (40 CFR parte 230). Durante el periodo de comentario aqui indicado cualquier persona puede solicitar, por escrito, que se lleve a cabo una audiencia publica para considerar la accion propuesta (que incluye la descarga de material de dragado o de relleno en humedales u otras aguas de los Estados Unidos). Solicitudes para audiencia publica deben indicar particularmente las razones para llevar a cabo tal audiencia.

El periodo para comentar termina 30 dias despues de la fecha de esta notificacion. Preguntas y comentarios concernientes a esta carta deben ser dirigidos a Paul DeMarco, Environmental Branch, a la direccion en membrete, por telefono a 904-232-1897, o por fax a 904-232-3442. Copia de la Evaluaci6n Ambiental, dibujos en alta resolucion y otra informaci6n, estan disponibles en nuestro portal de Documentos Ambientales

<http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/>.

Una audiencia publica para presentar el Plan Tentativamente Seleccionado se llevara a cabo el 22 de agosto de 2017, a las 9:00 am, en el Centro de Convenciones de Puerto Rico, 100 Convention Boulevard, San Juan, Puerto Rico. Informacion adicional esta disponible en nuestro portal de Documentos Ambientales <http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents/>.

Si tiene alguna pregunta comuniquese con Paul DeMarco al 904-232-1897, o por correo electronico a paul.m.demarco@usace.army.mil.

Sinceramente, Gina P. Ralph Chief, Environmental Branch

Anejo
### PUERTO DE SAN JUAN, PUERTO RICO, ESTUDIO INTEGRADO DE VIABILIDAD E IMPACTO AMBIENTAL



### MAXIMO ANCHO PROPUESTO

Ampliar el canal del Terminal de la Army de 350' a 450' de ancho

#### MAXIMA PROFUNDIZACION PROPUESTA

- Corte 6 a 46'
- Canal Anegado a 44'
- Canal del Terminal de la Army a 44'
- Zona de viraje en el Terminal de la Army a 44'
- Canal San Antonio a 36'
- Zona Este del Area de embarcaciones de crucero a 36'

#### CONSTRUCCION

- Draga Mecanica (clamshell) con transporte en barcaza de abertura en el fondo para depositar el material dragado en mar profundo - Ocean Dredged Material Disposal Site (ODMDS)
- ~ 2.1 Millones de yardas cubicas de material dragado



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

REPLY TO ATTENTION OF

Planning and Policy Division Environmental Branch

AUG 1 7 2017

Mr. Carlos Rubio-Cancela State Historic Preservation Officer Office of the Governor P.O. Box 9023935 San Juan, Puerto Rico 00902-3935

Re: San Juan Harbor Improvements Project, San Juan, Puerto Rico

Dear Mr. Rubio-Cancela:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is studying the feasibility of providing navigation improvements to San Juan Harbor, Puerto Rico. The harbor serves a varied fleet of vessels, ranging from container and bulk vessels to both large (cruise) and small passenger vessels. San Juan Harbor is part of an existing federal project which currently provides and maintains a system of channels, features, and major terminals for navigational purposes. However, physical constraints and the associated inefficiencies, which limit the system's ability to safely and efficiently serve the forecasted vessel fleet and process the forecasted cargo volumes, generate the need for modifications to the existing navigation system.

The purpose of the San Juan Harbor Improvements Project is to identify and recommend modifications that would improve the efficiency of the navigation system, such as deepening and/or widening the channels. The San Juan Harbor Improvements Project Feasibility Study modeled a number of alternative plans combining multiple structural and nonstructural measures to improve the safety and efficiency of the navigation system. As a result of the feasibility study, a Tentatively Selected Plan (TSP) for the project was chosen which includes deepening of the channel at Cut-6, Anegado Channel, Army Terminal Channel, Army Terminal Turning Basin, San Antonio Channels, and Cruise Ship Basin East (Figure 1). Widening is only proposed along Army Terminal Channel, 50 feet on each side of the federal channel.

The existing San Juan Harbor federal project was previously subject to a magnetometer survey in 1992. The results of this fieldwork is documented in the report entitled; *Cultural Resources Magnetometer Survey at San Juan Harbor, Puerto Rico* (Márquez Marin 1993). A subsequent diver identification of these targets was conducted and documented in the report; *Cultural Resource Magnetic Anomaly Identification Investigation in San Juan Harbor, San Juan Puerto Rico* (Koski-Karell

1993). Additional field investigations were conducted during April 1994 by Mid-Atlantic Technology to evaluate two potentially significant resources that had been identified during the previous studies. These investigations are documented in; *Underwater Investigations to Ground Truth Two Potentially Significant Submerged Cultural Resources, San Juan Harbor, San Juan, Puerto Rico* (Hall 1994). Based on the results of this report, three additional investigations by Panamerican Consultants, Inc. identified and mitigated effects of dredging activities to the *Manuela* and the *Cristóbal Colón*, two nineteenth century shipwrecks located in the Entrance Channel. These investigations are documented in reports entitled; *Archaeological Diver Identification and Evaluation of an Iron-Hulled Vessel in the Entrance Channel to San Juan Harbor, Puerto Rico* (James et al. 2001), *Archaeological Diver Identification and Evaluation of Anomaly 6:7 in the Entrance Channel to San Juan Harbor, Puerto Rico* (Krivor 2003), and *Archaeological Data Recovery of the Iron-Hulled Vessel Manuela and Documentation of the Cristóbal Colón In the Entrance Channel to San Juan Harbor San Juan, Puerto Rico* (James et al. 2003).

Based on the introduction of new technologies since the initial cultural resources surveys and the inclusion of areas that are outside of the federal channels and basins within the Feasibility Study alternatives, the Corps determined that all portions of San Juan Harbor where widening and deepening were proposed should be subject to a new submerged cultural resources survey. As such, the Corps contracted Southeastern Archaeological Research (SEARCH) to identify historic properties that may be located within the area of potential effects (APE) (see Figure 1). This survey is documented in the enclosed draft report; *San Juan Harbor Improvement Study, San Juan Puerto Rico, Submerged Cultural Resources Survey*.

The SEARCH remote sensing survey of the APE utilized a magnetometer, sidescan sonar, and a subbottom profiler. Results of the remote-sensing survey did not identify any potentially significant anomalies in 10 of the 11 areas surveyed. The 10 areas cleared for potentially significant submerged cultural resources include Anegado Channel, San Antonio Channel, Anchorage Area E, Graving Dock Channel and Turning Basin, Puerto Nuevo Channel and Turning Basin, Army Terminal Channel and Turning Basin, and Anchorage Area F. While a number of magnetic anomalies were documented within these areas, previous navigational/channel improvements (primarily dredging) have likely impacted or removed potentially significant submerged cultural resources from within these areas. No further work is recommended within these eight areas.

The only potentially significant cultural resources identified within the APE were located within the Anchorage Area F Expansion. Four clustered anomalies (comprised of 18 individual magnetic anomalies) and one individual anomaly (CA-21M) were identified that may represent potentially significant submerged cultural resources. These anomalies are recommended for avoidance or additional investigations in the form of diver identification to determine significance and eligibility for listing in the National Register of Historic Places (NRHP). As a result, Anchorage Area F Expansion has been removed from proposed deepening and widening measures, and will not be dredged or otherwise maintained as a part of the San Juan Harbor Improvement Study. Based on the results of this survey, the Corps has determined that deepening and/or widening of Cut-6, Anegado Channel, Army Terminal Channel, Army Terminal Turning Basin, San Antonio Channels, and Cruise Ship Basin East as part of the TSP for the San Juan Harbor Improvement Study poses no effect to historic properties listed or eligible for listing in the NRHP.

Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), as amended and it's implementing regulations (36 CFR 800), the Corps kindly requests your comments on the determination of no effect and SEARCH's draft report entitled; *San Juan Harbor Improvement Study, San Juan Puerto Rico, Submerged Cultural Resources Survey*. If there are any questions or comments, please contact Ms. Meredith Moreno at (904) 232-1577 or by e-mail at meredith.a.moreno@usace.army.mil.

Sincerely,

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

Cc:

Executive Director, Instituto de Cultura Puertorriqueña, PO Box 9024184 San Juan, Puerto Rico 00902-4184 Juan Vera, Consejo para la Conservación y Estudio de Sitios y Recursos Arqueológicos Subacuáticos, Instituto de Cultura Puertorriqueña, PO Box 9024184 San Juan, Puerto Rico 00902-4184



Figure 1. San Juan Harbor cultural resources survey area.



# **NEWS RELEASE**

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Contact: Paul DeMarco at 904-232-1897 Paul.m.demarco@usace.army.mil

### San Juan Harbor, Puerto Rico Integrated Feasibility Study & Environmental Assessment

**Jacksonville, FI** – The Jacksonville District, U.S. Army Corps of Engineers (Corps) has prepared a Draft Feasibility Study and Environmental Assessment concerning navigational improvements to San Juan Harbor in San Juan, Puerto Rico. The Corps presented results of this study including a Tentatively Selected Plan at a public meeting in San Juan, Puerto Rico on Tuesday, August 22, 2017. The Puerto Rico Ports Authority (the project sponsor), Puerto Rico Electric Power Authority, port users, U.S. Coast Guard, San Juan harbor pilots, environmental resource agency representatives and other interested parties attended the meeting. Also at this meeting, the U.S. Coast Guard, San Juan Sector, a cooperating agency, presented an overview of their rule making process for expansion of Anchorage Area "F".

The Tentatively Selected Plan consists of deepening Cut-6 to 46 feet, widening the Army Terminal Channel by 100 feet and deepening the Anegado, the Army Terminal Channels and the Army Terminal Turning Basin to 44 feet (see figure). In addition, the San Antonio Channel would be deepened to 36 feet. Lesser increments of widening and deepening were also evaluated. The dredged material is expected to be suitable for placement in the Ocean Dredged Material Disposal Site located a few miles from the harbor entrance. Some material may be suitable for placement in dredged holes and other beneficial purposes.

Pursuant to the National Environmental Policy Act and the U.S. Army Corps of Engineers Regulations (ER 200-2-2), please find enclosed the Proposed Finding of No Significant Impact. This public notice (along with its enclosures and referenced documents) also follows the public notice requirement of Section 404(a) of the Clean Water Act. Evaluation of the impact of the proposed action on the public interest includes application of the guidelines promulgated by the Administrator, U.S. Environmental protection Agency, pursuant to Section 404(b) of the Clean Water Act (40 CFR part 230).

The Corps invites public comments and questions on the Draft Feasibility Study and Environmental Assessment and Proposed Finding of No Significant Impact. The comment period ends 30 days from the date this notice is published. Questions and comments concerning this notice should be directed to Paul DeMarco, Corps of Engineers – SAD, Jacksonville District, Planning and Policy Division, P.O. Box 4970 Jacksonville, FL 32232, or fax 904-232-3442. A copy of the Environmental Assessment, high resolution drawings and other information is available on the Corps' website

<http://www.saj.usace.army.mil/About/Divisions-Offices/Planning/Environmental-Branch/Environmental-Documents>



U.S. ARMY CORPS OF ENGINEERS – Planning and Policy Division, Environmental Branch 701 San Marco Blvd, Jacksonville, FL 32207 http://www.saj.usace.army.mil/



### US Army Corps of Engineers JACKSONVILLE DISTRICT

### PROPOSED FINDING OF NO SIGNIFICANT IMPACT

#### SAN JUAN HARBOR, PUERTO RICO NAVIGATION IMPROVEMENT STUDY INTEGRATED FEASIBILITY STUDY AND ENVIRONMENTAL ASSESSMENT

The U.S. Army Corps of Engineers, Jacksonville District (Corps), has conducted an environmental assessment in accordance with the National Environmental Policy Act of 1969, as amended. The Corps assessed the effects of the following actions in the Draft Integrated Feasibility Report and Environmental Assessment (IFR/EA), dated August 2017 for the San Juan Harbor Improvements Study, Puerto Rico. This integrated report is incorporated herein by reference. The Preferred Alternative consists of the following:

- Widening
  - Widen Army Terminal Channel 50 feet on each side (100 feet total) from an existing width of 350 feet to provide a total width of 450 feet.
  - No additional widening justified at this time.
- Deepening
  - Deepen Cut-6 to project depth of 46 feet.
  - Deepen Anegado Channel to a project depth of 44 feet.
  - Deepen Army Terminal Channel to a 44-foot project depth.
  - Deepen Army Terminal Turning Basin to a 44-foot project depth.
  - Deepen the San Antonio Channels and Cruise Ship Basin East to a project depth of 36 feet.
- Dredged Material Placement Options
  - Base Plan Place dredged material at the existing Offshore Dredged Material Disposal Site (ODMDS).
  - Estimate includes use of a mechanical clamshell dredge to excavate approximately 2,110,000 cubic yards of material into a bottom-dump barge for transport to the ODMDS. A hydraulic dredge could also be used.
  - Beneficial uses of dredged material under consideration include filling holes in Condado Lagoon to enhance sea grass planting and material placement islands with living shorelines.

In addition to the "no action" alternative, a final array of three alternatives with varying levels of benefits and costs were evaluated, including the Preferred Alternative. The alternative with the highest net-benefits (Preferred Alternative described above) has a BCR greater than 1.0 and it

becomes the National Economic Development Plan. There is not a locally preferred plan. The Preferred Alternative is also the environmentally preferable alternative.

I have reviewed the IFR/EA for the Preferred Alternative. This Finding incorporates by reference all discussions and conclusions contained in the IFR/EA enclosed hereto. Based on the information analyzed in the IFR/EA, which reflects pertinent information obtained from agencies having jurisdiction by law and/or special expertise, I conclude that the Preferred Alternative will not significantly affect the quality of the human environment and does not require an Environmental Impact Statement. Reasons for this conclusion are in summary:

- a. All practicable means to avoid and minimize adverse environmental effects have been incorporated into the Preferred Alternative. Environmental commitments as detailed in the IFR/EA will be implemented to minimize impacts.
- b. Pursuant to the Clean Water Act of 1972, as amended, any discharge of dredged or fill material associated with the TSP have been found to be compliant with section 404(b)(1) Guidelines (40 CFR 230). This evaluation can be found in Appendix J of the IFR/EA.
- c. The Puerto Rico Planning Board will review the federal consistency determination concurrently with the public review of the draft IFR/EA. As shown in Appendix I, the Corps determined the proposed action is consistent with the enforceable policies of the Puerto Rico Coastal Management Program, per the Federal Coastal Zone Management Act. A water quality certification pursuant to section 401 of the Clean Water Act will be obtained from Puerto Rico Environmental Quality Board prior to construction. All conditions of the water quality certification will be implemented in order to minimize adverse impacts to water quality.
- d. Pursuant to section 7 of the Endangered Species Act of 1973, as amended, coordination with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service is ongoing and will be completed prior to approval of the final IFR/EA. The Corps agrees to maintain open and cooperative communication with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service regarding actions necessary to complete the project.
- e. Pursuant to section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, consultation has been initiated and is ongoing with the Puerto Rico State Historic Preservation Officer and the National Park Service in accordance with the National Historic Preservation Act and considerations given under the National Environmental Policy Act. No effect to historic properties are anticipated.

In view of the above, and the attached IFR/EA, and after consideration of public and agency comments received on the project, I conclude that the Preferred Alternative would not result in a significant effect on the human environment. This Proposed Finding of No Significant Impact incorporates by reference all discussions and conclusions contained in the IFR/EA enclosed herewith.

Jason A. Kirk, P.E. Colonel, U.S. Army District Commander

Date



### GOVERNMENT OF PUERTO RICO

Puerto Rico Tourism Company

August 29, 2017

Mr. Paul DeMarco Environmental Branch Department of the Army Jacksonville District Corps of Engineers 701 San Marco Blvd. Jacksonville, FL 32207-0019

### DRAFT FEASABILITY STUDY AND ENVIRONMENTAL ASSESSMENT NAVIGATIONAL IMPROVEMENTS TO THE SAN JUAN HARBOR

Dear Mr. DeMarco:

The Puerto Rico Tourism Company (PRTC) has reviewed the previously mentioned document. As the local economic development agency in charge of developing tourism, we welcome the proposed improvements to the San Juan Harbor. The San Juan Harbor is the main port in Puerto Rico for cruise ship operations. During fiscal year 2016-2017, the port of San Juan received 507 cruise ship trips (197 of those as homeport operation). For the same fiscal year, we received a total of 1,467,070 passengers (442,382 of those as homeport passengers). The cruise ship activity in the San Juan Harbor is important for the economy of the San Juan Metropolitan Region and Puerto Rico.

Among works to be done, the Tentatively Selected Plan (TSP) would include the deepening of the federal channels leading to the cruise ship terminals along the San Antonio Channels from 35 to 36 feet and Cruise Ship Basin East from 30 to 36 feet. The proposed deepening would benefit the cruise chip piers in Old San Juan and the Pan-American piers at Isla Grande. The deepening is necessary because in keeping up with modern times cruise ships have become larger.



La Princesa, San Juan, PR 00902 | PO Box 9023960, San Juan, PR 00902-3960

Mr. Paul DiMarco Draft Feasibility Study – San Juan Harbor Page 2 of 2 August 29, 2017

The proposed improvements are needed for the continued development of the tourism industry in Puerto Rico. We find that the Feasibility Study and the Environmental Assessment addresses all economic and environmental issues that may arise from the proposed improvements.

Should you have any questions regarding this letter you may contact me or planner William Pitre at (787) 721-2400, ext. 2063.

Cordially,

Saúl Suárez-Flores Director Planning and Development Office

WP/mrd

### CENTER for BIOLOGICAL DIVERSITY



September 7, 2017

Paul DeMarco Army Corps of Engineers PO Box 4970 Jacksonville, FL 32232 Paul.m.demarco@usace.army.mil

### **Re: Comments on San Juan Harbor Environmental Assessment**

The Army Corps must revise its Finding of No Significant Impact and analyze the impacts of widening and deepening the San Juan Harbor in a full Environmental Impact Statement (EIS). Moreover, the Environmental Assessment (EA) is inadequate and fails to comply with the National Environmental Policy Act (NEPA).

### I. The Corps must prepare an EIS because there are significant environmental impacts associated with the project.

NEPA's fundamental purposes are to guarantee that: (1) agencies take a hard look at the environmental consequences of their actions before these actions occur; and (2) agencies make the relevant information available to the public so that it may also play a role in both the decision-making process and the implementation of that decision. See, e.g. 40 C.F.R. § 1500.1. To assure transparency and thoroughness, agencies also must "to the fullest extent possible...[e]ncourage and facilitate public involvement" in decision-making. 40 C.F.R. §1500.2(d).

The purpose of an EA is to assist the agency in determining whether the project may significantly affect the environment and therefore require a full EIS. 42 U.S.C. §4332(2)(C); 40C.F.R. §1508.9. An agency may avoid preparing a full EIS if the agency: (1) prepares an environmental assessment identifying and analyzing the action's environmental effects; and (2) makes a finding of no significant impact, which presents the agency's reasons for concluding that the action's environmental effects are not significant. 40 C.F.R. §§ 1501.4(b), (e); 1508.9; 1508.1.3. NEPA requires federal agencies to prepare an EIS for all "major federal actions significantly affecting the quality of the human environment." 42 U.S.C. § 4332(2)(C); see also 40 C.F.R. § 1501.4. A full EIS is required if "substantial questions are raised as to whether a project . . . may cause significant degradation of some human environmental factor." *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1149-50 (9th Cir. 1998). To trigger this requirement, the plaintiff "need *not show* that significant effects will *in fact* occur;" but rather, "raising substantial questions whether a project may have a significant environmental effect is sufficient." *Id*. (emphases in original).

Whether an action may have "significant" impacts on the environment is determined by considering the "context" and "intensity" of the action. 40 C.F.R. § 1508.27. "Context" means

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the significance of the project "must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality." Id. § 1508.27(a). Intensity of the action is determined by considering the following ten factors: (1) impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial; (2) the degree to which the proposed action affects public health or safety; (3) unique characteristics of the geographic area such as proximity to ecologically critical areas; (4) the degree to which the effects on the quality of the human environment are likely to be highly controversial; (5) the degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks; (6) the degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration; (7) whether the action is related to other actions with individually insignificant but cumulatively significant impacts; (8) the degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources; (9) the degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the federal Endangered Species Act; (10) whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment. 40 C.F.R. § 1508.27(b)(1)-(10).

In the case of the Feasibility Study to widen and deepen San Juan Harbor, the applicability of at least two of the significance factors (impacts to a species listed under the ESA and cumulatively significant impacts) indicates that the Corps must prepare an EIS. The presence of one or more significant effects can trigger the need for a full EIS. *See, e.g. Nat'l Parks & Conserv. Ass'n. v. Babbitt,* 241 F.3d 722, 731 (9th Cir. 2001) (either of two significance factors considered by the court "may be sufficient to require preparation of an EIS in appropriate circumstances"); *Anderson v. Evans,* 350 F.3d 815, 835 (9th Cir. 2003) (presence of one or more factors can necessitate preparation of a full EIS). If the Crops does not prepare an EA or EIS for this permit, the agency has abrogated its duty to fully analyze the impacts of, alternatives to, and mitigation measures for the action. 40 C.F.R. §§ 1502.14, 1502.16, 1508.7, 1508.8.

The Center strongly urges the Corps to prepare an EIS for this project, which would include complete scientific substantiation for the project, a thorough analysis of all direct, indirect, and cumulative environmental impacts, and consideration of a full range of alternatives to the project. Moreover, to meet its NEPA obligations, the NEPA document must be made available for public review and comment. *See, e.g. Anderson v. Evans*, 314 F.3d 1006, 1016 (9th Cir. 2002) ("the public must be given an opportunity to comment on draft EAs and EISs"). Following is a description of some, but not all, of the potentially significant environmental impacts of the proposed action.

### a. Impacts to threatened corals are significant.

The EA's conclusion that there will be no significant impacts on corals is arbitrary. The Corps acknowledges that the project will affect ESA-listed coral species, but arbitrarily discounts those effects. Corals are deeply imperiled and the project will adversely affect threatened corals by increasing sedimentation and smothering corals.

San Juan Harbor is near at least two large coral communities, one off the coast of the Puerta de Tierra beach, and another off of the coast of the Parque Nacional Isla de Cabras.<sup>1</sup> Although the Corps focuses its abbreviated analysis on *Acropora cervicornis*, the agency needs to comprehensively analyze the impacts on all listed corals.

The Corps must comprehensively analyze impacts to nearby corals arising from dredging-related sedimentation in a full EIS. As the Corps learned during the deepening and widening of the port channels at the Port of Miami, sedimentation from harbor improvement projects can spread great distances away from the dredging locations, harming corals and other marine species. At the Port of Miami, dredged material migrated hundreds of meters away from the dredging and blasting sites.<sup>2</sup> This sedimentation smothered corals, causing widespread total and partial coral mortality by preventing photosynthesis, filtering, and increasing the risk of stress-related diseases.<sup>3</sup> The vessels transporting dredged material to the disposal site will also leaked dredged material and create turbidity and sedimentation that needs to be analyzed.

The Corps impermissibly relies on an outdated 150-meter impact zone. The Corps relies on old information from Key West and Port Everglades that are no longer appropriate. The best available science demonstrates that the Project will cause sedimentation and other harmful impacts to corals beyond 150-meters from dredging activities. Nonetheless the Corps and NMFS used a 150-meter "impact" zone to estimate impacts of the Port Everglades project. Specifically, scientific monitoring of impacts on corals from the similar Port of Miami channel widening project demonstrated that the footprint of adverse impacts to coral habitat and corals extended far beyond 150-meters. Monitoring at the Port of Miami showed that Project sedimentation impacted corals well beyond the 150-meter mitigation zone, causing the Corps to re-initiate consultation.<sup>4</sup> The Crops' reliance on old NMFS findings that effects on corals would be "insignificant" is arbitrary given the new information and newly listed corals. The Agencies' use

<sup>&</sup>lt;sup>1</sup> Location of Coral Reefs—Reef Basemap, Reefbase, http://reefgis.reefbase.org/ (last accessed May 4, 2016).

<sup>&</sup>lt;sup>2</sup> Dial Cordy Delineation of Potential Sedimentation Effect Area Within Middle and Outer Reef Habitats at 42 (August 2015) (sedimentation-related mortality occurred in excess of 650 meters from construction activities); NMFS, Examination of Sedimentation Impacts to Coral Reef along the Port of Miami Entrance Channel, December 2015, Final Report at 35, 47 (April 2016) (noting sedimentation impacts in excess of 700 meters north of the port channel).

<sup>&</sup>lt;sup>3</sup> Dial Cordy Delineation of Potential Sediment Effect Area Within Middle and Outer Reef Habitats at 3 (August 2015); FDEP Report on Sites Visited in Port of Miami Expansion Project February 9, 2015; June 17, 2015, NOAA Port of Miami Field Observations from May 19, 2015; NMFS, Examination of Sedimentation Impacts to Coral Reef along the Port of Miami Entrance Channel, December 2015, Final Report at 8 (April 2016); Pollock, F. J., Larnb, J. 8, Field, S. N., Fleron, S. F., Schaffelke, 8., Shedrawi, G., & Willis, B. L. (2014). Sediment and turbidity associated with offshore dredging increase coral disease prevalence on nearby reefs. PloS ONE, 9(7), e102498 (corals exposed to dredging-related sedimentation are twice as likely to develop disease); DERM Report on Opportunistic Hardbottom/Reef Inspections (July 2014) (dredging-related sedimentation can "increase diseases in corals").

<sup>&</sup>lt;sup>4</sup> Florida Department of Environmental Protection, *Field notes on impact assessment in Miami Phase III Federal Channel Expansion Permit #0305721-001-BI*. 39pp (18 August 2014) (impacts extended beyond 200 meters); Miami-Dade Department of Regulatory and Economic Resources, Division of Environmental Resources Management, US Army Corps of Engineer's Port of Miami Channel Deepening Project: Report on Opportunistic Hardbottom/Reef Inspections 10pp. (July 2014) (sedimentation impacts extending to 450 meters); National Oceanic and Atmospheric Administration, Port of Miami Acropora cervicornis Relocation Report, Final Report 15pp. (13 February 2014) (noting sedimentation impacts extending beyond 200 meters).

of an inadequate impact zone resulted in a vast underestimate of the true harmful impacts of dredging activities on corals.

The Corps' reliance on a management plan is insufficient to fully mitigate the adverse impacts on corals. The project's impacts on threatened corals triggers the need to prepare a full EIS.

### b. The project will have significant effects on endangered marine mammals.

The Corps must also consider the effect of increasing the size and number of ships calling at the Harbor as is relates to the increased risk of harm from ship strikes. Ships striking and killing or maiming marine species is a serious, prevalent problem that the Project may worsen in the Harbor area as a result of this project. The EA fails to consider that the operation of the widened and deepened channel will harm Antillean manatees. Vessel collisions are a leading cause of mortality and injury for manatees.

Higher traffic volumes of larger ships in the shipping lanes leading up to and within the Puerto Rico area will increase the risk of collisions with marine species. Larger vessels account for a disproportionate number of ship strikes—especially fatal ship strikes.<sup>5</sup> Partly due to their greater weight and partly because of their decreased maneuverability, "most, if not all, lethal collisions are caused by large ships rather than small vessels."<sup>6</sup> For instance, most large ship strikes to whales result in death.<sup>7</sup>

Ship strikes pose a serious threat to marine mammals, such as the Puerto Rico population of Antillean manatees. The U.S. Fish and Wildlife Service (USFWS) has estimated that, over the past thirty years in in Puerto Rico, "37% of manatees died of natural causes, 26% die[d] of human-related causes, and 36% of [unknown] causes."<sup>8</sup> USFWS lists boat strikes as the primary cause of human-caused manatee deaths in Puerto Rico.<sup>9</sup> Naturally, the number of ship strikes is related to the number of ships navigating in Puerto Rico's waters. A harbor accommodating larger ships will increase the likelihood that Puerto Rico manatees will suffer ship-related injury or death. Because the Puerto Rico manatee population is small and geographically isolated, any increase in impacts to this population is significant, and the Corps must mitigate these impacts accordingly.

It is insufficient to mitigate only the impacts of dredging and construction, a full EIS must also disclose the impacts of vessel traffic on manatees. First, the assumption that vessel traffic will decrease is incorrect because even though there are larger vessels there will be an increase in vessel traffic to meet growing demands. Second, even assuming fewer vessels, the larger vessels

<sup>&</sup>lt;sup>5</sup> Laist et al., *Collisions Between Ships and Whales*, 17 MARINE MAMMAL SCI. 35, 54 (2001); Silber et al., *Hydrodynamics of a Ship/Whale Collision*, 391 J. EXPERIMENTAL MARINE BIOLOGY & ECOLOGY 11, 18-19 (2010) (ship size correlated to risk and severity of ship strike)

 <sup>&</sup>lt;sup>6</sup> Laist et al., *Collisions Between Ships and Whales*, 17 MARINE MAMMAL SCI. 35, 54 (2001); Silber et al., *Hydrodynamics of a Ship/Whale Collision*, 391 J. EXPERIMENTAL MARINE BIOLOGY & ECOLOGY 11, 18-19 (2010).
<sup>7</sup> A.S. Jansen & G.K. Silber, *Large Whale Ship Strike Database*, NOAA Technical Memorandum, NMFS-OPR-25, U.S. DEP'T COMMERCE 9, fig. 4 (2004).

<sup>&</sup>lt;sup>8</sup> USFWS, Antillean Manatee Fact Sheet (Apr. 2, 2013), http://www.fws.gov/caribbean/es/manatee\_factsheet.html. <sup>9</sup> *Id*.

are more likely to have a significant impact on manatees because of their size, maneuverability and speed.

As part of its environmental review, the Corps must consider how lowering the speed of ships entering into the Harbor may reduce the likelihood of fatal and injurious ship strikes. In addition, the Corps should require marine observers to search for manatees within any of the shipping channels. In addition, the Corps should recommend that, once a manatee sighted, ships should take precautions, such as stopping their vessel to allow the manatee to pass, stopping the vessel's propellers, and taking any necessary steps to avoid colliding with manatees.

### c. The dredging may have significant impacts on sea turtles.

The Corps acknowledges that hopper dredges can harm and kill sea turtles. Unless there is a clear and binding statement that the project will not use hopper dredges, then the Corps must fully analyze the impacts of dredging on endangered sea turtles. The lighting from the dredge can also disorient sea turtles. The assumption that dredging to widen and deepen the channel are similar to maintenance dredging is arbitrary. This project is a much larger undertaking that will last much longer and will remove more materials with dredges operating for longer periods. These impacts on endangered species weigh toward a full EIS.

### d. The noise impacts on marine mammals will be significant.

The Corps' discussion of noise impacts from the project is important, but it impermissibly narrowed its analysis to construction activities. The agency must also consider and disclose the environmental impacts of vessel noise. The Corps acknowledges that the project facilitates longterm access of larger ships in approaching and in the harbor, and larger ships are noisier. Anthropogenic ocean noise can severely impact marine species. Anthropogenic noise pollution can mask marine mammal communications at almost all frequencies these mammals use.<sup>10</sup> "Masking" is a "reduction in an animal's ability to detect relevant sounds in the presence of other sounds."<sup>11</sup> Ambient ship noise can cover important frequencies these animals use for more complex communications.<sup>12</sup> Some species, such as the highly endangered right whale, are especially vulnerable to masking.<sup>13</sup> Ship noise can completely and continuously mask right whale sounds at all frequencies.<sup>14</sup> NOAA has recognized that this masking may affect marine mammal survival and reproduction by decreasing these animals' ability to "[a]ttract mates,

<sup>11</sup> OCEAN NOISE AND MARINE MAMMALS, NAT'L RES. COUNCIL 96 (2003), available at

<sup>&</sup>lt;sup>10</sup> See, e.g., John Hildebrand, Impacts of Anthropogenic Sound on Cetaceans, in MARINE MAMMAL RESEARCH: CONSERVATION BEYOND CRISIS (Reynolds, J.E. III et al., eds. 2006); L. S. Weilgart, The Impacts of Anthropogenic Ocean Noise on Cetaceans and Implications for Management, 85 CANADIAN J. ZOOLOGY 1091-1116 (2007).

http://www.nap.edu/openbook.php?record\_id=10564&page=R1.

 $<sup>^{12}</sup>$  Id. at 42, 100 ("An even higher level, an understanding threshold" may be necessary for an animal to glean all information from complex signals.")

<sup>&</sup>lt;sup>13</sup> Clark, C.W. at al., Acoustic Masking in Marine Ecosystems: Intuitions, Analysis, and Implication, 395 MARINE ECOLOGY PROGRESS SERIES 201, 218-19 (2009), available at http://www.int-

res.com/articles/theme/m395p201.pdf; Clark, C.W. et al., Acoustic Masking in Marine Ecosystems as a Function of Anthropogenic Sound Sources, at \*17, fig. 8, available at

https://www.academia.edu/5100506/Acoustic Masking in Marine Ecosystems as a Function of Anthropogenic Sound\_Sources (last visited Oct. 29, 2014).  $I^{14}$  *Id* (showing anthropogenic noise masking 100 percent of the frequencies right whales used over the majority of a

six-hour study).

[d]efend territories or resources, [e]stablish social relationships, [c]oordinate feeding, [i]nteract with parents, or offspring, [and] [a]void predators or threats."<sup>15</sup>

In addition to masking effects, marine mammals have displayed a suite of stress-related responses from increased ambient and localized noise levels. These include "rapid swimming away from [] ship[s] for distances up to 80 km; changes in surfacing, breathing, and diving patterns; changes in group composition; and changes in vocalizations."<sup>16</sup> Some avoidance responses to localized marine sounds may even lead to individual or mass strandings.<sup>17</sup> Louder anthropogenic sounds may also lead to permanent hearing loss in marine mammals.<sup>18</sup>

The greatest source of human-caused marine noise is ship propeller cavitation—the sound poorly designed propellers make as they spin through the water.<sup>19</sup> Cavitation accounts for as much as 85 percent of human caused noise in the world's oceans.<sup>20</sup> Cavitation may also increase due to hull designs that create non-homogenous wake fields behind ships.<sup>21</sup> However, even well-designed propellers and hulls may begin to cavitate if they are not regularly cleaned and smoothed.<sup>22</sup> Another significant source of anthropogenic marine noise is on-board machinery, especially diesel engines.<sup>23</sup> Other onboard machines may also cause vibrations that migrate

http://www.mmc.gov/special\_events/capitalhill\_briefing/cox\_capitalhill\_briefing\_0914.pdf.

<sup>&</sup>lt;sup>15</sup> Jason Gedamke, Ocean Sound & Ocean Noise: Increasing Knowledge Through Research Partnerships, NOAA 2 (2014), available at

http://cetsound.noaa.gov/Assets/cetsound/documents/MMC%20Annual%20Meeting%20Intro.pdf; Clark, C.W. et al., *Acoustic Masking in Marine Ecosystems as a Function of Anthropogenic Sound Sources*, at \*3, *available at* https://www.academia.edu/5100506/Acoustic\_Masking\_in\_Marine\_Ecosystems\_as\_a\_Function\_of\_Anthropogenic Sourd Sources (lost visited Oct 20, 2014)

\_Sound\_Sources (last visited Oct. 29, 2014). <sup>16</sup> OCEAN NOISE AND MARINE MAMMALS, NAT'L RES. COUNCIL 94 (2003), *available at* http://www.nap.edu/openbook.php?record\_id=10564&page=R1.

<sup>&</sup>lt;sup>17</sup> *Id.* at 132; BRANDON L. SOUTHALL ET AL., FINAL REPORT OF THE INDEPENDENT SCIENTIFIC REVIEW PANEL INVESTIGATING POTENTIAL CONTRIBUTING FACTORS TO A 2008 MASS STRANDING OF MELON-HEADED WHALES 3 (*PEPONOCEPHALA ELECTRA*) IN ANTSOHIHY, MADAGASCAR, INT'L WHALING COMM'N 4 (2013), *available at* http://iwc.int/private/downloads/4b0mkc030sg0gogkg8kog4o4w/Madagascar%20ISRP%20FINAL%20REPORT.pd f.

<sup>&</sup>lt;sup>18</sup> Kastak, D. et al., *Noise-Induced Permanent Threshold Shift in a Harbor Seal*, 123 J. ACOUSTICAL SOC'Y OF AM. 2986 (2008); Kujawa, S.G. & Liberman, M.C, *Adding Insult to Injury: Cochlear Nerve Degeneration After "Temporary" Noise-Induced Hearing Loss*, 29 J. NEUROSCIENCE 14,077.

<sup>&</sup>lt;sup>19</sup> Joseph J. Cox, *Evolving Noise Reduction Requirements in the Marine Environment*, MARINE MAMMAL COMM'N: CONGRESSIONAL BRIEFING ON OCEAN NOISE, at 12 (2014), *available at* 

http://www.mmc.gov/special\_events/capitalhill\_briefing/cox\_capitalhill\_briefing\_0914.pdf; GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 1-2 (2014) (definition of cavitation).

<sup>&</sup>lt;sup>20</sup> Joseph J. Cox, *Evolving Noise Reduction Requirements in the Marine Environment*, MARINE MAMMAL COMM'N: CONGRESSIONAL BRIEFING ON OCEAN NOISE 12 (2014), *available at* 

<sup>&</sup>lt;sup>21</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 4 (2014).

<sup>&</sup>lt;sup>22</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 5 (2014) (definition of cavitation).

<sup>&</sup>lt;sup>23</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 4 (2014) (definition of cavitation).

underwater.<sup>24</sup> Finally, ship noise increases at higher ship speeds, as this increases the degree and volume of cavitation and onboard machine sounds.<sup>25</sup>

Here, the agency must analyze the noise impacts from larger ships that will be approaching and traveling in San Juan Harbor as a result of this widening and deepening project.

### e. The impacts from potential oil spills are significant.

The Corps' failed to consider the significant environmental impact from oil spills. The EA notes that the project will allow larger capacity petroleum tankers. It will also change the current practice of loading tankers with light loads. The agency must analyze in a full EIS the potential for an oil spill and the environmental risks of an oil spill. The existing channel width and depth limits the volume of petroleum products that could be carried through the channel in one vessel. This means that there is a greater potential for a high volume oil spill that could harm and kill corals, seabirds, sea turtles, manatees and other species. It will also impair water and air quality.

Acute and chronic oil spills have a wide array of lethal and sublethal impacts on marine species, including immediate and long-term effects. Petroleum oil is a complex mixture of hundreds of different compounds, mostly hydrocarbons, with different levels of toxicity to wildlife. Polycyclic aromatic hydrocarbons (PAHs) are among the most toxic oil components and have been documented to cause significant impacts on wildlife. Direct impacts to wildlife from exposure to oil include behavioral alteration, suppressed growth, induced or inhibited enzyme systems and other molecular effects, physiological responses, reduced immunity to disease and parasites, histopathological lesions and other cellular effects, tainted flesh, and chronic mortality.<sup>26</sup> Oil can also exert indirect effects on wildlife through reduction of key prey species.<sup>27</sup> As detailed below, the persistence of toxic subsurface oil leading to chronic exposure, even at sublethal levels, can impact wildlife species and ecosystems for decades.<sup>28</sup>

Exposure to crude oil adversely affects fish at all stages.<sup>29</sup> Oil affects virtually all invertebrate taxa.<sup>30</sup> It is toxic to bottom-dwelling, pelagic and intertidal invertebrates such as corals, lobsters,

<sup>&</sup>lt;sup>24</sup> Guidelines for the Reduction of Underwater Noise from Commercial Shipping to Address Adverse Impacts on Marine Life, Int'l Maritime Organization 4 (2014).

<sup>&</sup>lt;sup>25</sup> GUIDELINES FOR THE REDUCTION OF UNDERWATER NOISE FROM COMMERCIAL SHIPPING TO ADDRESS ADVERSE IMPACTS ON MARINE LIFE, INT'L MARITIME ORGANIZATION 5 (2014) (definition of cavitation).

<sup>&</sup>lt;sup>26</sup> Holdway, D. A. 2002. The acute and chronic effects of wastes associated with offshore oil and gas production on temperate and tropical marine ecological processes. Marine Pollution Bulletin 44:185-203.

<sup>&</sup>lt;sup>27</sup> Peterson, C. H., S. D. Rice, J. W. Short, D. Esler, J. L. Bodkin, B. E. Ballachey, and D. B. Irons. 2003. Long-term ecosystem response to the Exxon Valdez oil spill. Science 302:2082-2086.

<sup>&</sup>lt;sup>28</sup> Id.

<sup>&</sup>lt;sup>29</sup> Carls, M. G., S. D. Rice, and J. E. Hose. 1999. Sensitivity of fish embryos to weathered crude oil: part I. Lowlevel exposure during incubation causes malformations, genetic damage, and mortality in larval pacific herring (Clupea pallasi). Environmental Toxicology and Chemistry 18:481-493; Bernanke, J., and H.-R. Kohler. 2009. The impact of environmental chemicals on wildlife vertebrates. Reviews of Environmental Contamination and Toxicology 198:1-47.

<sup>&</sup>lt;sup>30</sup> Suchanek, T. H. 1993. Oil impacts on marine invertebrate populations and communities. American Zoologist 33:510-523.

crabs, oysters, clams, and zooplankton.<sup>31</sup> Widespread mortality of marine invertebrates generally occurs in the immediate vicinity of oil spills due to chemical toxicity and smothering, and additional mortality can result when toxic components of oil are remobilized from sediments.<sup>32</sup> Sublethal effects to invertebrates from oil exposure include impairment of reproduction, growth, respiration, excretion, chemoreception, feeding, movements, stimulus response and disease resistance.<sup>33</sup> In corals, laboratory experiments have documented broad impacts from oil exposure including reduced growth, tissue damage and death, zooxanthellae expulsion, abnormal feeding behaviors, increased susceptibility to bacterial infection, damaged reproductive function (e.g. lower gonad numbers, sterilization of gametes), impaired larval metamorphosis and recruitment, and bioaccumulation of toxic compounds in exoskeletons.

Oil is hazardous to sea turtles of all ages and the avenues of exposure are numerous. Egg mortality is increased in eggs exposed to oil due to the oil's toxicity and smothering effects (NMFS 2003 at 38). Juvenile and adult turtles encounter oil, tar, and other spill-related chemicals in the water column, at the surface, and through contaminated prey. Laboratory tests of the effects of oil on 15- to 18-month old loggerheads found that both acute and chronic exposure to oil adversely affects all of a sea turtle's major physiological systems (Lutcavage et al. 1995). Because oiled seabirds often return to shore, the impacts of oil spills on seabirds are among the most visible and well-documented. Seabirds, shorebirds, and wading birds are vulnerable to becoming coated with oil at the water surface and shoreline. Oiling destroys the water-proofing and insulating properties of the feathers, thereby compromising their buoyancy and ability to thermoregulate (Jenssen 1994). Oiled birds rapidly deplete their fat reserves due to their inability to forage and regulate their body temperature, and quickly become emaciated, dehydrated, and hypothermic, often leading to mass die-offs (Jenssen 1994). Studies on the effects of oil on eggs have shown significant mortality and developmental defects in embryos (Jenssen 1994). Oiled birds are also at high risk of ingesting oil when they preen their feathers (Briggs et al. 1997). Ingested oil can damage the gastrointestinal tract, evidenced by ulcers, diarrhea, and a decreased ability to absorb nutrients, and inhibit proper hormone function (Jenssen 1994). Inhalation of volatile hydrocarbons can result in pneumonia, neurological damage, and absorption of chemicals that can lead to cancer.<sup>34</sup>

Whales, dolphins, and manatees can be exposed to oil internally by inhaling volatile compounds at the surface, eating or swallowing oil, and consuming oil-contaminated prey, and externally by swimming in oil (NOAA 2010b). The inhalation of toxic hydrocarbons can cause respiratory irritation, inflammation, emphysema, and pneumonia (Geraci and St. Aubin 1988, NOAA 2010b). If absorbed into the lungs and bloodstream, toxic hydrocarbons can accumulate in tissues like the brain and liver causing neurological disorders and organ damage, result in anemia and immune suppression, and lead to reproductive failure or death (Geraci and St. Aubin 1988, NOAA 2010b). Baleen whales that filter-feed at the surface are vulnerable to coating and fouling

<sup>31</sup> USFWS. 2010. Effects of Oil on Wildlife and Habitat. (May 2010), available at

http://www.fws.gov/home/dhoilspill/pdfs/DHJICFWSOilImpactsWildlifeFactSheet.pdf.; Peterson, C. H., M. C. Kennicutt, R. H. Green, P. Montagna, D. E. Harper, E. N. Powell, and P. F. Roscigno. 1996. Ecological consequences of environmental perturbations associated with offshore hydrocarbon production: a perspective on long-term exposures in the Gulf of Mexico. Canadian Journal of Fisheries and Aquatic Science 53:2637-2654.

<sup>&</sup>lt;sup>32</sup> Suchanek 1993, Peterson et al. 1996, Peterson et al. 2003, Haapkyla 2007

<sup>&</sup>lt;sup>33</sup> Supra at 30.

<sup>&</sup>lt;sup>34</sup> Oiled Wildlife Care Network, http://www.owcn.org/about-oiled-wildlife/effects-of-oil-on-wildlife

their baleen plates with oil, thereby decreasing their ability to eat (Geraci and St. Aubin 1988, NOAA 2010b). Manatees are at risk from fouling the sensory hairs around their mouths which are important for detecting edible seagrasses. Cetaceans may ingest oil-contaminated zooplankton and fish prey, leading to gastrointestinal inflammation, ulcers, bleeding, diarrhea, and maldigestion (Geraci and St. Aubin 1988, NOAA 2010b). Long-term studies of killer whales impacted by the *Exxon Valdez* spill indicate that oil spills can have long-term, population-level effects on marine mammals. A resident killer whale pod that suffered a 33% loss in the year following the *Exxon Valdez* spill had not recovered to pre-spill numbers sixteen years after the spill, while a transient pod that experienced a 41% loss, including reproductive-age females, has continued to decline toward extinction since the spill (Matkin et al. 2008).

The potential for larger volume oil spills is greatly increased by widening and deepening the harbor. Not only will larger ships be able to come into the harbor, but they will also be transiting in the ocean where whales occur and along the coast with potential impacts on sensitive coral reef ecosystems.

# f. The cumulative effects of numerous widening and deepening harbor projects must be evaluated.

The cumulative effects of connected widening and deepening must be evaluated in a full EIS. The Corps' evaluation and approval of widening and deepening ports throughout the coastal US are connected actions that should be evaluated in a programmatic EIS. Cumulative environmental effects can be defined as effects on the environment which are caused by the combined results of past, current and future activities. 40 CFR §1508.7. There are numerous feasibility studies occurring at ports and harbors throughout the United States to widen and deepen navigation channels to allow larger vessels. These actions are all related and foreseeable. Additionally, many will have impacts in multiple locations for species that migrate. Specifically, with more of these larger vessels being able to go into numerous ports, this will increase vessel traffic in the ocean that will be louder and more likely to collide with marine mammals.

# **II.** The EA is inadequate to meet the Corps' obligation to take a hard look at the environmental impacts.

The EA fails to consider important information and it makes conclusions that are contrary to fact. There are several shortcomings in the EA, some of which are described in the above sections.

First, the agency's reliance on a 150-meter buffer zone is inadequate and the recent information from Port of Miami renders reliance on old analyses outdated and arbitrary. Corals have beendocumente din the area. Sedimentation and water quality issues have been identified far beyond 150-meters from similar dredging projects. Dredged materials will leak off of the vessel taking them to the disposal area and affect listed corals. Thus, the impacts on ESA-listed corals are underestimated.

Second, the agency concedes that seagrass habitat will be affected, but it fails to consider the impact of losing seagrasses on manatees.

Third, conclusion that noise will only temporarily increase is incorrect, because noise will increase permanently because larger vessels are noisier. Moreover, the assumption that the vessel calls are likely to decrease under the proposed action is flawed because shipping is likely to continue to increase.

Fourth, the EA only analyzes the environmental impacts of construction, and fails to consider the ongoing impacts of deepening and widening the channel. This will mean larger vessels that are more likely to collide with marine mammals including whales and manatees.

Fifth, the EA fails to consider alternatives. It appears that the EA considers only the no action and various depths of dredging. This is inadequate as all of the alternatives then have similar effects. The Corps must analyze alternatives that will be environmentally beneficial, for example mitigation for corals by outplanting, noise reduction of vessels by either speed limits or requiring the best available noise reduction technology at the port, ship strike avoidance by requiring approaching speed limits, education of mariners on avoiding striking manatees and whales, limiting the number of vessels that may transit to ensure that there is not an increase in vessel calls. There are numerous alternatives that would present an environmentally preferable alternative.

And finally, the agency's evaluation of cumulative effects is woefully inadequate. A conclusory statement that "cumulative adverse impact will be appropriately minimized" fails to disclose cumulative impacts.

# **III.** The Corps must complete consultation under section 7 of the ESA because its action may affect listed species, and it must obtain a permit under the MMPA.

Section 7(a)(2) of the ESA requires federal agencies to "insure that any action authorized, funded, or carried out by such agency . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the adverse modification of habitat of such species . . . determined . . . to be critical . . . ." 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). To accomplish this goal, agencies must consult with the delegated agency of the Secretary of Commerce or Interior whenever their actions "may affect" a listed species. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a).

The ESA's consultation requirement applies to Federal agencies taking *any action*. 16 U.S.C. § 1536(a)(2). "Action means all <u>activities or programs of any kind authorized</u>, funded, or carried out, in whole or in part, by Federal agencies in the United States or upon the high seas" including "the granting of licenses, contracts, leases, easements, rights-of-way, <u>permits</u>, or grants-in-aid." 50 C.F.R. § 402.02 (emphasis added). The Supreme Court noted that ESA's section 7 command to Federal agencies "admits of no exception." *Tenn. Valley Auth.*, 437 U.S. v. Hill, 437 U.S. 153, 173 (1978). See also *Pacific Rivers Council v. Thomas*, 30 F.3d 1050, 1054-55 (9th Cir. 1994). (recognizing that Congress intended "agency action" to be interpreted broadly, admitting of no limitations.) Moreover, the use of the word "shall" in a statute indicates Congress' intent to impose a mandatory duty. *Bennett v. Spear*, 520 U.S. 154, 172 (1997) (use of "shall" creates a "categorical requirement").

The Corps concedes that the project may affect listed species, and therefore it must engage in consultation with the National Marine Fisheries Service and Fish and Wildlife Service (for manatees). The Corps determination that the project is not likely to adversely affect listed species such as corals, manatees, and other marine mammals is flawed for many of the reasons mentioned above.

Additionally, the Corps needs an authorization under the Marine Mammal Protection Act. The MMPA prohibits the taking of marine mammals, unless the take falls within certain statutory exceptions. 16 U.S.C. § 1371(a)(3). The statute defines "take" is as "to harass, hunt, capture, collect, or kill, or attempt to harass, hunt, capture, collect or kill, any marine mammal." 50 C.F.R. § 216.3; 16 U.S.C. § 1362(13).

The Corps concedes that behavioral effects of its action are possible, but discounts those effects on marine mammals. The agency's determination that "no additional coordination under the MMPA is anticipated for this project" and that "no incidental harassment would occur" is arbitrary. As described above, the project will take marine mammals through noise disturbance, ship strikes, and reduced foraging areas for manatees. For these reasons, the Corps must obtain an MMPA permit before proceeding with the project.

### IV. Conclusion

In sum, the Corps should revoke its Finding of No Significant Impact, prepare a comprehensive EIS disclosing the impacts of widening and deepening San Juan Harbor channel, and obtain authorizations under the ESA and MMPA.

Sincerely,

<u>/s/ Miyoko Sakashita</u> Miyoko Sakashita Oceans Program Director

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CN 078-04495 REV. 05/17

#### GOVERNMENT OF PUERTO RICO PUERTO RICO ELECTRIC POWER AUTHORITY

#### SAN JUAN, PUERTO RICO



GPO BOX 364267 SAN JUAN, PR 00936-4267

www.prepa.com

September 11, 2017

Mr. Paul DeMarco, Department of the Army Jacksonville District Corps of Engineers 701 San Marco Boulevard Jacksonville, FL 32207-8175

Dear Mr. DeMarco:

### RE: San Juan Harbor Navigational Improvements Project Request for Information

On August 30, 2017, the Puerto Rico Electric Power Authority (PREPA) received your letter regarding the above mentioned project. As a result of the evaluation of the information submitted by the US Army Corps of Engineers (CoE), PREPA submits the following information regarding the impact of the proposed Project, as presented, in PREPA's operations and infrastructure.

PREPA is fully supportive of the proposed Project, since for the efficient and reliable operation of the electric system of Puerto Rico, some of the generating units on the north coast of the Island must use natural gas instead of the oil fuels used today. This requires the construction of an LNG receiving, storage and re-gasifying infrastructure, and the dredge of the navigational channel within the San Juan Harbor, in order for it to have the required depth for the LNG Carriers. Notwithstanding its support for the Project, PREPA also has some concerns that will require the Corps 'attention during the dredging activities.

The electrical system in Puerto Rico is operated by PREPA, a public corporation created by Law No. 83 of 1941. To supply the electrical system demand of the Island, PREPA operates several generating units located at different geographical areas. Among them are the Palo Seco and San Juan Complexes, located on the north coast of

<sup>&</sup>quot;We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information."

Mr. Paul DeMarco September 11, 2017 Page 2

the Island, specifically in the Toa Baja and San Juan municipalities, respectively. Palo Seco has a total generation of 722 megawatts (MW), while San Juan has 840 MW. These units are essential in ensuring the reliability and stability operation of the electric system, and therefore, critical for its operation.

To supply the fuel (Bunker C and Diesel) demand of both complexes, PREPA contracts suppliers to ship the fuel in vessels that dock in the Puerto Rico Port Authority's (PRPA) Terminal-ABC in order to transfer it to PREPA's onshore storage tanks located at each facility. Therefore, special consideration shall be taken during the Project's planning and execution to avoid any fuel supply disruption to these power stations. Otherwise, it may result in an adverse impact on the electrical system operation and reliability, as well as the people of Puerto Rico's wellbeing and national security stability.

The San Juan Complex seawater intake structures are located near the proposed Project's area. During the proposed dredging activities, there is the potential of impacts to the quality of the seawater pumped into the condensers circulation water system, which may affect the power stations compliance with the regulatory agencies water quality requirements. Also, it may limit the generating units' thermal efficiency, reducing their maximum generation capacity and availability, and increasing the maintenance costs associated to additional condensers cleaning activities. Therefore, the implementation of best management practices during the Project execution are required to prevent and reduce the impact of the proposed dredging activities to PREPA's operations and infrastructure at the San Juan Complex.

Regarding PREPA's future plans, in order to provide natural gas to some of its generating units in Palo Seco and San Juan, PREPA has performed a Feasibility and Option Study through which it preliminarily concluded that there are two feasible options. The preferred feasible option is a Storage and Vaporization Infrastructure at the San Juan Complex, which includes a shore side LNG receiving terminal with carriers and vaporization ashore and cargo provided through LNG carrier. The LNG carriers are expected to require a depth of up to 40.2 feet and channel width of 400 feet through the Army Terminal Channel and its Turning Basin. Due to the need for this infrastructure, the viability study for the proposed dredged project already integrated a maximum widening of the Army Terminal Channel and Turning Basin from 40 to 44 feet.

For additional information, please contact Mrs. Luisette X. Ríos Castañer, Environmental Protection and Quality Assurance Division, Acting Head, at (787) 521-4960.

Cordially,

Efran Paredes Maisonet Planning and Environmental Protection Director



**GOBIERNO DE PUERTO RICO** 

Oficina Estatal de Conservación Histórica

September 18, 2017

### Gina Paduano Ralph, Ph.D.

Chief, Environmental Branch Jacksonville District Corps of Engineers 701 San Marco Boulevard Jacksonville, FL 32207-8175

SHPO 10-05-15-02 SAN JUAN HARBOR IMPROVEMENT STUDY, SAN JUAN, PUERTO RICO

Dear Dr. Paduano,

We have reviewed the draft submerged cultural resources survey report (July 2017) prepared for the above referenced project. Overall, it is a very comprehensive document. However, while we are aware that the report cautions that positional accuracy of previously reported shipwrecks and obstructions from multiple databases may be tentative, it should, nevertheless, explicitly state when current survey data does not mesh with this earlier locational information and present potential reasons why. For example, *Figure 40* (Page 59) marks a shipwreck within what appears to be the northern end of the Army Terminal Channel, while the current survey did not detect such a find. The final report should directly acknowledge and discuss this discrepancy.

As for the potentially significant anomalies detected in the Anchorage Area F Expansion (referred to in the draft report as "Cable Area"), if these cannot be avoided, the U.S. Army Corps of Engineers will need to evaluate their historic significance in consultation with our Office.

If you have any questions regarding this matter, please contact Miguel Bonini at (787) 721-3737 or <u>mbonini@prshpo.pr.gov</u>.

Sincerely,

any Mul

Carlos A. Rubio-Cancela State Historic Preservation Officer

CARC/GMO/BRS/MB



OFICINA ESTATAL DE CONSERVACIÓN HISTÓRICA OFICINA DEL GOBERNADOR

STATE HISTORIC PRESERVATION OFFICE



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

REPLY TO ATTENTION OF

Planning and Policy Division Environmental Branch

Mr. Randy Lavasseur Superintendent San Juan National Historic Site 501 Norzagaray Street San Juan, PR 00901

NOV 2 0 2017

Re: San Juan Harbor Improvements Project, San Juan, Puerto Rico

Dear Mr. Lavasseur:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), is studying the feasibility of providing navigation improvements to San Juan Harbor, Puerto Rico. San Juan Harbor is part of an existing federal project which currently provides and maintains a system of channels, features, and major terminals for navigational purpose; however, physical constraints and the associated inefficiencies, which limit the system's ability to safely and efficiently serve the forecasted vessel fleet and process the forecasted cargo volumes, generate the need for modifications to the existing navigation system. The purpose of this project is to identify and recommend modifications that would improve the efficiency of the navigation system. The San Juan Harbor Improvements Project Feasibility Study modeled a number of alternative plans that combined multiple structural and nonstructural measures to improve the safety and efficiency of the navigation system. As a result of the feasibility study, a Tentatively Selected Plan (TSP) for the project was chosen which includes deepening of the channel at Cut-6, Anegado Channel, Army Terminal Channel, Army Terminal Turning Basin, San Antonio Channels, and Cruise Ship Basin East, and widening the Army Terminal Channel 50 feet on each side of the federal channel (Figure 1).

As part of the consideration of potential impacts of the project on historic properties, the Corps determined that all portions of San Juan Harbor where widening and deepening were proposed should be subject to a submerged cultural resources survey. The Corps contracted Southeastern Archaeological Research (SEARCH) to conduct this investigation within all proposed alternative plans. This survey is documented in the enclosed report; *San Juan Harbor Improvement Study, San Juan Puerto Rico, Submerged Cultural Resources Survey.* 

Results of the remote-sensing survey did not identify any potentially significant anomalies within the TSP footprint. The only potentially significant cultural resources identified within the surveyed areas are located within the Anchorage Area F Expansion. Four clustered magnetic anomalies and one individual anomaly were identified that may represent potentially significant submerged cultural resources.

These anomalies are recommended for avoidance or additional investigations in the form of diver identification to determine significance and eligibility for listing in the National Register of Historic Places (NRHP). As a result, Anchorage Area F Expansion has been removed from proposed deepening and widening measures, and will not be dredged or otherwise maintained as a part of the San Juan Harbor Improvement Project.

In addition to the submerged cultural resources survey, the Corps also identified historic properties within the viewshed of San Juan Harbor and properties that have the potential to be affected by increased vessel wake. Historic resources along the shoreline of the San Juan Harbor are currently protected from wave energy in the harbor by revetments. Erosion of San Juan Harbor shorelines is controlled predominantly by wind waves and tidal currents. The relative infrequency of cargo vessel wakes compared with wind waves makes them a minor factor contributing to shoreline changes and erosion. Deepening the Federal navigation channel would reduce the shoreline impact of vessel wakes by reducing the number of vessels and increasing the range of tides during which vessels can transit the harbor. Therefore, no adverse impacts to historic properties, including Castillo de San Felipe del Morro, are anticipated by deepening and/or widening the Federal Channel as indicated in the TSP. Economic analysis also indicates that fewer total vessels would call on San Juan Harbor as a result of the TSP as compared to current conditions. Since fewer vessels would be calling on the port with the proposed project, there would be no effect on the viewshed of historic properties. Furthermore, the TSP would not result in a change in the existing use of San Juan Harbor, which would continue to remain a historic seaport. Commercial and recreational vessel traffic patterns, shoreline land uses, and natural resources that define the aesthetic (including noise and visual) characteristics of the harbor would remain consistent with present conditions.

Based on the results of the above referenced analyses, the Corps has determined that the San Juan Harbor Improvement Project poses no effect to historic properties listed or eligible for listing in the NRHP. Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), as amended and it's implementing regulations (36 CFR 800), the Corps kindly requests your comments on the determination of no effect. If there are any questions or comments, please contact Ms. Meredith Moreno at (904) 232-1577 or by e-mail at meredith.a.moreno@usace.army.mil.

Sincerely,

Giha Padyano Ralph, Ph.D. Chief, Environmental Branch

Encl

cc:

Felix Lopez, Chief of Cultural Resources, San Juan National Historic Site, 501 Norzagaray Street, San Juan, PR 00901


Figure 1. San Juan Harbor cultural resources survey area.



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

REPLY TO ATTENTION OF

Planning and Policy Division Environmental Branch

NOV 2 0 2017

Mr. Carlos Rubio-Cancela State Historic Preservation Officer Office of the Governor P.O. Box 9023935 San Juan, Puerto Rico 00902-3935

Re: San Juan Harbor Improvements Project, San Juan, Puerto Rico (SHPO 10-05-15-02)

Dear Mr. Rubio-Cancela:

The U.S. Army Corps of Engineers, Jacksonville District (Corps), acknowledges receipt of your letter dated September 18, 2017 regarding the Draft Report entitled; *San Juan Harbor Improvement Study, San Juan Puerto Rico, Submerged Cultural Resources Survey.* The Corps has addressed your comments and incorporated these changes in the enclosed Final Report. Please note that due to Hurricane Maria your comments were not received until after Southeastern Archaeological Research (SEARCH) produced bound copies of the report in accordance with the timeframes identified in their contract with the Corps. Therefore, your requested changes are included in five errata sheets located within the document. The enclosed compact disk contains the revised Final Report.

Based on the results of the submerged cultural resources survey of the San Juan Harbor Improvements Project, no potentially significant cultural resources are located within the project area (see Figure 1). Potentially significant magnetic anomalies were identified in the Anchorage Area F Expansion area; however, Anchorage Area F Expansion has been removed from the project area. Therefore, the Corps has determined that the San Juan Harbor Improvement Project will have no effect on historic properties listed or eligible for listing in the NRHP. Should the project be reformulated to include the Anchorage Area F Expansion area, consultation would be reinitiated with your office in order to evaluate the historic significance of the magnetic anomalies. Pursuant to Section 106 of the National Historic Preservation Act (16 USC 470), as amended and it's implementing regulations (36 CFR 800), the Corps kindly requests your comments on the determination of no historic properties effected. If there are any questions or comments, please contact Ms. Meredith Moreno at (904) 232-1577 or by e-mail at meredith.a.moreno@usace.army.mil.

Sincerely, Gina Paduano Ratph, Ph.D.

Chief, Environmental Branch

Encl

CC:

Executive Director, Instituto de Cultura Puertorriqueña, PO Box 9024184 San Juan, Puerto Rico 00902-4184

Juan Vera, Consejo para la Conservación y Estudio de Sitios y Recursos Arqueológicos Subacuáticos, Instituto de Cultura Puertorriqueña, PO Box 9024184 San Juan, Puerto Rico 00902-4184



Figure 1. San Juan Harbor cultural resources survey area.



**GOBIERNO DE PUERTO RICO** 

### Oficina Estatal de Conservación Histórica

December 5, 2017

# Gina Paduano Ralph, Ph.D.

Chief, Environmental Branch Jacksonville District Corps of Engineers 701 San Marco Boulevard Jacksonville, FL 32207-8175

SHPO 10-05-15-02 SAN JUAN HARBOR IMPROVEMENTS PROJECT, SAN JUAN, PUERTO RICO

Dear Dr. Paduano,

Our Office has received and reviewed the above referenced project in accordance with 54 U.S.C. 306108 (commonly known as Section 106 of the *National Historic Preservation Act*) and 36 CFR Part 800: *Protection of Historic Properties*. The State Historic Preservation Officer (SHPO) is to advise and assist federal agencies and other responsible entities when identifying historic properties, assessing effects upon them, and considering alternatives to avoid or reduce the project's effects.

Based on the U.S. Army Corps of Engineers' decision to remove Anchorage Area F Expansion from the project, our records support your finding of no historic properties affected within the project's area of potential effects.

Please note that should the Agency discover other historic properties at any point during project implementation, you should notify the SHPO immediately. If you have questions regarding this matter, please contact our Office at (787) 721-3737 or email, ediaz@prshpo.pr.gov.

Sincerely,

achy anhi

Carlos A. Rubio-Cancela State Historic Preservation Officer

CARC/GMO/BRS/MB



OFICINA ESTATAL DE CONSERVACIÓN HISTÓRICA OFICINA DEL COBERNADOR

STATE HISTORIC PRESERVATION OFFICE

### NON-FEDERAL SPONSOR'S SELF-CERTIFICATION OF FINANCIAL CAPABILITY FOR DECISION DOCUMENTS

I, Julian Bayne Hernandez do hereby certify that I am <u>Acting Assistant Executive Director of</u> <u>Economic Development of the Puerto Rico Ports Authority</u> (the "Non-Federal Sponsor"); that I am aware of the financial obligations of the Non-Federal Sponsor for the <u>San Juan Harbor</u> <u>Improvements</u> and that the Non-Federal Sponsor will have the financial capability to satisfy the Non-Federal Sponsor's obligations for that project. I understand that the Government's acceptance of this self-certification shall not be construed as obligating either the Government or the Non-Federal Sponsor to implement a project.

IN WITNESS WHEREOF, I have made and executed this certification this 14 days of December, 2017.

BY: irector of Economic Daulopunt Everi TITLE: DATE:



Government of Puerto Rico Puerto Rico Electric Power Authority

January 11, 2018

Mr. Eric Summa Chief, Planning and Policy Division Jacksonville District Corps of Engineers 701 San Marco Boulevard Jacksonville, Florida 32207-8175

Dear Mr. Summa:

### Re: LNG Receiving, Storage & Gasification Facilities at San Juan

Consistent with previous communications by the Puerto Rico Electric Power Authority (PREPA) regarding the above referenced project, PREPA takes this opportunity to offer more details on the process for project approval, as well as the financial scheme envisioned to establish a Public-Private Partnership (P3) for its development. As mentioned before, the project for a terminal in San Juan harbor for receiving, storing and gasification of Liquefied Natural Gas (LNG) is key to comply with the Mercury and Air Toxic Standards (MATS), as regulated by the US Environmental Protection Agency (EPA). The use of natural gas will also contribute to reduce and stabilize Puerto Rico's electricity rates, hence contributing to the economic growth potential of Puerto Rico.

The above referenced project requires both local and federal approvals. The provision of LNG to the northern plants is included in PREPA's Integrated Resources Plan (IRP) and this project is acknowledged by the Puerto Rico Energy Commission (PREC) as our selected project to provide the LNG to the northern power plants. Project submission to the PREC will take place alongside with project filing to the Federal Energy Regulatory Commission (FERC), which must provide the ultimate approval for a terminal in San Juan harbor for receiving, storing and gasification of LNG. FERC is the leading agency regarding the construction of new LNG terminals within the United States.

Regarding permit application for the LNG terminal to the FERC, and as directed by that federal agency, simultaneous filings on other federal and local government agencies will be required in order to achieve a 2.5 to 3 year final approval. Engineering and design is also to be performed in that 2.5 to 3 year timeline on a parallel basis, and once approved by FERC, an estimated additional 3 year period for construction and commissioning period is expected, which will pose the project into commercial operation by early 2024 and not later than 2025.

## Chief Executive Officer

G.P.O. Box 364267 San Juan, Puerto Rico 00936-4267

□ 787.521.4666□ 787.521.4665



"We are an equal opportunity employer and do not discriminate on the basis of race, color, gender, age, national or social origin, social status, political ideas or affiliation, religion; for being or perceived to be a victim of domestic violence, sexual aggression or harassment, regardless of marital status, sexual orientation, gender identity or immigration status; for physical or mental disability, for veteran status or genetic information," Mr. Eric Summa Page 2

As stated earlier, PREPA will pursue a P3 for this project, which will be an agreement between a private company and Puerto Rico's government, including PREPA. The agreed term is currently envisioned to be from 15 to 20 year operation, where at the end of the term all the facilities and infrastructure title and ownership shall be vested upon the Government of Puerto Rico. As part of the agreement, Puerto Rico's government will provide port, portside land and necessary easements for the infrastructure and will start studies for design and permitting, being PREPA who will file the permit application to FERC. On the other side, the private company will engineer, design, construct, operate, and own-to-transfer the maritime terminal for receiving, storing, and gasification of LNG.

The private company shall provide the new dock and LNG unloading facilities, LNG transferring infrastructure (cryogenic pipeline, etc.), storage tank(s), gasifiers, and all related auxiliaries as well as gas transfer and supply lines. PREPA will purchase the LNG and the private company will unload, receive, store, gasify, and transfer natural gas to PREPA's facilities. Tolling fees shall be composed of initial CAPEX, maintenance CAPEX, OPEX, and margin. It is estimated that the tolling fee will be in the range to \$1.25 to \$1.50 per million BTU's managed in the facility.

The aforementioned project is similar to the P3 arrangement between PREPA and Excelerate Energy (Excelerate) for the Aguirre Offshore Gas Port (AOGP), as Excelerate will provide engineering, procurement, and construction services for the terminal. Excelerate will also provide the O&M services on the terminal, gasifying facilities, and the Floating Storage Regasification Unit vessel (FSRU). The main differences between the AOGP concept and the LNG terminal in San Juan harbor is that the FSRU is a unit under a rental agreement with no title transfer option to the government, and PREPA shall borne the cost of the off shore terminal and in-shore facilities.

The LNG terminal in San Juan harbor project estimate, approaching \$350 million, has been previously submitted to the United States Corps of Engineers (USACE). For clarification purposes, profit margins included in the \$350 million investment are considered for all the involved parties (permitting/regulatory advisors, designers, legal, demolition, construction, equipment, as well as the private company's overhead allocation from its project financing, if any), except the private company entering into the P3 agreement. As a P3 project, where only the private company is investing and starts to produce earnings with the tolling fee scheme, profit margins are to be included in the P3 contract terms and conditions, which it is envisioned that will be included in the tolling fee.

Mr. Eric Summa Page 3

Timeline for issuing the request for proposal (RFP) for the project is scheduled to start on April 2018, alongside with permits and commencement of detailed studies for design. PREPA's current implementation schedule for the project is as follows:

	Project Task	Schedule
1.	Planning	Will resume on February 2018
2.	Procurement of the private company for the P3	Start date: April 2018
3.	Permitting (detailed studies for filing)	Start date: April 2018
4.	Conceptual design and required studies	Starting month: May 2018
5.	P3 contract establishment	March 2019
6.	Detailed design	Start date: March 2019
7.	Detailed design completed all systems	September 2020
8.	Permitting final approval	February 2021
9.	Construction	From April 2021 to April 2024
10.	Commercial Operation	April 2024

The above mentioned schedule describes the development of the terminal in San Juan harbor for receiving, storing, and gasification of LNG project. However, PREPA has already been investing in converting the existing units for natural gas use. As an example, dual fuel combustors have already been purchased for San Juan combustion turbine units 5 & 6, for both natural gas and distillate No. 2 oil use. Also, modifications to the inside housing auxiliaries on each combustion turbine are on-going considering space requirements of natural gas piping and auxiliaries.

PREPA hereby confirms that the Federal Navigation Project, which includes the Army terminal widening and deepening, is of outmost importance and hence required for both permitting and the cost benefit of the San Juan LNG project to our end customers, which is the entire people of Puerto Rico. If the Federal Navigation Project is not constructed, in order for PREPA to sustain the reliability of the electric grid in the north area of Puerto Rico, PREPA will be forced to convert its existing No. 6 fuel oil-fired steam units in San Juan and Palo Seco Power Plants to use No. 2 light distillate oil (diesel).

The Federal Navigation Project channel widening and deepening is required for PREPA to pursue the use of currently available 125,000 to 135,000 cubic meter capacity LNG vessels or larger. Larger LNG vessels will translate in fewer port calls to San Juan harbor (about 1 per month or less, but no more than two per month). Not having the Federal Navigation Project, without the corresponding channel widening and deepening, will prevent these LNG large vessels to transit through the San Juan harbor, which will result in requesting a much higher

Mr. Eric Summa Page 4

number of port calls of smaller vessels. This will in turn result in a permitting challenge due to the already congested San Juan harbor transit.

PREPA is not optimistic in achieving permitting for frequent port calls of smaller LNG vessels, as it is well expected that the United States Coast Guard (USCG) would be reluctant to authorize a higher number of port calls for LNG vessels to enter San Juan harbor, as LNG exclusions zones will still apply to the harbor's transit. Moreover, due to the unavailability of smaller LNG carriers in the market, the only option would be to secure fabrication of not less than two vessels for continuous and dedicated use for PREPA. Such vessel costs are not included in the \$350 million estimate, which would make the project not feasible for lowering electricity costs.

In terms of cost benefit to our clients, the project's importance goes beyond any return-ofinvestment on a project development, it is the resulting kilowatt-hour rate to Puerto Rico's residential, commercial, and industrial customers. A lower and feasible electricity rate using LNG can only be achieved with reliable LNG availability and adequate receiving means. In fact, transporting and receiving LNG in large or bulk quantities will greatly reduce transportation costs, which are also lower with a higher number of available market vessels. An adequate number of vessels in the LNG industry require the widening and deepening of San Juan harbor, which can be achieved with the Federal Navigation Project. The return-of-investment for this project will be its positive contribution to the economic growth of Puerto Rico.

We are confident that the details provided above will provide the USACE with more information on this important project for Puerto Rico. If you need more information or would like to further discuss this or other matters related to the San Juan LNG project, please contact engineer José Vázquez-Vera at (787) 521-7749 or by email at jvazquez12333@aeepr.com.

Sincerely,

Justo L. González-Torres Acting Executive Director

c Efran Paredes-Maisonet William Ríos-Mera



# GOVERNMENT OF PUERTO RICO

**Ports Authority** 

January 11, 2018

COL Jason A. Kirk **Commander Jacksonville District** U.S. Army Corps of Engineers, Jacksonville District 701 San Marco Boulevard Jacksonville, FL 32207

# Navigation Study for San Juan Harbor Improvement Feasibility Report and **Environmental Assessment**

Dear Colonel Kirk:

The Puerto Rico Ports Authority (PRPA) understands that you are nearing completion of the Integrated Feasibility Report and Environmental Assessment for San Juan Harbor Navigation Improvements Study. The improvements generated from this Recommended Plan will increase transportation efficiencies in the San Juan Harbor. PRPA strongly supports the findings and recommendations of said plan.

PRPA understands that the Recommended Plan consists of navigation improvements to: CUT-6, ANEGADO CHANNEL, SAN ANTONIO CHANNEL, CRUISE SHIP BASIN EAST, and ARMY TERMINAL CHANNEL & TURNING BASING as the national economic development (NED) plan.

PRPA has issued an internal certification of funds for the non-federal sponsor's share of the Recommended Plan. It is the intent of the PRPA to make the appropriate investment in the project, upon approval of the Capital Improvement Program by PRPA's Board of Directors.

If you need more information or would like to further discuss this or other matters related to the Project, please contact engineer Romel Pedraza at (787) 729-8715 ext. 3178 or by email at rpedraza@prpa.pr.gov.





P.O. Box 362829, San Juan, PR 00936-2829 • 64 Lindbergh Street, Former Miramar Naval Base, San Juan, PR 00907