ENVIRONMENTAL APPENDIX
PERTINENT CORRESPONDENCE
AND NEPA SCOPING

NEW JERSEY BACK BAYS
COASTAL STORM RISK MANAGEMENT
FEASIBILITY STUDY

PHILADELPHIA, PENNSYLVANIA

APPENDIX F.12

August 2021

NJBB
NEW JERSEY BACK BAYS STUDY

U.S. Army Corps of Engineers
Philadelphia District

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Environmental Resources Branch

JUL 22, 2016

Dear :

The U.S. Army Corps of Engineers, Philadelphia District (Corps), in partnership with the New Jersey Department of Environmental Protection (NJDEP), Bureau of Coastal Engineering, has initiated a feasibility study to address coastal flooding concerns for the communities bordering the New Jersey back bays.

The feasibility study will consist of the formulation and evaluation of alternative plans to address the identified water resources issues, as well as the selection of a recommended plan. In accordance with the National Environmental Policy Act (NEPA) of 1969, as amended, the preparation of a draft Environmental Assessment (EA) or Environmental Impact Statement (EIS) will be completed and circulated to the public as part of this feasibility study.

We are currently soliciting comments from the resource agencies and public to identify any significant issues, problems, needs, or concerns along with any pertinent information regarding these potential future project areas to more accurately characterize them. The Corps will use this information to confirm whether sites are suitable for potential Corps activities in order to develop a priority list of project sites likely to provide the greatest flood risk management benefits, as well as any associated feasible ecosystem restoration benefits. Coastal flooding concerns along the Atlantic Coast of New Jersey have previously been evaluated by a Federal Coastal Storm Risk Management (CSRM) program (Hurricane Sandy Coastal Projects Performance Evaluations Study); however, the New Jersey Back Bays (NJBB) study area (Figure 1), which encompasses five counties and approximately 1,300 square miles (950 miles of coastline), currently lacks a comprehensive CSRM program. As a result, many areas within the NJBB region experienced extensive damage during Hurricane Sandy and subsequent coastal events due to low elevation areas and highly developed residential and commercial infrastructure along the back bay coastline.

The purpose of the Corps NJBB CSRM Feasibility Study is to identify comprehensive CSRM strategies to increase resilience, and to reduce risk from future storms and impacts of sea level change. The objective of the Study is to investigate CSRM problems and solutions to reduce damages from coastal flooding that affects population, critical infrastructure, critical facilities, property, and ecosystems.

The NJBB is one of nine focus areas identified in the North Atlantic Coast Comprehensive Study (NACCS), whose goals are to:
• Provide a risk management framework, consistent with and National Oceanic and Atmospheric Administration (NOAA)/Corps Infrastructure Systems Rebuilding Principles; and
• Support resilient coastal communities and robust, sustainable coastal landscape systems, considering future sea level and climate change scenarios, to reduce risk to vulnerable populations, property, ecosystems, and infrastructure.

The other eight focus areas identified in the NACCS are located outside of New Jersey and being studied by other Corps Offices.

While the NACCS provides a Tier 1 (regional scale) analysis, the NJBB CSRM Study will build upon the NACCS outcomes and framework to formulate Tier 2 (State or watershed scale) and Tier 3 (municipal or community level scale) analyses, strategies and measures for potential implementation. The goal is to enable communities to better understand and manage their short-term and long-term risk in a systems context. For your information, the NACCS Study from January 2015, including an Environmental and Cultural Resources Conditions Report, is available online at http://www.nad.usace.army.mil/CompStudy.aspx and http://www.nad.usace.army.mil/Portals/40/docs/NACCS/Env-and-Cultural_report_Oct2014.pdf.

Study Approach: The study will investigate the network of interconnected tidal water bodies and coastal lakes located landward of the New Jersey ocean coastline of Monmouth, Ocean, Burlington, Atlantic and Cape May Counties. The study will consider and develop solutions with respect to past, current, and future CSRM and resilience planning initiatives and projects underway by the Corps and other Federal, State, and local agencies. The study team will perform four overarching efforts:

1) Assess the study area's problems, opportunities and future without project conditions;
2) Assess the feasibility of implementing system-wide coastal storm risk management solutions such as policy/programmatic strategies, storm surge barriers at selected inlet entrances, or tidal gates at selected lagoon entrances;
3) Assess the feasibility of implementing site-specific perimeter solutions such as a combination of structural, non-structural, and natural and nature-based features; and
4) Assess the impacts of back bay strategies and solutions on the Atlantic Coast CSRM Program towards developing recommendations within a systems context given likely future scenarios.

The product of this study will be a comprehensive CSRM, climate change adaptable, shared vision for the NJBB amongst the Corps and all stakeholders. With this approach, the NJBB study will align with the broader climate change adaptation, community resilience planning, and sustainability principles coupled with the ongoing Systems Approach to Geomorphic Engineering (SAGE) and Engineering With Nature (EWN) practices currently incorporated into Corps Civil Works planning processes. This structure will allow Corps to facilitate interagency efforts, leverage funding and serve as the Agency Champion/Integrator, representing a holistic plan to address vulnerable coastal communities within the NACCS NJBB study area. The study team organized two workshop meetings with key stakeholders in June 2016 and will have future webinars/teleconferences to discuss alternatives, CSRM opportunities, and a Tentatively Selected Plan.

The deliverable for this study will be a feasibility report with integrated NEPA compliance documentation culminating in a Chief's Report recommending scaled, incrementally implementable comprehensive Corps design and phased construction opportunities using the full array of CSRM strategies and measures within a watershed-based, systems framework. The Chief's Report will also offer implementable policy recommendations with supporting analyses for non-Corps entities including floodplain management, landscape architecture, hurricane evacuation plans, and Community Rating System enhancement opportunities. The study will provide additional recommendations for incorporating existing Corps and external programs,

projects, plans and actions, as well as public-private partnership opportunities into the NJBB study umbrella.

While the draft Feasibility Report will develop programmatic NEPA compliance documentation identifying a range of impacts, the final Feasibility Report will produce a detailed fully compliant EA/EIS document that evaluates impacts for specific solutions.

For any part of the study area, please indicate if your agency or group has identified significant documented environmental resources or concerns with respect to terrestrial and aquatic species, critical habitats, archaeological resources or concerns of hazardous wastes. Please provide any relevant information and / or comments within 30 days of the date of this letter. Please direct comments to Ms. Beth Brandreth of the Environmental Resources Branch at the address provided above. Enclosure #1 is a list of all addresses receiving this letter.

If you have any questions, you may reach Ms. Brandreth at (215) 656-6558. Thank you for your cooperation.

Sincerely,

Peter R. Blum, P.E.
Chief, Planning Division

Mfr: NEPA Scoping letter for NJBB study.

Figure 1. New Jersey Back Bay Study Area.

Enclosure #1
List of Addressees:

Federal and State Agencies

Ms. Diane Dow, Director
New Jersey Department of Environmental Protection
Land Use Regulation Program
P.O. Box 420
Mail Code: 501-02A
501 E. State Street
Trenton, NJ 08626

Mr. Mark Pedersen, Acting Director
New Jersey Department of Environmental Protection
Land Use Regulation Program
P.O. Box 420
Mail Code: 501-02A
501 E. State Street
Trenton, NJ 08626

New Jersey Department of Environmental Protection
Office of Permit Coordination and Environmental Review
Attn: Joseph Corleto, NEPA Review
PO Box 423
401 East State Street
Trenton, NJ 08625

Ms. Dorina Frizzera
NJDEP, Office of Science
Mail code 428-01, P.O. Box 420
Trenton, NJ 0862

NJDEP Bureau of Coastal Engineering
Attn: Bill Dixon
1510 Hooper Avenue
Toms River, NJ 08753

Katherine Marcopul, PhD
Deputy State Historic Preservation Officer
Mail Code 501-04B
New Jersey Department of Environmental Protection
Historic Preservation Office
PO Box 420
Trenton, NJ 08625-0420

Ms. Ginger Kopkash, Assistant Commissioner

New Jersey Department of Environmental Protection
NJDEP Land Use Management
P.O. Box 420
Mail Code: 401-07B
Trenton, New Jersey 08625-0420

New Jersey Department of Environmental Protection
Office of Environmental Review
Attn: Kelley Davis, Biologist
PO Box 423
401 East State Street
Trenton, NJ 08625

New Jersey Department of Environmental Protection
NJ Coastal Management Office
401-07D P.O. Box 420
401 East State Street
Trenton, NJ 08625-0420

Mr. David Chanda, Director
New Jersey Division of Fish and Wildlife
P.O. Box 400
501 East State Street, 3rd Floor
Trenton, New Jersey 08625-0400

Kira Dacanay, Senior Fisheries Biologist
NJDEP Bureau of Shellfisheries
Nacote Creek Research Station
360 N. New York Rd. P.O. Box 418
Port Republic, NJ 08241

Ms. Grace Musemeci, Chief
Federal Facility - Environmental Review Section
USEPA Region II
290 Broadway, 25th Floor
New York, NY 10007-1866

Mr. Mike Poetzsch
Federal Facility - Environmental Review Section
USEPA Region II
290 Broadway, 25th Floor
New York, NY 10007-1866

U. S. Fish and Wildlife Service
Eric Schrading, Supervisor
New Jersey Field Office, Atlantic Professional Park
4 East Jimmie Leeds Road
Galloway, New Jersey 08205

National Marine Fisheries Service
Habitat Conservation Division
Attn: Karen Greene
James J. Howard Marine Sciences Laboratory
74 Magruder Road
Highlands, New Jersey 07732

Mark Murray-Brown, Section 7 Coordinator
Protected Resources Division
NOAA National Marine Fisheries Service
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester MA 01930

Darlene Finch, Mid-Atlantic Regional Coordinator
NOAA Office for Coastal Management
Maryland Department of Natural Resources
Tawes State Office Building – E2
580 Taylor Avenue
Annapolis, MD 21401

Edwin Muñiz
Assistant State Soil Scientist
Natural Resources Conservation Service
United States Department of Agriculture
220 Davidson Ave., 4th Floor
Somerset, NJ 08873

Scott V. Duell
Chief, Risk Analysis Branch
U.S. DHS/FEMA Region II
26 Federal Plaza, Room 1337
New York, NY 10278

Patti Rafferty
Chief, Resource Stewardship
Gateway National Recreation Area
210 New York Avenue
Staten Island, NY 10305

<u>Non-Governmental Organizations</u>

Mr. Alek Modjeski
American Littoral Society
18 Hartshorne Drive, Suite #1
Highlands, NJ 07732

Ms. Martha Maxwell-Doyle
Barnegat Bay Partnership
Ocean County College
College Drive
P.O. Box 2001
Toms River, NJ 08753

Dr. Lenore Tedesco
The Wetlands Institute
1075 Stone Harbor Blvd.
Stone Harbor, NJ 08247-1424

New Jersey Sierra Club
145 West Hanover St.
Trenton, NJ 08618

New Jersey Environmental Federation
198 Brighton Ave
Long Branch, NJ 07740

Ms. Patty Doerr
Nature Conservancy
2350 Route 47
Delmont, NJ 08314

Academia

Dr. Stewart Farrell, Director, Coastal Research Center
Stockton University
101 Vera King Farris Drive
Galloway, NJ 08205-9441

Michael Kennish, Ph.D.
Institute of Marine & Coastal Sciences Rutgers University
71 Dudley Road
New Brunswick, NJ 08903

Ms. Lisa Auermueller
Jacques Cousteau National Estuarine Reserve
130 Great Bay Blvd, Tuckerton, NJ 08087

Sustainability Institute at the College of New Jersey
Attn: Linda Weber
Forcina Hall, 3rd Floor
2000 Pennington Rd.
Ewing, NJ 08628-0718

Mr. Tony MacDonald
Monmouth University
400 Cedar Avenue
West Long Branch, NJ 07764

Tribes

Ms. Susan Bachor and Ms. Blair Fink
Delaware Tribe Historic Preservation Representatives
PO Box 64
Pocono Lake, PA 18347

Ms. Nekole Alligood, Cultural Preservation Director
Delaware Nation
31064 State Highway 281
PO Box 825
Anadarko, OK 73005

Ms. Robin Dushane, Cultural Preservation Director
Eastern Shawnee Tribe of Oklahoma
12705 S. 705 Road
Wyandotte, OK 74370

Mr. Jesse Bergevin, Tribal Historic Preservation Officer
Oneida Indian Nation
2037 Dream Catcher Plaza
Oneida, NY 13421

Ms. Bonney Hartley
Tribal Historic Preservation Officer
Stockbridge-Munsee Mohican Tribal Historic Preservation
New York Office
65 1st Street
Troy, NY 12180

Mr. Arnold Printup, Historic Preservation Officer
St. Regis Mohawk Tribe
412 State Route 37
Hogansburg, NY 13655

USDA United States Department of Agriculture
Natural Resources Conservation Service

220 Davidson Avenue 4th Floor
Somerset, NJ 08873
Voice 732-537-6040
Web: http://www.nj.usda.gov

August 8, 2016

Department of the Army
Philadelphia District, Corps of Engineers
Environmental Resources Branch
Attn: Beth Brandreth
Wanamaker Building, 100 Penn Square East
Philadelphia, PA 19107-3390

Re: Coastal Storm Risk Management Program, New Jersey Back Bay study area

Dear Beth:

The Natural Resources Conservation Service, an agency of the United States Department of Agriculture, is the leading agency in soils inventory and evaluation. Part of our soil evaluation is to classify our Nation soils base on their suitability to produce food, fiber, forage, and oilseed crops.

NRCS conducted a review of the soils that occur in the perimeter of the area of interest (AOI). The AOI consisted of approximately 624,064 acres of coastal area within the New Jersey east coast or Atlantic Coast as pointed in your request and highlighted in red in the attached maps. After reviewing the documentation provided, we concluded that 60 percent of the AOI is classified in the modern soil survey as important farmland of prime, statewide, local, and unique importance. Farmland classification is define as map units with prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland classification that soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

In addition, other soil parameters of possible interest were evaluated for the AOI like soil drainage class, soil leaching index, and hydrologic soil group. Areas classified as "Not rated" are areas mapped as water or miscellaneous areas that includes urban land or areas used as borrow pits.

The drainage class is dominated by soils classified as very poorly drained. Those are soils with a frequency and duration of wet periods at the soil surface. Alterations of the water regime by human activities, either through drainage or through irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized-excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained, and very poorly drained. These classes are defined in the "Soil Survey Manual."

The ratings for Pesticide Loss Potential-Leaching are used for evaluating and determining the potential of the soil to transmit pesticides through the profile and the likelihood of the contamination of ground-water supplies. Evaluations consider movement of water through the soil. Ratings are for soils in their natural condition and do not consider present land use. The properties that affect the pesticide loss potential include the soil's hydrologic group, depth to water table, saturated hydraulic conductivity at different depths, and if occur the possibility of water movement in fractured bedrock. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that have low leaching potential. "Somewhat limited" indicates that the soil has features that are moderately rated for leaching potential. Some leaching can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable and leaching potential is high. The interpretation map showed 66 percent of the AOI is very limited with a negative impact to surface and ground water by human activity.

The AOI is mostly dominated by soils with a hydrologic soil group (HSG) A/D (31%) and soils in group A (26%). HSG are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of

water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes. Soils in group A are soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission. Soils in group A/D are soils that behave as A when drained and D in natural condition or undrained. Group D are soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

In conclusion, human activity other than farming in areas classified as important farmland may generate an irreversible conversion of farmland to a non-agricultural activity.

Attached find the soil map supporting the determination in assessing the farmland classification and other soil parameters.

Please do not hesitate to contact Edwin Muñiz with any questions or concern related to this determination at 732-537-6062.

Reference:

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.nrcs.usda.gov/. Accessed August 5, 2016.

Sincerely,

acting for

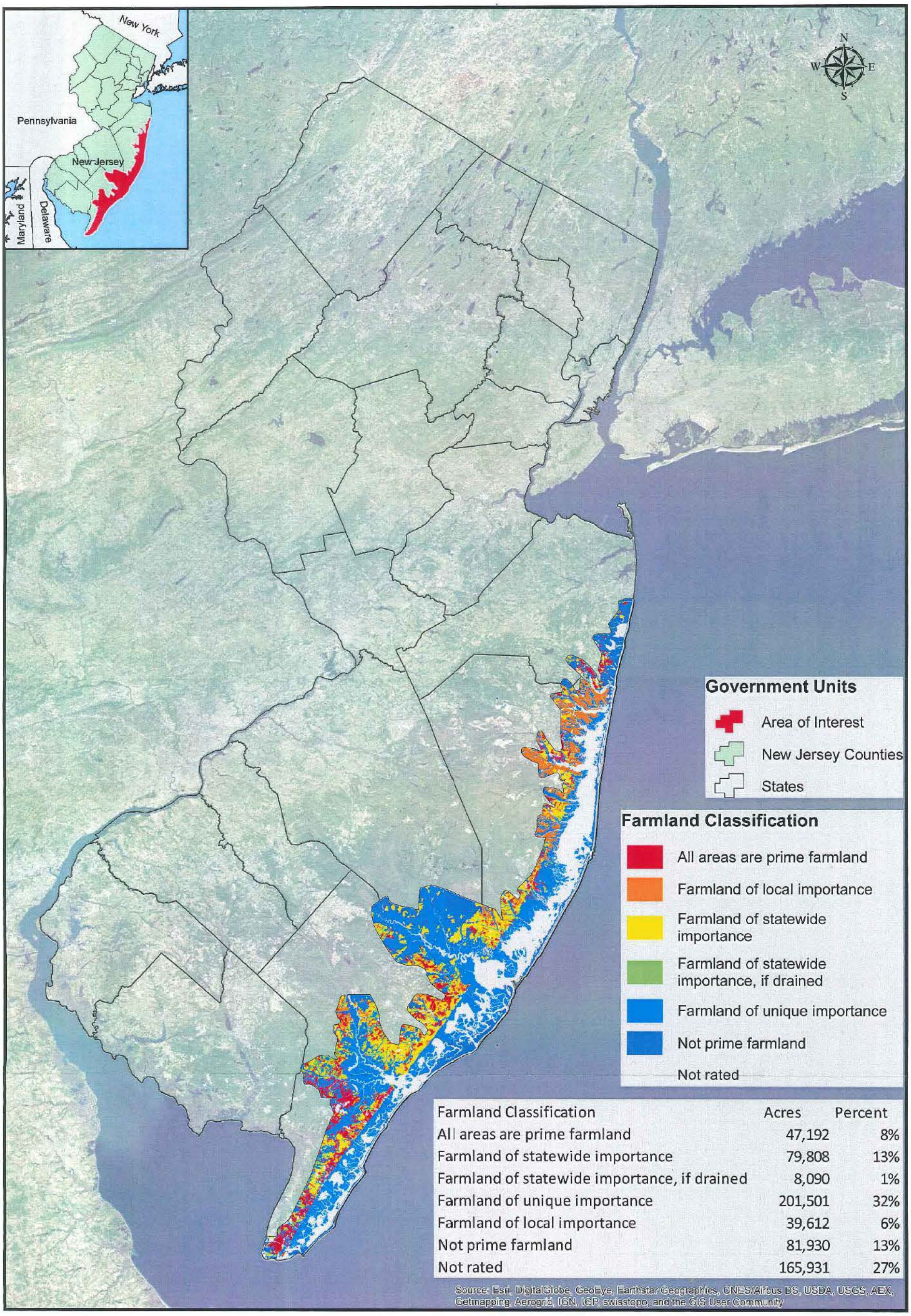
Carrie Lindig
State Conservationist

Enclosures (4)

cc: Richard K. Shaw, PhD

Farmland Conversion Impact
Farmland Classification

Coastal Storm Risk Management
New Jersey Back Bay Study Area



Farmland Classification	Acres	Percent
All areas are prime farmland	47,192	8%
Farmland of statewide importance	79,808	13%
Farmland of statewide importance, if drained	8,090	1%
Farmland of unique importance	201,501	32%
Farmland of local importance	39,612	6%
Not prime farmland	81,930	13%
Not rated	165,931	27%

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

13 6.5 0 13 26 Miles

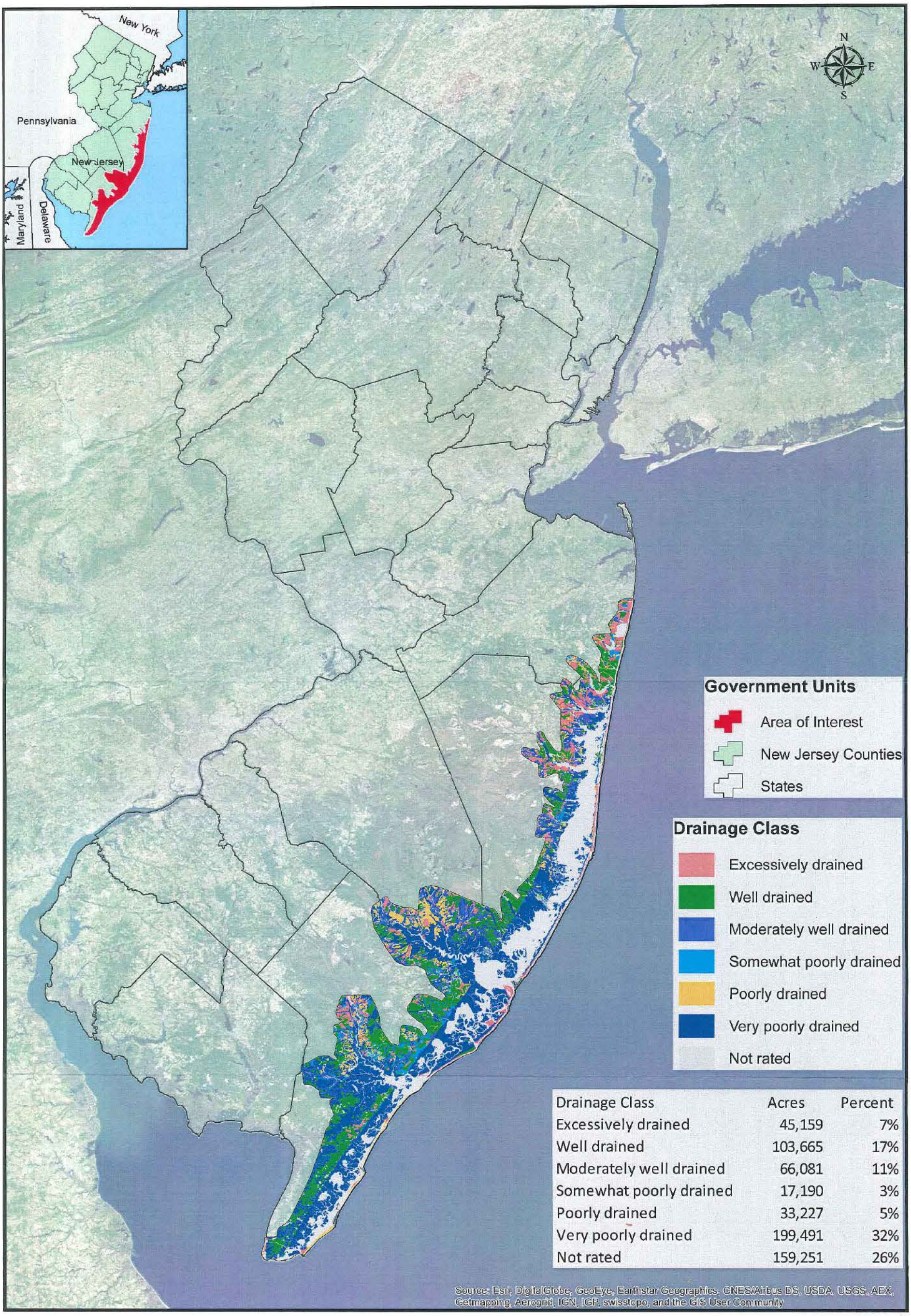
1 inch = 13 miles

USDA United States Department of Agriculture
Natural Resources Conservation Service

This data set is not designed for use as a primary regulatory tool in permitting or citing decisions, but may be used as a reference source. This information may be interpreted by organizations, agencies, units of government, or others based on needs; however, they are responsible for the appropriate application. Federal, State, or local regulatory bodies are not to reassign to the Natural Resources Conservation Service any authority for the decisions that they make. The Natural Resources Conservation Service will not perform any evaluations of these maps for purposes related solely to State or local regulatory programs.

Farmland Conversion Impact
Soil Drainage Class

Coastal Storm Risk Management
New Jersey Back Bay Study Area



Drainage Class	Acres	Percent
Excessively drained	45,159	7%
Well drained	103,665	17%
Moderately well drained	66,081	11%
Somewhat poorly drained	17,190	3%
Poorly drained	33,227	5%
Very poorly drained	199,491	32%
Not rated	159,251	26%

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

13 6.5 0 13 26 Miles

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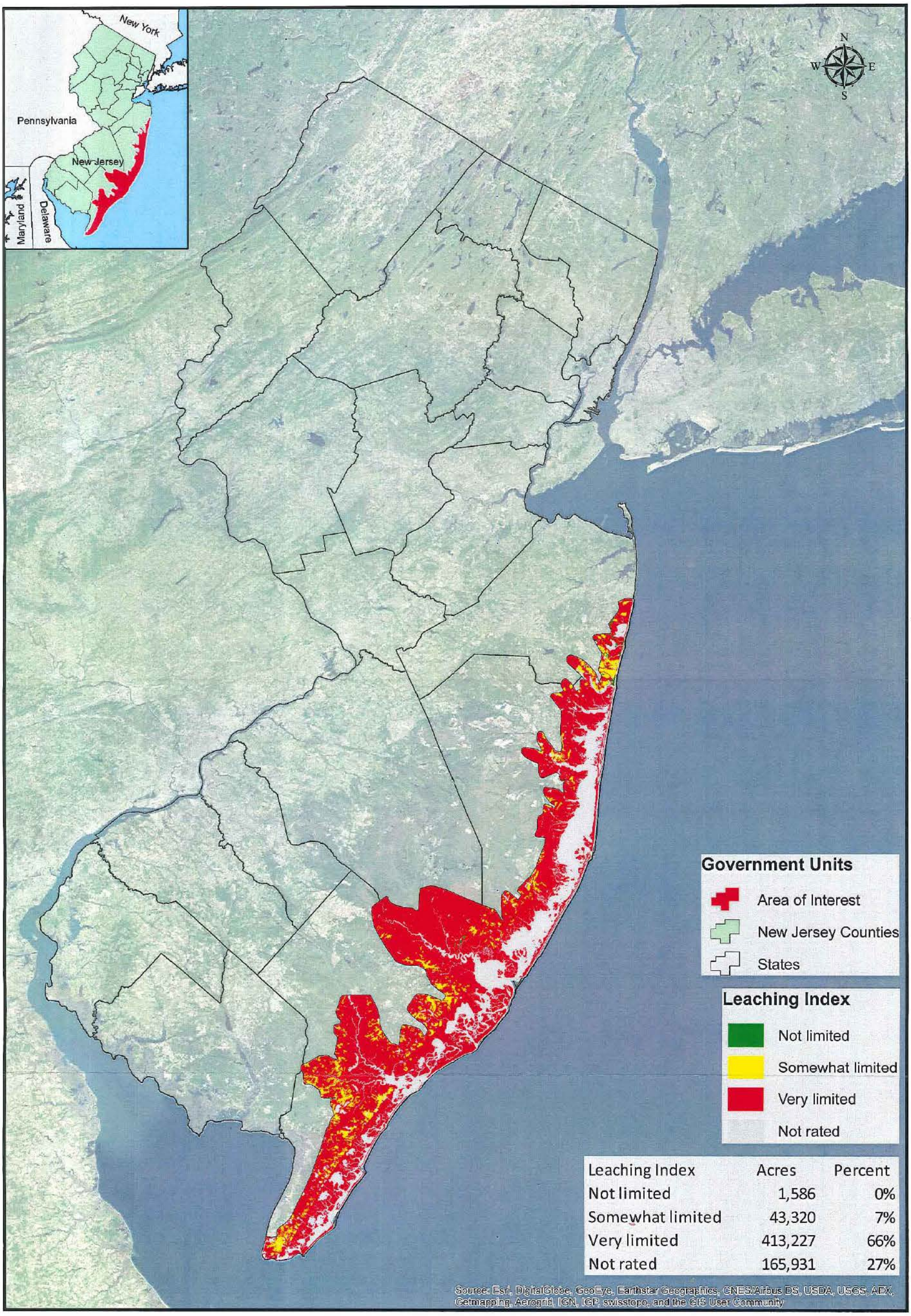
Farmland Conversion Impact
Leaching Index

Coastal Storm Risk Management
New Jersey Back Bay Study Area



Leaching Index	Acres	Percent
Not limited	1,586	0%
Somewhat limited	43,320	7%
Very limited	413,227	66%
Not rated	165,931	27%

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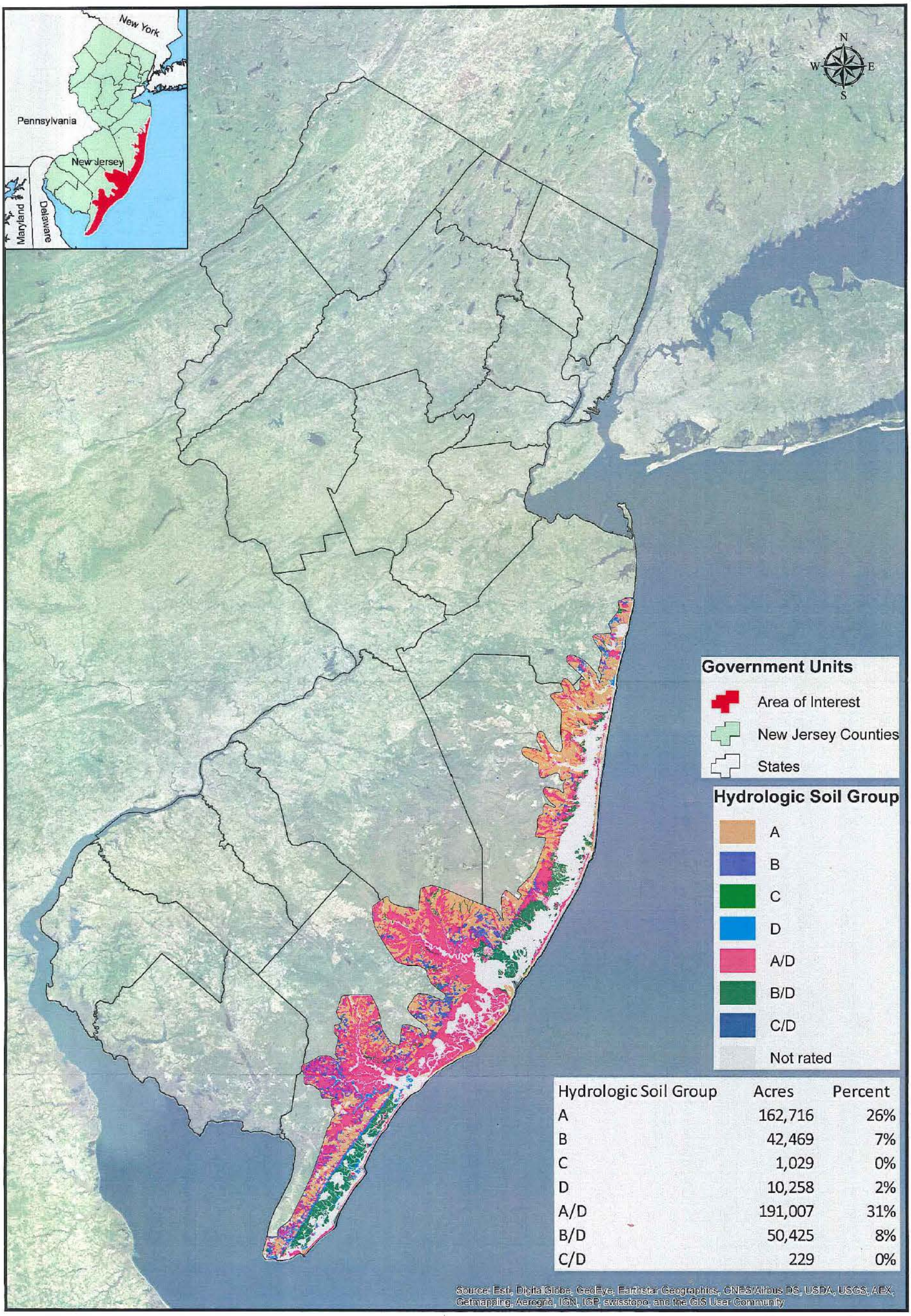
Farmland Conversion Impact
Hydrologic Soil Group

Coastal Storm Risk Management
New Jersey Back Bay Study Area



Hydrologic Soil Group	Acres	Percent
A	162,716	26%
B	42,469	7%
C	1,029	0%
D	10,258	2%
A/D	191,007	31%
B/D	50,425	8%
C/D	229	0%

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

AUG 22 2016

Peter R. Blum, P.E.
Chief, Planning Division
Dept of the Army
Philadelphia District, Corps of Engineers
Wanamaker Bldg, 100 Penn Square East
Philadelphia, PA 19107-3390

Dear Mr. Blum:

The U.S. Environmental Protection Agency (EPA), Region 2, in response to your July 22, 2016 letter, is providing comments regarding issues affecting a draft feasibility study to address coastal flooding concerns for the communities bordering the New Jersey back bays. Coastal flooding concerns along the Atlantic Coast of New Jersey have previously been evaluated by a Federal Coastal Storm Risk Management (CSRM) program (Hurricane Sandy Coastal Projects Performance Evaluations Study); however, the New Jersey Back Bays (NJBB) study area, which encompasses five counties and approximately 1,300 square miles (950 miles of coastline), currently lacks a comprehensive CSRM program. As a result, many areas within the NJBB region experienced extensive damage during Hurricane Sandy and subsequent coastal events due to low elevation areas and highly developed residential and commercial infrastructure along the back-bay coastline.

We understand that your July 22 letter was widely distributed at NJDEP, and we are assuming that the Barnegat Bay and Delaware Estuary programs would be included in this distribution. The Corps should coordinate with the Barnegat and Delaware Estuary NEPs since the project study area includes these two areas of national significance and the NEP programs have a significant amount of information that would be important to the study. The local entities are well aware of the impacts from Hurricane Sandy and other storms that produced flooding in low lying and heavily urbanized areas where various mitigation project types, both large and small scale, could be implemented. Many small scale projects are implemented through NJ's section 319 nonpoint source management program (NPS MP). Please see link to NJ's plan http://www.state.nj.us/dep/wms/bears/docs/nps_plan_2015.pdf

In the NPS MP, NJ identifies waters and watersheds impaired by NPS pollution as well as prioritizes unimpaired waters for protection. While we may focus on water quality rather than flood mitigation, it would be convenient if the Corps could potentially work in conjunction with these areas to produce increased benefits.

New Jersey is the most densely populated state with approximately 8.9 million people living within 7,500 square miles of land area. NJ is also one of the most geologically and hydro-geologically diverse states, with over 18,000 miles of rivers and streams; over 50,000 acres of lakes, ponds, and reservoirs; 950,000 acres of wetlands; 260 square miles of estuaries; 127 miles of coastline; and over 450 square miles of ocean under its jurisdiction. The combination of population density, diversity of natural resources, and a wide range of industries and land uses, presents unique challenges to protecting NJ's water resources. Water quality standards, monitoring, and assessment provide the scientific foundation for the protection of NJ's water resources and implementation of the federal Clean Water Act and the New Jersey Water Pollution Control Act.

As noted, the study deliverable will be a Report with integrated NEPA compliance documentation, that recommends scaled, incrementally implementable Corps design and phased construction opportunities using the full array of CSRM strategies and measures within a watershed based, systems framework. The NJDEP has several approved 9 –Element watershed plans that may be of value to the Corps as well.

Regarding any potential construction activities, there is much related to sustainability that can apply to future projects as many facilities will be new construction. To the maximum extent possible, project managers are encouraged to utilize local and recycled materials; to recycle materials generated onsite; and to utilize technologies and fuels that minimize greenhouse gas emissions.

Further, to the extent feasible, renewable energy (including, but not limited to solar, wind, geothermal, biogas, and biomass) and energy-efficient technologies should be incorporated into the design, construction, and operation of all types of projects.

As you may also encounter demolition during projects, recycling and/or reuse of construction and demolition (C&D) material can lessen the impacts of increasing disposal at solid waste facilities. The project should incorporate recycling, reuse and disposal options for C&D waste associated with bridge demolition as appropriate. You may find more detailed information about recycling of C&D waste at: http://www.epa.gov/osw/conserve/imr/cdm/recycle.htm.

To that end, the following information and internet hyperlinks are provided for your consideration and use:

- **Multi-media green building and land design practices**

Utilize green building practices which have multi-media benefits, including energy efficiency, water conservation (see WaterSense below), and healthy indoor air quality. Apply building rating systems and no-cost online tools and guides, such as ENERGY STAR, Portfolio Manager, Target Finder, Indoor Air Quality Package, and WaterSense for building construction. The ENERGY STAR website (see below) includes, among other things, information on new single-family homes, multi-family homes, commercial and other buildings, and schools. The website also provides an ENERGY STAR "Training Center" free of charge.

U.S. Green Building Council (USGBC) LEED Programs and Guides: http://www.usgbc.org/

ENERGY STAR home page: http://www.energystar.gov

ENERGY STAR Target Finder (no-cost online tool to set energy performance targets): http://www.energystar.gov/targetfinder

Indoor Air Quality: http://www.epa.gov/iaq

- **Water conservation and efficiency in building construction**

Promote water conservation and efficiency through the use of water efficient products (e.g., toilets, faucets, showerheads) and practices. For new building construction and restoration projects, we recommend considering the use of products with the WaterSense label where appropriate. Devices receiving the EPA WaterSense label must be at least 20% more water efficient than (and must meet or exceed the performance standards of) non-labeled devices of the same type. Additionally, when possible, consider the use of WaterSense Certified Professional Irrigation Partners and WaterSense Builder Partners. These professionals use WaterSense labeled devices where appropriate, are trained in the latest water conservation practices, and use the latest water efficiency tools and technologies, including irrigation equipment and xeriscaping for landscaping and best management practices for construction in the WaterSense New Home Specifications. Visit the WaterSense website for tips on water efficiency, a WaterSense labeled product search tool, a list of WaterSense Partners, access to the Water Budget Tool at: http://www.epa.gov/watersense/

In addition to using WaterSense labeled products and certified professionals, there are many water conservation strategies and best management practices that can be used in new construction and/or restoration. Here are some useful links to water conservation information:

- Whole Building Design Guide: http://www.wbdg.org/resources/water_conservation.php
- Alliance for Water Efficiency: http://www.allianceforwaterefficiency.org/
- Water Use It Wisely – 100 Ways to Conserve: http://www.wateruseitwisely.com/100-ways-to-conserve/index.php
- Determining Energy Usage http://water.epa.gov/infrastructure/sustain/energy_use.cfm

- **Green Building in Federal Agency Projects**

The *Federal Green Construction Guide for Specifiers* includes helpful information for procuring green building products and construction/renovation services within the Federal government: http://www.wbdg.org/design/greenspec.php

- **Use Environmentally Preferable Purchasing**

Promote markets for environmentally preferable products by referencing EPA's multi-attribute Environmentally Preferable Purchasing guidance. Products and services include: Building and

Construction, Carpets, Cleaning, Electronics, Fleets, Food Services, Landscaping, Meetings and Conferences, Office Supplies, and Paper.
http://www.epa.gov/epp

- **Purchase 'green' electronics, and measure their benefits**

Require the purchase of desktop computers, monitors, and laptops that are registered as Silver or Gold products with EPEAT, the Electronics Product Environmental Assessment Tool at www.epeat.net. Products registered with EPEAT use less energy, are easier to recycle, and can be more easily upgraded than non-registered products. Energy savings, CO_2 emission reductions, and other environmental benefits achieved by the purchase, use and recycling of EPEAT-registered products can be quantified using the Electronics Environmental Benefits Calculator: http://eerc.ra.utk.edu/ccpct/eebc/eebc.html

http://www.energystar.gov/index.cfm?c=products.pr_find_es_products

- **Consider Low Impact Development to help manage storm water**

Low Impact Development (LID) is an approach to land development (or re-development) that works with nature to manage storm water as close to its source as possible. LID employs principles such as preserving and recreating natural landscape features, minimizing effective imperviousness to create functional and appealing site drainage that treat storm water as a resource rather than a waste product.

Implement site planning, design, construction, and maintenance strategies to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the building site with regard to the temperature, rate, volume, and duration of flow.

Additional information: http://water.epa.gov/polwaste/green/
http://water.epa.gov/infrastructure/greeninfrastructure/
http://www.epa.gov/nrmrl/wswrd/wq/models/swc/

- **Evaluate sustainable storm water management at brownfield sites**

Consider designs for storm water management on compacted, contaminated soils in dense urban areas:

Additional information: http://www.epa.gov/brownfields/tools/swdp0408.pdf

- **Alternative and Renewable Energy**

The Department of Energy's "Green Power Network" (GPN) provides information and markets that can be used to supply alternative generated electricity. The following link identifies several suppliers of renewable energy:

Additional information:
http://apps3.eere.energy.gov/greenpower/buying/buying_power.shtml?

- **Clean Diesel**

For new equipment utilize contract specifications requiring advanced pollution controls and clean fuels: http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf and
http://www.epa.gov/cleandiesel/technologies/index.htm

Implement diesel controls, cleaner fuel, and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other construction activities, including:

- Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and
- Use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts, repowers, or newer, cleaner equipment.

For more information on diesel emission controls in construction projects, please see:
http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf

- **Utilizing recycled materials in construction projects**

Many industrial and construction byproducts are available for use in road, building or infrastructure construction. Use of these materials can save money and reduce environmental impacts. The Recycled Materials Resource Center has developed user guidelines for many recycled materials and compiled existing national specifications.

Additional information: http://rmrc.wisc.edu
http://www.epa.gov/osw/conserve/imr/index.htm
http://www.epa.gov/epawaste/conserve/tools/cpg/products/index.htm
http://www.fhwa.dot.gov/pavement/recycling/rectools.cfm

- **Encourage cost-efficient, environmentally friendly landscaping**

EPA's GreenScapes program provides cost-efficient and environmentally friendly solutions for landscaping. For additional information, please see:
http://www.epa.gov/wastes/conserve/tools/greenscapes/index.htm

- **Incorporate on-site energy generation and energy efficient equipment upgrades into projects at drinking water and wastewater treatment facilities**

Consider using captured biogases in combined heat and power systems, and renewable energy (wind, solar, etc.) to generate energy for use on-site. Evaluate the potential energy savings associated with upgrading to more energy efficient equipment (pumps, motors, lighting, etc.).

Additional information: http://water.epa.gov/infrastructure/sustain/goinggreen.cfm
http://www.epa.gov/region9/waterinfrastructure/howto.html

Thank you for the opportunity to comment regarding the future feasibility study to address coastal flooding concerns for the communities bordering the New Jersey back bays. Our comments contained in this letter are intended to help provide useful information that will ultimately inform local, state and federal decision-making and review related to land and water resource use and impacts. Should you have any questions regarding the comments and concerns detailed in this letter, please feel free to contact Michael Poetzsch of my staff at 212-637-4147.

Sincerely,

Grace Musumeci, Chief
Environmental Review Section

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
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SEP 26 16

Peter R. Blum, Chief
Planning Division
Philadelphia District
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RE: New Jersey Back Bay Coastal Storm Risk Management Feasibility Study

Dear Mr. Blum:

We received your letters dated July 22, 2016, and August 1, 2016, regarding the New Jersey Back Bay (NJBB) Coastal Storm Risk Management (CSRM) feasibility study. The Corps, in partnership with the New Jersey Department of Environmental Protection (NJDEP) has initiated a feasibility study to address coastal flooding concerns along New Jersey's back bays. The objective of the study is to investigate CSRM problems and to identify solutions to reduce damages from coastal flooding that affects populations, critical infrastructure, critical facilities, property, and ecosystems within the NJBB.

The NJBB CSRM study will build upon the outcomes and the framework developed in the North Atlantic Coastal Comprehensive Study which provided Tier 1 (regional scale) analysis of CSRM strategies. The NJBB study will expand upon this earlier effort and will include Tier 2 (state or watershed scale) and Tier 3 (municipal or community level) analyses, strategies and measures for potential implementation. A draft Environmental Impact Study or Environmental Assessment will be prepared in accordance with the National Environmental Protection Act (NEPA) as part of the feasibility study.

In your letters you request that the resource agencies identify, for any part of the study area, significant documented environmental resources or concerns with respect to terrestrial and aquatic species, critical habitats, archaeological resources or concerns with hazardous wastes. The study area is delineated on a map provided with your request and includes the ocean coastline, back bays, and watersheds from Cape May at the mouth of the Delaware Bay north to approximately Long Branch, encompassing 1,300 square miles and 950 miles of coastline.

The coastal waters and inlets of New Jersey provide habitat for a wide variety of NOAA trust resources including federally managed species; shellfish and crustaceans, migratory species, and federal protected species of fish, sea turtles, and marine mammals. The many inlets along the coast provide critical links between the Atlantic Ocean and the spawning, nursery and forage grounds in the bays, estuaries and rivers. To assist you in the development of a feasibility study and any accompanying NEPA documents, we offer you the following comments:

Aquatic Resources of New Jersey's Back Bays

The back bays of the New Jersey coast are highly productive habitat for a wide variety of NOAA trust resources, shellfish and other aquatic resources including important forage species such as silversides (*Menidia* spp.), killifish (*Fundulus* spp.), menhaden (*Brevoortia tyrannus*), and bay anchovy (*Anchoa mitchilli*). The abundance of forage species makes the bays important feeding and nursery areas for a number of estuarine-dependent, commercially and recreationally important species, including summer flounder (*Paralichthys dentatus*), winter flounder (*Pseudopleuronectes americanus*), bluefish (*Pomatomus saltatrix*), striped bass (*Morone saxatilis*), weakfish (*Cynoscion regalis*), Atlantic tomcod (*Microgadus tomcod*), and tautog (*Tautoga onitis*).

Anadromous species such as alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*), and striped bass transit the bays' inlets to reach spawning and nursery habitat in freshwater tributaries. The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Freshwater Fisheries has confirmed spawning runs of alewife and blueback herring, collectively known as river herring, in a number of waterways in Monmouth, Ocean, Burlington, Atlantic and Cape May counties (NJDEP 2005).

Alewife and blueback herring spend most of their adult life at sea, but return to freshwater areas to spawn in the spring. Both species are believed to be repeat spawners, generally returning to their natal rivers (Collette and Klein-MacPhee 2002). In the Mid-Atlantic, landings have declined dramatically since the mid-1960s and have remained very low in recent years (ASMFC 2007). Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960's, river herring have been designated as Species of Concern by NOAA. Species of Concern are those species about which we have concerns regarding status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). We wish to draw proactive attention and conservation action to these species.

Catadromous American eel (*Anguilla rostrata*) spawn in the Sargasso Sea and transit the inlets as elvers to the freshwater habitats in bays' tributaries. They inhabit these freshwater areas until they return to the sea as adults. According to the 2012 benchmark stock assessment, the American eel population is depleted in U.S. waters. The stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, exposure to toxins and contaminants, and disease (ASMFC 2012).

New Jersey's back bays, especially Barnegat and Manahawkin Bays, support areas of submerged aquatic vegetation (SAV) including eelgrass (*Zostera marina*) and widgeon grass (*Ruppia maritima*). SAV habitats are among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions which range from chemical cycling and physical modification of the water column and sediments to providing food and shelter for commercial, recreational, as well as, economically important organisms (Stephan and Bigford 1997). Larvae and juveniles of many important commercial and sport fish such as bluefish summer flounder,

spot (*Leiostomus xanthurus*), Atlantic croaker (*Micropogonias undulatus*), herrings (*Clupeidae*) and many others appear in eelgrass beds in the spring and early summer (Fonseca et al 1992).

Studies from the lower Chesapeake Bay found that SAV beds area are important for the brooding of eggs and for fishes with demersal eggs and as habitat for the larvae of spring-summer spawners such as anchovies (*Anchoa spp.*), gobies, (*Gobiosoma spp.*), weakfish, and silver perch (*Bairdiella chrysoura*) (Stephan and Bigford 1997). Heckman and Thoman (1984) concluded that SAV beds are also important nursery habitats for blue crabs. According to Peterson (1982), in Kenworthy (1988) shallow dwelling hard clams may be protected from predation by the rhizome layer of seagrass beds.

The *Inventory of New Jersey's Estuarine Shellfish Resources* (McCloy and Joseph 1985) and the Department of Interior shellfish maps (1963) identify a variety of shellfish habitats throughout the back bays including hard clam, soft clam, and eastern oyster beds. In addition to their commercial value, shellfish have an important ecological role in the back bays. As filter feeders, they play a role in improving water quality in the bays. They also serve as a food source for a variety of fish that feed the siphons of shellfish. Steimle et al. (2000) studied the diets of demersal fish in the lower Hudson-Raritan Estuary. They reported the siphons of hard clams were an important part of the diet of winter flounder.

Wetlands in the study area perform many important ecological functions including water storage, nutrient cycling and primary production, sediment retention, water filtration or purification, and groundwater recharge. Estuarine wetlands provide nursery and forage habitat for a variety of species including alewife, Atlantic croaker, Atlantic menhaden (*Brevoortia tyrannus*), spot, striped bass, as well as federally managed bluefish, and summer flounder (Graff and Middleton undated). Mummichog, killifish, anchovies and other small fish and benthic organisms found in estuarine wetlands provide a valuable food source for many of the commercially and recreationally valuable species mentioned above including striped bass, summer flounder, weakfish, red hake (*Urophycis chuss*), scup (*Stenotomus chrysops*) and windowpane (*Scophthalmus aquosus*) (Steimle et al. 2000).

Magnuson-Stevens Fishery Conservation and Management Act (MSA)

Essential Fish Habitat

The back bays and coastal waters of New Jersey have been designated as essential fish habitat (EFH) for a variety of life stages of fish managed under the New England Fishery Management Council, the Mid-Atlantic Fishery Management Council, and National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (NMFS). Species include, but are not limited to, Atlantic butterfish (*Peprilus triacanthus*), bluefish, black sea bass (*Centropristis striata*), red hake, scup, summer flounder, winter flounder, windowpane flounder, king mackerel (*Scomberomorus cavalla*), Spanish mackerel (*Scomberomorus maculates*), cobia (*Rachycentron canadum*), clearnose skate (*Raja eglanteria*), little skate (*Leucoraja erinacea*), winter skate (*Leucoraja ocellata*), and a number of sharks and other highly migratory species.

Habitat Areas of Particular Concern

Several habitat areas of particular concern (HAPCs) have been designated in the study area. HAPCs are subsets of EFH that are identified based on one or more of the following considerations: 1) the importance of the ecological function, 2) extent to which the habitat is sensitive to human-induced degradation, 3) whether and to what extent, development activities are stressing the habitat type, or 4) rarity of habitat type (50 CFR 600.815(a)(8)).

SAV has been designated as a habitat area of particular concern (HAPC) for summer flounder by the Mid-Atlantic Fishery Management Council. Studies by Weinstein and Brooks (1983), Adams (1976) and Lascara (1981) in Packer et al. (1999) indicate that SAV is important habitat for juvenile summer flounder. Rodgers and Van Den Avyle (1983) suggest that SAV beds are important to summer flounder, and that any loss of these areas along the Atlantic Seaboard may affect summer flounder stocks.

The mouth of Little Egg Inlet and Great Bay has been designated as a Habitat Area of Particular Concern (HAPC) for sandbar shark (*Carcharhinus plumbeus*). Pregnant sandbar shark females occur in the area between late spring and early summer, give birth and depart shortly after while neonates (young of the year) and juveniles (ages one and over) occupy the nursery grounds until migration to warmer waters in the fall (Rechisky and Wetherbee 2003 and Springer 1960). Neonates return to their natal grounds as juveniles and remain there for the summer.

EFH Consultations

The MSA requires federal agencies, such as the Corps to consult with us on any action or proposed action authorized, funded, or undertaken, by such agency that may adversely affect EFH identified under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the consultation process.

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

> An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The EFH final rule also states that the loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may also be considered adverse effects on EFH.

Our EFH regulations also allow federal agencies to incorporate an EFH assessment into documents prepared for other purposes including National Environmental Policy Act (NEPA) documents such as your draft EIS provided certain conditions are met. If an EFH assessment is contained in another document, it must be clearly identified as an EFH assessment and include all of the following mandatory elements including: (i) a description of the action, (ii) an analysis of the potential adverse effects of the action on EFH and the managed species, (iii) the federal agency's conclusions regarding the effects of the action on EFH, and (iv) proposed mitigation, if applicable.

For a listing of EFH and further information, please see our website at: http://www.greateratlantic.fisheries.noaa.gov/habitat. The website also contains information on descriptions of EFH for each species, guidance on the EFH consultation process including EFH assessments, and information relevant to our other mandates

Endangered and Threatened Species

Sea Turtles

Several species of sea turtles listed as threatened or endangered under the federal Endangered Species Act (ESA) occur in coastal New Jersey waters during the warmer months, typically from April through mid-November. The Western North Atlantic Distinct Population Segment (DPS) of loggerhead turtles (*Caretta caretta*), as well as Kemp's ridley (*Lepidochelys kempii*), and green sea turtles (*Chelonia mydas*) are present in these waters mainly during late spring, summer, and early fall when water temperatures are relatively warm. Currently, none of these species have established nesting sites on New Jersey beaches. However, these species are found along the coast and may enter the NJBB to forage. For instance, green, Kemp's ridley, and loggerhead turtles are known to be present within Barnegat Bay, NJ, and use its waters for foraging. The endangered leatherback turtle (*Dermochelys coriacea*) may be found in the waters off the New Jersey coast during the same time frame as the above species, though the species is typically found in deeper, more offshore waters. However, leatherback turtles have stranded along the outer shores of New Jersey.

Atlantic Sturgeon

Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) occur in estuarine and marine waters along the U.S. Atlantic coast and may be present within the area covered by the feasibility study. Five Atlantic sturgeon DPSs may be found within the study area. These are the ESA listed endangered New York Bight, Chesapeake Bay, South Atlantic, and Carolina DPSs, and the ESA listed threatened Gulf of Maine DPS. Sub-adult and adult individuals from any of these DPSs could occur within the study area. Early (eggs, larvae, young-of-year) and juvenile[1] life stages are found in large rivers and their estuaries and will not be present as they are not able to tolerate the high salinity of marine and coastal waters.

[1] The terms juvenile and sub-adult are here used to differentiate between young immature Atlantic sturgeon that has not yet migrated to sea (juvenile) and young immature sturgeon that has migrated to sea (sub-adults).

Prey Resources

Submerged Aquatic Vegetation and Aquatic Invertebrates

Sea turtles forage on a variety of resources depending on species. Green sea turtles are mainly herbivores, foraging on submerged aquatic vegetation (SAV) such as eelgrass and algae. Kemp's ridley turtles forage on swimming crabs but may also prey on fish, jellyfish, and different mollusks. Loggerhead turtles are called so because of their large heads and powerful jaws that enables them to feed on hard-shelled prey such as whelks and conch. Loggerheads turtles also feed on horseshoe crabs, seas urchins and other marine animals. Atlantic sturgeon forage on benthic worms but will also forage opportunistically on small fish, mollusks, and other organisms. All these prey resources are found along the New Jersey coast and in the waters of the NJBB. For instance, the Benthic Invertebrate Community Monitoring and Indicator Development for Barnegat Bay-Little Egg Harbor have identified benthic invertebrate communities in good condition within the bay, and extensive SAV areas have been mapped as well. The feasibility study needs to both consider impacts to SAV and aquatic invertebrates from solutions to protect communities and infrastructure from storms and floods and the ability to protect and enhance these resources in the face of future storms and sea level change.

Effects

Construction Activities

Specific future projects related to NJBB CSRM have not yet been identified but your letter indicates that these may include storm surge barriers, tidal gates, and perimeter solutions such as a combination of structural, non-structural, and natural and nature based features. Any construction activity has the potential to adversely affect endangered and threatened species and such effects should be addressed in the EIS or EA. Impacts could include, but are not limited to, exposure to sound from pile driving, vessel strikes, entanglement in vertical lines (e.g., for buoys marking vessel exclusion areas), entrapment in structures, exposure to suspended sediment, and loss of habitat. Use of best management practices to avoid or minimize effects to endangered and threatened species should be included in the feasibility study. Such practices could include, but are not limited to establishing work windows when species are unlikely to be present; establishing measures to reduce sound from pile driving such as using vibratory hammer instead of impact hammer; placing turtle exclusion barriers such as turbidity curtains around work areas; placing vertical lines inside rigid sleeves, e.g., pull lines through PVC pipes; minimizing use of vessels and vessel speed; and avoiding or minimizing impacts to SAV and areas having high densities of aquatic invertebrates.

Flood Risk Management

As mentioned, the New Jersey back bays provide important foraging opportunities for Atlantic sturgeon and several species of turtles. Thus, the feasibility study needs to consider if any solution to reduce the risk to communities and infrastructure from storms may impede species access and movements, and how such effects can be avoided or minimized. Access does not only

include the ability to enter the back bays (i.e. the inlets) but also movements within and between the tidal bodies and open waters that are landward of the New Jersey ocean coastline.

Climate Change

Currently there are no established sea turtle nesting in New Jersey. However, occasional rare nesting and nesting attempts by loggerhead turtles has been observed on New Jersey and Delaware beaches. Further, a green turtle laid eggs on a Delaware beach in 2011 and a potential nesting attempt occurred in New Jersey in 2010. It is not known if these nesting attempts are part of outliers that have normally occurred over time or if it is a new phenomenon as a response to a changing climate. However, it is a potential for turtle nesting to expand north with warmer ocean currents and climate. Thus, the feasibility study should address the potential for increased occurrences of sea turtle (loggerhead and green turtle) nesting on New Jersey beaches. This should include incorporating into the feasibility study the impacts to beaches from sea level rise and the potential for establishing conservation measures for sea turtle nesting.

Thank you for the opportunity to provide input into the development of the NJBB CRSM feasibility study. We look forward to continued coordination with your office on this study as it moves forward. If you have any questions or need additional information, please do not hesitate to contact me at karen.greene@noaa.gov or (732) 872-3023. For additional information on threatened and endangered species, please contact Peter Johnson at peter.b.johnson@noaa.gov or (978) 281-9416.

Sincerely,

Karen M. Greene
Mid Atlantic Field Offices Supervisor
Habitat Conservation Division

cc: MAFMC – C. Moore
NEFMC – T. Nies
ASMFC – L. Havel
GARFO – P. Johnson, K.Chu, J. Pelligrino
Corps – M. Brandreth

and habitat characteristics. NOAA Technical Memorandum NMFS-NE-151.

Peterson, C.H. 1982. Clam predation by whelks (Busycon spp.): Experimental tests on the importance of prey size, prey density, and seagrass cover. Mar. Biol, 66:159-70.

Rechisky, E.L. and B. M. Wetherbee. 2003. Sort-term movements of juvenile and neonate sandbar sharks, *Carcharhinus plumbeus*, on their nursery grounds in Delaware Bay. *Envir. Bio. of Fishes*. 68:113-128.

Rogers, S.G. and M.J. Van Den Avyle. 1983. Species profiles: life histories and environmental requirements of coastal fishes and invertebrates (South Atlantic): summer flounder. U.S. Fish and Wildl. Serv. FWS/OBS-82/11.15. 14p.

Springer, S. 1960. Natural history of the sandbar shark, *Eulania milberti*. *Fish. Bull*. 61:1-38.

Steimle, F.W., R.A. Pikanowski, D.G. McMillan, C.A. Zetlin, S.J. Wilk. 2000. Demersal fish and American lobster diets in the Lower Hudson-Raritan Estuary. NOAA Technical Memorandum NMFS-NE-161. Woods Hole, MA. 106 p.

Stephan, C. D and T.E. Bigford. eds. 1997. Atlantic Coastal Submerged Aquatic Vegetation: a review of its ecological role, anthropogenic impacts, state regulation and value to Atlantic coast fish stocks. Atlantic States Marine Fisheries Commission. Habitat Management Series #1.

U.S. Department of Interior. 1963. Distribution of shellfish resources in relation to the New Jersey Intracoastal waterway. Bureau of Sportfisheries and Wildlife. Boston, MA.

Weinstein, M.P. and H.A. Brooks. 1983. Comparative ecology of nekton residing in a tidal creek and adjacent seagrass meadow: community composition and structure. Mar. Ecol. Prog. Ser. 12: 15-27.

Literature Cited

Adams, S.M. 1976. The ecology of eelgrass, *Zostera marina* (L.), fish communities. I. Structural Analysis. J. Exp. Mar. Biol. Ecol. 22: 269-291.

Atlantic States Marine Fisheries Commission. 2012. American Eel Benchmark Stock Assessment. Stock Assessment Report No. 12-01. Washington, DC. 29 p.

Atlantic States Marine Fisheries Commission. 2007. Species Profile: shad and river herring: Atlantic states seek to improve knowledge of stock status and protect populations coast wide. www.asmfc.org. Washington, DC.

Collette, B.B. and G. Klein-MacPhee. eds. 2002. Bigelow and Schroeder's fishes of the Gulf of Maine. Smithsonian Institution. Washington, D.C.

Fonseca, M.S., W.J. Kenworthy and G.W. Thayer. 1992. Seagrass beds: nursery for coastal species. In: R.H. Stroud (ed.). Stemming the side of coastal fish habitat loss. Proceedings of a symposium on conservation of coastal fish habitat, Baltimore, Maryland, March 7-9, 1991. p 141-146.

Graff, L. and J. Middleton. Undated. Wetlands and fish: catch the link. Save Our Stream Program. Izaak Walton League of America, Inc., Prepared for National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Habitat Conservation. Silver Spring, Maryland. 48 p.

Heckman, K.L. and T.A. Thoman. 1984. The nursery role of seagrass meadows in the upper and lower reaches of the Chesapeake Bay. Estuaries 7:70-92

Kenworthy, W.J., G.W. Thayer and M.S. Fonseca. 1988. Utilization of seagrass meadows by fishery organisms. In: Hook, D.D., W.H. McKee, Jr., H.K. Smith, J. Gregory, V.G. Burrell, Jr., M.R. DeVoe, R.E. Sojka, S. Gilbert, R. Banks, L.H. Stolzy, C. Brooks, T.D. Matthews and T.H. Shear (eds.). The ecology and management of wetlands. Vol 1, Ecology of wetlands. Timber Press. Oregon. 592 p.

Lascara, J. 1981. Fish predatory-prey interactions in areas of eelgrass (Zostera marina). M.S. Thesis. Coll. William and Mary. Williamsburg, VA. 81 p.

McCloy, T.W and J.W. Joseph. 1985. Inventory of New Jersey's Estuarine Shellfish Resources. Completion Report. Project no. 3-332-R-5.

New Jersey Department of Environmental Protection. 2005. Locations of anadromous American shad and river herring during their spawning period in New Jersey's Freshwaters including known migratory impediments and fish ladders. Division of Fish and Wildlife, Bureau of Freshwater Fisheries. Sicklerville, NJ.

Packer, D.B., S.J. Griesbach, P.L. Berrien, C.A. Zetlin, D.L. Johnson and W.W. Morse. 1999. Essential Fish Habitat Source Document: Summer Flounder, *Paralichthys dentatus,* life history

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August 22, 2016

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Env. Resources Branch

Re: Backbay flood risk reduction feasibility study information request

Dear Ms. Brandreth,

This letter is in response to the July 22, 2016, letter requesting general information about marine resources in the proposed study area. Enclosed is a CD that contains charts of known shellfish populations and shellfish aquaculture lease areas. For submerged aquatic vegetation resources, please see charts available on the Division of Land Use Regulation's website, http://www.nj.gov/dep/landuse/sav.html.

Additionally, we offer the following general comments, the first 3 of which were previously provided to USACOE personnel regarding this study.

1) As a resource agency, we are concerned about the potential impacts to valuable commercial and recreational fisheries, fish and shellfish habitats, and fishing access. Investigations and risk reduction measures should consider these adverse impacts, both in terms of impacts to the resources themselves, and to the local and State economies supported by these resources. New Jersey's recreational fishing industry is a significant financial and social driver to the state's economy and tourism industry, supporting nearly 20,000 jobs and contributing nearly $1.5 Billion annually to the state's economy. Our commercial fishing industry is worth nearly $152 million in dockside value with $2.5 billion overall to the economy and accounts for nearly 45,000 jobs in New Jersey.

2) Along these lines, potential user and resource conflicts for proposed risk reduction measures should be evaluated.

3) The Marine Fisheries Administration is an excellent source of fisheries and habitat information and data. Please feel free to contact the Administration for information, as not all data sources or reports are posted online. Resource agencies (not just ours) are also likely to have unpublished data (collected, but still under analysis) that will be useful. For example, the Bureau of Shellfisheries has recently collected shellfish information for Raritan and Sandy Hook Bays, and the Navesink and Shewsbury Rivers, but final reports are not yet available. Older data from southern counties is being mined and evaluated. Knowing the sources of information available, even if unpublished, will help reduce redundancy in data collection or assumptions of data gaps.

4) Any stream, river or body of water with open access to the ocean, without dams or impediments to fish movement, could have an anadromous run and should be protected. All or parts of the water bodies contained within this project area are considered to be within an anadromous species migration corridor. In order to protect the anadromous species spawning run in this area, a timing restriction from March 1 through June 30 is needed on any in-water disturbance, sediment generating activities and pile driving.

Please feel free to contact the Marine Fisheries Administration with any questions or comments. Correspondence can be directed to Kira Dacanay (kira.dacanay@dep.nj.gov) and Kelly Davis (kelly.davis@dep.nj.gov).

Sincerely,

Kira Dacanay
Senior Biologist

cc. B. Muffley – Marine Fisheries Administrator
R. Allen
R. Babb
K. Davis

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August 25, 2016

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Philadelphia, Pennsylvania 19107-3390

Re: Multiple Counties
New Jersey Back Bay Coastal Storm Risk Management Program

Dear Ms. Brandreth:

Thank for your submission regarding the proposed United States Army, Corps of Engineers development of a comprehensive study to asses New Jersey back bay coastal storm risk management. The Historic Preservation Office (HPO) looks forward to further consultation regarding the potential impact of the proposed study on historic properties within New Jersey. HPO cultural resource data is available online through the New Jersey Department of Environmental Protection's online environmental mapping tool, GeoWeb: http://www.nj.gov/dep/gis/geowebsplash.htm. This Cultural Resources Geographic Information System (CRGIS) includes data on all resources included in, or formally determined eligible for inclusion in the New Jersey and National Registers of Historic Places.

Please note however, while the HPO's CRGIS does include some information pertaining to archaeological site sensitivity, the HPO is not the repository for archaeological site registration information or site data. Information regarding registered archaeological sites within New Jersey is managed by the Bureau of Archaeology and Ethnology at the New Jersey State Museum. For more information on the presence of archaeological sites within the proposed area of potential effects, please contact Jim Moss, Bureau of Archaeology and Ethnology Registrar, at 609-292-6330.

Independent file review and research may be conducted at the Historic Preservation Office. Our collection includes New Jersey and National Registers of Historic Places nomination and opinion of eligibility files, cultural resource surveys, inventories and reports, as well as a small reference

library. Please contact Atalaya Armstrong for HPO required file review training at 609-292-0061 for file review appointments, once trained. Please see the HPO website for further information: http://www.nj.gov/dep/hpo/4sustain/info.htm.

Additional Comments

Thank you for providing the opportunity to review and comment on the potential for the above-referenced project to affect historic and archaeological resources. The HPO looks forward to further consultation regarding the further development and implementation of the proposed study. If additional consultation with the HPO is needed for this undertaking, please reference the HPO project number 16-2157 in any future calls, emails, or written correspondence to help expedite your review and response. Please do not hesitate to contact Jesse West-Rosenthal (609-984-6019) of my staff with any questions regarding archaeology or Michelle Craren (609-292-0032) with questions regarding historic architecture.

Sincerely,

Katherine J. Marcopul

Katherine J. Marcopul
Deputy State Historic
Preservation Officer

Cc: Nikki Minnichbach, USACE

KJM/MMB/JWR

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF PERMIT COORDINATION AND ENVIRONMENTAL REVIEW
P.O. Box 420 Mail Code 401-07J Trenton, New Jersey 08625-0420
Telephone Number (609) 292-3600
FAX NUMBER (609) 633-2102

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

September 1, 2016

Beth Brandreth
Project Biologist
USACOE
Wanamaker Bldg.
I 00 E. Penn Square
71h Floor
Philadelphia, PA 19107-3390
Env. Resources Branch

RE: **Backbay flood risk reduction feasibility study information request**

Dear Ms. Brandreth:

This letter is in response to the July 22,_2016, letter (received in the NJDFW Director's office on Aug. 2) requesting general information about marine resources in the proposed study area and is an addendum to a letter sent by Kira Dacanay on August 22, 2016.

We offer the following comment.

Marine Fisheries:
Anadromous fish restrictions (river herring & sturgeon mainly) are in place from Mar 1 - Jun 30, during which time noise restrictions are imperative (i.e. driving pilings) to reducing disturbance of the spawning migration. Winter Flounder restrictions are in place from Jan. 1 – May 30 during which time substrate disturbance and turbidity restrictions are imperative to reducing disturbances. Additionally, any work being done in the area may need to be referred to USFWS if it Is likely to interact with Sturgeon.

Endangered and Non-game Species Program:
Significant issues, problems, needs, concerns

- ENSP supports a careful inquiry into the creation of a "comprehensive CSRM program" of the back bays areas of the state. Our primary ***concern*** is that to "increase resilience, reduce risk from future storms and the impacts of climate change", natural areas will be stabilized in a manner that diminishes their ability to support the plants and wildlife of this ecosystem. We would like the report to consider a wide variety of adaptation strategies (including engineered solutions specified in the letter like storm surge barriers and tide gates but also ones such as managed retreat) as it is our belief that a multi-pronged approach is the most feasible and likely to succeed.
- An ENSP ***need*** from this process would be specific information regarding the feasibility and likelihood of success of additional armoring of the coast. It is encouraging to read that proposed engineering would be undertaken with SAGE and EWN practices in place,

but we recognize the trade-offs that can occur when natural processes are interrupted through stabilization and shore protection. As we adapt to sea-level rise, ENSP wants to ensure that our natural resources are given as much priority as possible, especially when we are aware of the ecosystem benefits and ability of these systems to regulate when they are intact.

Significant Resources in Project Area

Marsh Species (including but not limited to)

- Birds: Northern Harrier[2], American Bittern[2], Least Tern[2], Peregrine Falcon[2], Short-eared Owl[2] ,Yellow-crowned Night-heron[2], Black-crowned Night-heron[2], Cattle Egret[2] , Black Rail[3], Saltmarsh Sparrow[4], Snowy Egret[4], Little Blue Heron[4], Tricolored Heron[4], Glossy Ibis[4], Clapper Rail, Osprey, Great Egret, Common Tern[4], Forster's Tern, Gull-billed Tern[4], Caspian Tern[4], Laughing Gull, Least Bittern[4], Great Blue Heron[4]
- Plants: SAVs (eel grass ,widgeon grass)
- Diamondback Terrapin[4]

Beach Species (including but not limited to)

- Birds: Piping Plover[1], Least Tern[2], Black Skimmer[2], American Oystercatcher[4], Common Tern[4]
- Plants: Seabeach amaranth[1]
- Invertebrates: Northeastern Beach Tiger Beetle[1]

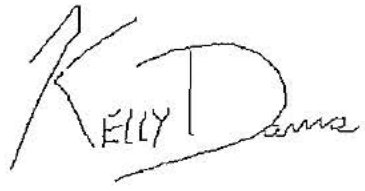
Little Egg Inlet and environs (south from North Brigantine Natural Area north to Holgate)

- This area represents the largest undeveloped barrier island and marsh island ecosystem in the state. It includes federal wilderness areas, federal refuges, state natural areas and state wildlife management areas. Little Egg Inlet and Brigantine Inlet are among the last unmodified and/or unarmored inlets in the state. All consideration should be given to leave this system as intact and as unaltered as possible, where natural processes are prioritized.

[1] Federally endangered or threatened
[2] State endangered or threatened
[3] Likely federal candidate for listing
[4] Special Concern

Please feel free to contact the Marine. Fisheries Administration with any questions or comments. Correspondence can be directed to Kelly Davis (kelly.davis@dep.nj.gov).

Sincerely,



Kelly Davis
Principal Biologist Fisheries

ɪtoric Preservation Representatives
P.O. Box 64
ɔno Lake, PA 18347
e@delawaretribe.org

August 9, 2016

Department of the Army
Philadelphia District, Corps of Engineers
Wanamaker Building, 100 Penn Square East
Philadelphia, PA 19107

RE: New Jersey Back Bays Study

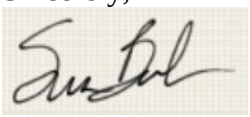
Dear Ms. Cooper Minnichbach,

Thank you for informing the Delaware Tribe of the above referenced project. The Delaware Tribe is committed to protecting historic sites important to our tribal heritage, culture and religion. Our initial review indicates that there are many known religious or culturally significant sites within this project area and we would like to enter into consultation as the project progresses.

We do ask that in the event that a concentration of artifacts and/or in the event any human remains are accidentally unearthed during the course of the project that all work is halted until the Delaware Tribe of Indians is informed of the inadvertent discovery and a qualified archaeologist can evaluate the find.

If you have any questions, feel free to contact this office by phone at (610) 761-7452 or by e-mail at temple@delawaretribe.org.

Sincerely,



Susan Bachor
Delaware Tribe Historic Preservation Representative

US Army Corps of Engineers

News Release

Army Corps, NJDEP to host public meeting for flood risk study

Published Nov. 22, 2016

PHILADELPHIA (November 22, 2016) – The U.S. Army Corps of Engineers and the New Jersey Department of Environmental Protection are hosting a public meeting regarding the New Jersey Back Bays Flood Risk Management study on Dec. 1 from 6-8 p.m. at Stockton University in Galloway Township, N.J.

The Army Corps, in partnership with NJDEP, is conducting a feasibility study for coastal storm risk management problems within the New Jersey Back Bay area, defined as the network of interconnected tidal water bodies located landward of the New Jersey ocean coastline in Monmouth, Ocean, Atlantic, Burlington, and Cape May Counties.

The study area includes approximately 950 square miles and nearly 3,400 miles of shoreline. The objective of the study is to investigate problems and solutions to reduce damages from coastal flooding that affects population, critical infrastructure, critical facilities, property, and ecosystems.

The general public and other stakeholders are invited to provide feedback, help identify significant issues, and learn about the overall study process and status. The meeting will be held on Thursday, December 1, 2016 between 6:00 PM and 8:00 PM at the Stockton University Campus Center located at 101 Vera King Farris Drive, Galloway, NJ 08205. The event will commence in the theater, which is on the main level of the Campus Center. Free parking is available directly in front of the Campus Center, Lots 2 and 3.

For more information, visit: http://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Coastal-Storm-Risk-Management/

Related Link: **New Jersey Back Bays Study Webpage**
http://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Coastal-Storm-Risk-Management/

Contact

Steve Rochette
215-656-6432

Release no. 11222016

USACE flood risk management Army Corps of Engineers flooding
NJDEP New Jersey Back Bays backbays

4. A determination has been made that Poland can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

5. All defense articles and services listed in this transmittal are authorized for release and export to the Government of Poland.

[FR Doc. 2019–27133 Filed 12–16–19; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Notice of Intent To Prepare a Tiered Environmental Impact Statement for the New Jersey Back Bays Coastal Storm Risk Management Feasibility Study

AGENCY: U.S. Army Corps of Engineers, DoD.

ACTION: Notice of intent.

SUMMARY: Pursuant to the requirements of the National Environmental Policy Act (NEPA), the U.S. Army Corps of Engineers, Philadelphia District (Corps) is preparing an integrated Feasibility Report/Tiered Environmental Impact Statement (EIS) for the proposed New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study. The study is assessing the feasibility of coastal storm risk management alternatives to be implemented within the authorized study area with a specific emphasis on the back bay areas along the New Jersey Atlantic Coast extending from Cape May Inlet to Shark River Inlet including the NJ Coastal Lakes Area.

DATES: Comments and suggestions must be submitted by January 16, 2020.

ADDRESSES: Pertinent information about the study can be found at: *https://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Study/*. Interested parties are welcome to send written comments and suggestions concerning the scope of issues to be evaluated within the Tiered EIS to Steven D. Allen, Environmental Resources Branch, Planning Division, U.S. Army Corps of Engineers, Philadelphia District. Mail: Steven D. Allen, U.S. Army Corps of Engineers, Philadelphia District, CENAP–PL–E, Wanamaker Building, 100 Penn Square East, Philadelphia, PA 19107–3390; phone: (215) 656–6559; email: *Steven.D.Allen@usace.army.mil.*

FOR FURTHER INFORMATION CONTACT: Questions about the overall NJBB study should be directed to J.B. Smith, Project Manager, U.S. Army Corps of Engineers, Philadelphia District, Planning Division, Project Development Branch. Mail: J.B. Smith, U.S. Army Corps of Engineers, Philadelphia District, CENAP–PL–PC, Wanamaker Building, 100 Penn Square East, Philadelphia, PA 19107–3390; Phone: (215) 656–6579; email: *J.B.Smith@usace.army.mil.*

SUPPLEMENTARY INFORMATION:

1. Background

The U.S. Army Corps of Engineers (Corps), in partnership with the New Jersey Department of Environmental Protection (NJDEP), as the non-federal sponsor, are undertaking this study. The NJBB CSRM Feasibility Study area is one of 9 focus areas with vulnerable coastal populations identified in the North Atlantic Coast Comprehensive Study (NACCS). The NACCS was conducted in response to Public Law 113–2 and the Water Resource and Reform Development Act (WRRDA) of 2014 following the devastation in the wake of Hurricane Sandy, which greatly affected the study area in October of 2012. The purpose of the NJBB CSRM Feasibility Study is to identify comprehensive CSRM strategies to increase coastal resilience, and to reduce flooding risk from future storms and impacts of sea level change. The objective of the Study is to investigate CSRM problems and solutions to reduce damages from coastal flooding that affect population, critical infrastructure, critical facilities, property, and ecosystems. The authority for the proposed project is the resolution adopted by the U.S. House of Representatives Committee on Public Works and Transportation and the U. S. Senate Committee on Environment and Public Works dated December 1987. A Feasibility Cost Sharing Agreement (FCSA) was executed in 2016 with the NJDEP.

2. Study Area

The study area encompasses approximately 950 square miles located behind the New Jersey barrier islands of Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, and includes the set of interconnected water bodies and coastal lakes that are separated from the Atlantic Ocean.

3. Corps Decision Making

As required by Council on Environmental Quality's Principles, Requirements and Guidelines for Water and Land Related Resources Implementation Studies all reasonable alternatives to the proposed Federal action that meet the purpose and need will be considered in the Tiered EIS. Tiering, which is defined in 40 CFR 1508.28, is a means of making the environmental review process more efficient by allowing parties to ''eliminate repetitive discussions of the same issues and to focus on the actual issues suitable for decision at each level of environmental review'' (40 CFR 1502.20). The Study will consider the full array of structural, non-structural, and natural and nature-based measures, and will consider past, current, and future coastal storm risk management and resilience planning initiatives and projects underway by the USACE and other Federal, State, and local agencies.

4. Public Participation

The Corps and the NJDEP hosted two agency workshop meetings in June 2017, with representatives from federal and state agencies, counties, municipalities, non-governmental organizations (NGOs), elected officials and academia. The Corps initially announced the preparation of an integrated Feasibility Report/EIS for study in the December 27, 2017 **Federal Register**. Two public NEPA scoping meetings were later held in the southern and northern regions of the study area in September 2018. Subsequent to the publication of the December 27, 2017 NOI, the Study was granted an exemption from the requirement to complete the feasibility study within 3 years, as required in Section 1001(a) of the Water Resources Reform and Development Act of 2014. This exemption was granted on October 31, 2018 on an interim basis, and allowed for an additional 17 months to complete the Draft Integrated Feasibility Report and Tier 1 EIS. Therefore, in order to align the revised study schedule with Executive Order 13807, Notice to Withdraw the original NOI was published in the February 20, 2019 **Federal Register**. To further provide the public with study information, an Interim Feasibility Report and Environmental Scoping Document was released on February 28, 2019 that identified the preliminary economic, environmental, engineering and other studies performed to date of the above referenced alternatives. This report presented the selection of a focused array of alternatives for further evaluation. A webinar was later held on March 14, 2019 to present the findings of the report and to solicit comments from the general public and stakeholders. In addition, comments,

concerns and information submitted to the Corps are being evaluated and considered during the development of the Draft EIS. Comments received are continuing to aid the study progress and included in the draft report and will be part of the administrative record

5. Lead and Cooperating Agencies

The U.S. Army Corps of Engineers is the lead federal agency for the preparation of a Tiered EIS in order to meet the requirements of the NEPA and the NEPA Implementing Regulations of the President's Council on Environmental Quality (40 CFR 1500–1508). The following agencies have accepted the invitation to be Cooperating Agencies: The U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. The preparation of a Tiered EIS will be coordinated with New Jersey State and local municipalities with discretionary authority relative to the proposed actions. The Draft Integrated Feasibility Report/Tiered EIS is currently scheduled for distribution to the public in March of 2020.

Dated: December 9, 2019.

Jeffrey L. Milhorn,

Major General, U.S. Army, Commander, North Atlantic Division.

[FR Doc. 2019–27122 Filed 12–16–19; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2019–ICCD–0154]

Agency Information Collection Activities; Comment Request; Foreign Gifts and Contracts Disclosures

AGENCY: Department of Education (ED), Office of the General Counsel (OGC)

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is requesting the Office of Management and Budget (OMB) to conduct an emergency review of a new information collection.

DATES: Approval by the OMB has been requested by January 2, 2020. Interested persons are invited to submit comments on or before December 27, 2019.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use *http://www.regulations.gov* by searching the Docket ID number ED–2019–ICCD–0154. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. If the *regulations.gov* site is not available to the public for any reason, ED will temporarily accept comments at *ICDocketMgr@ed.gov.* Please include the docket ID number and the title of the information collection request when requesting documents or submitting comments. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Strategic Collections and Clearance Governance and Strategy Division, U.S. Department of Education, 400 Maryland Ave. SW, LBJ, Room 6W–208D, Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Hilary Malawer, Deputy General Counsel, 202–401–6148.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Foreign Gifts and Contracts Disclosures.

OMB Control Number: 1801–NEW.

Type of Review: A new information collection.

Respondents/Affected Public: Private and Public Institutions of Higher Education (IHEs).

Total Estimated Number of Annual Responses: 400.

Total Estimated Number of Annual Burden Hours: 8,000.

Abstract: Section 117 of the Higher Education Act of 1965 (HEA), as amended, provides that institutions of higher education must file a disclosure report with the Secretary of Education under the following circumstances: Whenever any institution is owned or controlled by a foreign source or receives a gift from or enters into a contract with a foreign source, the value of which is $250,000 or more, considered alone or in combination with all other gifts from or contracts with that foreign source within a calendar year, the institution shall file a disclosure report with the Secretary on January 31 or July 31, whichever is sooner. (see *https://www.govinfo.gov/content/pkg/USCODE-2017-title20/pdf/USCODE-2017-title20-chap28-subchapI-partB-sec1011e.pdf*).

This collection of information is necessary to implement 20 U.S.C. 1011f.

Dated: December 13, 2019.

Stephanie Valentine,

PRA Coordinator, Strategic Collections and Clearance, Governance and Strategy Division, Office of Chief Data Officer.

[FR Doc. 2019–27262 Filed 12–13–19; 4:15 pm]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Applications for New Awards; Fulbright-Hays Group Projects Abroad Program

AGENCY: Office of Postsecondary Education, Department of Education.

ACTION: Notice.

SUMMARY: The Department of Education is issuing a notice inviting applications for fiscal year (FY) 2020 for the Fulbright-Hays Group Projects Abroad (GPA) Program, Catalog of Federal Domestic Assistance (CFDA) number 84.021A and 84.021B. This notice relates to the approved information collection under OMB control number 1840–0792.

DATES:

Applications Available: December 17, 2019.

Deadline for Transmittal of Applications: February 18, 2020.

Pre-Application Webinar information: The Department will hold a pre-application meeting via webinar for prospective applicants. Detailed information regarding this webinar will

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

Environmental Resources Branch

JAN 11 2018

SUBJECT: Invitation to be a Cooperating Agency in the Environmental Review for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study

Catherine McCabe
Acting Regional Administrator
U.S. Environmental Protection Agency – Region 2
290 Broadway
New York, NY 10007-1866

Dear Ms. McCabe:

The U.S. Army Corps of Engineers, Philadelphia District (District), in partnership with the State of New Jersey Department of Environmental Protection (NJDEP) is undertaking a feasibility study to examine measures to reduce future flood risk and the economic costs and risk associated with flood and storm events that affect the NJBB study area, which encompasses five counties and approximately 1,300 square miles (950 miles) of coastline along New Jersey's Atlantic Coastal Bays and Inlets (Figure 1). This Study will also contribute to the resilience of communities, important infrastructure, and the environment. As part of the feasibility study, the District will prepare an integrated Draft Environmental Impact Statement (DEIS) pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. The DEIS will evaluate environmental impacts from reasonable study alternatives and determine the potential for significant impacts related to reducing coastal storm risks in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities as it relates to sea level rise, local subsidence and storms, as well as to reduce the economic costs and risk associated with large scale flood and storm events in the area. The NJBB CSRM Feasibility Study will build upon and supplement the North Atlantic Coast Comprehensive Study: Resilient Adaption to Increasing Risk (NACCS, published in January 2015) and ongoing local, state, and Federal efforts by other agencies and groups to improve regional resiliency.

The District is undertaking this effort pursuant to its responsibilities under the Clean Water Act, Clean Air Act, and other statutes under the purview of the Environmental Protection Agency. An initial NEPA scoping letter was sent to the Environmental Review Section of Region 2 on July 22, 2016.

The District anticipates that there will be a draft Tentatively Selected Plan (TSP) by October 2018 with an integrated DEIS available in January 2019. As part of the environmental review process for this project, the District is required by law[1] to identify, as early as practicable, any Federal and non-Federal agencies that may have an interest in the Study, and invite such agencies to become participating agencies in the environmental review process[2]. This letter is a formal invitation to participate as a cooperating agency for the Study.

Should your agency choose to assume cooperating status, your agency's specific responsibilities as a cooperating agency will include:

- Attendance at and input during agency coordination meetings;
- Comment and feedback on the schedule, overall scope of the NEPA document(s), significant issues to be evaluated, environmental impacts, study and assessment methodologies, range of alternatives and proposed compensatory mitigation, if applicable;
- Guidance on relevant technical studies required as part of the NEPA analysis;
- Identification of issues related to your agency's jurisdiction by law and special expertise;
- Participation, as appropriate, at public meetings and hearings;
- Timely review of the administrative and public drafts of the Draft Integrated Feasibility Report (IFR)/NEPA document and Final IFR/NEPA document;
- Providing staff support at the lead agency's request to enhance the interdisciplinary capability for the study.

As a cooperating agency, you have the right to expect that the NEPA document will enable your agency to perform its jurisdictional responsibilities. Likewise, you have the obligation to tell the District if, at any point in the process, your agency's requirements are not being met. We expect that, at the end of the process, the NEPA document(s) will satisfy your NEPA requirements including those related to study alternatives, environmental consequences and mitigation.

If your agency does not wish to be a cooperating agency, your agency still has the opportunity to become a participating agency in the environmental review process. As a participating agency, you will be afforded the opportunity, together with the public, to be involved in defining the purpose and need for the project, as well as in determining the range of alternatives to be considered for the project. These opportunities will build on

[1]Section 2045 of the Water Resources Development Act of 2007 (33 U.S. C. 2348), as amended.
[2]Designation as a "participation agency" or "cooperating agency" does not imply that the participating agency supports the proposed project or has any jurisdiction over, or special expertise concerning the proposed project or its potential impact. A "participating agency" differs from a "cooperating agency", which is defined in regulations implementing the National Environmental Policy Act as "any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment" 40 CFR 4-1508.5

the early participation opportunities that were provided during the alternatives analysis process. In addition, you will be asked to:

- Provide input on the environmental impact assessment methodologies and analysis level of detail in accordance with your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate;
- Review and comment on section of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

In order to give your agency adequate opportunity to weigh the relevance of your agency's participation as either a cooperating agency or a participating agency or both in this environmental review process, written response to this invitation is requested by February 15, 2018.

A response is also requested if you elect to not become a cooperating agency indicating that your agency has no jurisdiction or authority with respect to the study area, no expertise or information relevant to the study area, or does not intend to submit comments on the project[3]. A negative response may be transmitted electronically to Steve Allen, Project Biologist, at Steven.D.Allen@usace.army.mil.

We look forward to your response to this request and your role as a cooperating or participating agency on this study. If you have questions or would like to discuss in more detail the study or our agency's respective roles and responsibilities during the study process, please contact Steve Allen at (215) 656-6559 or by e-mail above.

Sincerely,

Peter R. Blum P.E.
Chief, Planning Division

[3]Per Section 1005 of WRRDA 2014, which amends Section 2045 of WRDA 2007

Figure 1. New Jersey Back Bay Study Area.

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

JAN 11 2018

Environmental Resources Branch

SUBJECT: Invitation to be a Cooperating Agency in the Environmental Review for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study

John Rabin
Acting Regional Administrator
Federal Emergency Management Agency – Region II
Mitigation Division/EHP
One World Trade Center
New York, NY 10007

Dear Mr. Rabin:

The U.S. Army Corps of Engineers, Philadelphia District (District), in partnership with the State of New Jersey Department of Environmental Protection (NJDEP) is undertaking a feasibility study to examine measures to reduce future flood risk and the economic costs and risk associated with flood and storm events that affect the NJBB study area, which encompasses five counties and approximately 1,300 square miles (950 miles) of coastline along New Jersey's Atlantic Coastal Bays and Inlets (Figure 1). This Study will also contribute to the resilience of communities, important infrastructure, and the environment. As part of the feasibility study, the District will prepare an integrated Draft Environmental Impact Statement (DEIS) pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. The DEIS will evaluate environmental impacts from reasonable study alternatives and determine the potential for significant impacts related to reducing coastal storm risks in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities as it relates to sea level rise, local subsidence and storms, as well as to reduce the economic costs and risk associated with large scale flood and storm events in the area. The NJBB CSRM Feasibility Study will build upon and supplement the North Atlantic Coast Comprehensive Study: Resilient Adaption to Increasing Risk (NACCS, published in January 2015) and ongoing local, state, and Federal efforts by other agencies and groups to improve regional resiliency.

The District is undertaking this effort pursuant to the Senate Resolution adopted on December 17th 1987 by the Committee on Environmental and Public Works, Public Law 113-2 Disaster Relief Appropriations (2013) and the Water Resources and Reform Development Act (WRRDA) of 2014. An initial NEPA scoping letter was sent to the Risk Analysis Branch on July 22, 2016.

The District anticipates that there will be a draft Tentatively Selected Plan (TSP) by October 2018 with an integrated DEIS available in January 2019. As part of the environmental review process for this project, the District is required by law[1] to identify, as early as practicable, any Federal and non-Federal agencies that may have an interest in the Study, and invite such agencies to become participating agencies in the environmental review process[2]. This letter is a formal invitation to participate as a cooperating agency for the Study.

Should your agency choose to assume cooperating status, your agency's specific responsibilities as a cooperating agency will include:

- Attendance at and input during agency coordination meetings;
- Comment and feedback on the schedule, overall scope of the NEPA document(s), significant issues to be evaluated, environmental impacts, study and assessment methodologies, range of alternatives and proposed compensatory mitigation, if applicable;
- Guidance on relevant technical studies required as part of the NEPA analysis;
- Identification of issues related to your agency's jurisdiction by law and special expertise;
- Participation, as appropriate, at public meetings and hearings;
- Timely review of the administrative and public drafts of the Draft Integrated Feasibility Report (IFR)/NEPA document and Final IFR/NEPA document;
- Providing staff support at the lead agency's request to enhance the interdisciplinary capability for the study.

As a cooperating agency, you have the right to expect that the NEPA document will enable your agency to perform its jurisdictional responsibilities. Likewise, you have the obligation to tell the District if, at any point in the process, your agency's requirements are not being met. We expect that, at the end of the process, the NEPA document(s) will satisfy your NEPA requirements including those related to study alternatives, environmental consequences and mitigation.

If your agency does not wish to be a cooperating agency, your agency still has the opportunity to become a participating agency in the environmental review process. As a participating agency, you will be afforded the opportunity, together with the public, to be involved in defining the purpose and need for the project, as well as in determining the range of alternatives to be considered for the project. These opportunities will build on

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[2]Designation as a "participation agency" or "cooperating agency" does not imply that the participating agency supports the proposed project or has any jurisdiction over, or special expertise concerning the proposed project or its potential impact. A "participating agency" differs from a "cooperating agency", which is defined in regulations implementing the National Environmental Policy Act as "any Federal agency other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment" 40 CFR 4-1508.5

the early participation opportunities that were provided during the alternatives analysis process. In addition, you will be asked to:

- Provide input on the environmental impact assessment methodologies and analysis level of detail in accordance with your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate;
- Review and comment on section of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

In order to give your agency adequate opportunity to weigh the relevance of your agency's participation as either a cooperating agency or a participating agency or both in this environmental review process, written response to this invitation is requested by February 15, 2018.

A response is also requested if you elect to not become a cooperating agency indicating that your agency has no jurisdiction or authority with respect to the study area, no expertise or information relevant to the study area, or does not intend to submit comments on the project[3]. A negative response may be transmitted electronically to Steve Allen, Project Biologist, at Steven.D.Allen@usace.army.mil.

We look forward to your response to this request and your role as a cooperating or participating agency on this study. If you have questions or would like to discuss in more detail the study or our agency's respective roles and responsibilities during the study process, please contact Steve Allen at (215) 656-6559 or by e-mail above

Sincerely,

Peter R. Blum P.E.
Chief, Planning Division

[3]Per Section 1005 of WRRDA 2014, which amends Section 2045 of WRDA 2007

Figure 1. New Jersey Back Bay Study Area.

DEPARTMENT OF THE ARMY
PHILADELPHIA DISTRICT, CORPS OF ENGINEERS
100 PENN SQUARE EAST, 7th FLOOR WANAMAKER BUILDING
PHILADELPHIA, PENNSYLVANIA 19107-3390

Environmental Resources Branch

JAN 11 2018

SUBJECT: Invitation to be a Cooperating Agency in the Environmental Review for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study

John Bullard
Regional Administrator
Greater Atlantic Region Fisheries
Office of National Marine Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930

Dear Mr. Bullard:

The U.S. Army Corps of Engineers, Philadelphia District (District), in partnership with the State of New Jersey Department of Environmental Protection (NJDEP) is undertaking a feasibility study to examine measures to reduce future flood risk and the economic costs and risk associated with flood and storm events that affect the NJBB study area, which encompasses five counties and approximately 1,300 square miles (950 miles) of coastline along New Jersey's Atlantic Coastal Bays and Inlets (Figure 1). This Study will also contribute to the resilience of communities, important infrastructure, and the environment. As part of the feasibility study, the District will prepare an integrated Draft Environmental Impact Statement (DEIS) pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. The DEIS will evaluate environmental impacts from reasonable study alternatives and determine the potential for significant impacts related to reducing coastal storm risks in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities as it relates to sea level rise, local subsidence and storms, as well as to reduce the economic costs and risk associated with large scale flood and storm events in the area. The NJBB CSRM Feasibility Study will build upon and supplement the North Atlantic Coast Comprehensive Study: Resilient Adaption to Increasing Risk (NACCS, published in January 2015) and ongoing local, state, and Federal efforts by other agencies and groups to improve regional resiliency.

The District is undertaking this effort pursuant to its responsibilities under Section 7 of the Endangered Species Act and the Magnuson-Stevens Fisheries and Conservation Management Act, and has been coordinating with the Protected Resources Division and Habitat Conservation Division. An initial NEPA scoping letter was sent to these offices on July 22, 2016, and the Habitat Conservation Division participated in a public

workshop meeting in 2016 along with several meetings and telephone conversations with Philadelphia District staff.

The District anticipates that there will be a draft Tentatively Selected Plan (TSP) by October 2018 with an integrated DEIS available in January 2019. As part of the environmental review process for this project, the District is required by law[1] to identify, as early as practicable, any Federal and non-Federal agencies that may have an interest in the Study, and invite such agencies to become participating agencies in the environmental review process[2]. This letter is a formal invitation to participate as a cooperating agency for the Study.

Should your agency choose to assume cooperating status, your agency's specific responsibilities as a cooperating agency will include:

- Attendance at and input during agency coordination meetings;
- Comment and feedback on the schedule, overall scope of the NEPA document(s), significant issues to be evaluated, environmental impacts, study and assessment methodologies, range of alternatives and proposed compensatory mitigation, if applicable;
- Guidance on relevant technical studies required as part of the NEPA analysis;
- Identification of issues related to your agency's jurisdiction by law and special expertise;
- Participation, as appropriate, at public meetings and hearings;
- Timely review of the administrative and public drafts of the Draft Integrated Feasibility Report (IFR)/NEPA document and Final IFR/NEPA document;
- Providing staff support at the lead agency's request to enhance the interdisciplinary capability for the study.

As a cooperating agency, you have the right to expect that the NEPA document will enable your agency to perform its jurisdictional responsibilities. Likewise, you have the obligation to tell the District if, at any point in the process, your agency's requirements are not being met. We expect that, at the end of the process, the NEPA document(s) will satisfy your NEPA requirements including those related to study alternatives, environmental consequences and mitigation.

If your agency does not wish to be a cooperating agency, your agency still has the opportunity to become a participating agency in the environmental review process. As a

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participating agency, you will be afforded the opportunity, together with the public, to be involved in defining the purpose and need for the project, as well as in determining the range of alternatives to be considered for the project. These opportunities will build on the early participation opportunities that were provided during the alternatives analysis process. In addition, you will be asked to:

- Provide input on the environmental impact assessment methodologies and analysis level of detail in accordance with your agency's area of expertise;
- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate;
- Review and comment on section of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

In order to give your agency adequate opportunity to weigh the relevance of your agency's participation as either a cooperating agency or a participating agency or both in this environmental review process, written response to this invitation is requested by February 15, 2018.

A response is also requested if you elect to not become a cooperating agency indicating that your agency has no jurisdiction or authority with respect to the study area, no expertise or information relevant to the study area, or does not intend to submit comments on the project[3]. A negative response may be transmitted electronically to Steve Allen, Project Biologist, at Steven.D.Allen@usace.army.mil.

We look forward to your response to this request and your role as a cooperating or participating agency on this study. If you have questions or would like to discuss in more detail the study or our agency's respective roles and responsibilities during the study process, please contact Steve Allen at (215) 656-6559 or by e-mail above.

Sincerely,

Peter R. Blum P.E.
Chief, Planning Division

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Figure 1. New Jersey Back Bay Study Area.

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Environmental Resources Branch

JAN 11 2018

SUBJECT: Invitation to be a Cooperating Agency in the Environmental Review for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study

Paul Phifer, PhD
Assistant Regional Director – Ecological Services Northeast Region
Department of the Interior
U.S. Fish and Wildlife Service
Northeast Regional Office
300 Westgate Center Drive
Hadley, MA 01035-9587

Dear Mr. Phifer:

The U.S. Army Corps of Engineers, Philadelphia District, (District) in partnership with the State of New Jersey Department of Environmental Protection (NJDEP) is undertaking a feasibility study to examine measures to reduce future flood risk and the economic costs and risk associated with flood and storm events that affect the NJBB study area, which encompasses five counties and approximately 1,300 square miles (950 miles) of coastline along New Jersey's Atlantic Coastal Bays and Inlets (Figure 1). This Study will also contribute to the resilience of communities, important infrastructure, and the environment. As part of the feasibility study, the District will prepare an integrated Draft Environmental Impact Statement (DEIS) pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. The DEIS will evaluate environmental impacts from reasonable study alternatives and determine the potential for significant impacts related to reducing coastal storm risks in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities as it relates to sea level rise, local subsidence and storms, as well as to reduce the economic costs and risk associated with large scale flood and storm events in the area. The NJBB CSRM Feasibility Study will build upon and supplement the North Atlantic Coast Comprehensive Study: Resilient Adaption to Increasing Risk (NACCS, published in January 2015) and ongoing local, state, and Federal efforts by other agencies and groups to improve regional resiliency.

The District is undertaking this effort pursuant to its responsibilities under Section 7 of the Endangered Species Act and the Fish and Wildlife Coordination Act (16 U.S.C 661-666c), and has been coordinating with the U.S. Fish and Wildlife Service New

Jersey Field Office (NJFO). An initial NEPA scoping letter was sent to the NJFO on July 22, 2016, and the NJFO participated in a public workshop meeting in 2016.

The District anticipates that there will be a draft Tentatively Selected Plan (TSP) by October 2018 with an integrated DEIS available in January 2019. As part of the environmental review process for this project, the District is required by law[1] to identify, as early as practicable, any Federal and non-Federal agencies that may have an interest in the Study, and invite such agencies to become participating agencies in the environmental review process[2]. This letter is a formal invitation to participate as a cooperating agency for the Study.

Should your agency choose to assume cooperating status, your agency's specific responsibilities as a cooperating agency will include:

- Attendance at and input during agency coordination meetings;
- Comment and feedback on the schedule, overall scope of the NEPA document(s), significant issues to be evaluated, environmental impacts, study and assessment methodologies, range of alternatives and proposed compensatory mitigation, if applicable;
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As a cooperating agency, you have the right to expect that the NEPA document will enable your agency to perform its jurisdictional responsibilities. Likewise, you have the obligation to tell the District if, at any point in the process, your agency's requirements are not being met. We expect that, at the end of the process, the NEPA document(s) will satisfy your NEPA requirements including those related to study alternatives, environmental consequences and mitigation.

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participating agency, you will be afforded the opportunity, together with the public, to be involved in defining the purpose and need for the project, as well as in determining the range of alternatives to be considered for the project. These opportunities will build on the early participation opportunities that were provided during the alternatives analysis process. In addition, you will be asked to:

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We look forward to your response to this request and your role as a cooperating or participating agency on this study. If you have questions or would like to discuss in more detail the study or our agency's respective roles and responsibilities during the study process, please contact Steve Allen at (215) 656-6559 or by e-mail above.

Sincerely,

Peter R. Blum P.E.
Chief, Planning Division

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Environmental Resources Branch

JAN 11 2018

SUBJECT: Invitation to be a Cooperating Agency in the Environmental Review for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study

Commander Fifth Coast Guard District
431 Crawford Street
Portsmouth, VA 23704

Dear Commander:

The U.S. Army Corps of Engineers, Philadelphia District (District), in partnership with the State of New Jersey Department of Environmental Protection (NJDEP) is undertaking a feasibility study to examine measures to reduce future flood risk and the economic costs and risk associated with flood and storm events that affect the NJBB study area, which encompasses five counties and approximately 1,300 square miles (950 miles) of coastline along New Jersey's Atlantic Coastal Bays and Inlets (Figure 1). This Study will also contribute to the resilience of communities, important infrastructure, and the environment. As part of the feasibility study, the District will prepare an integrated Draft Environmental Impact Statement (DEIS) pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended. The DEIS will evaluate environmental impacts from reasonable study alternatives and determine the potential for significant impacts related to reducing coastal storm risks in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities as it relates to sea level rise, local subsidence and storms, as well as to reduce the economic costs and risk associated with large scale flood and storm events in the area. The NJBB CSRM Feasibility Study will build upon and supplement the North Atlantic Coast Comprehensive Study: Resilient Adaption to Increasing Risk (NACCS, published in January 2015) and ongoing local, state, and Federal efforts by other agencies and groups to improve regional resiliency.

The District is undertaking this effort pursuant to the Senate Resolution adopted on December 17th 1987 by the Committee on Environmental and Public Works, Public Law 113-2 Disaster Relief Appropriations (2013) and the Water Resources and Reform Development Act (WRRDA) of 2014.

The District anticipates that there will be a draft Tentatively Selected Plan (TSP) by October 2018 with an integrated DEIS available in January 2019. As part of the

environmental review process for this project, the District is required by law[1] to identify, as early as practicable, any Federal and non-Federal agencies that may have an interest in the Study, and invite such agencies to become participating agencies in the environmental review process[2]. This letter is a formal invitation to participate as a cooperating agency for the Study.

Should your agency choose to assume cooperating status, your agency's specific responsibilities as a cooperating agency will include:

- Attendance at and input during agency coordination meetings;
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As a cooperating agency, you have the right to expect that the NEPA document will enable your agency to perform its jurisdictional responsibilities. Likewise, you have the obligation to tell the District if, at any point in the process, your agency's requirements are not being met. We expect that, at the end of the process, the NEPA document(s) will satisfy your NEPA requirements including those related to study alternatives, environmental consequences and mitigation.

If your agency does not wish to be a cooperating agency, your agency still has the opportunity to become a participating agency in the environmental review process. As a participating agency, you will be afforded the opportunity, together with the public, to be involved in defining the purpose and need for the project, as well as in determining the range of alternatives to be considered for the project. These opportunities will build on the early participation opportunities that were provided during the alternatives analysis

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process. In addition, you will be asked to:

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- Participate in coordination meetings, conference calls, and joint field reviews, as appropriate;
- Review and comment on section of the pre-draft or pre-final environmental documents to communicate any concerns of your agency on the adequacy of the document, the alternatives considered, and the anticipated impacts and mitigation.

In order to give your agency adequate opportunity to weigh the relevance of your agency's participation as either a cooperating agency or a participating agency or both in this environmental review process, written response to this invitation is requested by February 15, 2018.

A response is also requested if you elect to not become a cooperating agency indicating that your agency has no jurisdiction or authority with respect to the study area, no expertise or information relevant to the study area, or does not intend to submit comments on the project[3]. A negative response may be transmitted electronically to Steve Allen, Project Biologist, at Steven.D.Allen@usace.army.mil.

We look forward to your response to this request and your role as a cooperating or participating agency on this study. If you have questions or would like to discuss in more detail the study or our agency's respective roles and responsibilities during the study process, please contact Steve Allen at (215) 656-6559 or by e-mail above.

Sincerely,

Peter R. Blum P.E.
Chief, Planning Division

[3]Per Section 1005 of WRRDA 2014, which amends Section 2045 of WRDA 2007

Figure 1. New Jersey Back Bay Study Area.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New Jersey Field Office
Ecological Services
4. E. Jimmie Leeds Road, Suite 4
Galloway New Jersey 08205
Tel: 609/646 9310
http://www.fws.gov/northeast/njfieldoffice/

In Reply Refer To:
2016-CPA-0267a

JAN 29 2018

Peter Blum, Chief
Planning Division, Philadelphia District
U.S. Army Corps of Engineers
Wannamaker Building
100 Penn Square East
Philadelphia, Pennsylvania 19107-3390

Dear Mr. Blum:

This letter responds to your January 11, 2018 electronic correspondence to the U.S. Fish and Wildlife Service (Service) inviting us to participate as a cooperating agency in the environmental review for the New Jersey Back Bays Coastal Storm Risk Management Feasibility Study (NJBBFS). This is to confirm the Service agrees to participate and serve as cooperating agency on this Study pursuant to the National Environmental Policy Act of 1969, as amended (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

In addition, the New Jersey Field Office received a Military Interdepartmental Purchase Request (MIPR) for NJBBFS in October 2016 to include participating in site visits and meetings; and preparing a Planning Aid Letter, and draft and final 2(b) reports pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661 *et seq.*). The MIPR funds are scheduled to expire on December 30, 2018, and as such will need to be extended to reflect the timeline of the milestones identified in the NJBBFS.

The Service commends the Corps' past and ongoing coordination efforts for the NJBBFS and looks forward to continued multi-agency cooperation and partnership to protect federally and State-listed species, and Federal trust resources. If you have any questions, please contact Steve Mars at 609-382-5267 or Steve_Mars@fws.gov.

Sincerely,

Eric Schrading
Field Supervisor

cc: USACE, Philadelphia District: Steve Allen

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930-2276

FEB 6 - 2018

Peter R. Blum, Chief
Planning Division
Philadelphia District
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

Re: New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study; Cooperating Agency Invitation

Dear Mr. Blum:

Your letter dated January 11, 2018, invites us to participate as a cooperating agency in the environmental review for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study. The U.S. Army Corps of Engineers, Philadelphia District (District), in partnership with the New Jersey Department of Environmental Protection is undertaking a feasibility study to examine measures to reduce future flood risk and the economic costs and risks associated with flood and storm events that affect the NJBB study area. The study area encompasses five counties and approximately 1,300 square miles along New Jersey's Atlantic Coastal Bays and Inlets. The study will contribute to the resilience of communities, important infrastructure, and the environment. As part of the feasibility study, the District will prepare environmental compliance documents pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended to evaluate environmental impacts from reasonable project alternatives and to determine the potential for significant impacts related to reducing coastal storm risks in ways that support the long-term resilience and sustainability of the coastal ecosystem and surrounding communities as it relates to sea level rise, local subsidence and storms, as well as to reduce the economic costs and risks associated with large scale flood and storm events in the area. The study will build on and supplement the North Atlantic Coast Comprehensive Study published in January 2015 and ongoing local, state, and federal efforts by other agencies and groups to improve regional resiliency. We agree to participate as a cooperating agency to help foster a collaborative process and interagency coordination on this project.

Because our role and degree of involvement as a cooperating agency is dependent on existing staff and fiscal resources, our contribution to the process will be limited to participating in project meetings and providing written comments in response to your documents prepared as part of the NEPA process. We will provide technical information identifying aquatic species and habitats of concern, identification of issues to be considered and evaluated during the NEPA process and guidance on evaluating, avoiding and minimizing project effects to our trust resources. At this time we are unable to undertake any data collection, conduct analyses or to

prepare any sections of the NEPA documents as our staff and resources are fully committed to other obligatory programs of NOAA Fisheries.

Please note that our participation as a cooperating agency does not constitute an endorsement of this project, nor does it obviate the need for consultations required under the Magnuson-Stevens Fishery Conservation and Management Act, Fish and Wildlife Coordination Act, and the Endangered Species Act.

Thank you for the opportunity to participate as a cooperating agency on this project. We look forward to working with you and your staff as the study progresses. If you have any questions regarding this matter, please contact Keith Hanson (410 573-4559, keith.hanson@noaa.gov) in our Annapolis Field Office or Ursula Howson (732 872-3116, ursula.howson@noaa.gov) in our New Jersey Field Office for information regarding essential fish habitat and other trust resources, or Peter Johnsen (978-282-8416, peter.b.johnsen@noaa.gov) for information regarding threatened and endangered species.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

Ec: S. Allen – ACOE Phila.
Hanson, Greene, Howson- NMFS/HCD
Murray Brown, Johnsen - NMFS/PRD

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

FEB 14 2018

Peter R. Blum, P.E.
Chief, Planning Division
U.S Army Corps of Engineers,
Philadelphia District
100 Penn Square East
Wanamaker Building, 7th Floor
Philadelphia, PA, 19107-3390

RE: Invitation to be a Cooperating Agency in the Environmental Review for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Study

Dear Mr. Blum:

This is in response to a January 11, 2018 letter requesting that the U.S. Environmental Protection Agency serve as a cooperating agency for the NJBB CSRM study. As stated in your letter, the U.S. Army Corps of Engineers, Philadelphia District, in cooperation with the New Jersey Department of Environmental Protection is undertaking a feasibility study to examine measures to reduce future flood risk and the economic costs and risks associated with flood and storm events that are affecting the NJBB study area, while contributing to the resilience of communities, important infrastructure, and the environment.

EPA is pleased to accept this invitation. Please note that due to resource constraints, EPA may 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) 637-3721 or my assigned staff, Michael Poetzsch at (212)637-4147 or Poetzsch.michael@epa.gov.

Sincerely,

Judy-Ann Mitchell, Chief
Sustainability and Multimedia Programs Branch

US Army Corps of Engineers

News Release

Army Corps, NJDEP to host public meetings for flood risk study

Published Aug. 3, 2018

The New Jersey Back Bays study area includes approximately 950 square miles and nearly 3,400 miles of shoreline. The objective of the study is to investigate problems and solutions to reduce damages from coastal flooding that affects population, critical infrastructure, critical facilities, property, and ecosystems.

PHILADELPHIA (Aug. 3, 2018) – The U.S. Army Corps of Engineers and the New Jersey Department of Environmental Protection are hosting public meetings regarding the New Jersey Back Bays Coastal Storm Risk Management study on Sept. 12, 2018 in Ventnor City, N.J. and on Sept 13 in Toms River Township, N.J.

The Army Corps, in partnership with NJDEP, is conducting a feasibility study for coastal storm risk management problems within the New Jersey Back Bay area, defined as the network of

interconnected tidal water bodies located landward of the New Jersey ocean coastline in Monmouth, Ocean, Atlantic, Burlington, and Cape May Counties. The study area includes approximately 950 square miles and nearly 3,400 miles of shoreline. The objective of the study is to investigate problems and solutions to reduce damages from coastal flooding that affects population, critical infrastructure, critical facilities, property, and ecosystems.

Some of the measures that will be discussed at the public meetings include structural solutions such as storm surge barriers, tide gates, levees, and floodwalls; non-structural solutions such as elevating homes; and nature-based features such as marsh restoration and the creation of living shorelines. The final plan may also include recommendations of actionable and policy implementable items such as floodplain management and Community Rating System enhancement opportunities.

The general public and other stakeholders are invited to attend the meetings to learn more about the study process and current status. In addition, the public will have an opportunity to provide feedback on the study and interact with project team members. The meeting details are as follows:

- Public meeting from 6-8 p.m. on Sept. 12, 2018 at the Ventnor Educational Community Complex - 400 N Lafayette Ave, Ventnor City, NJ 08406
- Public meeting from 6-8 p.m. on Sept. 13, 2018 at the Ocean County College Gateway Building - Lot 1, College Drive, Toms River, NJ 08753

Participants are encouraged to submit questions in advance of the meeting by email to PDPA-NAP@usace.army.mil or in writing to the U.S. Army Corps of Engineers, Planning Division, 100 Penn Square East, Philadelphia, PA 19107.

-End-

Related Link: **New Jersey Back Bays Study Area Map**
http://www.nap.usace.army.mil/Portals/39/docs/Civil/NJBB/NJBB_Map.pdf?ver=2016-12-05-094557-173

Related Link: **New Jersey Back Bays Study Webpage**
http://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Coastal-Storm-Risk-Management/

Contact
Steve Rochette
215-656-6432
stephen.rochette@usace.army.mil

Release no. 18-058

United States Department of the Interior
FISH AND WILDLIFE SERVICE
New Jersey Field Office
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In reply refer to: 16-CPA-0267a

SEP 14 2018

Peter Blum, Chief
Planning Division
Philadelphia District
U.S. Army Corps of Engineers
Philadelphia, Pennsylvania 19107-3390
Attn: Steve Allen

Dear Mr. Blum:

The U.S. Fish and Wildlife Service (Service) is providing the following comments pursuant to the Fish and Wildlife Coordination Act (48 Stat.401; 16 U.S.C. 661 *et seq.*) (FWCA) regarding the U.S. Army Corps of Engineers, Philadelphia District's (Corps) New Jersey Back Bay Feasibility Study (Study), Monmouth, Ocean, Burlington, Atlantic, and Cape May Counties, New Jersey. These comments are also intended to meet our statutory responsibilities pursuant to the National Environmental Policy Act of 1969 (87 Stat. 884, as amended; 42 U.S.C. 4321 *et seq.*) (NEPA) and do not preclude additional comments on forthcoming environmental, documents including a Federal Environmental Impact Statement (EIS). The Study is one of nine feasibility studies that are underway by several other Corps Districts in the Northeast as part of a North Atlantic Coast Comprehensive Study (NACCS). The New Jersey Department of Environmental Protection's (NJDEP) Bureau of Coastal Engineering is the local cost-sharing sponsor of the Study.

AUTHORITY

The following comments on the proposed action are provided to assist the Corps in seeking comments on potential alternatives pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et. seq.*) (ESA); FWCA; the 2014 Memorandum of Understanding between the Corps and the Service regarding implementation of Executive Order (EO) 13186, Responsibilities of Federal Agencies to Protect Migratory Birds; the Migratory Bird Treaty Act of 1918 (40 Stat. 755; 16 U.S.C. Section 703-712); NEPA; the Clean Water Act of 1977 (86 Stat. 816, 33 U.S.C. 1344 *et seq.*) (CWA), the Emergency Wetlands Resource Act of 1986 (P.L. 99-645; 100 Stat. 3582); the National Wildlife Refuge System Improvement Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 (16 U.S.C. 668dd - ee); the Wilderness Act (78 Stat. 890; 16 U.S.C. 1131 *et seq.*) (WA), EO 11988, Floodplain Management (May 24, 1977; 42 FR 26951); and EO 11990, Protection of Wetlands (May 24, 1977; 42 FR 26961).

INTRODUCTION

The Corps states a draft EIS will be forthcoming which will evaluate a suite of alternatives that support long-term resilience and sustainability of the coastal ecosystem and surrounding communities. The EIS will focus on Statewide or watershed scale strategies (including a municipal or community level scale) for potential implementation. Factors under consideration include sea level rise; local subsidence; and predicted storm frequency and intensity; and economic costs and risks associated with large scale flood and storm events. Preliminary alternatives under consideration include a suite of structural and non-structural alternatives, in addition to several natural and nature-based features.

The following comments are intended to assist the Corps in identifying a single project or series of projects that are sufficiently protective of fish and wildlife resources and their respective habitats, while meeting the stated Study purpose which is to confirm whether sites are likely to provide the "greatest flood risk management benefits, as well as any associated feasible ecosystem restoration benefits."

STUDY AREA

The geographic boundary of the Study Area includes five counties of New Jersey (Monmouth, Ocean, Burlington, Atlantic and Cape May counties) and a drainage area of over 1,300 square miles. The Study Area includes parts of the Atlantic coast and the entire Back Bay system from Manasquan River to the Cape May Canal (Figure 1).

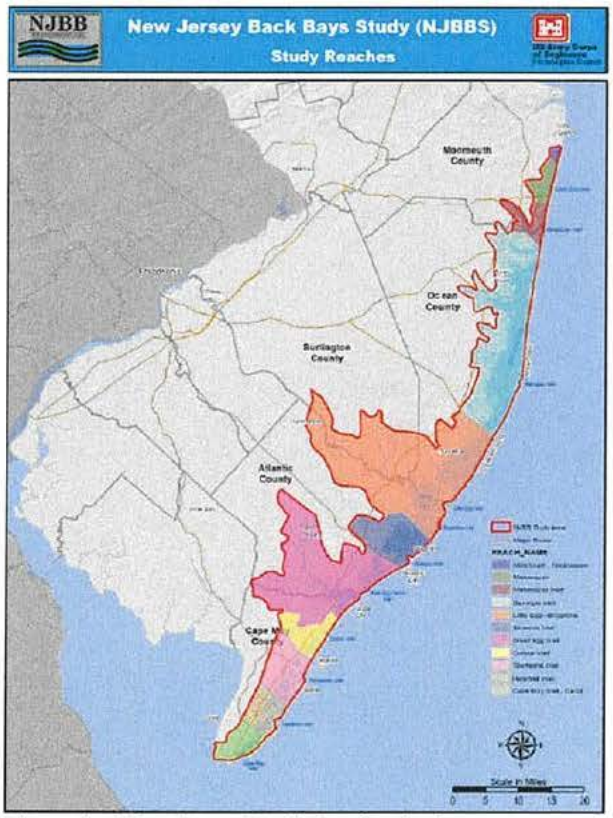

Figure 1 – New Jersey Back Bay Study Area

National Wildlife Refuges

The geographic area also encompasses all 47,485 acres of lands managed by the Edwin B. Forsythe National Wildlife Refuge Program, Atlantic County, New Jersey (EBFNWR) and up to 5,500 acres of the Cape May National Wildlife Refuge, Cape May County, New Jersey (Albers pers. comm., 2018; Hanlon pers. comm., 2018). Parts of the EBFNWR are designated as "National Wilderness Areas" at the Holgate and Little Egg Inlet Units (Units), and as such remain unmaintained for navigation purposes pursuant to the WA (Figure 2); the WA mandates that these Units be managed to preserve their wilderness character. Aside from Old Inlet (a designated Wilderness area located within the National Park Service's (NPS) Fire Island National Seashore), Little Egg Inlet is also the only unmodified inlet between Montauk, New York, and Gargathy Inlet, Virginia (Rice 2014). In addition, the two EBFNWR Units are habitat for approximately 30 percent of New Jersey's piping plover (*Charadrius melodus*) population. The piping plover is listed as threatened pursuant to the ESA. The Service provided substantive comments to the Corps on the ecological value of the two EBFNWR WA Units in a Planning Aid Report that evaluated the use of Little Egg Inlet as a potential sand source for the Barnegat Inlet to Little Egg Inlet Storm Damage Reduction Project (U.S. Fish and Wildlife Service 2016). As of this date the use of Little Egg Inlet as a sand source for beach nourishment has not occurred partly due to the incompatibly that dredging represented for a designated WA Unit and also because of its incompatibility with the management of a National Wildlife Refuge.

Any Study alternative proposed for advancement by the Corps which may impact (directly or indirectly) a designated WA Unit will likely receive the same level of concern from the Service as did for the proposed dredging of Little Egg Inlet. The Service recommends that any Study alternative consider the enabling legislation for which the Refuge lands were acquired. This includes not advancing any Study alternative that may adversely affect a WA Unit.

Coastal Barrier Resources Act

Numerous parts of the Study Area on the Atlantic Coast are also managed pursuant to the Coastal Barrier Resources Act of 1982 (16 U.S.C. 3501 *et seq.*) (CBRA) which established the Coastal Barrier Resources System (CBRS), a defined set of geographic units along the Atlantic, Gulf of Mexico, Great Lakes, U.S. Virgin Islands, and Puerto Rico coasts. Congress enacted CBRA to minimize the loss of human life, wasteful Federal expenditures, and damage to natural resources associated with coastal barriers. The Secretary of the Interior, through the Service, is responsible for administering CBRA. The CBRS units are depicted on a set of maps that are maintained by the Service and are available for viewing and download on the Service's CBRA website at https://www.fws.gov/CBRA/. Most new Federal expenditures and financial assistance that encourage development are prohibited within the CBRS. The Corps is required to consult with the Service prior to committing funds for projects or actions within or affecting the CBRS. Activities that are proposed in a CBRS Unit must meet the purposes of CBRA or meet the exceptions allowed by CBRA.

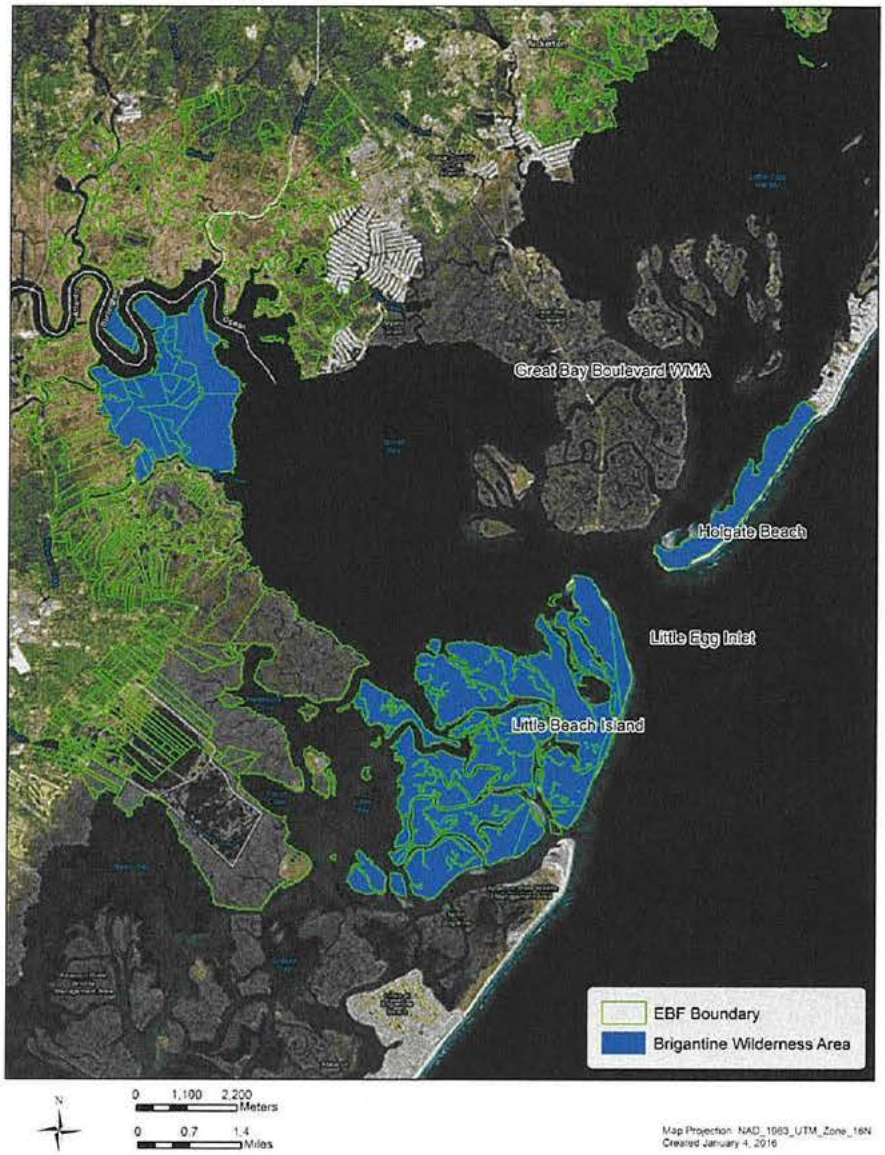

Figure 2. Wilderness Areas of EBFNWR

National Estuary Program and National Estuarine Research Reserves

The Study Area also includes the Barnegat Bay Partnership ([BBP], a National Estuary Program administered by the Environmental Protection Agency) located at Ocean County College, New Jersey and the Jacques Cousteau National Estuarine Research Reserve ([JCNERR], administered by the National Oceanic and Atmospheric Administration (NOAA)] located in Tuckerton, Ocean County, New Jersey. Both the BBP and JCNERR receive Federal funding and engage numerous stakeholders in their individual study areas both of which are encompassed by the Corps' Study Area; thus, it is imperative that the Corps include these groups to identify ecological relevant project(s) that offer long-term community resilience while providing needed benefits to the coastal ecosystem (see http://www.prepareyourcommunitynj.org/).

To that end, the BBP and its numerous Federal (including the Corps), State, local, and non-government agencies, academic institutions and other stakeholders have developed a Draft (July 2018) Comprehensive Conservation and Management Plan (CCMP) for public review to "reflect the changes in the Barnegat Bay's condition and emerging threats, such as climate change and sea level rise." The current draft CCMP can be accessed by visiting the following web site https://www.barnegatbaypartnership.org/wp-content/uploads/2018/07/Full-Document-BBP-CCMP-Draft.pdf.

The Corps should seek input from the BBP and JCNERR, as they have extensive knowledge of Barnegat Bay-Little Egg Harbor estuary and conduct substantial monitoring, research and outreach with the communities most affected in the Bay. Both the BBP and JCNERR can provide valuable information which will ensure the Corps Feasibility Study and the draft EIS is robust and current.

Great Egg Harbor River National Scenic and Recreation River

The Great Egg Harbor River (GEHR) was established by Congress as a Wild and Scenic River in 1992 and encompasses 308 square miles. The GEHR is an ecologically important watershed and supports one of only a few remaining river herring (*Alosa spp.*) spawning runs left in New Jersey (NJDEP 2016). The entire GEHR watershed is in the geographic boundary of the Study Area. A CMP was developed in cooperation with the Great Egg Harbor National Scenic and Recreational River Council (Council) and the NPS. A copy of the CMP can be obtained at http://www.gehwa.org/river-council/.

The GEHR is an ecologically important watershed and supports an important river herring spawning runs in New Jersey (Smith 2012). The entire GEHR watershed is in the geographic boundary of the Study Area. The Corps should coordinate with the NPS and the Council and similarly evaluate each alternative that may affect this significant and valuable watershed to ensure compatibility with the GEHR CMP and Congress' intent to establish the Wild and Scenic River.

Essential Fish Habitat

Portions of the tidally inundated areas of the Study Area are deemed essential fish habitat (EFH) and as such are regulated pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (90 Stat. 331; 16 U.S.C. 1801-1882). The National Marine Fisheries Service (NMFS) has designated much of the Study Area essential to the life stages of numerous recreational and commercial finfish species. Alternatives under consideration by the Corps should be coordinated with the NMFS to assess potential impacts to EFH.

OTHER RELATED CORPS ACTIVITIES IN THE STUDY AREA

There is numerous overlapping and potentially interrelated Corps projects, already approved under separate Congressional authorization, which may affect any one of the Study Area's proposed project alternatives. Most relevant of these authorized and ongoing projects involve the Corps' Operations and Maintenance Dredging Program (O&M). The Corps O&M Program

maintains the entire length of the Intercoastal Waterway from Manasquan River to the Cape May Canal (Canal), and includes the management of two Corps' confined disposal facilities (CDFs) on the Canal. In addition, the Corps maintains inlets on the Atlantic Coast and Delaware Bay, all of which are in the Study Area and may become interrelated to several of the Study alternatives under consideration. The inlets include Barnegat, Absecon, Great Egg Harbor, Corson, Townsend, Hereford, and Cape May. In most cases, each of these maintenance projects includes a beach nourishment component.

The Corps also maintains several 50-year Storm Damage Reduction Projects along the Atlantic Coast of NJ, all of which are located in the subject Study Area. Each of these O&M and Storm Damage Reduction Projects could become interrelated with the current Feasibility Study (potential source of clean sand needed for nature based projects) and as such should be closely evaluated with the current Feasibility Study to determine potential beneficial use compatibility.

Finally, the Corps was selected as one of three Corps Districts in the Nation to implement an Engineering With Nature initiative – a program the couples existing Corps authorities with potential beneficial use projects. Mordecai Island, Ocean County, New Jersey and the beneficial use of dredged material is an excellent on-the-ground approach to construction of an environmentally beneficial project while providing coastal resilience. The Mordecai Island also had the added benefit of protecting an adjacent sea grass bed and provides needed shorebird nesting and horseshoe crab (*Limulus polyphemus*) spawning habitat. Other ongoing discussions of similar beneficial use projects include removing accumulated dredged material from the Corps CDF on the Cape May Canal and placing the resultant dredged material as a beneficial use for neighboring bay communities, all the while providing added horseshoe crab spawning habitat and foraging habitat for the listed red knot (*Calidris canutus rufa*).

FISH AND WILDLIFE RESOURCES

Federally Listed Species

Any activity that may adversely affect listed species should be addressed in formal Section 7 ESA consultation, such as the one completed in December 2005 when the Service evaluated the Corps Coastal Storm Damage Reduction Program for the Atlantic Coast. However, the Service recommends that the Corps minimize impacts on federally listed species such that informal consultation can be completed for any alternative(s) selected by the Corps for advancement.

Piping Plover

As previously discussed, there are known nesting occurrences of the piping plover along New Jersey's Atlantic Coast shoreline. The largest nesting plover population in New Jersey is at the Gateway National Park - Sandy Hook Unit (NJDEP 2017). Specific to the Study Area, the next largest congregation of plovers is located at the EBFNWRs Holgate and Little Beach Units. Approximately 30 pairs of plovers have occupied the EBFNWR lands for breeding for the last ten years (Table 1). The Piping Plover Recovery Plan established a region-wide goal of 1.5 chicks fledged per breeding pair (U.S. Fish and Wildlife Service 1996a). Analysis of trends in abundance and productivity from 1986-2009 indicates the breeding productivity within New Jersey was 1.18 chicks per pair (Hecht and Melvin 2009).

TABLE 1. NUMBER OF PIPING PLOVER NESTING PAIRS AND PRODUCTIVITY ON E.B. FORSYTHE NATIONAL WILDLIFE REFUGE, 1993 TO 2015			
Year	Nesting Pairs	Plover Chicks Fledged	Fledging Rate (Chicks/Pairs)
1993	18*	4*	0.22*
1994	31	9	0.29
1995	9*	8*	0.89*
1996	35	13	0.37
1997	22	6	0.27
1998	31	26	0.84
1999	33	39	1.18
2000	30	29	0.97
2001	36	29	0.81
2002	35	20	0.57
2003	34	32	0.94
2004	38	8	0.21
2005	32	8	0.25
2006	30	10	0.33
2007	39	16	0.41
2008	25	1	0.04
2009	17	24	1.41
2010	26	31	1.19
2011	24	27	1.13
2012	31	20	0.65
2013	37	21	0.57
2014	26	45	1.73
2015	38	52	1.37
Mean	29.43	20.78	0.71

These small, territorial shorebirds are present on the Atlantic Coast between March and the end of August. Piping plovers nest above the high tide line, usually on sandy ocean beaches and barrier islands, but also on gently sloping foredunes, blowout areas behind primary dunes, washover areas cut into or between dunes, the ends of sand spits, and deposits of suitable dredged or pumped sand. Threats to piping plover include beach stabilization efforts (beach armoring, sand fences, sea walls, groins, jetties, and riprap); habitat loss; and intensive recreational use.

Based on the propensity of the piping plover to historically nest on the Atlantic Coast and its many inlets, including many areas in the Study Area including Little Egg Inlet, the Service recommends that the Corps fully evaluate the effects of any alternative being considered in the

subject Feasibility Study on piping plover habitat. This analysis will aid in the preparation of a biological assessment in the future for any alternative selected pursuant to ESA.

Seabeach Amaranth

Seabeach amaranth (*Amaranthus pumilus*) is found in the Study Area from Monmouth County to Cape May County, New Jersey. It is an annual plant endemic to Atlantic Coast beaches and barrier islands (U.S. Fish and Wildlife Service 1996b), occurring historically from Nantucket, Massachusetts to Folly Beach, South Carolina. By 1987, the plant was extirpated from nearly three-fourths of its earlier range (Hancock and Hosier 2003). Although the species recolonized much of those former areas between 1990 and 2000, populations in the recolonized states dropped sharply after an initial surge. Numbers remain very low and local extirpations are occurring again. The seabeach amaranth recovery objective is to have 75 percent of the sites with suitable habitat within the historical range occupied for 10 consecutive years (U.S. Fish and Wildlife Service 1996b).

The primary habitat of seabeach amaranth consists of overwash flats at accreting ends of islands, lower foredunes, and upper strands of non-eroding beaches (landward of the wrackline), although the species occasionally establishes small temporary populations in other habitats, including sound-side beaches, blowouts in foredunes, inter-dunal areas, and on sand and shell material deposited for beach replenishment or as dredge spoil. Seabeach amaranth usually is found growing on a nearly pure sand substrate, occasionally with shell fragments mixed in.

Seabeach amaranth occupies elevations from 8 inches to 5 feet above mean high tide. The plant is intolerant of even occasional flooding during its growing season. Seabeach amaranth is dependent on a terrestrial, upper beach habitat that is not flooded during the growing season from May into the fall. Such habitat is sparsely vegetated with annual herbs and, less commonly, perennial herbs (mostly grasses) and scattered shrubs. Vegetative associates of seabeach amaranth include sea rocket (*Cakile edentula*), seabeach spurge (*Chamaesyce polygonifolia*), and other species of open, sandy beach habitats. Seabeach amaranth is often associated with beaches managed for the protection of beach nesting birds such as the piping plover and the State-listed (endangered) least tern (*Sterna antillarum*) and black skimmer (*Rynchops niger*), and (Species of Concern) American oystercatcher (*Haematopus palliates*) and common tern (*Sterna hirundo*). Threats to seabeach amaranth include beach stabilization efforts (beach armoring, sand fences, sea walls, groins, jetties, and riprap); habitat loss; intensive recreational use; invasive species such as the Asiatic sand sedge (*Carex kobomugi*); and herbivory by webworms.

The Service recommends that the Corps fully evaluate the effects of any alternative being considered in the subject Feasibility Study on seabeach amaranth. This analysis will aid in the preparation of a biological assessment in the future for any alternative selected pursuant to ESA.

Red knot

A final rule to list the red knot as threatened under the ESA was published on December 11, 2014, with an effective date of January 12, 2015. Small numbers of red knots may occur in New Jersey year-round, while large numbers of birds rely on Delaware Bay and Atlantic Coast

stopover habitats during the spring (mid-May through early June) and fall (late-July through October) migration periods, respectively. These small shorebirds fly up to 9,300 miles from south to north every spring and reverse the trip every autumn, making the red knot one of the longest-distance migrating animals. Migrating birds break their spring migration into non-stop segments of 1,500 miles or more, ending at stopover sites called staging areas. Red knots converge in large flocks on stop-over and staging areas along the Delaware Bay and Atlantic Coast, including the Study Area. Threats to the red knot include disturbance, reduced food availability at staging areas, and loss of stopover habitat. Available records indicate that red knots occur in the Study Area, including Holgate, Little Beach and nearby State managed lands (*i.e.,* Island Beach State Park, Barnegat Lighthouse State Park, North Brigantine Natural Area, Malibu Beach Wildlife Management Area, Corson's Inlet State Park, Strathmere Natural Area, Cape May Point State Park). These records indicate red knots use the Study Area annually during both spring and fall migration, with flocks sometimes numbering hundreds of birds.

For red knots, unimproved tidal inlets are a preferred nonbreeding habitat. Along the Atlantic Coast, dynamic and ephemeral (lasting only briefly) features are important red knot habitats, including sand spits, islets, shoals, and sandbars, features often associated with inlets. From South Carolina to Florida, red knots are found in significantly higher numbers at inlets than at other coastal sites (U.S. Fish and Wildlife Service 2014). Threats to red knot include beach stabilization efforts (beach armoring, sand fences, sea walls, groins, jetties, and riprap); habitat loss; and intensive recreational use.

Specific to the Study Area, the red knot concentrated during fall migration of previous years at the northern tip of Corson's Inlet and from Prescott Terrace in Strathmere south to the northern tip of Sea Isle City, utilizing beaches, back bays, and marshes for foraging and roosting. Southbound migrating red knots may occur as early as July 15 and as late as November 15.

The Service recommends that the Corps fully evaluate the effects of any alternative being considered in the subject Feasibility Study on the red knot. This analysis will aid in the preparation of a biological assessment in the future for any alternative selected pursuant to ESA.

Northern long-eared bat

The proposed Study Area is located within the summer range of the northern long-eared bat (*Myotis septentrionalis*) (NLEB). During the summer, NLEB typically roost singly or in colonies underneath bark, crevices, or hollows of both live and dead trees and/or snags (typically ≥3 inches dbh). The NLEB bat is opportunistic in selecting roosts, selecting varying roost tree species throughout its range. During the winter, NLEBs predominately hibernate in caves and abandoned mine portals. Maternity colonies generally consist of 30 to 60 females and young. Males and non-reproductive females may occur within the breeding and foraging range of maternity colonies, but some individuals are solitary in the summer and may roost in cooler places such as caves and mines. Roosting NLEBs have also been observed in man-made structures, such as buildings, barns, sheds, cabins, under eaves of buildings, and in bat houses.

The Service recommends that the Corps fully evaluate the effects of any alternative being considered in the subject Feasibility Study on the NLEB. This analysis will aid in the preparation of a biological assessment in the future for any alternative selected pursuant to ESA.

CONSERVATION ACTIVITIES

Section 7(a)(l) of the ESA requires all Federal agencies to utilize their authorities, in consultation with the Service, to develop and carry out programs to conserve all species listed under the ESA. Additionally, Section 2(c)(1) of the ESA declares that all Federal agencies shall utilize their authorities to further the purposes of ESA. The purpose of the ESA is to protect and recover threatened and endangered species and the ecosystems upon which they depend. To avoid future Project delays, the Service recommends coordination with the Service to fulfill this important conservation mandate. Whenever possible the Corps should adopt a strategy of incorporating the habitat needs of the aforementioned species in the design of any Study alternative considered.

MIGRATORY BIRDS

The Corps entered into a Memorandum of Understanding (MOU) with the Service on September 5, 2014 (expires 2019) and committed to following Service recommendations to conserve migratory birds. Some of the applicable responsibilities of both parties of the MOU for the subject Study include: supporting EO 13186; emphasizing an interdisciplinary, collaborative approach to migratory bird conservation in cooperation with other governments, State and Federal agencies and non-federal partners; working to protect, restore, and enhance migratory bird habitats; and in general promoting collaborative approaches towards the development of reasonable and effective conservation measures for actions that promote bird conservation. It is recommended that the Corps seek opportunities to further bird conservation as specified in EO 13186 and embraced in the jointly signed MOU.

OTHER FISH AND WILDLIFE AND THEIR HABITATS

American Eel

American eel (*Anguilla rostrata*), are distributed in the Atlantic Ocean from Greenland to Brazil. Along the Atlantic coast of the United States, eels are found from Maine and Florida. The American eel spawns in the Sargasso Sea, a warm water area in the middle of the North Atlantic between the Azores and West Indies. American eel larvae spend 9 to 12 months as leptocephali larvae (glass eels) during which time they are transported by the Gulf Stream into coastal U.S. waters, including all of the waters identified in the Corps Study Area. American eels are managed under an interstate fishery management plan developed by the Atlantic States Marine Fisheries Commission (ASMFC) and implemented in 2001. Total American eel landings declined markedly from 1979 until 1996, and have since remained relatively low but stable. The ASMFC indicate the American eel population in U.S. waters is depleted. (https://www.nefsc.noaa.gov/sos/spsyn/op/eel/, http://www.asmfc.org/species/american-eel). American eel stocks along the U.S. Atlantic coast underwent a status review by the Service in 2011 in response to a petition to list the species as threatened or endangered under the ESA. On October 7, 2015 the Service determined the listing of the American eel was not warranted.

The Service recommends that any alternative selected during the development of a draft EIS identify potential adverse impacts to the American eel and any nature based mitigation strategies that could mitigate or potentially aid in the recovery of American eel.

River Herring

River Herring collectively known as Alewife (*Alosa pseudoharengus*) and Blueback Herring (*Alosa aestivalis*) are confirmed in numerous waterways of the Study Area. They include: Absecon Creek; Doughty Creek; Mill Creek; numerous creeks(12) in Barnegat Bay; the Great Egg Harbor River and 15 of its tributaries; Little Egg Harbor and three of its tributaries; the Manasquan River; Tuckahoe River; Toms River; and the Mullica River and 11 of its tributaries (including the Bass River) (NJDEP 2005). River herring are anadromous fish that spend the majority of their adult lives at sea, only returning to freshwater in the spring to spawn. Historically river herring spawned in virtually every river and tributary along the Atlantic coast. Alewives spawn in rivers, lakes, and tributaries of the Northeast. Blueback herring prefer to spawn in swift flowing rivers and tributaries and are most numerous in waters from Chesapeake Bay south. Mature alewife (ages three to eight) and blueback herring (ages three to six) migrate rapidly downstream after spawning. Juveniles remain in tidal freshwater nursery areas in spring and early summer, but may also move upstream with the encroachment of saline water. As water temperatures decline in the fall, juveniles move downstream to more saline waters. Little information is available on the life history of juvenile and adult river herring after they emigrate to the sea and before they mature and return to freshwater to spawn Shad and river herring once supported the largest and most important commercial and recreational fisheries along the Atlantic coast. Since colonial times, the blockage of spawning rivers by dams and other impediments, combined with habitat degradation and overfishing, have severely depleted shad and river herring populations. Commercial landings for these species have declined dramatically from historic highs (see http://www.asmfc.org/species/shad-river-herring).

In 2011, the river herring underwent a status review by NOAA to determine if the alewife and blueback should be listed as threatened or endangered pursuant to ESA. On August 7, 2013 NOAA determined that listing was not warranted for the alewife and blueback herring. As part of their determination NOAA agreed to fund and implement, in conjunction with the ASMFC and other partners, a coordinated coast-wide effort to continue to address data needs and proactively conserve river herring and their habitat. In their determination NOAA emphasized that they would be working with effected stakeholders to continue implementing important conservation efforts. NOAA indicated that they would likely revisit the status review of river herring by the end or 2018.

The NMFS indicated that the river herring is in major decline warranting designation as a Species of Concern (Greene pers. comm., 2017). Species of Concern are those species about which NOAA has concerns regarding status and threats, but for which insufficient information is available to warrant listing under the ESA. The Service concurs in NMFS' finding and recommends that any alternative selected during the development of a draft EIS should identify potential adverse impacts to river herring and any nature based mitigation strategies that could mitigate of potentially aid in the recovery of the river herring.

Striped Bass

The striped bass (*Marone saxitilis*) is found throughout the Study Area. The Atlantic Striped Bass Conservation Act (16 U.S.C. Section 5151 *et seq.*) is intended to support and encourage the development, implementation, and enforcement of effective interstate action for the conservation and management of the Atlantic striped bass. The Atlantic Coastal Fisheries Cooperative Management Act provides a vehicle for the Secretary of Commerce, in cooperation with the Secretary of the Interior, to support the Atlantic States Marine Fisheries Commission's striped bass management efforts.

Striped bass are one of the species most sought-after by recreational anglers on the Atlantic Coast. From 2005-14, recreational harvest along the Atlantic coast averaged 26.2 million pounds, generating significant revenues to the Nation's economy. Recreational landings for striped bass make up roughly 75-80% of the coastal landings. Along the Atlantic Coast, the striped bass ranges from the St. Lawrence River in Canada to St. John's River in Florida. Striped bass larvae and post larvae drift downstream toward nursery areas located in river deltas and the inland portions of the coastal sounds and estuaries. Juveniles typically remain in estuaries for two to four years and then migrate out to the Atlantic Ocean. Striped bass spend the majority of their adult life in coastal estuaries or the ocean.

Commercial fishermen harvest striped bass with a variety of gear including gill nets, pound nets, haul seines, and hook-and-line. From 2005-14, commercial harvest averaged 6.7 million pounds. Striped bass are managed directly by the state jurisdictions on the Atlantic Coast through the ASMFC (https://chesapeakebay.noaa.gov/fish-facts/striped-bass).

The Service recommends that any alternative selected during the development of a draft EIS identify potential adverse impacts to the striped bass and any nature based mitigation strategies that could mitigate loss of habitat or potentially aid in striped bass conservation.

Seagrasses or Submerged Aquatic Vegetation

Seagrasses or submerged aquatic vegetation (SAV) is found in the Study Area. It is found in shallow salty and brackish waters in many parts of the world, from the tropics to the Arctic Circle. Seagrasses serve as habitat and food for many recreationally and commercially important estuarine and marine species [*e.g.*, bay scallop (*Argopecten irradians)*, blue mussel (*Mytilus edulis)*, blue crab (*Callinectes sapidus)*, and weakfish (*Cynoscion regalis*)]. Seagrass beds support commercial fisheries, biodiversity, and also play a significant role in nutrient cycling, carbon sequestration, filtering of essential elements, and wave dampening. Seagrasses can form dense underwater meadows. Because of these benefits, seagrasses are believed to be the third most valuable ecosystem in the world (only preceded by estuaries and wetlands) (https://ocean.si.edu/ocean-life/plants-algae/seagrass-and-seagrass-beds). Threats to seagrass beds include dredging, filling, prop wash, turbidity, algae blooms and the general eutrophication of the seagrasses host waters.

In the Study Area, the BBP has been working cooperatively with the NJDEP in monitoring the heath of seagrass populations in Barnegat Bay. In their State of the Bay report for 2016, much of

the Bay's seagrass population was defined as "degraded" (see https://www.barnegatbaypartnership.org/wp-content/uploads/2017/08/BBP_State-of-the-Bay-book-2016_forWeb-1.pdf).

The Service recommends that any alternative selected during the development of a draft EIS identify potential adverse impacts to SAV and any nature based mitigation strategies that could mitigate for the loss of habitat or potentially aid in SAV habitat restoration.

Shellfish

Harvested species in the Study Area include hard clams (*Mercenaria mercenaria*), Eastern oysters (*Crassostrea virginica*), and bay scallops (*Argopecten irradians*). Overall, the abundance of hard clams in Barnegat Bay in 2012 was down approximately 23% from the last survey completed in 1985/1986. For Little Egg Harbor, the overall abundance in 2011 was down approximately 57% compared with the 1985/1986 survey. However, the abundance of hard clams in Little Egg Harbor increased 32% between 2001 and 2011 (see https://www.barnegatbaypartnership.org/wp-content/uploads/2017/08/BBP_State-of-the-Bay-book-2016_forWeb-1.pdf).

In the Study Area of Barnegat Bay, NJDEP has designated the Bay's waters for harvesting as 75% "approved," 6% "prohibited," and 19% "seasonal and special restricted" for shellfish harvest (see https://www.barnegatbaypartnership.org/wp-content/uploads/2017/08/BBP_State-of-the-Bay-book-2016_forWeb-1.pdf). To date, there have been no substantial changes in the percentages of classified waters over the past five years. Threats to shellfish include poor water quality that is generally attributable to contamination from stormwater runoff and other nonpoint sources rather than single, point source discharges. This can be seen in the northern portion of the Barnegat Bay, which represents a majority of the prohibited and special restricted waters. Additional threats to shellfish include overharvesting, the general eutrophication of host waters, algae blooms, pathogens, and loss of seagrass beds.

The Service recommends that any alternative selected during the development of a draft EIS identify potential adverse impacts to shellfish populations and any nature based mitigation strategies that could mitigate for the loss of habitat or potentially aid in shellfish recruitment and restoration.

NATIONAL ENVIRONMENTAL POLICY ACT

The goal of the NEPA is to reduce adverse impacts to the environment, including cumulative impacts and to take actions that protect, restore, and enhance the environment (40 CFR Parts 1500 to 1508). The Study Area is a mosaic of habitats ranging from tidal to non-tidal. Since Colonial times, 39 % of wetlands in New Jersey have been destroyed by human activities (Dahl 1990). Just in Barnegat Bay over 238 acres of tidal wetlands and 284 acres of freshwater wetlands were lost since 2007 (see https://www.barnegatbaypartnership.org/wp-content/uploads/2017/08/BBP_State-of-the-Bay-book-2016_forWeb-1.pdf). These historic losses have contributed to an increase of flooding and poor water quality and the general degradation of Barnegat Bay and other Study Area waters. Any additional losses of wetlands

associated with some of the Study alternatives would be considered substantial and should be avoided to the maximum extent practicable. Should the proposed Project involve an adverse effect to the aquatic environment, the goals of NEPA would not be fulfilled (*i.e.,* to protect and enhance the quality of the human environment). The filling of an undetermined amount of wetlands and waters of the U.S. is not supported by several Congressional initiatives aimed at the protection and restoration of wetlands and flood plains (E.O. for Flood Plains, and Wetlands) and the New Jersey Wildlife Action Plan.

The Service strongly recommends the Corps expend considerable effort on alternatives that provide an ecological uplift (i.e., *Mordecai Island*) and not pursue alternatives that are considered hard structures (*i.e.,* groins or inlet tide gate structures) that could further degrade the aquatic environment.

Purpose and Need

Pursuant to NEPA, it is vital that the purpose and need statement be easily understood in order to develop a proper scope of analysis for identifying reasonable and practicable alternatives for consideration; analyze those alternatives in depth; and select the preferred alternative. Further discussion should be offered by the Corps in the purpose and need statement regarding other reasonably expected projects that can be expected with any alternative considered (dune fortification, dredging, and additional wetland and open water fills) and the interrelationship or interdependence of any existing authorized Corps project to the Study's alternatives under consideration.

Federally Listed Species

Approximately one-third of the State's piping plover population is found in the Study Area. Other Federal listed species confirmed in the Study Area include the threatened seabeach amaranth, red knot, and northern long-eared bat. Based on some preliminary alternatives identified by the Corps (*i.e.,* tide gates; storm surge barriers; hardened shorelines; groins; dune construction; new levee construction; and increases in dredging frequency and volumes, including beach nourishment along the Atlantic Coast and the ICWW) it is reasonable to expect that any one of these activities could adversely affect a listed species. As such, the Corps should continue coordinating with the Service to determine the extent of any adverse impacts that could be associated with any Study alternative.

The Corps should be aware of another Feasibility Study underway by the Corps of Engineers, New York District as part of the NACCS. The New York District is evaluating the potential impacts of similar structures identified in the NJBBS, including a proposed levee/tide gate structure that would span New York Harbor from Breezy Point, Brooklyn, New York to Sandy Hook, Monmouth County, New Jersey. The Gateway National Park at Sandy Hook currently provides habitat for approximately 60 % of New Jersey's piping plover population. The New York District's NACCS study also has the potential to adversely affect the piping plover.

A shoreline hardening project selected by the Corps as a preferred alternative for either the Sandy Hook or Little Egg Inlet area could significantly impact the continued existence of this

species. As such, the Corps should evaluate the activities identified by the New York District (and the other seven NACCS studies) to ensure that the cumulative effects of any Study alternative being considered in the NACCS effort would not adversely affect, either individually or cumulatively, a federally listed species.

Cumulative Effects

The EIS should describe that the Study Area as impaired due to the cumulative actions of humans over the last two centuries and that any additional loss of wetlands or open waters in the Study Area will further exacerbate an already impacted Study Area. The draft EIS should reference that wetlands, and their corresponding ecological functions and values (including flood protection), continue to be lost in New Jersey due to development, the effects of sea level rise, and the subsidence of marsh plains. The EIS should also reference that the current mitigation strategy of converting lesser quality aquatic habitats (*i.e.,* a *Phragmites* dominated marsh) to another of higher value does not result in added flood protection to the region. To offset the continuing cumulative effects of declining wetland acreage in the Study Area the Service recommends that the Corps (1) minimize impacts to the aquatic environment by seeking Study alternatives that avoid the filling of wetlands or open waters, and (2) for wetland impact areas that are deemed unavoidable, develop a viable mitigation plan to offset adverse impacts to the aquatic environment as specified in the 2015 Presidential Memorandum (Obama 2015). In the Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment, for which the Department of Defense is a signature party, the White House said "Agencies shall each adopt a clear and consistent approach for avoidance and minimization of, and compensatory mitigation for, the impacts of their activities and the projects they approve" (Obama, 2015). The Corps cumulative analysis of impacts and corresponding compensation, if any, should also be consistent with the Executive Order 11988 (Floodplain Management), and EO 11990 (Protection of Wetlands). A restoration strategy whereby the selection of a preferred Study alternative would also result in a "net benefit to the aquatic environment" should also be major themes throughout the Study's draft EIS.

Indirect Effects

The draft EIS should discuss what, if any flooding impacts may occur as the Corps evaluates the potential construction of any Study alternative being considered. This should include a discussion on how a study alternative may exacerbate an already known flooding condition or place undue hydrologic stress on a barrier island system that may not be designed for coastal storms or projected rising sea levels. The latter example could apply should the Corps select a tide gate system that prohibits flood waters from entering the Back Bay may place undue stress on a dune system making it potentially prone to breach.

The Service is also concerned that flood waters that would normally be accommodated in the Study Area may be diverted to other areas outside the Study Area (*i.e.,* Shark, Navesink, or Shrewsbury Rivers, and Raritan and Delaware Bays) and cause indirect flooding of lands and communities in these watersheds. The feasibility Study should reference the potential indirect effects of converting known estuarine marshes to a freshwater habitat as tidal flow may be restricted upstream of planned levees or flood control structures. Several of the Study

alternatives under consideration have the potential to prohibit the passage of aquatic organisms upstream and downstream of any planned construction site. The conversion of aquatic habitats and/or the blocking of fish passage would necessitate mitigation requirements, and potentially exacerbate already depressed fisheries, and require large quantities of mitigation to offset impacts on the aquatic environment.

Alternative Analysis

The Council of Environmental Quality states (40 CFR Part 1508.25) that a range of actions, alternatives, and impacts shall be considered in a NEPA document. For a proposed action or any reasonable alternative, the Federal action agency should determine the area that will be affected. In 1989 the EPA defined the geographic scope for an alternative analysis to "...include all areas that would be reasonable to consider in the industry." and that "...the basic project purpose will generally determine the appropriate geographical scope."

The Service objects to the selection of hard engineered solutions, such as a levee, tide gate, or flood wall, unless they are accompanied by significant ecological gains for the Study Area. As discussed earlier, there are numerous opportunities for the Corps to pursue beneficial alternatives in the aquatic environment. The Service recommends the Corps to work closely with the effected stakeholders and pursue alternatives that improve water quality, finfish and shellfish habitat, wetlands habitat and fish passage. Improvement in aquatic functions and habitat can lead to additional flood storage and storm attenuation in the Study Area.

The Service also requests that the scope of alternatives include an array of nature based alternatives that utilize dredged material for large scale wetland and island restoration projects. The Corps should fully consider the utilization of the millions of cubic yards of dredged material currently found in the dozens of CDFs found within the Study Area, including the Corps' owned and operated CDF located adjacent to the Cape May Canal. Barring a CDF that contains contaminants of ecological concern, the use of dredged material for an ecological beneficial use can improve ecological functions of the bay while providing coastal resilience to adjoining communities facing flood risk. The Corps only has to review their very successful work at Mordecai Island which utilized dredged material for the restorations of an island and wetland habitat. This new habitat provides ecological uplift for Barnegat Bay, nesting habitat for shorebirds, storm resilience for Long Beach Island, protects an existing sea grass bed, and provides for safe navigation with the boating public. This initiative could result in the adoption many of the restoration projects identified in the Corps Final Selection Report dated December 2001, for the New Jersey Intercoastal Waterway (Corps 2001).

The use of nature based alternatives has considerable ecological and community benefits that appear just as practicable economically and environmentally as a seawall or other hard structure that offers minimum ecological benefit. The Corps needs to determine why dredged material that is contained in a CDF (that is free of contamination) cannot be utilized for sediment enrichment projects such as marsh and island creation and for coastal resilience for targeted Back Bay communities.

CLEAN WATER ACT

The Congressional intent of the CWA "... is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." As the NJDEP and the Corps are aware, the U.S. Congress passed the CWA to enable Federal agencies to restore, and maintain the chemical, physical, and biological integrity of the Nation's waters.

Alternatives that are not water dependent (i.e., in-water fills for the purpose of constructing levees, groins, or seawalls) should be avoided whenever possible. Hard structures or tide gates may likely generate sufficient interest from the public to warrant reconsideration, as the losses of wetlands or waters of the US and the costs of mitigation may outweigh any gains a hard structure or tide gate may represent.

Non-water dependent alternatives that may be economically viable and meet the purpose of the Study could include a "retreat" program for businesses and residences that suffer repeatable flood losses. Properties eligible for a "retreat" program could be bought-out, relocated outside the flood plain or be raised above a certain storm height elevation. For properties that are vacated, the use of upland areas for the construction of berms or levees is a preferred alternative over any losses to the aquatic environment. The implementation of a "retreat" program should be carefully coordinated with representatives of the Housing and Urban Development Authority (HUD), the Federal Emergency Management Authority (FEMA), and NJDEPs Blue Acres Program - as each of these agencies manages programs to acquire or relocate flood prone properties and businesses.

SERVICE CONCLUSIONS AND RECOMMENDATIONS

The Service has significant concerns to the selection of hard engineered solutions, such as levees, tide gates, or flood walls being constructed in the Study Area. The Service prefers the selection of nature based alternatives as was constructed on Mordecai Island, as the template used in selecting Study alternatives. The Corps should be seeking alternatives that avoid or minimize activities in the aquatic environment with a goal of improving water quality and the habitats of numerous fish, shellfish, and migratory birds whenever possible. The Corps should focus on the Study Areas population declines of numerous species, wetland and seagrass losses, and fish migration impediments, as they develop a robust Study alternative analysis. Finally, the Corps should utilize the efforts of the BBP, JCNERR, and NJDEP to develop viable solutions for the affected communities while providing a path forward towards ecological restoration of New Jersey Back Bay habitats.

The Service requests the following be incorporated into the Corps draft NEPA document. The Service will maintain our coordination status pursuant to FWCA and NEPA to ensure that the Project is sufficiently protective of fish and wildlife resources, including species protected under the ESA, and their respective habitats. The Service recommends the Corps implement the following measures:

- evaluate all Study alternatives to ensure compliance with the enabling legislation which authorized the acquisition of Refuge lands and avoid the advancement of any alternative that may affect a WA Unit;
- coordinate with the BBP and JCNERR to further the selection of alternatives that align with the work they are implementing with many stakeholders in the Study Area;
- coordinate with the NPS and the Council to ensure compatibility with their CMP;
- consult with the NMFS to ensure the effects any Study alternative are evaluated pursuant to ESA and the Magnuson-Stevens Fishery Conservation and Management Act;
- work with the Corps O&M Division to evaluate the beneficial use of dredged material, (including the utilization of sediment currently stored in dozens of CDFs) to meet the Study's purpose and need objectives;
- continue informal ESA consultation with the Service on potential effects of Study alternatives considered;
- evaluate the cumulative effects on listed species regarding actions taken by the Corps of Engineers to further the goals of the NACCS;
- adopt a strategy for the selection of Study alternatives that prioritize the habitat needs of any affected listed species or fish and wildlife resource;
- seek opportunities to further migratory bird conservation pursuant to EO 13186 and highlighted in the MOU between the Corps of Engineers and the Service;
- evaluate impacts to the American eel, striped bass, seagrasses, shellfish, and river herring and develop Study alternatives that further conservation efforts for these species;
- avoid the selection of hard structure Study alternatives by seeking Study alternatives that provide an ecological uplift while meeting the Study's purpose and need (*i.e.*,Mordecai Island)
- evaluate the interrelationship and interdependence of the current Study with other previously authorized Corps activities;
- ensure the Study's NEPA document advances the goals of EOs 11988, 11990 and 13112; and
- partner with HUD, FEMA and NJDEPs Blue Acres Program to identify businesses and residents that are prone to flooding and work towards developing a "Retreat" program.

Thank you again for allowing the Service to continue providing comments pursuant to FWCA, NEPA and ESA on the subject feasibility investigation. If you require additional information on the above, please contact Mr. Steve Mars at 609-382-5267.

Sincerely,

Eric Schrading
Field Supervisor

CF: USFWS, Region 5 (ARD for ES and NWR)
USFWS, (EBFNWR and CMNWR)
USEPA
NOAA
NJDEP

REFERENCES

A. LITERATURE CITED

Dahl , T.E. 1990. Wetland losses in the United States 1780's to 1980's. U.S. Department of Interior, Fish and Wildlife Service, Washington, D.C. 13 pp.

Hancock, T. E. and P. E. Hosier. 2003. Ecology of the threatened species, *Amaranthus pumilus* Rafinesque. Castanea 68(3):236-244.

Hecht, A. and S.M. Melvin. 2009. Population trends of Atlantic Coast piping plovers, 1986-2006. Waterbirds 32:64-72.

New Jersey Deprtment of Environmental Protection. 2005. Locations of anadromous American shad and river herring during the spawning period in New Jersey's Freshwaters including known migratory impediments and fish ladders. New Jersey Division of Fish and Wildlife, Bureau of Freshwater Fisheries, Trenton, New Jersey. 13 pp. Available at https://www.state.nj.us/dep/fgw/pdf/anadromouswaters.pdf.

_____. 2016. Studying River Herring – 2016 Report. New Jersey Division of Fish and Wildlife, Bureau of Marine Fisheries, Trenton, New Jersey. Available at: https://www.state.nj.us/dep/fgw/artriverherring17.htm

_____. 2017. Piping Plover Nesting Results in New Jersey-2017. New Jersey Division of Fish and Wildlife, Endangered and Nongame species Program. Trenton, New Jersey. 10pp.

Obama, B. 2015. Presidential Memorandum – Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment. November 3, 2015. Office of the Press Secretary, the White House. Washington, D.C.

Rice, T.M. 2014. Inventory of Habitat Modifications to Tidal Inlets in the U.S. Atlantic Coast Breeding Range of the Piping Plover (*Charadrius melodus*) prior to Hurricane Sandy: South Shore of Long Island to Virginia. Terwilliger Consulting, Incorporated, Locustville, Virginia. 25 pp.

Smith, R. 2012. Investigation and Management of Anadromous Fisheries. Inventory of Anadromous Clupeid Spawning Migrations in New Jersey Freshwaters (2002- 2007). Grant F-48-R Job I-7. New Jersey Division of Fish and Wildlife, Bureau of Freshwater Fisheries, Trenton, New Jersey. 12 pp.

U.S. Army Corps of Engineers. 2001 New Jersey Intercoastal Waterway Final Site Selection Report. U.S. Army Corps of Engineers. Philadelphia District. Phialdelphia, Pennsylvania. Two Volumes.

U.S. Fish and Wildlife Service. 1996a. Piping Plover (*Charadrius melodus*), Atlantic Coast Population, Revised Recovery Plan. Hadley, Massachusetts. 258 pp.

_____. 1996b. Recovery Plan for Seabeach Amaranth (*Amaranthus pumilus*) Rafinesque. Atlanta, Georgia. 59 pp.

_____. 2014. Rufa Red Knot Background Information and Threats Assessment. Supplement to: Endangered and Threatened Wildlife and Plants; Final Threatened Status for the Rufa Red Knot (*Calidris canutus rufa*). New Jersey Field Office, Pleasantville, New Jersey. 383 pp.

_____. 2016. Planning Aid Report dated March 22, 2016. Barnegat Inlet to Little Egg Inlet Storm Damage Reduction Project. U.S. Fish and Wildlife Service. Galloway, New Jersey.

B. PERSONAL COMMUNICATIONS

Albers, R. 2018. Deputy Refuge Manager, U.S. Fish and Wildlife Service, Edwin B. Forsythe National Wildlife Refuge, Galloway, New Jersey.

Greene, K. 2017. Supervisor. National Marine Fisheries Service, Highlands, New Jersey.

Hanlon, H. 2018. Biologist. U.S. Fish and Wildlife Service, Cape May National Wildlife Refuge, Cape May, New Jersey.

BARNEGAT BAY PARTNERSHIP
RESEARCH · EDUCATE · RESTORE

October 26, 2018

Peter Blum, Chief, Planning Division
U.S. Army Corps of Engineers, Philadelphia District
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107
VIA EMAIL

Re: New Jersey Back Bays Flood Risk Management Feasibility Study

Dear Mr. Blum:

I am submitting these comments to the U.S. Army Corps of Engineers regarding the New Jersey Back Bays Flood Risk Management Feasibility Study on behalf of the Barnegat Bay Partnership (BBP), which comprises federal, state, and local government agencies, academic institutions, nongovernmental organizations, and businesses working together to restore and protect a nationally significant estuary, the Barnegat Bay.

AUTHORITY

The BBP submits these comments pursuant to Section 320 of the Clean Water Act (33 U.S.C. 1330; as amended by P.L. 100-4 *et seq*.), which identifies one purpose of our management conference is to recommend "… corrective actions and compliance schedules addressing point and nonpoint sources of pollution, … and assure that the designated uses of the estuary are protected; …" In accordance with the BBP's Memorandum of Understanding Regarding the Roles and Responsibilities of Partners and its attendant charters and policies, the Environmental Protection Agency, New Jersey Department of Environmental Protection, and the U.S. Army Corps of Engineers (Corps) neither participated in the development of these comments nor reviewed them for endorsement.

GENERAL COMMENTS

The BBP commends the Corps for holding two public meetings (September 12 and 13, 2018), both of which were well attended and highly informative, to share information about the Feasibility Study and receive public comment. The format of the meetings, with Corps personnel and informational displays on the four main categories of potential measures available

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to the public first, followed by presentations and a Q&A session, provided diverse opportunities for interaction with local stakeholders.

As the information provided by the Corps at these meetings was scaled with respect to the types of projects being considered versus site specific solutions, our comments are similarly scaled in nature. We anticipate providing more detailed comments once the Interim Feasibility Report/Environmental Scoping Document is released. To that end, we are requesting to be involved as an interested party during the EIS development process.

Storm Surge Barriers

Within the Barnegat Bay watershed, the Feasibility study is investigating the placement of a storm surge barrier across the Barnegat Inlet. The BBP and our partners have a number of concerns with this potential measure. As currently depicted, the barrier would tie into an existing jetty structure on the southern side of the inlet at the north end of Long Beach Island. On the northern side of the inlet, the structure would tie into a jetty within Island Beach State Park (IBSP), an undeveloped section of the barrier island. Even with jetties along both sides of the inlet, the topography and bathymetry in the vicinity of the inlet have been highly dynamic. Previous Corps engineering solutions along the bayside of IBSP (*i.e.*, including geotubes) in the immediate vicinity have failed to reduce erosion; moreover, it is not clear how the proposed storm surge barrier would affect and/or be affected by this erosion. Furthermore, it remains unclear if the potential for erosion/flooding around the barrier has been considered.

Barrier islands, such as those under consideration, are highly dynamic landforms affected by natural and anthropogenic activities (Stutz and Pilkey 2005). In their natural condition they migrate landward due to storm overwash and erosion, and inlets open and close due to storms and sand movement associated with longshore transport and other oceanographic processes. Cranberry Inlet, a historic inlet in the vicinity of the Toms River, opened and closed in various locations multiple times in the eighteenth and nineteenth centuries, and an inlet opened in the northern portion of Barnegat Bay as a result of Superstorm Sandy, though it was quickly filled. If storm surge barriers are selected as a preferred method, will new storm surge barriers be required to be constructed at any future inlet in order to maintain the level of flood risk mitigation calculated now?

Lastly, while the current study investigated the effects of a storm surge barrier at the Barnegat Inlet, recent hydrodynamic modelling by the US Geological Survey has documented that most of the tidal flow into Barnegat Bay enters through Little Egg Inlet (Defne and Ganju 2014). It is not clear if water flow through Little Egg Inlet was taken into account during the current analysis, or how the proposed surge barrier at Barnegat Inlet interacts with that flow.

Impacts to Critical Habitats

The aquatic resources in the vicinity of the Barnegat Inlet are among the bay's most diverse, and recent submerged aquatic vegetation surveys conducted by the BBP and Stockton University have documented relatively robust eelgrass beds (*Zostera marina*) around the islands and channels in this portion of the bay (Lacey 2018, BBP unpublished data). With eelgrass bed area and density in the bay at substantially reduced levels compared to previous decades (Barnegat

Bay Partnership, 2016), it is of critical importance that these beds not be negatively impacted by any potential measures. It does not appear that potential impacts to this critical aquatic resource, and the species that depend on it (*e.g.*, blue crabs, the bay's most valuable fishery resource) have been considered.

Lastly, we have concerns with the models being used to evaluate the effects of this potential measure on flooding and flood risk. One of the displays available for viewing at the meetings appeared to show Great Bay Boulevard, which bisects the Tuckerton Peninsula, not impacted by flooding under a moderate degree of storm surge. As any of the residents and visitors to that area can attest, that roadway floods and is impassable during astronomic high tides, nor'easters, and generally any time of "nuisance" flooding (McKenna *et al.*, 2018). If the model outputs are unable to capture this well-documented phenomenon, the model design (input parameters, assumptions, *etc*.) should be revisited before the results are used to justify selecting measures for further investigation.

Perimeter Plan

The conceptual plans provided at the meeting did not appear to include floodwalls, levees, or other perimeter structural measures in the Barnegat Bay watershed. Many of the BBP's partners agree that these types of structural solutions are not appropriate for our watershed, and based on the recent scientific literature appear to have more adverse effects than benefits. Structural perimeter solutions severely curtail the ability of coastal marshes to receive sediment deposition needed to keep up with sea level rise (Ganju 2017) and prohibit their landward migration as water level rise (Gehman *et al*. 2018). Further, studies from Barnegat Bay and elsewhere have clearly documented a reduction in benthic infauna and epifauna associated with hard structures at the water's edge as compared to natural shorelines (Gittman *et al.* 2016), particularly for recreationally and commercially important species (Jivoff 2005).

Non-structural Measures

We are encouraged by the inclusion of non-structural measures in this feasibility study, as they are often overlooked during the discussion of how to practically manage flood risk. In particular, we feel that acquisition in areas that suffer from repetitive losses is a particularly useful strategy, especially if it can be implemented at an appropriate spatial scale. This approach has been effective in the Raritan River and Delaware River watersheds, and merits consideration as a solution, especially for back bays sites with low elevations and other risk factors which increase their vulnerability to sea level rise (*e.g.*, wind and wave fetch; vegetation).

Nature-based Features

Based on our own and others' experiences during and post significant storms, we strongly recommend that nature-based features be a prominent component of the tentatively selected plan. Human infrastructure with robust coastal wetlands and dune features between them and a water body typically fare far better than those without during storms (Barbier *et al.* 2013; Narayan *et al.* 2017). A growing body of literature has shown that wetlands, seagrass beds, oyster reefs, living shorelines, and other biogenic structures attenuate wave energy and ameliorate flood impacts effectively (Wamsley *et al.* 2010, Costanza *et al.*2008, Koch *et al.* 2006). As an added bonus, when properly implemented, these features are likely to be robust to sea level rise, which increases their longevity. While not feasible to implement everywhere in the watershed, there are

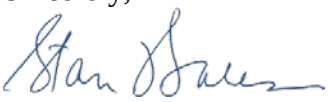
substantial areas of shoreline that would benefit from these treatments, with the added benefit of the additional ecosystem services, including water quality benefits, they provide.

Benefit/cost Calculations
It is not clear if the benefit/cost calculations include the $2.3+ billion in ecosystem services provided by the Barnegat Bay watershed to the regional economy (Kaufman and Cruz-Ortiz 2012). Not including those values when calculating the benefit to costs of various alternatives is likely to lead to selection of less than desirable alternatives and outcomes.

Finally, we feel we would be remiss if we did not comment on the potential for questionable development and/or redevelopment incentives that some potential "resilience" projects may create in some back-bay communities. We believe that the back-bay study should explore ways (*e.g.*, relocation incentives or requirements) to ultimately reduce future risks apart from any potential back-bay projects. Without such considerations, we are concerned that planning and implementation of resilience projects in some areas may simply encourage irresponsible redevelopment in high risk areas, which then results in additional publicly funded mitigation measures, with the cycle continuing to repeat itself at increasing costs and even higher risks into the future. This cycle needs to be addressed within the context of flood risk management on the broadest scale, as it is not unique to New Jersey's back bays, but is playing out here as seen in the construction activities along our shorelines.

We hope that you find our comments to be constructive during the formulation of the tentatively selected plan, and we welcome the opportunity to discuss these comments in more detail. If you have any questions, please feel free to contact me or Dr. Jim Vasslides, our Program Scientist, at 732-255-0472.

Sincerely,



L. Stanton Hales, Jr., Ph.D.
Director

cc: Mr. Rob Karl, Brick Township MUA, STAC Chair
Dr. Steven Yergeau, Rutgers Cooperative Extension, STAC Vice-Chair
Ms. Karen Green, NOAA-NMFS, Advisory Committee Co-Chair

CITATIONS

Barbier, E.B., Georgiou, I.Y., Enchelmeyer, B., Reed, D.J. 2013. The value of wetlands in protecting southeast Louisiana from hurricane storm surges. *PLoS ONE* 8(3).

Barnegat Bay Partnership. 2016. State of the Bay Report. Barnegat Bay Partnership, Toms River, NJ. 80pp.

Costanza, R., Perez-Maqueo, O., Martinez, M.L., Sutton, P., Anderson, S.J., Mulder, K. 2008. The value of coastal wetlands for hurricane protection. *Ambio* 37, 241-249.

Defne, Z., and N.K. Ganju. 2014. Quantifying the Residence Time and Flushing Characteristics of a Shallow, Back-Barrier Estuary: Application of Hydrodynamic and Particle Tracking Models. *Estuaries and Coasts* 38: 1719-1734.

Ganju, N.K., Defne, Z., Kirwan, M.L., Fagherazzi, S., D'Alpaos, A., Carniello, L. 2017. Spatially integrative metrics reveal hidden vulnerability of microtidal salt marshes. *Nature Communications* 8, 14156.

Gehman, A.-L.M., N.A. McLenaghan, J.E. Byers, C.R. Alexander, S.C. Pennings, and M. Alber. 2018. Effects of Small-Scale Armoring and Residential Development on the Salt Marsh-Upland Ecotone. *Estuaries and Coasts* 41: 54-67.

Gittman, R.K., Peterson, C.H., Currin, C.A., Fodrie, F.J., Piehler, M.F., Bruno, J.F. 2016. Living shorelines can enhance the nursery role of threatened estuarine habitats. *Ecological Applications* 26, 249-263.

Jivoff, P. 2005. The Effect of Artificial Shoreline on Habitat Quality and Mortality of Blue Crabs, Callinectes sapidus. Rider University, pp. 1-12.

Kauffman, G.J., Cruz-Ortiz, C. 2012. Economic Value of the Barnegat Bay Watershed. Institute for Public Administration Water Resource Agency, University of Delaware, Newark.

Koch, E.W., Sanford, L.P., Chen, S.-N., Shafer, D.J., McKee Smith, J., 2006. Waves in seagrass systems: Review and technical recommendations, Engineering Research and Development Center. U.S. Army Corps of Engineers, Vicksburg, MS, p. 92.

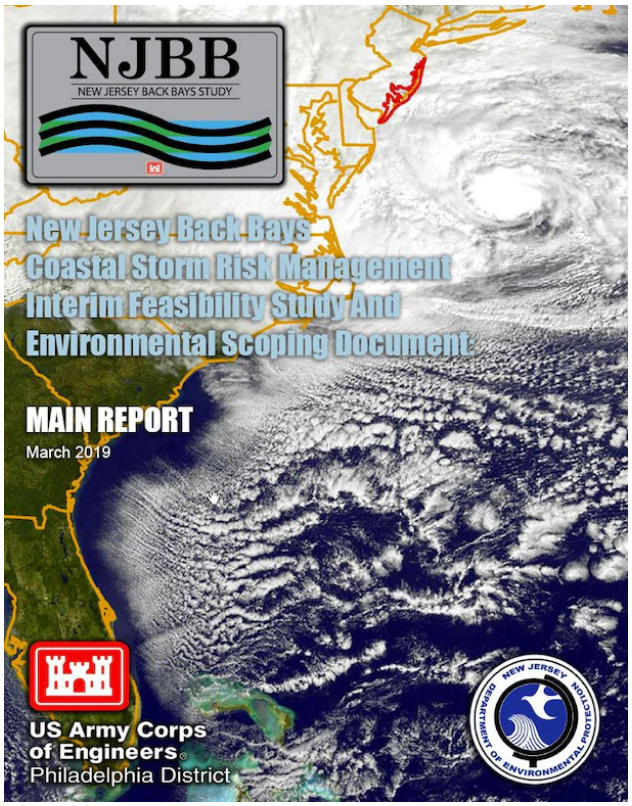
McKenna, K., DiCosmo, N., Greenfield, B., Gebert, J., Jensen, H., 2018. Quantification of Flood Event Forcing and the Impact of Natural Wetland Systems: Great Bay Boulevard, Ocean County, New Jersey. US Army Corps of Engineers, Institute for Water Resources, Alexandria, Virginia, p. 46.

Narayan, S., M.W. Beck, P. Wilson, C.J. Thomas, A. Guerrero, C.C. Shepard, B.G. Reguero, G. Franco, J.C. Ingram, and D. Trespalacios. 2017. The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA. *Scientific Reports* 7: 9463.

Stutz, M.L., Pilkey, O.H. 2005. The relative influence of humans on barrier islands: Humans versus geomorphology, *in* Ehlen, J., Haneberg, W.C., and Larson, R.A., eds., Humans as Geologic Agents. Boulder, CO. Geological Society of America Reviews in Engineering Geology, v.XVI, p. 137-147. Doi:10.1130/2005.4016(12).

Army Corps releases interim report for New Jersey Back Bays study

Published Feb. 28, 2019



The U.S. Army Corps of Engineers announced the release of an Interim Report for the New Jersey Back Bays Coastal Storm Risk Management Study. The document describes the engineering, economic, social and environmental analyses conducted to date. The objective of the study is to investigate problems and solutions to reduce damages from coastal flooding that affect population, critical infrastructure, property, and ecosystems.

PHILADELPHIA --

The U.S. Army Corps of Engineers announced the release of an Interim Report for the New Jersey Back Bays Coastal Storm Risk Management Study.

The Army Corps, in partnership with New Jersey Department of Environmental Protection, is conducting the feasibility study within the New Jersey Back Bay area, defined as the network of interconnected tidal water bodies located landward of the New Jersey ocean coastline in Monmouth, Ocean, Atlantic, Burlington, and Cape May Counties. The study area includes approximately 950 square miles and nearly 3,400 miles of shoreline. The objective of the study is to investigate problems and solutions to reduce damages from coastal flooding that affect population, critical infrastructure, property, and ecosystems.

The study team prepared the Interim Report to present preliminary findings and a focused array of alternative plans that manage risk and reduce damages from coastal storms. The document describes the engineering, economic, social and environmental analyses conducted to date. The focused array of alternative plans described in the report and future study analyses will ultimately result in the selection of a recommended plan for the region while minimizing environmental, social and economic impacts.

Some of the alternatives under consideration include structural solutions such as storm surge barriers, tide gates, levees, and floodwalls; non-structural solutions such as elevation of homes; and nature-based features such as marsh restoration and the creation of living shorelines. The study is being cost-shared by the DEP and federal government. The study was developed out of the Army Corps' North Atlantic Coast Comprehensive Study, which was undertaken after Hurricane Sandy.

The Army Corps will host a webinar on the report on March 14 from 9 to 10 a.m. (see following page for call in and web meeting information).

The general public and stakeholders are invited to provide comments by April 1, 2019.

Comments by email: PDPA-NAP@usace.army.mil

Comments in writing:

U.S. Army Corps of Engineers Planning Division

Wanamaker Building

100 Penn Square E.

Philadelphia PA 19107

Webinar Information

Audio Info:

Teleconference Dial-In Number(s):

Participant Code: (800) 230-1074

Confirmation Number: 464452

Web Meeting Info

URL: https://www.webmeeting.att.com

Meeting Number: (511) 468-6455

Participant Code: 644897

Conference ID: ZTS1401

Note: Webinar space is limited and demand could exceed capacity; however, a recording will be posted later to the study web page.

-30-

Related Link: **NJBB Study Webpage (links to main report and appendices)**
https://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Coastal-Storm-Risk-Management/

Related Link: **Report Executive Summary**
https://www.nap.usace.army.mil/Portals/39/docs/Civil/NJBB/Interim%20Report/1NJBB_Executive_Summary_Interim.pdf

Related Link: **NJDEP Division of Coastal Engineering** https://www.nj.gov/dep/shoreprotection/

Contact
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Congress of the United States
House of Representatives

COMMITTEE ON ARMED SERVICES
VICE-CHAIRMAN, SUBCOMMITTEE ON READINESS

SUBCOMMITTEE ON INTELLIGENCE, EMERGING THREATS & CAPABILITIES

COMMITTEE ON SMALL BUSINESS
CHAIRMAN, SUBCOMMITTEE ON ECONOMIC GROWTH, TAX & CAPITAL ACCESS

SUBCOMMITTEE ON INNOVATION & WORKFORCE DEVELOPMENT

May 7, 2019

Peter Blum, Chief, Planning Division
U.S. Army Corps of Engineers, Philadelphia District
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107

RE: New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study

Dear Mr. Blum,

I write to you to express my support for the ongoing New Jersey Back Bay (NJBB) Coastal Storm Risk Management (CSRM) feasibility study and planning process. The objectives laid out in the U.S. Army Corps of Engineers (USACE) Interim Feasibility Study reflect crucial steps that are needed to protect residential and commercial structures, as well as infrastructure critical to the regional economy from future extreme weather and climate related events.

Ensuring resilience to flooding and extreme weather events will be crucial to the ability of coastal communities on New Jersey's shoreline to maintain their way of life. Worsening storm surges due to sea level rise and more frequent extreme weather pose a direct threat to our shore economies as well as our coastal ecosystems. The USACE's Coastal Storm Risk Management plan will be crucial to ensuring that our shore communities remain vibrant and sustainable in the face of a changing climate.

I urge the USACE to ensure that the impacts of the CSRM's structural components on environmental sustainability, water quality, and fish and wildlife health are taken into consideration during this process. The structural measures laid out in the Interim Feasibility Study including storm surge barriers, interior bay closures and levees/floodwalls represent important components of a plan to protect coastal areas from sea level rise and storm surge. I ask that the implementation of such strategies take into account the importance of coastal ecosystem health to the surrounding area and that the environmental impacts of these projects be minimized.

The importance of Natural and Nature Based Features (NNBF) to our sea level rise adaptation strategy should also not be understated. A focus on the use of NNBFs, like living shorelines and wetland restoration, in this plan would help protect coastal residences while also promoting the health of bay ecosystems. These ecosystems are crucial to maintaining not only overall environmental health of the region, but also the strength of New Jersey's tourism and

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(856) 703-2700

535 EAST MAIN STREET
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MARLTON, NJ 08053
(856) 703-2700

recreational fishing economies. I hope that the coming phases of the USACE's study continue to work with a reasonable focus on these strategies.

I commend the USACE for their efforts to help prevent the worst impacts of a changing climate on New Jerseyans. It is among my top priorities in congress to ensure that New Jersey's coastal communities have the resources they need to stay strong in the face of the next Superstorm Sandy. I look forward to continuing to work closely with the USACE throughout this process to ensure that New Jersey has a comprehensive resilience plan and appreciate the Corps' leadership in this effort.

I appreciate your efforts to protect New Jersey's Back Bays and look forward to working with you going forward. Should you need to contact me, please reach out to my office in Washington, DC at (202) 225-4765, or in Toms River at (732) 504-0490.

Sincerely,

Andy Kim
Member of Congress

United States Department of the Interior
FISH AND WILDLIFE SERVICE
New Jersey Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, New Jersey 08205
Tel: 609/646 9310
www.fws.gov/northeast/njfieldoffice/

In reply refer to: 16-CPA-0267b

MAR 29 2019

Peter Blum, Chief
Planning Division
Philadelphia District
U.S. Army Corps of Engineers
Philadelphia, Pennsylvania 19107-3390
Attn: Steve Allen

Dear Mr. Blum:

The U.S. Fish and Wildlife Service (Service) is continuing to provide comments pursuant to the Fish and Wildlife Coordination Act (48 Stat.401; 16 U.S.C. 661 *et seq.*) (FWCA) regarding the U.S. Army Corps of Engineers, Philadelphia District's (Corps) New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study and Environmental Scoping Document - Main Report dated March 1, 2019. These comments follow previous comments made by the Service on September 14, 2018 and are intended to meet our statutory responsibilities pursuant to the National Environmental Policy Act of 1969 (87 Stat. 884, as amended; 42 U.S.C. 4321 *et seq.*) (NEPA) and do not preclude additional comments on the draft Federal Environmental Impact Statement (EIS).

The geographic boundary of the New Jersey Back Bays Coastal Study Area (includes five counties of New Jersey (Monmouth, Ocean, Burlington, Atlantic and Cape May counties) and a drainage area of over 1,300 square miles. The Study Area includes parts of the Atlantic Coast and the entire Back Bay system from Manasquan River to the Cape May Canal, New Jersey and includes numerous land holdings of the Edwin B. Forsythe and Cape May National Wildlife Refuges (Project Study Area).

AUTHORITY

The following comments on the proposed action are provided to assist the Corps in seeking comments on potential alternatives pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; l6 U.S.C. 1531 *et. seq.*) (ESA); FWCA; the 2014 Memorandum of Understanding between the Corps and the Service regarding implementation of Executive Order (EO) 13186, Responsibilities of Federal Agencies to Protect Migratory Birds; the Migratory Bird Treaty Act of 1918 (40 Stat. 755; 16 U.S.C. Section 703-712); NEPA; the Clean Water Act of 1977 (86 Stat. 816, 33 U.S.C. 1344 *et seq.*) (CWA), the Emergency Wetlands Resource Act of 1986 (EWRA) (100 Stat. 3582; 16 U.S.C. 3901-3932); the National Wildlife Refuge System Improvement Act of 1966, as amended by the National Wildlife Refuge System Improvement

Act of 1997 (NWRSIA) (111 Stat. 1252; 16 U.S.C. 668 et seq.); the Wilderness Act (WA)(78 Stat. 890; 16 U.S.C. 1131 *et seq.*), EO 11988, Floodplain Management (May 24, 1977; 42 FR 26951); and EO 11990, Protection of Wetlands (May 24, 1977; 42 FR 26961).

INTRODUCTION

The Service provided scoping comments on the subject Feasibility Study on September 14, 2018. Although the March 1, 2019 Main Study Report acknowledges that substantive comments were received by the Service, the Corps response to these concerns was general in scope and breadth. Rather than reiterate our concerns in this correspondence, the Service requests that the Corps prepare a streamlined response to our September 14, 2018 comments (and that of other agency's comments) in order that they are readily identified and sufficiently responsive.

Upon reviewing the current March 1, 2019 Main Report, we offer the following additional comments (by Section as identified in the Corps' Main Report) that should be addressed prior to the development and selection of a preferred alternative(s). The Service emphasizes the use of natural and nature-based alternative solutions that can meet project objectives. The Service expects a robust alternative analysis be completed that complements the efforts of numerous stakeholders in the Project Study Area; avoids impacts on the numerous fish and wildlife species and their habitats; and supports the mission of the Service's National Wildlife Refuge System of which two Refuges are managed in the Project Study Area (Edwin B. Forsythe and Cape May National Wildlife Refuges).

COMMENTS

3.6 Study Area

Each of the five areas evaluated (Coastal Lakes, Shark River, North, Central and South) which describe current conditions and the physical settings of the Project Study Area should also include a description of all Federal entities (Barnegat Bay and Delaware Bay National Estuary Programs, Jacques Cousteau National Estuarine Research Reserve (JCNERR), two National Wildlife Refuges and the National Pinelands Reserve) and State land holdings (State Forests, Parks, or Wildlife Management Areas).

3.6.1 Coastal Lakes Region

Acknowledge that Wreck Pond, located in Allenhurst, Monmouth County, New Jersey is a tidally influenced watershed with the Atlantic Ocean. In recent years river herring (*Alosa* sp.) have been documented passing through the existing non-gated culvert to watershed areas upstream of the Atlantic Ocean (McCulloch pers. comm. 2019).

4.2.1 Problems

Rising sea level represents a threat to numerous habitats important for fish and wildlife species. These threats include the loss of valuable breeding habitats for threatened and endangered species; migratory and shorebird nesting species; commercially important shellfish and finfish

species should be added to the ongoing threat assessments performed by the Corps. Historical acreage losses of wetlands (which has been shown to provide storm surge protection) in the Study Area from human development and coastal erosion should be discussed along with the projected acreage losses of habitats due to sea level rise.

4.4 b. Universal Constraints

Include compliance with the Department of the Interior if a selected alternative(s) lies within the jurisdictional boundary of the New Jersey Pinelands National Reserve. In addition, the Corps should ensure compliance with the State's Coastal Zone Management Act (N.J.A.C. 7:13-1.1 *et seq.*) and the Coastal Zone Management Act of 1972 (P.L. 92-583) (86 Stat. 1280; 16 U.S.C. 1451-1464) and Section 320 of the CWA (86 Stat. 816; 33 U.S.C. 1251 *et seq.*) (for activities that occur in a National Estuary Reserve).

4.4 c. Study-Specific Constraints

Reference should be made of the management plans for the New Jersey Pinelands National Reserve, Barnegat and Delaware Bay National Estuary Programs and the JCNERR. These management plans should be fully considered in the selection of the preferred alternative(s).

5.3 Existing Studies and Projects

Coastal engineering or maintenance dredging projects that the Corps conducted (if any) at Corson's Inlet, Great Egg Harbor Inlet, Townsend Inlet, and Hereford Inlet should be included in the discussion of existing studies and projects.

5.4 Shoreline Types

The Corps should discuss shoreline types (also in Section **5.8 Historical Shoreline Changes**) from a historical perspective and how sea level rise will contribute future changes in the Study Area. This discussion should be consistent with the historical losses of tidal marshes and future adverse impacts to New Jersey's marsh plains from projected rising seas.

5.5 Economics

The Corps should consider the economic wealth of the current wetland and forest systems in the Project Study Area and the ecological services they provide (fish and shellfish production, carbon sequestration, water quality benefits, and recreational and commercial use of the Study Area's waterways, National, State and local municipal parklands, refuges, and beaches). In 2016, more than 103 million Americans (40 percent of the U.S. population 16 years and older) participated in some form of fishing, hunting, or other wildlife associated recreation such as birdwatching or outdoor photography (U.S. Department of the Interior *et al.* 2016). This usage equated to an estimated $156.9 billion in expenditures on equipment, travel, licenses, and fees. The United States Environmental Protection Agency (2006) provided estimates of the economic value of wetlands worldwide at $14.9 trillion. Human based recreation is a strong economic interest for the State of New Jersey and rising sea levels represent a threat to the State's

economy. The Corps should consider discussing the growing data of the value of wetlands from a coastal resilience perspective. To highlight one of the many functions that wetlands perform (*e.g.,* flood protection), a regional study showed that wetlands on the New Jersey Coast avoided $430 million in direct flood damages during Hurricane Sandy (Narayan *et al.* 2017).

5.8 Historical Shoreline Changes

The Corps should acknowledge that the effects of shoreline erosion and sea level rise, coupled with coastal storm flooding is continuing to place the region's economy at risk.

6.14 Special Status Species

The Service has proposed the listing of the eastern black rail (*Laterallus jamaicensis*) as threatened, and is evaluating the listing of the monarch butterfly (*Danaus plexippus*), and the saltmarsh sparrow (*Ammodramus caudacutus*) for listing under the ESA. These three species may be present in the Project Study Area. Proposed species (black rail) are subject to the conference procedures under Section 7 of the ESA. Species being evaluated for listing (monarch butterfly and salt-marsh sparrow) do not receive any substantive or procedural protection under the ESA. Despite the current status of the monarch butterfly and salt marsh sparrow (*i.e.,* non-listed), each of these species are in decline range-wide.

6.2.2 Coastal Barrier Resources Act Areas

The Corps should acknowledge that the Service is the Federal lead agency responsible for the administration of the Coastal Barrier Resources Act of 1982 (P.L. 97-348) (96 Stat. 1653; 16 U.S.C. 3501 *et seq.*).

6.2.8 National Estuary Programs

The Corps should identify that the Delaware National Estuary Program is also located in the Project Study Area.

6.21 Climate and Climate Change

The Corps should acknowledge that the 2018 precipitation rate was the highest since record keeping began in 1895, with a statewide average of 64 inches of precipitation being recorded (see https://www.nj.gov/dep/drought/rainfall.html).

7.1 Economic and Social Without Project Conditions

The Corps should reference the Union of Concerned Scientists 2017 and 2018 publications and its conclusions regarding future without project impacts, economic risk, sea level rise, and chronic flooding predictions for New Jersey communities (Union of Concerned Scientists 2017, 2018).

8.2 Sea Level Change

The Service requests that the Corps compare its sea level projections against that of the rates predicted by the National Oceanic and Atmospheric Administration (see https://coast.noaa.gov/digitalcoast/tools/slr) and that of the Intergovernmental Panel on Climate Change (2014).

11. Environmental Laws and Compliance

The Service requests that the following authorities also be included: the EWRA; the National Wildlife Refuge System Administration Act of 1966, as amended by the NWRSIA; and the WA.

11.1 National Environmental Policy Act

Pursuant to NEPA (40 CFR Part 1508.7, Effects), the Corps should evaluate the direct and indirect effects of each of the alternatives considered, including those that may occur later in time and are reasonably foreseeable. For example, the placement of tidal gates at Barnegat Inlet may increase navigation use at Little Egg Inlet, an unmaintained and natural inlet (without a dredging history) bordering a designated Wilderness Unit of the Edwin B. Forsythe National Wildlife Refuge. This increased navigational use may warrant new dredging at the inlet or other waterways that are within or adjoin refuge lands.

In addition, the Corps should evaluate a change in use of a tidal gate where it could evolve (once constructed) from a storm protection structure whose project purpose would be served once or twice a year to a structure whose project purpose would be to halt rising sea levels on a daily basis. Each of these alternatives will have different scopes of environmental review pursuant to NEPA (alternatives considered, cumulative impacts and effects [direct and indirect]).

SERVICE CONCLUSIONS AND RECOMMENDATIONS

The Service appreciates the efforts by the Corps to discuss the array of alternatives being considered and for their commitment in ensuring the production of a comprehensive and transparent NEPA document. As the Corps further refines its environmental analysis, the Service will continue to provide comments and recommendations to ensure that the Project(s) maximize their benefits on the human environment, including fish, wildlife, and their respective habitats. The Service reiterates our concerns over alternatives that focus on hard engineered solutions, such as levees, tide gates, or flood walls being constructed in the Project Study Area. The Service prefers the selection of Engineered with Nature or Nature-based alternatives as was constructed on Mordecai Island, and now being considered in Delaware Bay and Seven Mile Island in Avalon, New Jersey.

The Corps should be seeking alternatives that avoid or minimize activities in the aquatic environment with a goal of improving water quality and the habitats of numerous fish, shellfish, and migratory birds whenever possible. The Corps should focus on the Study Areas' population declines of numerous fish and wildlife species, wetland and seagrass losses; and fish migration impediments, as they develop a robust alternative analysis. Finally, the Corps should utilize the

efforts of the Pinelands Commission, the Barnegat Bay Partnership, the Jacques Cousteau National Estuary Research Reserve, the NJDEP, and the Edwin B. Forsythe and Cape May National Wildlife Refuges to develop viable solutions for the affected communities while providing a path forward towards ecological restoration of New Jersey Back Bay habitats.

In addition to the recommendations contained in the Service's September 14, 2018 letter, the Service requests the following additional concerns be incorporated into the Corps NEPA document. The Service will maintain our coordination status pursuant to FWCA and NEPA to ensure that the Project is sufficiently protective of fish and wildlife resources, including species protected under the ESA, and their respective habitats.

Thank you again for allowing the Service to continue providing comments pursuant to FWCA, NEPA and ESA on the subject feasibility investigation. If you require additional information on the above, please contact Mr. Steve Mars at 609-382-5267.

Sincerely,

Eric Schrading
Field Supervisor

CF: USFWS- Region 5 (ARD for ES and NWR)
USFWS - EBFNWR and CMNWR
USEPA (Montella, Spinweber)
NOAA (Greene, Hanson)
NJDEP (Kopkash, Keller)
BBPNEP (Hales)
DBNEP (Kreeger)
JCNERR (Auermuller)
New Jersey Pinelands Commission

REFERENCES

A. LITERATURE CITED

Intergovernmental Panel on Climate Change. 2014. Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri, and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp.

Narayan, S., M.W. Beck, P. Wilson, C.J., Thomas, A. Guerrero, C.S. Shepard, B.G. Reguero, F. G. Franco, J.C. Ingram and D. Trespalacios . 2017. The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA. Scientific Reports, New York, New York. 12 pp.

Union of Concerned Scientists. 2018. Underwater – Rising Seas, Chronic Floods, and the Implications of U.S. Coastal Real Estate. Union of Concerned Scientists, Cambridge, MA. 28pp.

Union of Concerned Scientists. 2017. When Rising Seas Hit Home – Hard Choices Ahead for Hundreds of U.S. Coastal Communities. Union of Concerned Scientists, Cambridge, MA. 64pp.

U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. 144 pp

U.S. Environmental Protection Agency. 2006. Economic Benefits of Wetlands. EPA843-F-06-004, Office of Water, Washington, D.C. 4pp.

B. PERSONAL COMMUNICATIONS

McCulloch, D. 2019. Biologist. United States Fish and Wildlife Service, Galloway, New Jersey.

United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region
1234 Market Street
Philadelphia, PA 19107

IN REPLY REFER TO:
1.A.2.(NER-RSS)

APR 05 2019

U.S. Army Corps of Engineers, Planning Division
Attn: Peter Blum, Chief of Planning
Wanamaker Building
100 Penn Square East.
Philadelphia PA 19107

Subject: Release of an Interim Report for the New Jersey Back Bays Coastal Storm Risk Management Study

Dear Mr. Blum:

This is in response to a request for the National Park Service (NPS) to review and comment on the U.S. Army Corps of Engineers (Corps), Philadelphia District's Interim Report for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management Study.

The National Park Service offers the following comments:

General Comments

The NPS acknowledges and appreciates that the Corps states in the constraint section of the report that it would like to avoid non-sustainable solutions and that any proposed solutions or plans that lie within the jurisdictional boundaries of the National Park Service, must be mutually acceptable to the Secretary of the Army and the Secretary of the Interior.

We also acknowledge at this stage of the feasibility study and NEPA analysis that quantitative impact analyses are unavailable for the proposed alternatives due to the current preliminary low-level of design and limited modeling that has been completed at this point. We understand that further impact analysis on selected alternatives will be completed in a future NEPA document.

National Park Resources - Great Egg Harbor Scenic and Recreational River

The NPS has specific concerns regarding some of the current proposed alternatives for the Central Region of the study. The key resource for the NPS in the Central Region of the study is the Great Egg Harbor National Scenic and Recreational River.

The Great Egg Harbor National Scenic and Recreational System is a unit of the National Park Service (NPS), and was designated into the National Wild and Scenic River system in 1992 (P.L.102-536). Most of the river and its dozen designated tributaries are located in the Pinelands

National Preserve, and total 129 river miles. All of the rivers, including the mainstem, drain into the Great Egg Harbor. Part of the harbor itself is designated under the statute, and it is the National Park Service's responsibility to ensure that what is proposed by the New Jersey Back Bay Study not invade or unreasonably diminish the values for which the river and harbor were designated.

The river's Comprehensive Management Plan (CMP) lists the Great Egg Harbor's values as water quality, free flow and Outstandingly Remarkable Values (ORVs). ORVs for the Great Egg Harbor River include recreation, dozens of plant and animal species (some listed as Threatened or Endangered), cultural resources and scenery. All the river's ORVs receive protection through the designation legislation, CMP, an established River Council, and partner organizations like the Great Egg Harbor Watershed Association. All ORVs in the CMP associated with this river are considered important resources to the NPS.

The Great Egg Harbor River complex provides aquatic and wetlands habitats for numerous wildlife species currently listed as rare, threatened, or endangered by the NJ Department of Environmental Protection (NJDEP), U.S. Fish and Wildlife Service, and the Pinelands Commission. Wildlife habitats contained within the Great Egg River corridor are characterized as "exceptional" by the NJDEP. Wetland cover types within and adjacent to the Great Egg Harbor River, such as riverine, tidal and nontidal emergent wetlands, provide habitat for migratory waterfowl and passerine birds. Federally and State threatened and endangered flora and fauna that are known to occur in and adjacent to areas within the Great Egg Harbor River and its tributaries including the bald eagle, peregrine falcon, bog turtle, Pine Barrens tree frog, and Northern Harrier. In addition, the Great Egg Harbor River and estuary are important foraging, spawning, and nursery habitat for anadromous fish, including: alewife (*Alosa pseudoharengus*), striped bass (*Morone saxatilis*), and American shad (*Alosa sapidissima*).

In addition, the lower Great Egg Harbor River and its tributaries contain large expanses of ecologically significant tidal marshland and hardwood swamp. The middle and upper segments of the Great Egg Harbor River and its tributaries contain significant areas of hardwood swamp. Both areas have sites with rare plants or plant communities recognized by federal and state agencies and the Pinelands Commission. Furthermore, the Great Egg Harbor Designation is an important area to the local communities for recreational fishing, boating, paddling, hiking, birdwatching, and for viewing scenic areas noted in the Management Plan, particularly in the lower reaches of the designation.

Potential Impacts to NPS Resources

The NPS has concerns with the alternatives in the Central Region Study area, specifically: E(2), 4E(3), 4E(4), 4G(6-12). All of these proposed alternatives include a proposed Storm Surge Barrier (SSB) across the Great Egg Harbor Inlet. The NPS is concerned with the possible effects a SSB could have on the values associated with the Great Egg Harbor River including: tidal flow, tidal regime, ORVs, river sediment transport, and water quality – all of which could invade or unreasonably diminish the Great Egg Harbor River's values.

Specific impacts to NPS Resources are difficult to assess at this point in time of the NJBB study due to many unknowns associated with the SSB, including size of the structure, number of gates, operation and maintenance plan, construction material, construction window, etc.; however,

constructing a barrier across the Great Egg Harbor Inlet will most likely have impacts on the above list ORVs for the Great Egg Harbor River by disrupting the migration and local movements of aquatic species; altering the tidal and flushing regime in the estuary, which could change the aquatic community in the estuary and river; degrading the water quality in the river and estuary by blocking the draining of the river during a storm event; disrupting sediment transport from the river through the estuary to the ocean, which could have cascading effects the estuary/river flora and fauna; disrupting recreational boating moving from the river through the inlet to the ocean; and by forever altering the scenic viewshed of the lower river and estuary. Whether a SSB is open all the time or is unpredictably closed, the ecosystem will experience significant changes to which it will have to adapt (Elgershuizen 1981).

Overall, the report and the array of alternatives currently presented focuses heavily on structural alternatives and did not appear to spend an equal amount of analysis on non-structural alternatives. By focusing mainly on structural solutions, this has lead the Corps to consider alternatives that more are likely to impact NPS resources. The Corps' own policy cited on page 102 of the interim reports states the importance of non-structural alternatives:

"Section 73 of the Water Resources Development Act of 1974 requires consideration of nonstructural alternatives (measures) in all flood risk reduction studies. They can be considered independently or in combination with structural measures (Corps Planning Guidance Notebook PGN). Planning Bulletin (PB 2016-01) signed on 22 December 2015 further clarifies Corps policy on nonstructural measures for the plan formulation phase on investigations and implantation. The Planning Bulletin clarifies that it is the policy of USACE to formulate a full array of alternatives consisting of nonstructural measures and structural measures and that not all nonstructural measures need to meet USACE criteria for agency participation and cost share implementation."

We recommend that the Corps complete a thorough analysis of all non-structural alternatives to meet the project goals and objectives since the current non-structural analysis only considered one type of non-structural alternative, building retrofits. The non-structural alternative of acquisition/relocation should be a key component of any sustainable solution moving forward. A non-structural focused array of alternatives will likely have substantially less impacts on NPS resources than a structural focused array of alternatives.

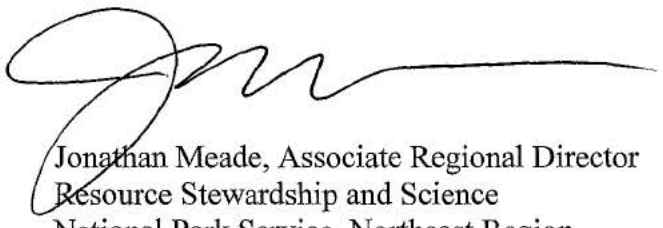
If any alternatives with a SSB in the Central Region Study area are carried further in the Planning process, we recommend that the draft EIS provide additional impact analysis related to the following issues which could have impacts on NPS resources:

1. Closures related to SSB at Great Egg Harbor Inlet. The EIS should clearly examine the frequencies and extent of closures relative to a proposed Great Egg Harbor Inlet SSB. Active management of a SSB is very difficult and one should not overlook the consequences to the affected ecosystem (Elgershuizen 1981).
2. Evaluate the impacts of a SSB construction, closures, and long-term operations/maintenance on riverine and estuarine species in the Great Egg Harbor River / estuary over various seasons and storm events. For example, will fish migration and local foraging patterns be disrupted by an SSB across the inlet?

3. Evaluate the impacts of SSB construction, closures, and long-term operations/maintenance on water quality within the Great Egg Harbor River / estuary over various seasons and storm events. For example, what will be the impacts to the turbidity, salinity, and local storm water systems in the bay as a result of SSB operation?
4. Evaluate the impacts of SSB construction, closures, and long-term operations/maintenance on tidal range within the Great Egg Harbor River / estuary over various seasons and storm events. For example, during closures, will there be a head of tide amplification for surrounding creeks and will this effect aquatic communities?
5. Evaluate the impacts of SSB construction, closures, and long-term operations/maintenance on current velocities and sediment transport within the Great Egg Harbor River / estuary over various seasons and storm events. For example, will changes in currents/energy flux affect Bay stratification and residence time? If flushing dynamics change in the bay, will Harmful Algal Blooms (HABs) increase in frequency and duration, and if so, will this impact local fish populations?
6. Evaluate possible changes to the bay substrate and sediment patterns as a result of SSB construction and operation. For example, if the SSB reduces wave action and water velocities within the bay, will this lead to a new character and distribution of benthic substrates, which in turn could alter the current distribution and biomass of benthic communities? Or will there be a redistribution of benthic communities, salt marshes, and changes to bay mixing and circulation patterns?
7. Evaluate the potential flooding and ponding risk to both natural and human communities when a proposed SSB is closed during storm events.
8. Evaluate the impacts to recreational boating / kayaking with a SSB in place across the inlet.
9. Finally, evaluate if SSBs are sustainable or non-sustainable solutions, as per the Corps interim report constraint section which states "would like to avoid non-sustainable solutions."

Thank you for the early scoping / coordination of this project and we appreciate the opportunity to provide these comments. Please keep the NPS on your coordination list for future updates and documents concerning this study. If you have questions on these comments, please contact Mark Eberle, at mark_eberle@nps.gov or 215-597-1258.

Sincerely,



Jonathan Meade, Associate Regional Director
Resource Stewardship and Science
National Park Service, Northeast Region

Reference

Elgershuizen, J.H.B.W. 1981. Some Environmental Impacts of a Storm Surge Barrier. Marine Pollution Bulletin. 12(8): pp. 265-271.

Smith, J B CIV (US)

From: Keith Hanson - NOAA Federal <keith.hanson@noaa.gov>
Sent: Wednesday, May 1, 2019 3:21 PM
To: Allen, Steven D CIV USARMY CENAP (US); Smith, J B CIV (US)
Cc: Darlene Finch - NOAA Federal; Peter B Johnsen - NOAA Federal; Karen Greene - NOAA Federal
Subject: [Non-DoD Source] NOAA's Comments on NJBB Interim Report

Hi All,

Below are our comments:

We have reviewed the information provided in the Interim Feasibility Study and Environmental Scoping Document (Interim Report) dated March 1, 2019 for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Study. The U.S. Army Corps of Engineers, Philadelphia District, in partnership with the New Jersey Department of Environmental Protection (NJDEP), is conducting a feasibility study within the New Jersey Back Bay area - the network of interconnected tidal water bodies located landward of the New Jersey ocean coastline in Monmouth, Ocean, Atlantic, Burlington, and Cape May counties – that includes approximately 950 square miles and 3,400 linear miles of shoreline. The objective of the feasibility study is to investigate problems and solutions to reduce damages from coastal flooding. The Interim Report presents preliminary findings in a focused array of alternative plans that reduce risks and damages from coastal storms.

The Philadelphia District and NJDEP are requesting our input on the Interim Report. To assist in the development of future documents and to analyze the impacts of the array of alternative plans, we offer you the following comments pursuant to various authorities, including the Coastal Zone Management Act, Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), and Fish and Wildlife Coordination Act. These comments also include information provided by NOAA's National Ocean Service (NOS).

Project History

The proposed project/feasibility study was first presented to us in 2016, following the outcomes and framework developed in the North Atlantic Coastal Comprehensive Study, which provided Tier 1 (regional scale) analysis of CSRM strategies. By letter dated September 26, 2016, we provided comments responding to your letters dated July 22, 2016 and August 1, 2016 regarding the NJBB CSRM feasibility study. We provided additional comments through email dated August 5, 2017, responding to your emails dated July 14, 2017, and August 3, 2017. Our previous comments described the wide variety of NOAA trust resources that are present in, or derive benefits (e.g., through biogeochemical process, trophic linkages, etc.) from, the coastal waters, bays, and inlets of New Jersey. Nearly all native fish and shellfish, and many marine mammals and sea turtle species use the coastal waters, bays, and inlets of New Jersey throughout their life cycle. Nearly all of the study areas in the report are designated essential fish habitat (EFH) by one or more Fisheries Management Council or the NMFS. Our comments below attempt to avoid reiterating past comments by focusing on issues specific to the Interim Report.

Interim Report and Appendices Comments

The Interim Report is a substantial and wide-ranging document that clearly recognizes and describes the increasing impact of climate change and sea level rise on coastal New Jersey. However, the report as a whole fails to clearly recognize, describe, and emphasize a number of critical issues, mainly: (1) many of the negative impacts of climate change and sea level rise are expansive in scale and scope and none of the proposed alternatives (management measures) will reduce these system-wide impacts; (2) large-scale regional efforts spanning multiple inland and coastal counties and watersheds, outside the scope of this Feasibility Study, and including a comprehensive suite of structural and non-structural measures would likely be necessary to ameliorate the effects of small, discrete, short-term events such as flooding in coastal New Jersey; (3) hardened, man-made structures typically have a far greater “perceived” effectiveness, rather than “real” effectiveness; and (4) climate change and sea level rise represent threats to innumerable habitats (e.g., salt marsh, submerged aquatic vegetation) and species, including recreationally, commercially, ecologically, and culturally important fish and shellfish, and a number of proposed structural hardened alternatives may adversely impact these habitats and species and reduce the ecosystems services they provide.

The Interim Report also lacks clarity and confounds the problems and solutions presented in the report by using the word “resilience” or “resiliency” without first providing a clear definition. “Resilience” is one of the most used/misused terms in science and policy, and the Interim Report does little to clarify its intended meaning. In environmental and engineering disciplines, resilience is defined as a systems ability or capacity to maintain structural and functional identity following external disturbance or perturbation. Resilience has two distinct components - resistance and recovery – and no definition of resilience is complete without these two components. Resistance is the capacity of a system to tolerate disturbance without changing to an alternative system while maintaining original function. Recovery is the time/trajectory and ability for a system to return to its original pre-disturbed state. The Interim Report seems to focus a number of proposed alternatives (mainly structural measures) solely on the “resistance” aspect of resilience. However, many of these same alternatives may reduce overall resilience by decreasing the ecosystems ability to recover from disturbances by adversely impacting normative physical, biological and chemical processes.

The Interim Report covers numerous topics, localities, and issues, however, it lacks crucial specificity on a number of issues and regularly defers comprehensive analyses to future efforts. Additionally, many of the analyses in the Interim Report rely on assumptions and/or were conducted with substantial data gaps (recognized in the report), such as the impact of Storm Surge Barriers on various resources, yet decisions on scoring and ranking do not appear to reflect these decisions. We recognize that data limitations are an issue for this effort at this stage, but a major issue with the report is the failure to emphasize the high degree of uncertainty of impacts associated with a number of structural management measures, but nevertheless carrying through a number of these alternatives. Furthermore, the way these alternatives are presented in the “Plan Formulation Process” section of the document fails to convey this uncertainty and appears to give the same weight (regardless of certainty and assumptions) to all alternatives. Additional scoring metrics or variable weighting systems should be used in future report to reflect the use of assumptions and high degree of uncertainty for a number of the structural measures. Furthermore, it is unclear as to why “Managed Coastal Retreat” was the only management measure to receive a score of “0” for acceptability in the Cycle 2 screening. It is also unclear as to why a number of

structural measures received a “1” for acceptability in the Cycle 2 screening. We are concerned with the lack of clarity and transparency in the Cycle 2 screening process and that these decisions may favor short-term structural measures over more sustainable long-term non-structural measures.

One prominent aspect of the report is the apparent absence of economic considerations of current and future habitats and species and the wealth of benefits they provide. Ecosystems provide a range of services fundamentally important to human well-being and existence. These include many of the services currently being analyzed in the Interim Report, such as erosion protection, wave attenuation, flood protection, carbon sequestration, water quality benefits, and many others. A number of peer-reviewed (e.g., Costanza, et al. 2014) sources have valued these ecosystem service benefits on global and regional scales (e.g., Narayan et al. 2017) and the Corps should consider these services and integrate them into all future analyses. This includes analyzing the potential loss of ecosystem services through the implementation of man-made structural measures.

In addition to the lack of ecosystem service analyses, absent in the report is any economic description or analyses on the impacts of the proposed alternatives on commercial and recreational fish and shellfish. U.S. fisheries provide jobs, food, and recreational opportunities for all citizens and are a fundamental part of our cultural heritage. Data from NOAA’s Fisheries Economics of the United States Annual Report from 2015 (released in 2017) highlighted that U.S. fisheries supported 1.6 million jobs (1.2 million commercial; 0.4 million recreational) and contributed $208 billion in sales to the economy ($144 billion commercial; $64 billion recreational). In New Jersey, that represented 32,000 jobs and $7.8 billion in sales. In addition to these numbers, the impact of fisheries is felt through the economy, including influencing things such as vessel purchases and restaurant operations. Because many of the regionally important commercial and recreational fish and shellfish species spend a portion of their lifecycle in the New Jersey Back Bays, complex analyses will be required to determine the impact of the proposed alternatives on local and regional (mid-Atlantic) fisheries and fishing operations (commercial and recreational).

Many of the coastal bays, inlets and nearshore areas are characterized by high fish production, high benthic faunal density, and species diversity; dense aggregations of fish are supported by local primary production. The nearshore areas are also critically important for fisheries as they demarcate the boundary where the Labrador Current flowing south collides with the Gulf Stream Current flowing north, providing nutrient rich waters and generating localized areas of high productivity. Benthic invertebrate communities are diverse and productive despite the high-energy disturbance regimes. Infaunal species provide important trophic linkages coupling benthic-pelagic ecosystems. Many of the organisms utilizing these habitats also provide trophic linkages between inshore and offshore systems. Additionally, many of these areas are important for a number of species that migrate across these areas.

Understanding how the coastal bays, inlets and nearshore areas function to provide habitat is the product of a complex mix of connections between biological processes and physical factors. There is potential for significant short-term and long-term physical, biological, and chemical impacts from landscape-scale modifications to the habitat, resulting in a cascade of adverse impacts. Proposed actions may result in cumulative, synergistic, and unanticipated changes in habitat quantity and quality as well as local and regional fisheries production. Furthermore, it is entirely unknown how barrier islands, Back Bay marshes, and the fish and shellfish that rely on these areas will respond to many of these large-scale structural measures currently proposed.

We continue to recommend robust, thorough, and transparent analyses of all alternatives on coastal habitats and species, including fish, shellfish, and their prey. In addition to the direct impacts on habitat and species typically analyzed in EFH assessments and Biological Assessment, these analyses should also analyze potential impacts to larval movement and settlement, as well as the far-reaching impacts on biogeochemical cycles, nutrient processing, hydrodynamics, and various other biological, chemical, and physical elements and processes. Furthermore, we recommend that a comprehensive suite of measures to avoid and minimize impacts to EFH, federally managed species, and their prey are also analyzed. The Corps should use various experts and their ongoing research, including the Barnegat Bay Partnership, in future analyses and development of

additional documents. We remain committed to providing comments and working with the Corps on this process as it moves forward.

Additional Comments

Consideration of Extratropical Cyclones: the focus of the report was on addressing storm surge from tropical cyclones. Part of this was driven by the scale of the analysis. Nevertheless, recent research indicates that extratropical cyclones, including nor'easters and other non-tropical storms, generate most of the large storm surges in the Northeast. Understanding the climatology of storm surges driven by extratropical cyclones is important for evaluating future risks. It remains unclear what consideration they were given in the modeling conducted for this report.

Future Assessment of Environmental Impacts: "The preliminary focused array of alternative plans identified in this Document will undergo a rigorous evaluation of compliance with environmental protection statutes and Executive Orders at subsequent phases of the feasibility study. A detailed examination of impact avoidance and minimization to better quantify both direct and indirect environmental impacts will also be performed in the future."

It is clear that many of the structural measures included in this focused array of alternative plans will have environmental impacts, although a detailed assessment of the extent of the impacts has been deferred to a later time. We appreciate that "Alternatives that had environmental impacts with a high certainty of hindering implementation failed the EQ criteria and were removed for [assume this should of been 'from] further consideration."

Limited Nonstructural Solutions Considered: "Section 73 of the Water Resources Development Act of 1974 requires consideration of nonstructural alternatives (measures) in all flood risk reduction studies. They can be considered independently or in combination with structural measures (Corps Planning Guidance Notebook PGN). Planning Bulletin (PB 2016-01) signed on 22 December 2015 further clarifies Corps policy on nonstructural measures for the plan formulation phase on investigations and implantation. The Planning Bulletin clarifies that it is the policy of USACE to formulate a full array of alternatives consisting of nonstructural measures and structural measures and that not all

nonstructural measures need to meet USACE criteria for agency participation and cost share implementation."

"At this stage of the analysis, nonstructural economic analysis incorporates only building retrofits (elevations) to residential structures due to availability of existing data such as structure inventory and cost information. Future analysis will include additional building retrofits such as flood proofing and ring levees for commercial, public, and industrial structures, as well as managed coastal retreat including acquisition / relocation. Future recommendations will also be made regarding land use management and early flood warning elements."

Given efforts by the State of New Jersey to pursue non-structural solutions (e.g., buyouts, land use planning, flood insurance, etc.), it is critical to consider the full array of alternative plans in this study. Building retrofits have limited impact (most the structure that has been retrofitted) while other non-structural solutions affected the range and type of properties at risk. A more comprehensive suite of non-structural options should be considered in this initial analysis, even if they are the responsibility of other governmental entities.

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Keith M. Hanson
Marine Habitat Resource Specialist
NOAA Fisheries
Greater Atlantic Region
Habitat Conservation Division

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Annapolis, MD 21401
Office: 410-573-4559

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State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF PERMIT COORDINATION AND ENVIRONMENTAL REVIEW
P.O. Box 420 Mail Code 401-07J Trenton, New Jersey 08625-0420
Phone Number (609) 292-3600
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PHILIP D. MURPHY
Governor

SHEILA Y. OLIVER
Lt. Governor

CATHERINE R. MCCABE
Acting Commissioner

May 06, 2019

Mr. Peter R. Blum
Chief, Planning Division
Philadelphia District, Army Corps of Engineers
Wanamaker Building, 100 Penn Square East
Philadelphia, PA 19107-3390

RE: New Jersey Back Bays Coastal Storm Risk Management
NEPA Interim Report
Cape May County to Monmouth County

Dear Mr. Blum:

The New Jersey Department of Environmental Protection's (Department) Office of Permit Coordination and Environmental Review (PCER) distributed, for review and comment, the NEPA Interim Report scoping document for the proposed New Jersey Back Bays Coastal Storm Risk Management Study for the area between Cape May Point in Cape May County to Long Branch in Monmouth County. The Interim Report presents an array of possible alternatives, including floodwalls and levees, to manage risk and reduce damage from coastal storms as well as the economic, social and environmental analyses that have been conducted to date to support the possible alternatives.

Based on the information provided for review, the Department offers the following comments for your consideration:

Division of Fish and Wildlife, Marine Fisheries

The Marine Fisheries Administration (MFA) performed a cursory review of the Interim Report, focusing on aspects of the report that affect or are most likely to affect the resources and habitats under the stewardship of the Administration. The Administration did not perform a review of administrative, engineering, or economic components of the report, or specific viable options at any particular location, owing to the broad-nature of Interim Report and its conclusions.

Completion of hydrodynamic modeling will be critical for environmental impact analysis and the Administration supports this as a tool to help evaluate the environmental impacts of all viable flood-risk reduction strategies identified for a given area or water body. Environmental impact analysis will need to be location and project specific. The loss of submerged aquatic vegetation (SAV), shellfish, and finfish habitats will need specific, careful evaluation. The Administration recommends that the USACE and NJDEP Office of Coastal Engineering engage the MFA early and often to ensure adequate evaluation of impacts to marine resources.

The following are comments related to specific sections of the Interim Report.

Fisheries Resources – 6.12

The MFA agrees with species listed in this section as species of concern and would expand that list with the following species to be considered in future EIS analysis. The MFA recommends including bait fish species, such mummichogs and killifish, as this is an important commercial fishery in NJ and are an important forage source for several economically important predator species. The MFA also recommends including blue crab, as the coastal waters of NJ are productive for this important commercial species. Shallow, vegetated estuaries and inshore areas serve as juvenile nurseries for tautog and adults can be found near the mouths of estuaries and inlets. Additionally, the Delaware Bay supports the largest spawning population of horseshoe crabs in the world. Adults and juveniles utilize NJ estuaries and nearshore environments and migrations occur between the continental shelf and inshore during spawning. Consultation with the MFA would be the most efficient and constructive way to ensure all species of concern are addressed in EIS analyses. For the most accurate and relevant information on the relative importance of commercial and recreational species in NJ, please contact the NJ MFA directly, as trends in relative importance change over time and may not be captured in peer-reviewed literature.

Natural and Nature-Based Features (NNBF) – 9.2.4

The MFA requests that the Corps clarify the definition of a living shoreline provided in the document and confirm that it is consistent with the NJDEP goals and definitions.

Appendix F – Environmental and Cultural Appendix

Submerged Aquatic Vegetation and Macroalgae – p. 27; 78

Please note that there are variety of resources documenting the historical and present distribution of SAV throughout the study area (not just Barnegat Bay) and that all resources should be referenced during completion of the EIS. The MFA can be contacted directly for all sources available to the MFA, some of which are unpublished but nevertheless critical to a comprehensive SAV evaluation. Other sources of information may be found by contacting universities (ex. Rutgers, Stockton, etc.) and non-profit organizations, as these groups often have their own monitoring programs. Additionally, it is important to recognize that SAV beds naturally expand and contract within a suitable habitat, such that quantification of loss should include all historical habitat, not just plants existing at the time of construction.

Fishery Resources – p. 36; 97

The MFA conducts several estuarine finfish surveys within the study area that will be useful to development of an EIS. Please contact the MFA directly for this information, as some data is unpublished. The MFA can also help guide appropriate selection of species for economic impact analysis that are most likely to be impacted from changes to environmental conditions (hydrodynamics, habitat, etc.) and for which there may be cascading effects on commercial or recreational fisheries. Change in tidal flow and water levels will alter habitat and behavior in all of New Jersey's tidal waters. The Southern New England/Mid-Atlantic winter flounder stock is near historic lows and the proposed ideas are in regions which have been determined to be Essential Fish Habitat for all life history stages of winter flounder. Winter flounder depend on shallow waters for their offspring to survive. Research should be conducted to determine the impacts to the winter flounder stock and habitat during and following construction. Physical structures that prevent water flow also prevent migratory fish from easily moving into back bay waters. Research on fish passages through propose structures will be helpful in determining the impact on anadromous species. New Jersey fisheries resources will be affected and differently at the various stages during and following the construction. Studies should be done on best available options to protect New Jersey's fisheries resources.

Shellfish – p. 40; 97-99

Please note that the Bureau of Shellfisheries (within the Marine Fisheries Administration) attempts to conduct shellfish population assessments annually throughout the study area on a rotating basis. Please contact the Bureau directly to ensure that the future EIS is using all existing data at the time of review, as additional estuaries included in the study area will have updated data by that time. Further, the different life histories of shellfish included in the surveys mean that populations are dynamic, changing over time in density and location, so it is important to document potential impacts based upon all available historical and current information. It is also critical to recognize that the systems included in the study, and throughout NJ, are not all alike and therefore cannot necessarily be compared as was suggested. For example, although outside the study area, the population of hard clams in Raritan Bay continues to show growth (1983, 2000, 2014) as does the population in the Navesink River (1983, 2015). Even Little Egg Harbor experienced a population increase (relatively) between 2001 and 2011, though it did not return to baseline 1987 levels.

Additionally, it is critical that an EIS include potential impacts to shellfish aquaculture, which is abundant in the study area. Hydrodynamic changes affecting water quality, food quality (microalgae), and benthic composition are all potential impacts that should be evaluated, along with any cascading economic impacts to that commercial fishery. Impact analysis should also consider potential compounded effects of long-term closures of flood gates on retention of storm surge and stormwater that may affect harvestability of shellfish per the NJAC 7:12. Locations of aquaculture leases along the Atlantic Coast can be found in the Atlantic Coast Shellfish Aquaculture Leasing Policy document available online. GIS layers may also be requested.

Shellfish Growing Waters – p. 40

The MFA anticipates changes to the Shellfish Growing Water Classifications within the study area that may adversely affect shellfish harvest or aquaculture leases, or the viability of oyster-reef based natural solutions in certain areas. It is important to review those classifications frequently.

If you have any additional questions, please contact Kira Dacanay at (609) 748-2021.

Division of Fish and Wildlife – Environmental Review

In general, projects such as this can reduce suitable habitat for beach nesting birds as they continue to prevent natural coastal processes that benefit this species group (overwash, etc.) from occurring. Noise and disturbance associated with demo/reconstruction of a seawall, installation of steel sheet pile should be avoided between March and August of any given year for vegetated dune and beach areas of documented endangered species nesting areas. If you have any questions or concerns regarding the New Jersey Division of Fish and Wildlife, please contact Mr. Kelly Davis at (908) 236-2118 or Kelly.Davis@dep.nj.gov.

Historic Preservation Office

Based on the information provided, the proposed project is only in its preliminary stages. Under the current study, an array of both structural and non-structural alternative plans have been considered. However, due to the preliminary nature of this study, only general impacts have been identified. Direct impacts will be quantified at a later date, if and when the proposed project moves forward.

According to the documentation submitted, cultural resource impacts may include impacts to historic districts and properties that are eligible in the National Register of Historic Properties as well as to sunken historical vessel sites. According to the Corps, further study is needed, and these potential impacts will likely be addressed through a Programmatic Agreement with the Historic Preservation Office. Due to the Corps' involvement, the proposed undertaking will require consultation under Section 106 of the National Historic Preservation Act for the identification, evaluation and treatment of historic properties within the project's area of potential effects. As a result, the HPO looks forward to further consultation with the Corps, pursuant to their obligations under Section 106 of the National Historic Preservation Act of 1966, as amended, and it's implementing regulations, 36 CFR §800.

In addition, if future project activities require any other federal funding, licensing, or permitting, Freshwater Wetlands permits, Waterfront Development permits, and/or Upland Development permits issued by the State of New Jersey's Division of Land Use Regulation, Highland Preservation Area Approval Permits, as well as environmental assessments under Executive Order 215, further consultation with the HPO will also be necessary.

If you have any questions, please contact Jesse West-Rosenthal at 609-984-6019. If additional consultation with the HPO is needed for this undertaking, please reference the HPO project

number 16-2157 in any future calls, emails, submissions or written correspondence to help expedite your review and response.

Green Acres Program

The NJ Back Bays Coastal Storm Risk Management Study includes possible impacts to DEP held properties as well as both municipal and county Green Acres encumbered parkland along the coast throughout Monmouth, Ocean, Atlantic and Cape May counties. Please continue to copy Green Acres on any correspondence regarding this project. We anticipate having more detailed comments once the Draft EIS is made available for review or more detailed plans are provided which indicate the specific impacts to encumbered lands.

If you have any additional questions, please contact Jessica Patterson at 609-984-0558.

Natural and Historic Resources-DEP Managed Lands

DEP managed lands are outlined in this proposed project and we would require ACOE to submit information through our Use of DEP Managed Lands at the Green Acres website at https://www.nj.gov/dep/greenacres/pdf/Request_to_Use_NJDEP_Property_2019.pdf. The Office of Natural Lands Management (ONLM) conducted a standard Natural Heritage Database (NHD) review of the entire project area which identified that several state-owned lands would potentially be impacted. As such, NHR Land Management Review will apply and we always recommend avoiding and/or minimizing impacts of our natural and cultural resources. Any future required environmental review shall include a formal NHD report acquired through ONLM. As this proposed project covers miles of shoreline and 5 counties, please consult with Robert Cartica and Mark Wong of ONLM with any questions pertaining to the requirements for submittal of NHD requests.

If you have any additional questions, please contact Robin Madden at (609) 292-5990.

Office of Coastal Resiliency

Comments on the Study:

1. Significant additional public and local government input is needed and should be led by the state of N.J. prior to the next phase of this effort moving forward
2. Nature based solutions were not prioritized, no evaluation was done on where they were feasible and appropriate. Anticipated maintenance costs of nature based solutions was identified as zero.
3. No analysis was done to identify needed upgrades to stormwater and other infrastructure systems to determine the cost and feasibility of making these improvements
4. Moving forward to scope expensive large scale structural inlet barriers and concrete walls undermines the potential for NJ to come up with a more thoughtful environmentally and culturally friendly Coastal Resilience Plan.
5. Significant environmental impacts would be expected from walls and inlet structures.
6. Where would NJ get the funds to cost share this and shouldn't alternatives be evaluated for that much money?

7. The Department does not support growth centers on barrier islands. Part of an alternative analysis should include purpose and need for any hard and expensive infrastructure to protect barrier islands

Comments on the Report:

1. This report represents the information presented by the USACE to-date. It is not possible to directly comment on the extent or severity of the environmental impacts of these proposed strategies without the additional analysis that will come from future steps in the study. It is expected that many of the proposed locations and structural strategies may have significant, un-mitigatable, environmental consequences that will limit support for those projects going forward.
2. Acquisition and relocation should be considered separate strategies in the non-structural appendices. The advantages and disadvantages are not parallel across both mitigation approaches, nor is the residual risk.
3. On page 114 of the main report, in Table 9-1, both building retrofit and managed coastal retreat would reduce flooding associated with inadequate municipal stormwater infrastructure, at least in the same way that zoning changes would.
4. Although it is helpful to have the inclusion of a variety of mitigation options, not limited to surge barriers, perimeter features and elevation projects, such as flood-proofing, zoning, and stormwater measures in the report. Even though many of those are outside the USACE purview, and do not address the specific flooding concern with which the USACE is charged. However the representation and organization of them in this report without distinction between the strategies that have been used in the study to-date, the strategies that will be considered going forward, and the strategies that should be inconsideration by other government and private organizations make it seems as though zoning, acquisition, and/or ecological measures have been included in the modeling to date, when they have not. It confuses the issue, makes it more difficult for the public to understand the role of these mitigation measures and their importance in overall flood risk reduction, beyond the surge from the 1% AEP.
5. Did the reduction in Average Annual Benefits decrease 19% from Cycle 1 to Cycle 2 include the reduction in benefits associated with a loss of value from 2 feet of sea level rise? It appears that the study includes sea level rise as part of the calculation of the water elevation from storms, but not in recognition that without other mitigation actions, not evaluated in the report, many of the residences and/or local roadways included in the study area will be permanently inundated from the 2 feet of sea level rise being used in the study. If these properties are not mitigated, it will have a significant impact the total benefits considered from any of the coastal storm reduction designs. If these properties are currently included in the benefit calculation, the cost of keeping them above MHW should also be included in the total cost, or they should be removed from the benefit calculation.

If you have any additional comment, please contact Jessica Jahre at (609) 633-2198.

Division of Land Use Regulation – Coastal Regulation

This is a preliminary pre-review and the Division of Land Use may be able to provide additional guidance as the project design progresses and additional detail and GIS .shp files are provided. Based on limited information available at this time, the USACE may need the following:

1. Federal Consistency Determination (because it is a federal project)
2. If project is in unmapped coastal wetlands and/or Freshwater wetlands, then a Freshwater Wetlands permit will also be required
3. Project description should address:
    - NJSA 13:19 Section 10
    - CAFRA 7:7-1 et seq. rules
    - Confirm ownership/provide owner authorization for all areas of disturbance.
4. Determine the presence of threatened and endangered species, beaches and dunes – The Department would prefer a bulkhead or rip rap, and all activities be located close to the road (not on the beaches or dunes) and within the same footprint as the existing structures.
5. Project plan needs to show
    - All existing structures
    - Public access
    - Quantify/identify the location of any dune/vegetation disturbance
    - Identify any grading adjacent to the proposed activities.
    - Identify/quantify any habitat enhancement activities.
    - Identify location of mapped Coastal Wetlands line
    - Identify any unmapped Coastal Wetlands and/or Freshwater Wetlands
    - Quantify any impacts to wetlands
    - Include topographic information – identify the location of existing dunes/proposed impacts to dunes.
    - Identify the location of the staging/access areas.
    - Limits of existing Tidelands authorization Comply with Coastal Engineering requirements for bulkheads and/or rip rap under NJAC 7:7-15.11.
6. Adhere to any City Beach Management Plan in place. All activities would need to adhere to the provisions on the BMP plan (where application of course) and coordinate with ENSP and USFWS regarding Piping Plover concerns.
7. Timing restrictions for threatened and endangered species will be required.

If you have any questions regarding Coastal Regulation please contact Kara Turner at (609) 633-7205 and Keith Stampfel at (609) 633-2289.

Division of Science and Research

1. The storm surge barriers, interior bay closures, levees and floodwalls will have major impacts on coastal ecosystems. These impacts are described in the executive summary. I would like to see the nonstructural, NNBF and building acquisition and relocation options prioritized even if the BCRs are less favorable.

2. Given the uncertainty of the Antarctic ice sheet melting, USACE's sea level rise scenarios may be on the low end. Under a high emissions scenario, Dr. Kopp at Rutgers has suggested that the "likely range" of sea level rise may be between 4.4 and 8.3 ft by 2100.

3. The consideration of modifications to structural measure to increase their habitat value is appreciated.

If you have any additional questions, please contact Metthea Yepsen at (609) 984-7739.

Air Compliance and Enforcement

Based on the information provided, the Division of Air Compliance and Enforcement offer the following comments:

- Construction Equipment-stationary construction equipment, may require air pollution permits. The applicant should review the requirements of NJAC 7:27-8.2(c) 1-21 for stationary permitting requirements.

- Fugitive Dust and Odors- dust emissions either windblown or generated from construction equipment should be controlled to prevent offsite impacts. The applicant also should be aware of potential offsite impacts of odors pursuant to NJAC 7:27-5.

- Idling Vehicles- any vehicles involved on the project must adhere to the idling standards (less than 3 minutes) in NJAC 7:27-14 and 15.

- Pump Stations- any pump station constructed as part of this project that has a fuel fired pump or emergency generator that has a heat input rate greater than 1 million BTU/hr will require a permit pursuant to 7:27-8.2(c)1. Electric Pumps would not require a permit.

If you have any questions or concerns, please contact Chris Odgers at (609)-292-3095.

Air Permitting

The applicant shall identify any stationary source air permit applicability. Please review NJAC 7:27-8.2 to determine air permit applicability for all operations.

If you have any additional questions, please contact Danny Wong at (609) 984-2608.

Air Planning

The Bureau of Evaluation and Planning (BEP) has reviewed the Army Corps New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study and Environmental Scoping Document (Study) and has the following comments:

1) 6.19 Air Quality
The Study states, "Monmouth County is part of the Northern New Jersey-New York-Connecticut Area that have been reclassified from marginal to moderate non-attainment in 2016 (NJDEP).

Comment #1
On 11/14/18, the USEPA proposed to reclassify the New York-Northern New Jersey-Long Island (NY-NJ-CT) nonattainment area to "serious" nonattainment for the 2008 ozone National Ambient Air Quality Standard.

2) 11.2 Clean Air Act, As Amended, 42 U.S.C. 7401, et seq.
The Study states, "Because all of the counties within the NJBB study area are in non-attainment for ozone, an accounting of emissions for any action contemplated will be required in order to determine if any threshold levels are exceeded that would trigger General Conformity Review."

Comment #1
A General Conformity Applicability Analysis and possibly a Conformity Determination will be required for this project in accordance with the USEPA's Federal General Conformity regulation (40 CFR Part 93, Subpart B, Determining Conformity of General Federal Actions to State or Federal Implementation Plans). When preparing the General Conformity Applicability Analysis and Conformity Determination (if necessary), USEPA guidance (General Conformity Guidance: Questions and Answers, July 13, 1994, https://www.epa.gov/sites/production/files/2016-03/documents/gcgqa_940713.pdf) indicates that a project cannot be broken into segments in order to be below the de minimis levels in the Federal General Conformity regulation. All reasonably foreseeable emissions must be included for the project as a whole in determining applicability. In addition, Section 93.150 (b) (Prohibition) of the Federal General Conformity regulation states that the project must conform to the State Implementation Plan prior to construction.

If you have any additional questions, please contact Angela Skowronek at (609) 984-0337.

Bureau of Mobile Sources

The Division of Air Quality Bureau of Mobile Sources offers the following comments. Levees, floodwalls, residential building retrofits, storm surge barriers, interior bay closures, and Natural and Nature Based Feature (NNBF) measures must adhere to New Jersey's "No Idling" law during their construction and use. The vehicles, road and non-road, used for the development and/or operation of these Coastal Storm Risk Management flood measures must be monitored so that no illegal and unnecessary idling (in accordance with N.J.A.C. 7:27-15 & 15) of gasoline or diesel-fueled vehicles may occur.

Diesel Exhaust Impact Measures:

- All on-road vehicles and non-road construction equipment operating at, or visiting, the construction site shall comply with the three-minute idling limit, pursuant to N.J.A.C.

7:27-14 and N.J.A.C. 7:27-15. Consider purchasing "No Idling" signs to post at the site to remind contractors to comply with the idling limits. Signs are available for purchase from the Bureau of Mobile Sources at 609/292-7953 or http://www.stopthesoot.org/sts-no-idle-sign.htm.

- All non-road diesel construction equipment greater than 100 horsepower used on the project for more than ten days should have engines that meet the USEPA Tier 4 non-road emission standards, or the best available emission control technology that is technologically feasible for that application and is verified by the USEPA or the CARB as a diesel emission control strategy for reducing particulate matter and/or NOx emissions.

- All on-road diesel vehicles used to haul materials or traveling to and from the construction site should use designated truck routes that are designed to minimize impacts on residential areas and sensitive receptors such as hospitals, schools, daycare facilities, senior citizen housing, and convalescent facilities.

If you have any additional questions, please contact Kris Dahl at (609) 292-1122.

Water Allocation

For some portions of the proposed project, authorizations for construction related dewatering may be required. The Bureau of Water Allocation and Well Permitting regulates the diversion of water from any source or combination of sources that exceeds 70 gallons per minute. If the project will stretch over numerous municipalities the applicant should expect to obtain authorizations for each municipality where work is expected. For your reference, we enclose the Construction Related Dewatering Guidelines. It is recommended that the applicant contact the Bureau to discuss the permitting process.

If you have any additional questions, please contact Ken Komar at (609) 984-6831.

NJDPES Discharge to Surface Water

The Bureau of Surface Water Permitting offers the following comment:

Based on a review of the document for the proposed project, it appears that dewatering during construction may be necessary at some point during the project. If the need arises for a discharge to surface water (from construction, etc.) a NJPDES Discharge to Surface Water permit will be necessary. Provided that the discharge is not contaminated, the appropriate discharge permit will be the B7- Short term De minimis permit (see http://www.state.nj.us/dep/dwq/pdf/b7-rfa-checklist.pdf). This is determined by running a pollutant scan as described in the application checklist where the data can be collected up to a year in advance of the discharge. If, however, the discharge is contaminated (the analytical results demonstrate levels greater than the Appendix A standards as specified in the De minimis permit see http://www.state.nj.us/dep/dwq/pdf/b7-deminimis-final-permit-5-20-15.pdf), the appropriate NJPDES Discharge to Surface Water permit will be the BGR – General Remediation Cleanup permit (see http://www.state.nj.us/dep/dwq/pdf/sw-gp-chklst.pdf) . The BGR permit can generally be processed in less than 30 days although a treatment works approval may be needed

for any treatment. If you have any questions or concerns, please contact Dwayne Kobesky at (609) 777-0285.

Stormwater Management

Construction projects that disturb 1 acre or more of land, or less than 1 acre but are part of a larger common plan of development that is greater than 1 acre, are required to obtain coverage under the Stormwater construction general permit (5G3). Applicants must first obtain certification of their soil erosion and sediment control plan (251 plan) form their local soil conservation district office. Upon certification, the district office will provide the applicant with two codes process (SCD certification code and 251 identification code) for use in the DEP online portal system application. Applicants must then become a registered user for the DEP online system and complete the application for the Stormwater Construction General Authorization. Upon completion of the application the applicant will receive a temporary authorization which can be used to start construction immediately, if necessary. Within 3-5 business days the permittee contact identified in the application will receive an email including the application summary and final authorization. If you have any additional questions, please contact Eleanor Krukowski at (609) 633-7021.

Thank you for giving the New Jersey Department of Environmental Protection the opportunity to comment on the NEPA Interim. Please contact Bill Dixon at (732) 255-0767 if you have any additional questions or concerns.

Sincerely,

Ruth W. Foster, PhD., P.G., Director
Permit Coordination and Environmental Review

Enclosure

c. Bill Dixon, Robert VonBriel, NJDEP, Coastal Engineering
Jessica Jahre, Coastal Resiliency
Kelly Davis, New Jersey Division of Fish and Wildlife
Jesse West-Rosenthal, NJDEP Historic Preservation Office
Keith Stampfel, NJDEP Division of Land Use Regulation
Kara Turner, NJDEP Division of Land Use Regulation
Angela Skowronek, NJDEP Air Planning
Kris Dahl, NJDEP Bureau of Mobile Sources
Eleanor Krukowski, NJDEP Stormwater
Dwayne Kobesky, NJDEP DSW
Jennifer Myers, NJDEP Water Allocation
Jessica Patterson, NJDEP, Green Acres Program
Robin Madden, Bob Cartica, NJDEP, NHRG
Kira Dacanay, NJDEP DFW. Marine Fisheries
Mettea Yepsen, NJDEP Office of Science

Revised 8/2015

Bureau of Water Allocation & Well Permitting
Construction Related Dewatering Guidance

Various permits and approvals may be required for construction related dewatering activities from the Well Permitting and Water Allocation Permitting sections in the Bureau of Water Allocation and Well Permitting. Permits required are site and project specific.

Well Permitting

An approved Well Permit is required for dewatering wells or dewatering well points which are 25 feet or more in total depth or are 6 inches or more in borehole diameter. All drilling activity shall be performed and completed by a New Jersey licensed well driller of the proper class. N.J.A.C. 7:9D – 1.11(g) 5.

Water Allocation

If construction related water use (including trench dewatering) is required at rates exceeding 70 gallons per minute or greater pumping capacity from a single source or combination of sources in the same municipality then that activity would be regulated. Potential regulatory mechanisms include:

Diversion of more than 100,000 gallons of water per day (≥ 70 gpm) for less than 31 days in a consecutive 365 day period- Short Term Water Use Permit-by-Rule (BWA-003) /Short Term Water Use Report (BWA-004), N.J.A.C. 7:19 – 2.17(a).

Diversion of more than 100,000 gallons of water per day (≥ 70 gpm) from a confined area/space (coffer dam) – Dewatering Permit-by-Rule (BWA-005), N.J.A.C. 7:19 – 2.17(b).

Diversion of more than 100,000 gallons of water per day (≥ 70 gpm) for more than 30 days in a consecutive 365 day period – Temporary Dewatering Permit (BWA-002), N.J.A.C. 7:19 – 2.3.

Diversion of less than or equal to 100,000 gallons of water per day at pumping rates of more than 70 gpm or larger – Water Use Registration (DWR-188), N.J.A.C. 7:19 – 2.18.

In addition –

Horizontal directional drilling – as this is part of the pipeline construction it would be included within the scope of the applicable regulatory mechanism for the project.

Pipeline pressure testing – water used for pressure testing pipeline segments has historically been done under a Short Term Water Use Permit-by-Rule (BWA-003)/Short Term Water Use Report (BWA-004), N.J.A.C. 7:19 –2.17(a).

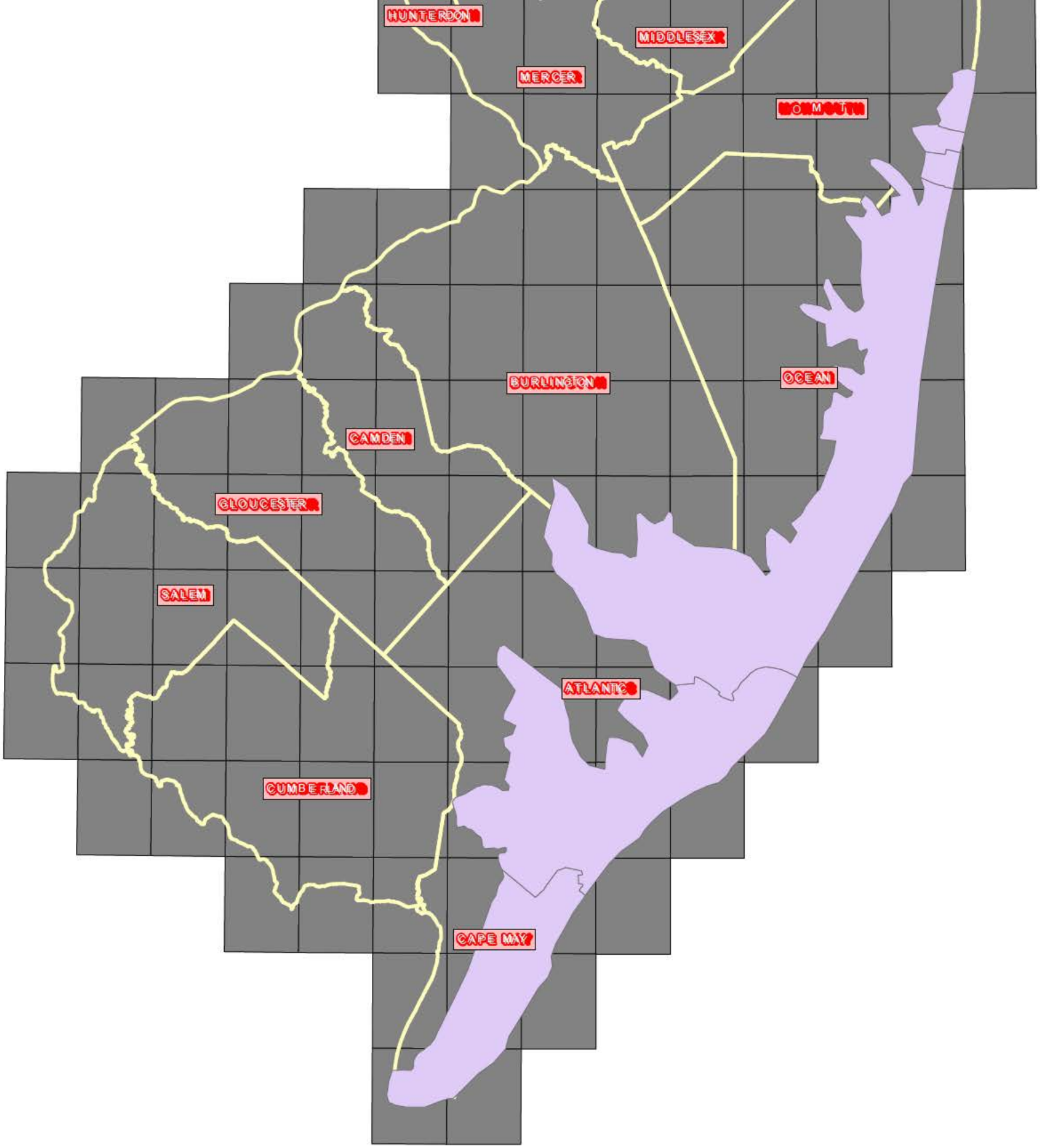
Applicability – If the project is located in close proximity to a salt water body (ocean, bay, coastal river, salt water marsh) the native ground water and water in the adjacent water body should be checked for: chlorides and salinity. Water Allocation Permitting does not apply to diversions of salt water except where the Department determines that the diversion and the resultant usage may affect utilization of fresh water in accordance with N.J.A.C. 7:19 –1.4(a)2. Salt water is defined as water containing a chloride concentration in excess of 10,000 mg/L. N.J.A.C. 7:19-1.3

For additional information see – www.nj.gov/dep/watersupply

or contact – Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q
P.O. Box 420
Trenton, New Jersey 08625-0420
(609)984-6831

Table 1: On Site Data Request Search Results (6 Possible Reports)

Report Name	Included	Number of Pages
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	Yes	152 page(s) included
2. Natural Heritage Priority Sites On Site	Yes	See emailed attachments
3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	14 page(s) included
4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3	Yes	19 page(s) included
5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	3 page(s) included


HUNTERDON
MIDDLESEX
MERCER
MONMOUTH
BURLINGTON
OCEAN
CAMDEN
GLOUCESTER
SALEM
ATLANTIC
CUMBERLAND
CAPE MAY

JOSEPH H. MANCINI
MAYOR
DIRECTOR OF PUBLIC AFFAIRS & SAFETY

JOSEPH P. LATTANZI
COMMISSIONER
DIRECTOR OF REVENUE & FINANCE

RALPH H. BAYARD
COMMISSIONER
DIRECTOR OF PUBLIC WORKS, WATER/SEWER

TOWNSHIP OF LONG BEACH N.J. OCEAN COUNTY

LYNDA J. WELLS
MUNICIPAL CLERK

6805 Long Beach Boulevard
Brant Beach, New Jersey 08008

website:
www.longbeachtownship.com

Phone (609) 361-1000
Fax (609) 494-5421

March 19, 2019

Mr. Peter R. Blum
U.S. Army Corps of Engineers Planning Division
Wanamaker Building
100 Penn Square E.
Philadelphia PA 19107

Re: Comments regarding the USACE New Jersey Back Bays Coastal Storm Risk Management Study

Dear Mr. Blum:

The Township of Long Beach has reviewed the *New Jersey Back Bays Coastal Storm Risk Management Study Interim Report and Environmental Scoping Document (NJBB Study)*. As you know, our barrier island community has experienced storm-related coastal flooding and the Township (Borough) is very concerned about future storm risks and the strategies for addressing them. I commend the Corps and State for identifying potential long-term solutions, though I feel that the costs identified in Table 10-1 and environmental permitting of the proposed solutions will be challenging and will require significant Federal financial support. I'm concerned about the impacts to the municipalities who may have to share in the financial burden for implementing the proposed projects.

The three long-term strategies presented in Chapter 10 for the *North Region* of the NJBB Study Main Report include (3A) nonstructural alternatives, (3D) nonstructural and perimeter floodwalls and levees, (3E2) combination of nonstructural solutions and storm-surge barrier and (3E3) combination of nonstructural solutions, storm-surge barrier, and floodwalls/levees.

Since the NJBB Study is not a decision document and does not provide site specific plans for where these solutions will be implemented on Long Beach Island, I offer the following comments for consideration prior to the project moving into the Draft Feasibility stage.

(3A) Nonstructural Alternatives – The NJBB Study identifies the nonstructural alternatives as natural and nature-based features, managed coastal retreat, building retrofit, land use management (zoning changes) and early flood warnings, however details for how this will be implemented for the 16,421 properties in the North Region are not provided.

- The Township recommends that the Corps investigate expanding current wetlands and sedge islands located in the Barnegat Bay, Manahawkin Bay, and Little Egg Harbor to protect the backbarrier properties of Long Beach Island from storm waves. This could involve natural and nature-based techniques that were recently used at Mordecai Island including the utilization of material dredged from the New Jersey Intracoastal Waterway or materials from local marinas or lagoons. The Corps should also consider open water disposal to create more buffer islands.
- With respect to managed retreat, building retrofit, and land use management, the Township recommends that the Corps work directly with the municipality to identify where these practices could work. Federal funding for these activities should be made available to local governments to implement these practices.

(3D) Nonstructural and Perimeter Floodwalls, Miter Gates, Road Closures and Levees – The Township recently passed an ordinance requiring that replacement bayside bulkheads be raised to 6.0 ft NAVD88 (from municipal code §64-13). And many coastal communities have extended these elevations to 9 ft NAVD88. Raising the bulkheads to meet perimeter floodwall elevations via changes in ordinances could be a burden to the municipalities. In addition, local homeowners may complain if their view is disrupted by a flood wall or levee.

- The Township recommends that the Corps work with the Long Beach Island municipalities to field collect current bulkhead elevations and identify the specific areas where nonstructural, floodwalls/levees, and natural and nature-based solutions have the greatest potential for reducing flood risks.

(3E2) Nonstructural and Storm Surge Barriers – The NJBB Study recommends a storm surge barrier at only Barnegat Inlet. Limiting the storm surge barrier to only one of the two inlets adjacent to Long Beach Island, puts the southern Long Beach Island backbarrier properties at risk for flooding from waters through Little Egg Inlet.

- While an additional storm surge barrier at Little Egg Inlet poses an enormous financial expense and environmental permitting challenges, the Township requests that future plans consider such a barrier to better protect the backbarrier properties in the Township from tidal flood events. This could also alleviate the need for the perimeter floodwall/levee that is proposed in the (3E3) solution that follows.

(3E3) Nonstructural, Storm Surge Barriers, and Floodwalls/Levees – This alternative includes the addition of 75 miles of floodwalls, miter gates, road closures in the North Region and 3 miles of levees on Long Beach Island.

- See recommendation from (3E2).
- In the development of the storm surge barriers and floodwalls/levees, the Township requests that the Corps consider how the addition of fresh water runoff from the mainland and how the local municipalities on the barrier islands will manage drainage during storm events. Future plans should include the addition of pumping facilities and infrastructure and address who will pay.

A *No Action* alternative is not acceptable to the Township. We value the Corps' involvement in our ocean-side flood risk reduction project (beach fill). However, without specific details on how the proposed alternatives will be planned for Long Beach Island and how this will affect the cost-share by the municipalities it is difficult to support the overall project.

Thank you for the opportunity to comment on the NJBB Study. Please contact me if you have any questions regarding the Township's (Borough's) requests for modifications to the plan as it enters the Draft Feasibility stage.

Sincerely,

Mayor Joseph Mancini
Township of Long Beach

cc: Mayor Jonathan Oldham, Borough of Harvey Cedars
J. Bailey Smith, USACE-NAP Planning

LONG BEACH ISLAND JOINT COUNCIL Of TAXPAYER ASSOCIATIONS

209W 18th Street
North Beach Haven, NJ 08008

March 30, 2019

J. Baily Smith Project Manager
U.S. Army Corps of Engineers Planning Division
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107

Dear Project Manager Smith:

Engagement with the Public should be a critical component of the CORP's Regional NJBB Study's planning for the future. Unfortunately, the March 1, 2019 NJBB Study's report recommends projects to be implemented with no plans for public engagement.

NJBB Study's report (Section 12.2 Public Involvement) describes public meetings which were insufficient to address Long Beach Island (LBI) public's concerns or needs.

The Joint Council of Taxpayer Associations (JCTA) therefore requests the CORP immediately develop a comprehensive public engagement program that takes into account the following issues and recommendations.

Public Engagement Issues

- Public engagement must take into account the two distinct coastal community populations: Homeowners and vacationers
    - Homeowner population (approximately 10,000 on LBI) the vast majority of whose homes are vacated for the winter.
    - Vacationers (100,00-150,000 on LBI per day in season)
- Public has little understanding of the flooding issues and proposed projects.
- Online information is poorly organized, with relevant information being overly technical, and difficult to find.
- The NJBB Study's preliminary report obscures regional information and is also overly technical and difficult for a layperson to interpret.
- Government officials and realtors fear increased public knowledge will result in a substantial decease in property values.
- No organization is responsible for educating the public on issues, projects or even how to protect their property from storm damage.
- No master plan addressing back bay islands erosion; lack of coordination between federal, state, county and local governments to address the erosion of back bay islands which protect LBI from coastal storm damage.

Recommendations

1. Public Education

   - Develop comprehensive public education plan
   - Expand the NJ Department of Education's Student Learning Standards for Climate Control to public programs.
   - Create and fund an Office of Public Engagement at a local college or university to develop and implement regional public education programs.
     - As a model, please refer to Florida Atlantic University which has, for over 50 years, an Office of Public Engagement that through community partnerships, public private partnerships, and multi-stakeholder coalitions, united collective resources to embrace the most complex challenges in the community and create impact, hope and opportunity.

2. Designate Long Beach Island as a Regional Public Engagement Demonstration Site

   - Coordinate with the proposed college/university Office of Public Engagement for a regional public education program that utilizes the LBI Department of Environment's Resilience Grant, and the JCTA's e-mail information system between the council, local taxpayer associations and their membership.
   - Create a singular and streamlined website to act as a depository for information about flooding issues and proposed solutions.
   - The Office of Public Engagement should conduct meetings and workshops year round to account for seasonal population fluctuation on Long Beach Island.
   - Develop a regional (LBI) public information system that includes appropriate data from academia, CORP, NJDEP, Ocean County and LBI Municipalities.
   - Develop/coordinate public educational programs to assist homeowners in how to implement projects that will decrease flood damage (i.e. bulkhead improvements).
   - Replicate educational programs developed on Long Beach Island to other NJBB Study regions.

I trust you will take these recommendations under advisement.

Peter E Trainor MPH
Chair Environmental Committee

Cc: Governor Philip Murphy
Mayor Joseph Mancini
Professor Steward Farrell
Bill Hudson. President JCTA

James M. Rutala Associates, LLC

March 29, 2019

J. B. Smith
U.S. Army Corps of Engineers
Planning Division
100 Penn Square E.
Philadelphia PA 19107

Re: New Jersey Back Bays Coastal Storm Risk Management Study
Somers Point, New Jersey

Dear Mr. Smith:

We are providing comments on behalf of the City of Somers Point, Atlantic County, regarding the New Jersey Back Bays Coastal Storm Risk Management Study:

1. The City endorses the installation of floodgates at inlets to reduce Back Bay flooding.

2. The study should also focus on more interim flood mitigation measures such as the installation of pump stations for Stormwater Management Systems and the replacement of existing bulkheads.

3. The study should investigate reducing flooding along the Patcong Creek in Somers Point by elevating the Garden State Parkway in low areas and providing tidal gates where creeks cross the Parkway.

If you should have any questions or require additional information, please feel free to call.

Regards,
Rutala Associates

James M. Rutala, PP, ACIP

cc: Wes Swain, City Administrator
Greg Schneider, City Engineer

717 River Drive ▪ Linwood, New Jersey ▪ Phone: 609.743.0354 ▪ E-mail: jmrutala@comcast.net

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: NJBB Comments
Date: Monday, April 1, 2019 2:02:16 PM

-----Original Message-----
From: Brennen, Linda [mailto:Linda.Brennen@co monmouth.nj.us]
Sent: Monday, April 01, 2019 1:54 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Cc: Sampson, Edward <Edward.Sampson@co monmouth.nj.us>
Subject: [Non-DoD Source] NJBB Comments

Monmouth County Division of Planning staff has reviewed the New Jersey Back Bay Study Interim Report dated March 1, 2019 and suggests that you reevaluate the categorization of the coastal lakes. The interim report notes that of the 13 coastal lakes in Monmouth County, only 4 were considered tidal and 8 were determined not to have any hydrological connection to the ocean. Wreck Pond, as one example, was considered not to be hydrologically connected, when in fact it is still influenced by tides. This is evidenced by the fact that the NJDEP has identified investigating the effects the Wreck Pond outfall extension had on the tidal flow and mixing within Wreck Pond as their Action Item 11 in the Wreck Pond Action Plan <Blockedhttps://www.state.nj.us/dep/wreckpond/index htm> . Salinity has been noted during water quality monitoring of several of the lakes classified as not connect, indicating that a connection still exists. Since the way these lakes are categorized will affect how they are treated in the study, the Monmouth County Planning Board strongly recommends they be reevaluated and that USACOE contact the NJDEP <Blockedhttps://www nj.gov/dep/wreckpond/contact htm> personnel involved in the Wreck Pond study, the various municipal engineers, and the appropriate Health Departments for further information.

Linda J. Brennen, PP/AICP

Supervisor, Environmental & Sustainability Planning

Monmouth County Division of Planning

One East Main Street, Freehold, NJ 07728

732-431-7460 x6470

732-409-7540 (fax)

Linda.Brennen@co.monmouth.nj.us

BOROUGH OF HARVEY CEDARS

PO BOX 3185
HARVEY CEDARS, NEW JERSEY 08008-0319

BOARD OF COMMISSIONERS

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DEPT. OF PUBLIC WORKS AND PUBLIC PROPERTY

JUDITH E. GERKENS
DEPT. OF REVENUE AND FINANCE

MICHAEL A. GAROFALO
DEPT. OF PUBLIC SAFETY AND PUBLIC AFFAIRS

DAINA A. DALE
MUNICIPAL CLERK

(609) 361-6000 x112
FAX (609) 494-2335
EMAIL clerk@harveycedars.org
www.harveycedars.org

April 1, 2019

Mr. Peter R. Blum
U.S. Army Corps of Engineers Planning Division
Wanamaker Building
100 Penn Square E.
Philadelphia PA 19107

RE: Comments regarding the USACE New Jersey Back Bays Coastal Storm Risk Management Study

Dear Mr. Blum:

The Borough of Harvey Cedars has reviewed the *New Jersey Back Bays Coastal Storm Risk Management Study Interim Report and Environmental Scoping Document (NJBB Study).* As you know, our barrier island community has experienced storm-related coastal flooding and the Borough is very concerned about future storm risks and the strategies for addressing them. I commend the Corps and State for identifying potential long-term solutions, though I feel that the costs identified in Table 10-1 and environmental permitting of the proposed solutions will be challenging and will require significant Federal financial support. I'm concerned about the impacts to the municipalities who may have to share in the financial burden for implementing the proposed projects.

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Thank you for the opportunity to comment on the NJBB Study. Please contact me if you have any questions regarding the Borough's requests for modifications to the plan as it enters the Draft Feasibility stage.

Sincerely,

Mayor Jonathan Oldham
Borough of Harvey Cedars

cc: Mayor Joseph Mancini, Township of Long Beach
J. Bailey Smith, USACE-NAP Planning

BARNEGAT BAY PARTNERSHIP
RESEARCH · EDUCATE · RESTORE

March 29, 2019

Peter Blum, Chief, Planning Division
U.S. Army Corps of Engineers, Philadelphia District
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107
VIA EMAIL PDPA-NAP@usace.army.mil

Re: New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study

Dear Mr. Blum:

I am submitting these comments to the U.S. Army Corps of Engineers regarding the New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study on behalf of the Barnegat Bay Partnership (BBP), which comprises federal, state, and local government agencies, academic institutions, nongovernmental organizations, and businesses working together to restore and protect a nationally significant estuary, the Barnegat Bay.

AUTHORITY

The BBP submits these comments pursuant to Section 320 of the Clean Water Act (33 U.S.C. 1330; as amended by P.L. 100-4 *et seq*.), which established the Barnegat Bay as an estuary of national significance. Section 320 further identifies important purposes of our management conference: addressing point and nonpoint sources of pollution, maintaining sustainable populations of fishes and wildlife, protecting their habitats, and assuring that the designated uses of the estuary are protected. In accordance with the BBP's Memorandum of Understanding Regarding the Roles and Responsibilities of Partners and its attendant charters and policies, the Environmental Protection Agency, New Jersey Department of

Ocean County College | College Drive | PO Box 2001 | Toms River, NJ 08754
phone (732) 255-0472 | fax (732) 864-3851
BBP.OCEAN.EDU

Environmental Protection, and the U.S. Army Corps of Engineers (USACE) neither participated in the development of these comments nor reviewed them for endorsement.

INTRODUCTION

The New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study and Environmental Scoping Document (Back Bays Study) is a substantial undertaking, which involved a great deal of preparation and effort. We commend the USACE for clearly identifying the effects of sea level rise and climate change in your planning; the BBP shares your concerns about the importance of these challenges to living on the coast. Furthermore, the BBP and our partners note that the Back Bays Study specifically recognizes the following: the importance of avoiding degradation of water quality as a universal constraint in selecting among project alternatives, and that natural ecological systems help mitigate flooding.

After reviewing the main report and accompanying appendices, the BBP and its partners are concerned about the project's direct impacts to critically important habitats (*i.e.*, intertidal wetlands, beds of submerged aquatic vegetation, and bay shorelines) and indirect effects more broadly throughout the back. While the document attempts to be comprehensive in scope, there are a number of recognized major data gaps (hydrodynamic and water quality modeling around storm surge barriers (SSBs), perimeter structures effects on recreation, etc.) resulting in some decisions being based on little information and/or a limited understanding.

Strikingly, the No Action alternatives described in the Environmental Considerations of the Focused Array (Appendix F) clearly demonstrate the potential substantial negative effects (increased nuisance flooding, tidal marsh loss, SAV bed loss, wildlife habitat loss) that sea level rise will have on the natural resources of the region if current trends continue. Unfortunately, none of the proposed alternatives discussed in this document will ameliorate these effects. The vulnerability of the coast (especially the back bays that are the focus of this study) to inundation over the next 30-50 years should be emphasized to all stakeholders. Furthermore, it should be clearly stated that significant action at the regional (and larger) scale is needed to stave off periodic flooding at best or total inundation of the lowest lying and more vulnerable areas.

The following comments are organized in a manner similar to the Back Bays Study itself; we first address any concerns associated with the initial screening processes,

then concerns with non-structural measures, and lastly those with structural measures. While many of our non-structural and structural comments are related to the Preliminary Focused Array in the North Region, they are also broadly applicable across the study area.

Planning and Process

The section on National Economic Development Criteria Screening (Section 9.5.1.1) is missing a discussion of the North Region.

It is not clear if the benefit/cost calculations include the $2.3+ billion in ecosystem services provided by the Barnegat Bay watershed to the regional economy (Kaufman and Cruz-Ortiz 2012). Not including those values when calculating the benefit to costs of various alternatives is likely to lead to selection of less than desirable alternatives and outcomes.

The Environmental Quality Criteria Screening Index scores found in the main report (Section 9.5.1.2) for the North Region (page 181) are different (and higher) than those reported in the Plan Formulation Appendix A Table 6. Which are the correct scores? Where are the data used to develop the scores? Because the indirect impacts associated with SSBs were not modeled and indirect effects were poorly recognized, providing the data used to develop the scores is important. The USACE Environmental Quality Criteria Screening scoring process involves considerable subjectivity. Without seeing the data it is not clear if additional alternatives should have failed, given that they are all so low (<2). The score currently suggests a very high risk endeavor, which is likely to increase to extreme once the modeling is completed.

Because of our own and others' similar experiences during and after significant storms, we strongly recommend that nature-based features be a prominent component of any tentatively selected plan(s). Human infrastructure with robust coastal wetlands and dune features between them and a water body typically fare far better during storms than infrastructure without such natural protective features (Barbier *et al.* 2013; Narayan *et al.* 2017). A growing body of literature has shown that wetlands, seagrass beds, oyster reefs, living shorelines, and other biogenic structures attenuate wave energy and ameliorate flood impacts effectively (Wamsley *et al.* 2010; Costanza *et al.* 2008; Koch *et al.* 2006). As an added bonus, when properly implemented, these features are likely to be robust against sea level rise, which increases their longevity and presumably their benefits. While not feasible to implement everywhere in the watershed, there are substantial areas of

shoreline that would benefit from the natural and nature-based treatments described above, with the added benefit of the additional ecosystem services, including water quality benefits, they provide.

Non-structural Measures

While refinement of the National Flood Insurance Program (NFIP) is discussed as one of the Nonstructural measures in the CSRM Measure Inventory and Screening (Section 9.2.2.4, pg. 107), it is limited to increasing participation of individuals and communities. While increased participation would benefit some communities along the bay, the USACE should use the North Atlantic Coast Comprehensive Study (NACCS) and the regional studies to promote larger conversation with other agencies (especially those involved in the National Disaster Recovery Framework and associated federal programs) about how to prevent the NFIP from incentivizing development and/or redevelopment in high risk areas, which then results in additional publicly funded mitigation measures, with the cycle continuing to repeat itself at increasing costs and even higher risks into the future.

We were pleased to see that managed retreat and relocation are mentioned prominently in the Back Bays Study, as those approaches are far too often left out of discussions on coastal storm risk reduction; however, we are concerned about some inconsistencies and potential bias apparent in the Management Measures Screening Process (Section 9.3). For example, some Structural Measures received generous Acceptability scores (1 for levees) in Cycle 2, whereas non-structural measures were given artificially low scores (0 for managed retreat). Upon careful review of the USACE definition of Acceptability, *i.e.*, "the workability and viability of the alternative plan with respect to compatibility with existing laws, regulations, and public policies," it is unclear why managed retreat was not scored a 0.5 or 1, as we are unaware of existing laws, regulations, or public policies discouraging this practice. Similarly, levees should score 0.5, the same as barriers and permanent floodwalls, as the NJ Rules on Coastal Zone Management and other land use regulations actively discourage those types of development. These inconsistencies appear to bias upward the rankings of structural components. As mentioned in our comments during the Feasibility Study, acquisition in areas that suffer from repetitive losses is a particularly useful and cost-effective strategy, especially when implemented at an appropriate spatial scale. This approach has been effective in the Raritan River and Delaware River watersheds, and merits consideration as a solution, especially for back-bay sites with low elevations and other risk factors which increase their vulnerability to sea level rise (*e.g.*, wind and wave fetch, vegetation).

The Preliminary Focused Array Description for the North Region (10.3.4) Alternative 3D (p202) states that non-structural solutions are proposed for "15,565 residential structures for the municipalities on the mainland adjacent to Great Bay and Mullica River Embayment, Little Egg Harbor and portions of Manahawkin Bay, and associated tributaries and canals." However, Figure 10-4 shows non-structural solutions associated with the mainland and barrier island communities for the entire region, similar to Alternative 3A (minus Point Pleasant Area). Which is correct, the text or the map?

Structural Measures

General Impacts

The document acknowledges that the structural components of the proposed alternatives will have moderate to significant impacts to coastal wetlands and other aquatic habitats that will necessitate mitigation. The USACE has indicated that they are contemplating using the New England Salt Marsh Model to assess wetland impacts and mitigation needs. While this model is suitable for assessing the use of coastal marshes for *terrestrial* wildlife, it ignores the high value of coastal marshes for fishes and other aquatic species (recognized in Appendix F, Fisheries Resources section). The use of salt marshes by commercially and recreationally important fish species in New Jersey is well documented (Able 1999; Able *et al.* 2007; Grothues and Able 2003; Hagan *et al.* 2007; Miller *et al.* 2003; Nemerson and Able 2003; Nemerson and Able 2004; Roundtree and Able 1992a,b) and should be taken into account when assessing wetland impacts and mitigation needs.

It is also not clear how the USACE will identify, account, and mitigate for significant impacts to wildlife species outside of wetlands, essential fish habitat, and the Migratory Birds Act. Birds, fishes, and reptiles are likely to lose access to critical feeding, resting, and nesting habitats, as well as food sources (Focused Array, Appendix F, Section F-2 Environmental Considerations); however the mechanisms for assessing the significance of, and subsequently mitigating for, the habitat losses is unclear.

The USACE indicates that SAV surveys will be completed in all locations and waterways with perimeter structures and SSBs (Appendix F, Section F-2 Environmental Considerations of the Focused Array – SAV). Indirect impacts associated with these activities can occur outside of the immediate construction area; however the SAV mapping that is available in Barnegat Bay is over 10 years

old, and SAV bed extent and shoot densities in beds can change significantly over the course of a few years. The true estimate of impacts (direct and indirect) may be substantially different than your methods would recognize, especially in Barnegat Bay, which has 75% of the remaining SAV within NJ State waters (BBP 2016). You would not calculate the net benefits of the project with old, inaccurate data, why would you do so for the net impacts? Therefore, the Corps should extend the proposed SAV surveys (both bed extent and density) to the entire study area.

In Section 10.7 Environmental Mitigation, the authors indicate that several preliminary alternatives were screened out as they would have induced significant impacts on critical fish and wildlife resources. SAV in Barnegat Bay is a critical fish and wildlife resource, yet alternatives 3E(2) and 3E(3) propose significant direct impacts and potential indirect significant impacts (as described in Appendix F) and were not removed from consideration. How were "critical fish and wildlife resources" defined?

The direct permanent loss of 11 acres of SAV beds (Habitat Areas of Particular Concern for summer flounder) under 3E(3) represents the loss of almost 0.2% of previously mapped SAV bed extent, and 21 acres of tidal marsh loss would be equal to 10% of what was lost naturally during 2007-2012 (BBP 2016). Considering these tidal marshes are an identified priority under the Emergency Wetlands Resources Act of 1986 (Appendix F) because of their national ecological significance, it would seem that a loss of this magnitude would be unacceptable. It is unclear how the USACE determines how to classify losses (*i.e.*, slight, moderate, significant, *etc*.). For example, the permanent loss of eight acres of subtidal bottom habitat for the placement of SSBs would be considered more than "moderate" by most ecologists (Table 10.2, p235).

Perimeter Structure Impacts
Studies from Barnegat Bay and elsewhere have clearly documented a reduction in benthic infauna and epifauna associated with hard structures at the water's edge as compared to natural shorelines (Gittman *et al.* 2016), particularly for recreationally and commercially important species (Jivoff 2005). It is not clear if these impacts will be assessed within the Benthic Index of Biotic Integrity. If not, they should be quantified given the amount of perimeter structures included in the various alternatives.

In Appendix F, Section F-2 Environmental Considerations of the Focused Array – Floodplains, the impacts discussed are on the effects on the human communities/structures within the floodplains, rather than the effects of the

alternatives on the floodplains themselves. Erecting permanent perimeter flood-control structures adjacent to natural areas is likely to have a significant adverse effect on the hydrology and natural communities within the floodplains, and should be assessed.

In Appendix F, Section F-2 Environmental Considerations of the Focused Array – Geology and Soils, the No Action alternative correctly points out that rates of sea level rise may also exceed normal sediment accretion rates in the saltmarshes and resulting in increased inundation and subsidence (*i.e.*, "marsh drowning"). Perimeter structures are likely to cut off soil and sediment sources which further reduce sediment deposition on the saltmarshes (Ganju 2017) and also prevent their landward migration as water level rises (Gehman *et al*. 2018); however, discussion of those effects is lacking. The effects of the perimeter structures on sediment transport into the wetlands should be described and quantified here so that there is a fuller understanding of the impacts of the proposed alternatives.

Re-suspension of sediments containing nutrients and a decrease of transitional uplands areas that act as filter for non-point source runoff are identified as indirect impacts of perimeter walls in Appendix F, Section F-2 Environmental Considerations of the Focused Array – Plankton. These are also water quality impacts, and as such should be identified and discussed in the Water Quality section.

The description of the impacts of structural perimeter measures on recreation (Appendix F, Section F-2) significantly downplays the extent to which a 5–10 foot-high barrier will alter recreational access to coastal waterways. Most homeowners who have property along the bays do so to have direct waterfront access for recreational activities, primarily boating. To suggest that the "potential effect would require further evaluation to determine the extent of this impact" is to ignore the obvious fact that the impact may be significant.

Storm Surge Barrier Impacts

The Back Bays Study makes clear that the quantification of some environmental impacts associated with SSBs has not been performed, since hydrodynamic environmental circulation and water quality modeling have not yet been completed. We understand that studies of those magnitude take considerable effort and are expensive to complete, and therefore are limited to only the most feasible alternatives. However, it is difficult to assess the suitability of certain alternatives, particularly those including the Barnegat Inlet SSB, when potentially significant impacts would be derived from changes to hydrodynamic circulation and water

quality. Our comments regarding the potential impacts of the Barnegat Inlet SSB (and the Manasquan Canal SSB), can only be based on limited information.

As currently depicted, the SSB at Barnegat Inlet would tie into an existing jetty structure on the southern side of the inlet at the north end of Long Beach Island. On the northern side of the inlet, the structure would tie into a jetty and existing sand dunes within Island Beach State Park (IBSP), an undeveloped section of the barrier island. Even with jetties along both sides of the inlet, the topography and bathymetry in the vicinity of the inlet have been highly dynamic. Previous USACE engineering solutions along the bayside of IBSP (*i.e.*, including geotubes) in the immediate vicinity of the proposed barrier have failed to reduce erosion. Conversely, the inlet itself has required dredging repeatedly, as has the ICW and state channels immediately to the south of the inlet. It is not clear how the proposed SSB would affect and/or be affected by the different bathymetry that would undoubtedly be created by the installation of any SSB. This should be included in any consideration of the suitability of a SSB at this location.

The Environmental Considerations of the Preliminary Focused Array (Section 10.6) concludes that inlet SSBs would have moderate to significant direct impacts on aquatic habitats, and that there may be more potential indirect impacts on hydrodynamics, water quality, and shifts in flora and fauna abundance, distributions and migrations (page 218, Table 10.2). Furthermore, it concludes on page 219 that "it is likely that substantial compensatory mitigation would be required." Recent research (BBP 2016) has shown that the healthiest eelgrass beds in the bay are located in the immediate vicinity of the Barnegat Inlet, across which a SSB is proposed under Alternatives 3E(2) and 3E(3). Given that consistently successful mitigation methodology for seagrass beds in Barnegat Bay has yet to be developed, and impacts to this critical habitat appear likely, Alternatives 3E(2) and 3E(3) should be dropped from consideration.

Miscellaneous Comments

In Figure 10-18, in the Key Outcomes box, Commercially/recreationally valuable species, the listed example is oysters. We would be remiss if we did not point out that hard clams are currently the most valuable commercially harvested aquatic species in the bay, though recent oyster aquaculture farms, particular in the immediate vicinity of the Barnegat Inlet (across which an SSB is proposed), are increasingly productive.

It is not clear which protected lands/areas are impacted by which feature associated with each project alternative in Table 11 in Appendix F. Some gridlines would be helpful to separate each alternative-feature group.

Reference is made to sea nettle (*Chrysaora quinquecirrha*) throughout Appendix F. Recent investigations have revealed that this species is actually bay nettle (*Chrysaora chesapeakei*), a close relative of the sea nettle (Bayha *et. al* 2017).

We hope that you find our comments to be constructive during the formulation of the tentatively selected plan, and we welcome the opportunity to discuss these comments in more detail. If you have any questions, please feel free to contact me or Dr. Jim Vasslides, our Program Scientist, at 732-255-0472.

Sincerely,

L. Stanton Hales, Jr., Ph.D.
Director

cc: Mr. Rob Karl, Brick Township MUA, STAC Chair
Dr. Steven Yergeau, Rutgers Cooperative Extension, STAC Vice-Chair
Ms. Karen Green, NOAA-NMFS, Advisory Committee Co-Chair

CITATIONS

Able, K.W. 1999. Measures of Juvenile Fish Habitat Quality: Examples from a National Research Reserve. In American Fisheries Society Symposium 22: American Fisheries Society.

Able, K.W., S.M. Hagan, K. Kovitvongsa, S.A. Brown, and J.C. Lamonaca. 2007. Piscivory by the mummichog (Fundulus heteroclitus): Evidence from the laboratory and salt marshes. *Journal of Experimental Marine Biology and Ecology* 345: 26-37.

Bayha, K.M., A.G. Collins, and P.M. Gaffney. 2017. Multigene phylogeny of the scyphozoan jellyfish family Pelagiidae reveals that the common U.S. Atlantic sea nettle comprises two distinct species (Chrysaora quinquecirrha and C. chesapeakei). *PeerJ* 5: e3863.

Barbier, E.B., Georgiou, I.Y., Enchelmeyer, B., Reed, D.J. 2013. The value of wetlands in protecting southeast Louisiana from hurricane storm surges. *PLoS ONE* 8(3).

Barnegat Bay Partnership. 2016. State of the Bay Report. Barnegat Bay Partnership, Toms River, NJ. 80pp.

Costanza, R., Perez-Maqueo, O., Martinez, M.L., Sutton, P., Anderson, S.J., Mulder, K. 2008. The value of coastal wetlands for hurricane protection. *Ambio* 37, 241-249.

Ganju, N.K., Defne, Z., Kirwan, M.L., Fagherazzi, S., D'Alpaos, A., Carniello, L. 2017. Spatially integrative metrics reveal hidden vulnerability of microtidal salt marshes. *Nature Communications* 8, 14156.

Gehman, A.-L.M., N.A. McLenaghan, J.E. Byers, C.R. Alexander, S.C. Pennings, and M. Alber. 2018. Effects of Small-Scale Armoring and Residential Development on the Salt Marsh-Upland Ecotone. *Estuaries and Coasts* 41: 54-67.

Gittman, R.K., Peterson, C.H., Currin, C.A., Fodrie, F.J., Piehler, M.F., Bruno, J.F. 2016. Living shorelines can enhance the nursery role of threatened estuarine habitats. *Ecological Applications* 26, 249-263.

Grothues, T.M., and K.W. Able. 2003. Discerning vegetation and environmental correlates with subtidal marsh fish assemblage dynamics during *Phragmites* eradication efforts: interannual trend measures. *Estuaries* 26: 574-586.

Hagan, S.M., S.A. Brown, and K.W. Able. 2007. Production of mummichog (*Funduls heteroclitus*): Response in marshes treated for common reed (*Phragmites australis*) removal. *Wetlands* 27: 54-67.

Miller, M.J., D.M. Nemerson, and K. Able. 2003. Seasonal distribution, abundance, and growth of young-of-the-year Atlantic coraker (*Micropogonias undulatus*) in Delaware Bay and adjacent marshes. *Fishery Bulletin* 101: 100-115.

Jivoff, P. 2005. The Effect of Artificial Shoreline on Habitat Quality and Mortality of Blue Crabs, Callinectes sapidus. Rider University, pp. 1-12.

Kauffman, G.J., Cruz-Ortiz, C. 2012. Economic Value of the Barnegat Bay Watershed. Institute for Public Administration Water Resource Agency, University of Delaware, Newark.

Koch, E.W., Sanford, L.P., Chen, S.-N., Shafer, D.J., McKee Smith, J., 2006. Waves in seagrass systems: Review and technical recommendations, Engineering Research and Development Center. U.S. Army Corps of Engineers, Vicksburg, MS, p. 92.

Narayan, S., M.W. Beck, P. Wilson, C.J. Thomas, A. Guerrero, C.C. Shepard, B.G. Reguero, G. Franco, J.C. Ingram, and D. Trespalacios. 2017. The Value of Coastal Wetlands for Flood Damage Reduction in the Northeastern USA. *Scientific Reports* 7: 9463.

Nemerson, D.M., and K. Able. 2003. Spatial and temporal patterns in the distribution and feeding habits of *Morone saxatilis* in marsh creeks of Delaware Bay, USA. *Fisheries Management and Ecology* 10: 337-348.

Nemerson, D.M., and K. Able. 2004. Spatial patterns in diet and distribution of juveniles of four fish species in Delaware Bay marsh creeks: factors influencing fish abundance. *Marine Ecology Progress Series* 276: 249-262.

Roundtree, R.A., and K.W. Able. 1992a. Foraging Habits, Growth, and Temporal Patterns of Salt-Marsh Creek Habitat Use By Young-of-Year Summer Flounder in New Jersey. *Transactions of the American Fisheries Society* 121: 765-776.

Rountree, R.A., and K. Able. 1992b. Fauna of Polyhaline Subtidal Marsh Creeks in Southern New Jersey: Composition, Abundance and Biomass. *Estuaries* 15: 171-185.

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] Storm Gates, Back Bay Report
Date: Friday, March 29, 2019 3:53:55 PM

-----Original Message-----
From: M J [mailto:sylviaj1910@yahoo.com]
Sent: Thursday, March 28, 2019 2:50 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] Storm Gates, Back Bay Report

SIERRA CLUB, P.O. Box 809
OCEAN COUNTY GROUP Point Pleasant, NJ

Although the representative of the Army Corps of Engineers, Steven Rochette recently stated that "the interim report outlines a focused array of potential alternatives that reduce the risk of back-bay flooding --- including one of the alternatives "a storm surge barrier at Barnegat Inlet," members of the Ocean County Sierra Club believe that it would be proper for the NJDEP to consider elevating properties and securing buyouts rather than expensive solutions such as floodwalls.

Living in this area our members find --- from experience with flooding, --- it would be appropriate for the study to include SEA LEVEL RISE and future weather influence. We find that the flood-protective designs proposed would have been appropriate for storms of the past, but not for future water onslaught considering CLIMATE CHANGE and SEA LEVEL RISE, as well as the sinking of barrier islands.

With future storms getting ever more violent, surge barriers, tide gates, levees, and floodwalls may not be the answer to save and protect lands; studies by Rutgers and other institutions have predicted that the Atlantic Ocean will eventually reach and permanently cover the entire area east of US Rte. 9 along the Atlantic shoreline.

Sincerely,

signed: Margit Meissner-Jackson
Chair and Conservation Chair
Sierra Club, Ocean County Group

SIERRA CLUB
FOUNDED 1892

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RE: New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study

To Whom It May Concern,

We have major concerns with DEP's and U.S Army Crop's Coastal Interim Report. One of the main factors missing in the study is sea level rise and its impacts in the future. We believe that the flood protective designs laid out in the report will not work. They are not capable of protecting us from current and future storms. There are better and cheaper holistic approaches for flood management and resiliency. It is critical that DEP and U.S Army Corp. consider natural flood control systems such as buyouts, elevating properties and vital infrastructure.

The current flood protective designs laid out in the study are not efficient. The problem with sea walls and gates is that the water goes around them. It gets to the dunes, into the bays causes pollution problems. Using seawalls and levees as measures to reduce flooding will actually raise the flood levels and overtop structures. This will stop the flushing of Bays and tidal areas, keeping pollutants trapped such as toxic sediments. It will cause stagnation of water, prevent fisheries from thriving, and cause a plethora of other environmental problems. Flood gates are also a $100 million project that have to take a lot of public land to be built. Instead New Jersey should focus on elevations and buyouts in flood prone areas when planning to create more flood storage.

The state does not currently have a program that requires towns to protect and maintain their dunes, which is what we need. We need stronger limits on impervious cover, natural systems restoration, and green building codes and green roofs. Money funded by tax payers should also not go to town projects such as flood walls, but towards more sustainable projects like dune restoration.

In order to protect our Jersey shore from climate impacts, including sea level rise and flooding, DEP and the U.S Army Corp. need to create a comprehensive approach to the shore that includes mitigation of climate change, adaptation for sea level rise, and restoration of natural systems.

If you have any questions, please feel free to call me at (609) 558-9100.

Sincerely,

Jeffrey H Tittel

Jeff Tittel Director, NJ Sierra Club

April 1, 2019

U.S. Army Corps of Engineer Planning Division
100 Penn Square E. Philadelphia PA. 19107
PDPA-NAP@usace.army.mil

RE: New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study and Environmental Scoping Document

Dear Philadelphia USACE,

The Surfrider Foundation submits these comments to the US Army Corps of Engineers (USACE) concerning the New Jersey Back Bays (NJBB)Coastal Storm Risk Management Interim Feasibility Study and Environmental Scoping Document (Study).

The Surfrider Foundation is a grassroots environmental organization dedicated to the protection and enjoyment of the world's ocean, waves, and beaches for all people. We submit these comments on behalf of our 80 chapters, 90 youth clubs, and more than 500,000 supporters, activists, and members in the United States, including our two local chapters most affected by the Study, our Jersey Shore and South Jersey Chapters.

Surfrider requests that USACE address the comments below as it assesses the proposed options for managing risk from coastal storms in the NJBB. The comments are not intended to be conclusive of all issues, but rather a summary of the most important issues for Surfrider and its members.

OBLIGATIONS UNDER NEPA
The National Environmental Policy Act of 1969 (NEPA) establishes a policy to encourage a productive and enjoyable harmony between humans and their environment, prevent or eliminate damage to the environment, and enrich the understanding of the ecological systems and natural resources important to the nation (42 USC § 4321). In furtherance of this policy, NEPA requires the federal government to use all practicable means such that the Nation may, among other duties, fulfill its responsibilities as trustee of the environment for future

generations; assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings; attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences; and enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources (42 USC § 4331(b)).

"*NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.*" Southern Utah Wilderness Alliance v. Norton, 301 F.3d 1217, 1237 (10th Cir. 2002)(citing 40 C.F.R. 1500.1(b) and Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1988)).

The Council on Environmental Quality (CEQ) promulgated uniform regulations to implement NEPA that are binding on all federal agencies (42 U.S.C. § 4342; 40 C.F.R. §§ 1500.3). Federal agencies must integrate NEPA into the planning process at the earliest possible time to insure that planning and decisions reflect environmental values (40 C.F.R. §§ 1501.2; see also 40 C.F.R. § 1502.5). Until an agency issues its final decision on a proposal, no action concerning the proposal may be taken that would have an adverse environmental impact or limit the choice of reasonable alternatives (40 C.F.R. § 1506.1(a)).

NEPA requires that federal agencies disclose the environmental effects of their actions and identify alternatives and mitigation measures through an environmental report. NEPA requires federal agencies to prepare an Environmental Impact Statement (EIS) for major federal actions that significantly affect the quality of the human environment (42 U.S.C. § 4332(2)(C)).

If an agency determines that the proposed action is one which does not categorically require an EIS under the agency's procedures, the agency must prepare an Environmental Assessment ("EA") (40 C.F.R. § 1501.4(a)), (b); Nat'l Parks & Conservation Ass'n v. Babbitt, 241 F.3d 722, 730 (9th Cir. 2001). If the federal agency determines on the basis of the EA not to prepare an EIS, the agency must prepare a Finding of No Significant Impact ("FONSI") setting forth a "convincing statement of reasons" to explain why the action will not have a significant impact on the environment (40 C.F.R. §§ 1501.4(e), see also 40 C.F.R. § 1508.13.

One of NEPA's key mandates requires Federal agencies, "*to the fullest extent possible*" to prepare a detailed environmental report for any major Federal action significantly affecting the environment, which addresses: "(1) the environmental impact of the proposed action; (2) any adverse environmental effects which cannot be avoided if the proposal is implemented; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity;

and (5) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented" (42 USC § 4332(c)).

Furthermore, "*Even though the agency's preferred alternative is identified by the EIS preparer in the EIS, the statement must be objectively prepared and not slanted to support the choice of the agency's preferred alternative over the other reasonable and feasible alternatives*."[1] And, "*Through the identification of the environmentally preferable alternative, the decisionmaker is clearly faced with a choice between that alternative and others, and must consider whether the decision accords with the Congressionally declared policies of [NEPA].*"[2]

"*However, [40 CFR 1502.25 was] not intended to authorize the preparation of a short summary or outline EIS, attached to a detailed project report or land use plan containing the required environmental impact data. In such circumstances, the reader would have to refer constantly to the detailed report to understand the environmental impacts and alternatives which should have been found in the EIS itself. . . . The EIS must stand on its own as an analytical document which fully informs decision makers and the public of the environmental effects of the proposal and those of the reasonable alternatives*" (Section 1502.1).[3]

COMMUNITY AND STAKEHOLDER INVOLVEMENT

Surfrider continues to be underwhelmed by the level of stakeholder outreach the USACE has completed for the Study. Considering the scale of the potential project and the far reaching impacts to the environment, human uses, and coastal communities, outreach for the Study requires a slower, more in depth approach. The potential impacts from the proposed projects include existential discussions for coastal communities.

Surfrider was not alerted to the earlier hearings and was therefore unaware of the Study until the latest round of outreach. We can say with certainty that the majority of affected stakeholders do not know the Study exists. We request more time for the public to provide comments.

USACE must engage affected stakeholders better, using various engagement mechanisms, including leveraging existing stakeholder lists; utilizing traditional and nascent media to properly notify and promote; and by ensuring effective messaging targeted to help the public understand the risks and benefits of this project in order to effectively participate in the process and offer informed

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[1] Council on Environmental Quality. Forty most asked questions concerning CEQ's national environmental policy act regulations. Page 5. March 1981. *Available at*: energy.gov/sites/prod/files/G-CEQ-40Questions.pdf

[2] Ibid. Page 6

[3] Ibid. Page 15–16; gpo.gov/fdsys/pkg/CFR-1996-title40-vol18/pdf/CFR-1996-title40-vol18-sec1502-1.pdf

feedback. When future engagement opportunities for the Study arise, Surfrider can assist in reaching potentially affected recreational users in New Jersey.

Lastly, USACE must engage and consult with the coastal and marine science community. This community can assist in developing scientific surveys to analyze ecological conditions before, during, and after the proposed project. Efforts to conduct thorough baseline research and establish long-term monitoring programs must be implemented, and made publicly available.

ENVIRONMENTAL IMPACTS

Surfrider is concerned about the potential substantial environmental impacts associated with the installation of hardened structures such as storm surge barriers (floodgates), floodwalls, and levees discussed in the Study. Many of the alternatives proposed, if constructed, would act as physical barriers to tidal flow, trapping wildlife, hurting water quality, and damaging habitat.

According to the Study, "*Storm surge barriers and interior bay closures may pose significant indirect impacts on hydrodynamics such as tidal flow, and tidal range, water quality, and shifts in flora and fauna abundance, distributions and migrations. These potential effects have a high level of uncertainty particularly with the unknown frequency of gate closures coupled with changes in tidal flooding events related to sea level rise.*" [4]

Estuary and riverine systems are highly productive because of their diversity of habitats and nutrient levels. Many marine and freshwater animals regularly traverse freshwater, brackish, and saltwater environments during their life stages. Drastically reducing the flow between these environments will negatively affect many species, including striped bass, herring, shad, eel and other species essential to the area. This includes federally protected species such as the atlantic and shortnose sturgeon.[5]

Physical barriers such as floodgates would obstruct tidal flow and alter the respiration of the river. When tidal and river exchange is restricted, runoff and other contaminants will become trapped, indefinitely impacting water quality. Surfrider is concerned that large, climate change rainfall events will lead to increases in polluted runoff. Coupled with less tidal flow, this situation could lead to more frequent algae blooms and lower dissolved oxygen levels essential for river and estuary health. Construction of the proposed floodgates could stir up a huge amount of sediment.

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[4] USACE. New Jersey back bays coastal storm risk management interim feasibility study and environmental scoping document. March 2019. Page 5. *Available at:* nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Coastal-Storm-Risk-Management

[5] New Jersey Division of Fish and Wildlife. New Jersey's Endangered and Threatened Wildlife. *Available at:* www.nj.gov/dep/fgw/tandespp.htm

Habit destruction will inevitably occur if the tidal exchange is altered. Sensitive, habitat forming animals such as oysters require tidal flow for their various life stages. Seagrasses depend on a particular balance of saltwater, freshwater, light, and oxygen levels, which could all be affected by the proposed projects. Productive habitats within the river and tributaries are not just environmentally important, they also offer other ecological services such as buffering shorelines from storms and sea level rise.

HUMAN USE IMPACTS

The proposed projects could have serious impacts on recreational use in the entire Study area, not only from the construction and operation of specific structures, but also from secondary impacts to adjacent recreation areas.

Currently the Study area is heavily used for fishing, pleasure boating, diving, beach going, bird watching, and various water sports such as swimming and surfing. The proposed in-water structures could have serious negative consequences to the environment, in turn reducing the access and value of recreational uses.

Physically blocking huge amounts of water, sediment, and tidal action could have profound effects on adjacent habitat and coastlines. Heavily used beaches along the Jersey shore could be negatively impacted by increased erosion or from additional sea walls, which ultimately destroy beaches. These impacts would be detrimental to recreational uses such as beach going, swimming, wildlife viewing, and surfing.

All of these negative impacts to human activity correlate with reduced economic activity in the recreational use sector. New Jersey gains around $3.5 billion in GDP from the ocean recreation and tourism industry every year, and this project would reduce some portion of that contribution to coastal economies that rely heavily on this income.[6]

ADDITIONAL ANALYSIS NEEDED

Surfrider is concerned about USACE's plan to cull some of the alternatives before doing a comprehensive NEPA analysis of all of the options. This project could radically change ecosystems and human lives; all the options deserve a "hard look" before being prematurely discarded. Below we discuss issues that USACE has not fully examined.

The various alternatives proposed could have significantly negative secondary effects on neighboring communities. For example, if floodgates were built that blocked a large inlet for any amount of time, massive amounts of water would be

[6] National Ocean Economics Program. Ocean Economy Data. *Available at:* oceaneconomics.org/market/ocean/oceanEcon

displaced onto adjacent shores. We cannot armor every community, eventually an adjacent community will bear the brunt of that water. And the communities that will need to be heavily armored to keep the integrity of floodgates could lose their beaches entirely.

Unrestricted tidal exchange is essential for sediment distribution. If a river or inlet is blocked by massive floodgates sediment exchange within intertidal areas and the larger littoral cell could be negatively affected. Surfrider is concerned the floodgates could block sediment and exacerbate erosion for adjacent beach communities. In addition, a decrease in sediment could weaken local dunes and shorelines, making communities more prone to flooding; and perhaps more vulnerable to the water deflected by the floodgates.

The concept of managed retreat or reimagined land use should be better highlighted in the Study documents. We are concerned that in the long term, armoring every shoreline and plugging every waterway will not keep people safe and some communities may need to move out of low lying areas eventually. Funding for this massive project might be better spent developing options for the community, such as offering to buy out property owners who are in harm's way, and empowering and supporting the community to make decisions that will enable them to remain safe and adapt in a just way. A portion of the funds for the project should be set aside for property buyouts for those who want and need them.

USACE must better address sea level rise (SLR) projections in relation to the Study area and the proposed alternatives. We urge USACE to use the best available SLR data when analyzing the proposed alternatives. The issue of SLR also brings up political questions if floodgates are constructed. They are described as being for storm use only, but as flooding becomes more and more routine, there will be strong public outcry to keep them closed with increased frequency.

Scientists have projected the East Coast will be greatly impacted by future SLR.[7] In addition, the eastern seaboard is subject to land subsidence which makes accurate SLR projections challenging. The Study must thoroughly model higher-end SLR projections in combination with subsidence. Even if the floodgates originally work as proposed, the continual increase of SLR, and land subsidence, will eventually render these flood control measures useless.

In addition, we urge USACE to analyze how increased precipitation levels will impact the Study area. Based on recent studies, scientists assume climate

[7] Scientific American. Sinking Atlantic coastline meets rapidly rising seas. *Available at:* www.scientificamerican.com/article/sinking-atlantic-coastline-meets-rapidly-rising-seas

change is increasing precipitation especially on the East Coast.[8] Surfrider is concerned that during large rain events, the offshore floodgates will lead to increased flooding. The combination of future SLR, coastal storm surges, and landfall rain could unintentionally flood areas of New Jersey.

Surfrider advocates that more natural based flood control or "living shorelines" are thoroughly utilized in any future Study analysis. USACE recently adopted the Proposed Nationwide Permit B to help streamline the process of implementing living shorelines CITE. Living shoreline are gaining recognition—largely because the science is clear that coastal armoring exacerbates erosion, while living shorelines curtail erosion by substituting natural vegetation for hard armoring structures and relying on natural methods for shoreline erosion control.

Surfrider is gladdened to see that the USACE will include recommendations concerning nuisance flooding, outside of their statutory requirements: *"The primary focus of the NJBB study is managing risk associated with storm surge events rather than flooding associated with inadequate storm sewer systems and/or high frequency (i.e. nuisance) flooding. USACE policy (ER 1165-2-21) states that storm water systems are a non- Federal responsibility. While inundation from high frequency flooding events and inadequate storm water systems is not the focus of the NJBB study, it is acknowledged that nonstructural and storm surge barrier measures may not provide flood risk management from high frequency flooding events. Therefore, complementary measures to address these problems will likely be investigated as part of the NJBB Study, and may be recommended as part of a comprehensive Federal project that could be implemented at the non-Federal level."*[9] Many stakeholders are under the impression that this Study is focused on nuisance flooding, so analyzing this important topic is critical.

Thank you for your consideration and incorporation of our comments.

Mike Castellano, Chair
Jersey Shore Chapter of the Surfrider Foundation

Beth Kwart, Chair
South Jersey Chapter of the Surfrider Foundation

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[8] US Global Change Research Program. Chapter 7: Precipitation change in the United States. *Available at:* science2017.globalchange.gov/chapter/7

[9] USACE. New Jersey back bays coastal storm risk management interim feasibility study and environmental scoping document. March 2019. Page 4. *Available at:* nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Coastal-Storm-Risk-Management

From: Philadelphia District Public Affairs-NAP
To: Smith, J B CIV (US); Kukola, Regina L CIV USARMY CENAP (US); Dohm, Joel V CIV USARMY CENAP (USA)
Cc: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] interim report
Date: Friday, March 1, 2019 5:41:05 PM

-----Original Message-----
From: kelley bless [redacted]]
Sent: Friday, March 01, 2019 5:33 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] interim report

Dear Sirs,

Your interim report on preventing flooding in the back bays is great. However, there is one thing you did not factor in.

Since Superstorm Sandy, there has been an enormous amount of unrestricted development immediately to the west of your north coastal zone. Some studies estimate a 150% increase in footprint and impervious surface, with next to no stormwater control other than "dump it in the bay". Huge acreages of trees have also been bulldozed, thereby eliminating any stormwater retention. Very few rain swales or retention basins or holding ponds are being constructed either, and what little are, are way too small to hold the water that a superstorm or hurricane will generate. They take up too much buildable land.

CAFRA has been repeatedly ignored and bypassed. Wetlands Act. Repeatedly ignored and bypassed. Land Use Act. Repeatedly ignored and bypassed. NJPDES repeatedly ignored and bypassed. Even NEPA EIS are being ignored. All these regulations are continuing to be ignored and bypassed, pretty much on a daily basis, with ever more being built, planned and proposed...and approved by municipal planning and zoning boards stacked with conflicts of interest. The most egregious example of this is Lakewood. NJDEP is inexplicably waiving these regulations on a consistent basis as well. CAFRA denials in particular are being overturned at an alarming rate.

Your risk management plan needs to include not just the storm surge and sea level rises, but the "stormwater surge" that is going to come into the back bays from immediately west in any major storm event. It will be 150% larger than during Sandy, if not more, as the building continues and the impervious cover percentage rises. The development needs to be brought to a complete halt, impervious surface installation halted, and better stormwater controls need to be implemented. CAFRA and the other regulations need to be enforced throughout the entire expanded CAFRA zone that was promulgated after Sandy rather than bypassed and ignored. Failing that, the federal regs should be invoked.

The danger is not just from the Atlantic Ocean.

Sincerely,

Kelley E Bless

-----Original Message-----
From: adam sennick [mailto:a[redacted]]
Sent: Saturday, March 02, 2019 12:16 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] Public comment regarding Barnegat Bay Corp of Engineers

I have hunted, fished, crabbed, and clammed the Barnegat Bay for 45 years and have noticed a steady decline in the overall health of the estuarine ecosystem as it's biological carrying capacity has been limited by its cultural carrying capacity, mainly by over development of the landscape adjacent to the bay.

Ironically enough, some of the answers to the issues is just a short distance east of the barrier island, it's called the Atlantic Ocean!

I have said for years that the Corp needs to utilize flumes, inlets, etc to bring Ocean water into the Barnegat Bay to create a flush of pollutants and phosphates, which would restore a healthier ecosystem, ultimately making the predominantly bulkheaded shoreline have more of a "living shoreline" that would naturally help against flood storms and catastrophic storms like Superstorm Sandy!

A major opportunity was lost after Sandy when an inlet in Mantaloking resulted. This inlet should have been maintained as such and would have been a head start to revitalizing northern Barnegat Bay.

The year is 2019 and it really baffles me that with all the technology and intelligence, that the Corps has not utilized the great blue Ocean adjacent to a dying bay to help save it. Local governments would rather spend millions of dollars on bids from their cronies to build retention basins to alleviate the problems, that appears to be smoke and mirrors and big payoffs, and the bay will continue a slow demise.

Good luck with whatever the Corps decides to do, but please do your best to help the Bay for our kids and future generations to enjoy!

Regards,

Adam Sennick
[redacted]

From: Philadelphia District Public Affairs-NAP
To: Smith, J B CIV (US); Dohm, Joel V CIV USARMY CENAP (USA)
Cc: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: NJBB Comments
Date: Monday, March 4, 2019 10:19:36 AM

-----Original Message-----
From: John Spano [mailto[redacted]]
Sent: Saturday, March 02, 2019 7:17 AM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] NJBB Comments

Suggestion : Mill Creek, Manahawkin – by means of dredging the creek increase the height and width of berm on the marsh side to prevent waves during from reaching properties as in the case of Sandy.

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] Comments on Interim Report for Back Bays Study
Date: Tuesday, March 5, 2019 1:41:58 PM

-----Original Message-----
From: Michael Davenport [redacted]
Sent: Monday, March 04, 2019 7:39 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] Comments on Interim Report for Back Bays Study

On Page 67 of the main report, mammals present within the study area are listed and discussed. However, seals (mammals) are not identified nor discussed which is surprising given that they may be the mammal group most directly affected by proposed flood-mitigation strategies. The Great Bay seal colony is the largest seal colony within New Jersey and the largest seal colony along the US East Coast south of Long Island, NY. It is regularly used as a haul-out site by 120+ individuals each winter. Up to 150 seals have been observed at this site at one time. This site is the focus of Stockton University's NJ Seal Study course and has been studied since 1994.

This study's project area also includes Barnegat Inlet, NJ's third largest seal colony. As many as four species of seal (grey, harbor, harp, and hooded) may occur within these colonies, with harbor seals being the most abundant. The colonies are generally occupied between the months of November and April. Although not listed as Endangered or Threatened within the US or NJ, these species are protected by the Marine Mammals Protection Act. Flood-mitigation alternatives such as the installation of storm surge barriers, would likely adversely impact the seal colonies by restricting their movements between the open ocean and the back bays where their haul-out sites are located. Back bay shorelines are preferred by seals for haul-outs over ocean beaches due to their sheltered waters, greater isolation from human disturbance, and less risk of predation by sharks.

On Page 34 of Appendix F, again, seals are omitted from the section regarding mammals.

On Page 46 of Appendix F, the Cooper's hawk is identified as having an Endangered status when, in fact, it actually has a status of Special Concern within the breeding season in NJ.

Helpful references:
• Slocum, C. and M. Davenport. 2009. Assessing Threats and Characterizing Habitats of Harbor Seals in Southern New Jersey. Poster presented at the 18th Biennial Conference of the Society of Marine Mammalogy, Quebec City, Quebec. Abstract in: Conference Proceedings of the 18th Biennial Conference of the Society of Marine Mammalogy.
• Harbor Seals in New Jersey. 2015. ESRI Story Map by M. Davenport, Conserve Wildlife Foundation of NJ. Access: Blockedhttp://conservewildlife maps.arcgis.com/apps/MapJournal/index html?appid=d2266f32c36449e0b9630453e56c3888&webmap=564588c5cff04fa990aab644400475f9

Thank you,
Michael Davenport
[redacted]

From: christopher macaluso
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: [Non-DoD Source] Coastal Back Bay Flooding
Date: Monday, March 4, 2019 11:50:59 AM

Good afternoon my name is Christopher Macaluso and I live and own my home in Atlantic City on a little street named Arizona Avenue. This street in Atlantic City is notorious for nuisance flooding mainly due to 100 year old storm drain infrastructure along with missing portions of bulked due to eminent domain issues from vacant lots owners . I've owned my home since 2011 and was living here during Hurricane Sandy . I'll send you some media to show you .

U.S. Army Corps of Engineers,
New Jersey Back Bays Coastal Storm Risk Management Study
(Leave forms at Public Comment table, or e-mail to PDPA-NAP@USACE.ARMY.MIL)

CONTACT INFO (OPTIONAL): Steve Singler
US National Park Service, (retired)
steve.singler@gmail.com

LOCATION: [redacted]

FEEDBACK ON POTENTIAL MEASURES:

Types of Measures	Feedback
Non-Structural Measures (Elevating Structures, Acquisition, Building Retrofit)	Best option is for strategic retreat, purchase homes and properties at fair market value that are vulnerable, utilize acquired properties to implement "soft" type mitigation (plantings etc)
Storm Surge Barriers	Not good. A high cost/high maintenance engineered system that inevitably will not be able to keep up with sea level rise. It's really a temporary high cost solution that will inevitably fail, at tremendous cost to taxpayers.
Perimeter Plan (Floodwalls, Levees)	same response as storm surge barriers
Nature-Based Features (Living Shorelines)	This solution, coupled with strategic retreat acquisition, is the best solution to sea level rise.

OTHER GENERAL COMMENTS:

While this project is titled New Jersey Back Bays Coastal Storm Risk Management Study, what, and all USACOE projects ultimately are is protection of vulnerable limited private ownership properties at the expense of unlimited public funding. The only truly sustainable program to deal with sea level rise and effects of coastal storms is the acquisition of vulnerable properties within affected areas, thus being a one time only expenditure of public funds, and implementation of soft (living shorelines) solutions

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] Cape Island Creek, Cape May, NJ
Date: Thursday, March 7, 2019 3:34:59 PM

-----Original Message-----
From: Terry DiUbaldi [mailto:[redacted]]
Sent: Thursday, March 07, 2019 1:26 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] Cape Island Creek, Cape May, NJ

I searched through the NJBB March 2019 Interim Feasiblity Study and Document Can you tell me if Cape Island Creek, off Elmira, Venice and Bank Street are being addressed for High-Frequency flooding? Residents in that area are having one foot high flooding issues, particularly the north end of Bank as well as Venice Ave with full moon, high tide, plus more frequent heavy rains. This continues to increase, whereas 10 years ago it was not an issue.

No need to get back to me; I just want to be assured that this is on your radar.

Thank you.

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: back bays study
Date: Thursday, March 7, 2019 3:35:17 PM

-----Original Message-----
From: William Ashton [mailto:[redacted]]
Sent: Thursday, March 07, 2019 10:16 AM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] back bays study

This is great news! I have lived in Maurice River Twp. all my life and I see what years of neglect and no maintenance have done to our shorelines. I understand we are being looked at for dredging at the mouth of the bay? I would like to see a much larger project of beach replenishment starting at Moores Beach and go all the way to East Point. I see our beaches disappearing and the channels getting shallower. I'm not one who believes that the seas are rising and it's hopeless, you don't have to be a genius to understand that if you fill the bathtub to high and get in it will overflow. The material is already there it just needs to be relocated. As you know hydraulic dredging is the fastest and most cost effective way to accomplish this. I hope you read this and consider us for help, decades of neglect could be reversed quickly. I believe this would be a huge economic boost for our little twp. Thank you, Bill Ashton

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] NJBB Comments
Date: Monday, March 11, 2019 3:22:05 PM

-----Original Message-----
From: Monica Shaw [mailto[redacted]]
Sent: Monday, March 11, 2019 9:21 AM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] NJBB Comments

Good Morning to whomever is reading this!
I sit with my morning cup of coffee, the sky is blue and bay is calmly moving with its tide change. It's hard to digest that this calm, beautiful body of water, that welcomes us in summer to paddle, fish and crab can turn its head and become a wicked, hostile witch!

I have read the New Jersey Back Bays Coastal Storm Risk Management Interim Feasibility Study and Environmental Scoping Document. I focused on 'North' remediation, since I live on LBI. I find most of your solutions overwhelming! I think man made storm surge barriers, bay closures, or any other artificially manufactured structure bizarre! And yet I know that some European countries have incorporated these structures into their environment.
Not only are these structures cost prohibitive, they are ugly! And will interfere with natural ebb and flow of the Bay's waters, which then impacts habitats, water quality and migrations. (You state that in your report.)

I support your ideas/recommendations for natural, environmentally safe remedies. Non-structural remedies are easy and cost effective. Wetland restoration, living shorelines,and permeable surfaces all are rational and folks can 'buy into it'. There are many environmental organizations(for example: Alliance for a Living Ocean, COA,Sierra Club) that rally volunteers to clean beaches, and plant dune grass. Perhaps, a focus can be put on building living, shorelines. Here on LBI we are 'planting' clam and oyster shells to build reefs in the bay for our baby oysters. (We have already seen the positive impact these reefs have had - ell grass grows, small fish have a habitat, as well as blue claw crabs) One small step here on LBI….. There are numerous restoration programs throughout the State. Perhaps these efforts needs to be 'beefed' up! with State funds and paid employees.

I truly do not believe that Mother Nature can be stopped. We have allowed the overdevelopment of our coastline (both ocean and bay), and now we are perplexed! Water will find a place to go, no matter what kind of a barrier you build. Instead of destroying whole ecosystems with artificial walls, please focus on our working along side Mother Nature. Perhaps then she'll allow us to (somewhat) contain her!

I applaud your efforts and studies.

Monica M. Shaw

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] NJBB Comments
Date: Wednesday, March 20, 2019 10:40:09 AM

-----Original Message-----
From: Kathleen [mailto[redacted]]
Sent: Wednesday, March 20, 2019 7:41 AM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] NJBB Comments

Stop wasting money trying to fight mother nature. A changing coastline and associated waterways is normal evolution.
People can not build commercial buildings or residential homes near the ocean, back bays or associated rivers and expect them to last very long. It's an unrealistic expectation. The barrier islands will slowly be submerged by the ocean due to rising sea levels, and hurricanes will wipe out properties now and then. Is what it is. If you financially can't handle the eventual loss..... don't buy or build in those areas.

Sent from Xfinity Connect Application

U.S. Army Corps of Engineers Planning Division.

To who maybe concern,

After finding the Back-Bay Report in the Sand Paper, a now you are receiving comments. I would like to discuss this with someone with some type of sense. Here's what I have been deal with at the least ten years. I would have liked to meet you guys, I would bring 2 glasses, one full one empty and a bag of sand, water displacement 101.

I moved in to Stafford 2000, but been down here since I was 8 years old on Long Beach. I can remember all the 30 and 40' boats parked behind the Beach Haven West Community. As time went on the boats got smaller and smaller, not cost, lack of water. The last 38' ocean left, stuck up dock three years, not before he had to get a petition, Stafford had to dredge 100 yard of mill creek to get him out. NutS!!

As what I've have seen, no one in the state, county, local government cares. But they will fine you for dredging, if you don't keep your bulkhead in repair [500$ a day], not having a DEP permit or township permit. I had 8 township officials, 6 state engineers over the years here. Even gets better, they spend 1000000 $ but still haven't fixed the original issue the lagoon filling in, from their standpipe.
These lagoons were built in the early 1950's I believe and never had a bit of maintenance ever since. As in depth, widening too keep channel navigable. I haven't seen any. They have been filling in ever since constructed. As I said I moved in 2000, I and the lower dock replaced a few years later, an had the sand and spoils removed to 5' at mean low tide. 4 years later filled in again from 8'by 10' route 72 storm water drain [the standpipe] has been dumping sand, oil and whatnot into their lagoon. Remember they just stated to use brie down here, it was sand and salt. In the 1990's they installed that standpipe, the lagoon was 15' deep. It's been filling in ever since, stopped the natural flow, engineered by the engineer to flush lagoon out when it rains. In 2006 had bulkhead replaced and lower dock. They clean it out to 8' at dock and 5' everywhere else [called sweeping]. 2019 high and dry at mean low, 3' high tide, you can actually watch the spoils flow from the pipe when it rains, god forbid if they are doing construction like now on rt. 72. As for the rest of Mill Creek, we scan it every time we go up and down. We know how deep it was and is now. It's filling in with decompose organic material over 80 yrs. At the mouth was around 100 yards wide, around 20' now, was 3' deep now .9 to a foot. As we plow it deeper to get in and out.
After Sandy, now the lower and upper parts, stay on the north side or you will run a ground, almost non- navigational. Can you understand how much it cost to replace a motor that sucked up the muck? How much more we pay in taxes. We even have a tax for the lagoon, two old guys in an 8' boat, they do nothing too. This township just takes never give back unless its on the backs of the residence.
Has the new mayor or Stafford township contact you with this huge problem? Have you inspected this or these areas?
I offered John Spodofora, the mayor, back than a fix, as the people want to hang him. New mayor Greg Myhre stopped by my house during election time. He thinks that state waterway belongs to the residents. Back in the day they stopped building lagoons, one, no-one took care of them, two, the environment a fancy way to say, they were not being mainted. Maybe new mayor should stick with the dog parks and play grounds an let the big boys get in here and clean out this mess.

Here's what he told me, [old mayor] he would have to geo-tube the spoils and remove to I site. The cost would be out the roof. This is what I told him, WHY. Here's the idea.
Use your dredged spoils that you removed, build a berm or levee 6' tall 10' wide, from the end of Jennings rd. to the bay to protect the homes adjacent to the marsh, cover with mat materials, dirt and

plant grass, looks natural. This would repair and maint state or fed. Waterway, also protect the home s from a 6/8' tidal surge with wind-blown waves on top. An we recycled the spoils into a protective wall. Where the removal cost would be zero. The water is not the real problem it just doesn't have anywhere to go but up, it's the waves. You need to stabilize the water. Just like the dunes on the beach.

I am sure the other water communities are the same way, so the water went up. Or as the lagoons fill in where is the water to go but up. If the depth of the original lagoons were 7', main channel 10' and now they are a foot or two, it floods.

But again, this is not our, water, or problem, 80 plus year of nothing, maybe next time they will maintain. Big job ahead of you guys. I am a field service engineer, in destruction of biohazards, human research, big pharma, you know maintain it now for a little or pay a lot to overhaul, upgrade, and replace. All governed by the law, CDC, and worst.
.
Here's another, raise your houses. He should say pay to have your home raised. Would you like to put your home three stories in the air with 120/130 mph winds and add in the pounding of waves on the first floor, must be a politician. Or the great FEMA, National flood insurance, frauding. Prorating of homeowner's properties. We pay for 250,000 and six figures for personal property. These people got 1 to 2 fifths of what it cost to replace their properties. Maybe the should prorate first and amend their premiums first, instead of letting people that paid for 250,000 of insurance think they were covered for the losses. These people paid for 20 or more years, if that matters.
He should lookoff the west coast of Africa, an old volcanic island. That's losing its west flank, when it goes, they are talking about 500 to 600' wave, the east coast.

Dredging of all waterways, lagoons, etc... are great ideas. They really need it. To changing back the water displacement due to the filling in over the last 80 years. Look at north and south inlets, every year. Come back behind my house it's like fast forward. I have it cleaned out, 5 years later its filled back in or worst, because I have no control over what they build. The shear volume of water that overflow from that stand pipe is 5 times greater than it was in 2000. [have pics]. In 1990 in flushed the corner out. Now it fills it in.
Flood gates, that's a good question, what do you do with the rain water you are going to trap behind it. Or worst if it breaches the islands. Still need some place to put the water, so here we are again. It's time for good cleaning out.

Thank you for your time,
Mr. Michael Kosteski
[redacted]
[redacted]

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] U.S. Army Corps of Engineers, New Jersey Back Bays Coastal Storm Risk Management Study
Date: Friday, March 29, 2019 3:53:34 PM

-----Original Message-----
From: David Jungblut [mailto [redacted]]
Sent: Friday, March 29, 2019 2:12 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>; Perer.R.Blum@usace.army.mil
Subject: [Non-DoD Source] U.S. Army Corps of Engineers, New Jersey Back Bays Coastal Storm Risk Management Study

From: Geologist David Jungblut

CONTACT INFO: David Jungblut, [redacted]

E-mail: [redacted] <mailto:j[redacted]>

Website: Blockedhttp://hurricanekatrinastudy.com <Blockedhttp://hurricanekatrinastudy.com/>

FEEDBACK ON POTENTIAL MEASURES:

Congratulations on finishing the first part of the New Jersey Back Bays Coastal Storm Risk Management Study. Now that you have completed the first step in your evaluation of the New Jersey coastal area, I would like to have a meeting and discuss your ideas and mine. I have been studying and think about this topic since Hurricane Katrina and I believe my views, possible technology and approaches may be benefit the overall project. I do like what I see in this study and I just believe that my life experiences can help to make the project work better.

Thank you,

David Jungblut

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] NJBB Comments
Date: Friday, March 29, 2019 3:53:47 PM

-----Original Message-----
From: Montgomery Teague [mailto [redacted]]
Sent: Friday, March 29, 2019 1:04 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] NJBB Comments

Who is going to pay for this plan? Why should the taxpayer pay for this? The taxpayer paid for the beach project and many towns discourage daily trip to the beach by not having parking, bath houses, etc. The taxpayers already funds the Federal Flood Insurance, and the beach replenishment and nourishment projects, but many of us have limited access to the beaches especially on LBI where on the north side there are plenty of private property signs.

It is time to retreat and stop wasting tax payer money. If those on barrier islands want to protect their investments, they can pay the bills.

Monty Teague

Sent from Mail <Blockedhttps://go microsoft.com/fwlink/?LinkId=550986> for Windows 10

From: Joe DiLorenzo
To: Philadelphia District Public Affairs-NAP
Subject: [Non-DoD Source] NJBB Comments
Date: Wednesday, April 3, 2019 4:14:05 PM

Most of the proposed CSRM structural alternatives (e.g., high flood walls, inlet surge barriers) will have some environmental or aesthetic impacts and may not be feasible in New Jersey's back bays. However, as some countries have learned, surge barriers may become necessary at some point, despite their relatively high cost. Thus, rather than waiting for the ensuing feasibility study to either reject or accept the proposed surge barrier alternatives, I would like to propose that their designs be modified (i.e., "tweaked") to minimize potential environmental impacts.

As you know, the currently designed surge barriers are generally linear structures that include some impermeable barriers/supports that will impede inlet flows and reduce the entrance area. This will likely cause local impacts (e.g., increased scour, increased tidal dissipation) as well as back-bay impacts (e.g., attenuated tidal ranges, increased residence times, increased algal blooms, decreased vertical mixing, increased sediment accumulation, etc.). However, if the proposed surge barriers were elongated and curved inside the entrance (i.e., concave shaped), the resulting reduction in entrance area may be smaller, and the aforementioned impacts may be mitigated to some extent. Of course, the longer the barriers the greater the construction costs, and such costs may not be justified at the present time. Nevertheless, the proposed modifications are worth considering because you may need to adapt to future storm conditions that are worse than presently anticipated.

Accordingly, I would like to request that additional engineering and modeling analyses be conducted for modified (i.e., elongated and curved) surge barrier designs that will effectively decrease the existing entrance areas by progressively smaller percentages (e.g., by only 30%, 20%, 10%, 5%, etc.). I realize that this may require some "outside-the-box" design engineering. Nevertheless, it may result in a more environmentally acceptable alternative that may be implemented now or reserved for the future.

Joseph L. DiLorenzo, Ph.D., CFM

Senior Scientist

Najarian Associates

[redacted]

[redacted]

[redacted]

From: Philadelphia District Public Affairs-NAP
To: Rochette, Stephen V CIV USARMY CENAP (US)
Subject: FW: [Non-DoD Source] NJ Back Bays Coastal Storm Risk Management Study Comments
Date: Friday, March 8, 2019 10:58:38 AM

-----Original Message-----
From: Bbsailor [mailto [redacted]]
Sent: Thursday, March 07, 2019 7:53 PM
To: Philadelphia District Public Affairs-NAP <PDPA-NAP@usace.army.mil>
Subject: [Non-DoD Source] NJ Back Bays Coastal Storm Risk Management Study Comments

Hello,

I have sailed Barnegat Bay for over 25 years and have observed many weather conditions and patterns that your study should consider.

The normal tide range in the back bay is about 6 to 7 inches per tide change, ranging about three hours later than the ocean time. Since the bulk of the water in the Barnegat Township coastal area comes through Barnegat Inlet, only about 5 percent of the bay volume change flows in to raise the tide in 6 hours and then out again for another 6 hours. This occurs about twice in any one 24 hour period. During northeast storms of prevailing winds the above pattern is changed and the wind keeps pushing in more water even when it would normally be flowing out. This adds 12 to 14 inches of higher water for each day that this northeast weather condition exists. Three day northeast weather conditions create minimal flooding as the water is near the tops of the bulkheads, however 5 day northeast events create major flooding.

Your study needs to address what would happen if Barnegat Inlet or other inlets had their gates closed and the barrier island were breached by large waves thus pushing much more water into the back bay than normally flows in. If the gates were closed, the water in the back bay would rise but could not escape until the gates were open. Adding rain runoff from mainland drainage and this back bay level could get abnormally high. I saw no emphasis in you study to create high volume pump out stations to get the water out of the back bay and into the ocean. In the event of power failure this high volume pump out capability needs to have an alternate power source to not lock high levels of water in the back bays when the inlet gates are deployed or closed.

I hope this gives you another perspective to consider.

Thanks for the chance to comment.

Joseph J. Rogowski
[redacted]

Sent from my iPad

4. A determination has been made that Poland can provide substantially the same degree of protection for the sensitive technology being released as the U.S. Government. This sale is necessary in furtherance of the U.S. foreign policy and national security objectives outlined in the Policy Justification.

5. All defense articles and services listed in this transmittal are authorized for release and export to the Government of Poland.

[FR Doc. 2019–27133 Filed 12–16–19; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF DEFENSE

Department of the Army, Corps of Engineers

Notice of Intent To Prepare a Tiered Environmental Impact Statement for the New Jersey Back Bays Coastal Storm Risk Management Feasibility Study

AGENCY: U.S. Army Corps of Engineers, DoD.

ACTION: Notice of intent.

SUMMARY: Pursuant to the requirements of the National Environmental Policy Act (NEPA), the U.S. Army Corps of Engineers, Philadelphia District (Corps) is preparing an integrated Feasibility Report/Tiered Environmental Impact Statement (EIS) for the proposed New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study. The study is assessing the feasibility of coastal storm risk management alternatives to be implemented within the authorized study area with a specific emphasis on the back bay areas along the New Jersey Atlantic Coast extending from Cape May Inlet to Shark River Inlet including the NJ Coastal Lakes Area.

DATES: Comments and suggestions must be submitted by January 16, 2020.

ADDRESSES: Pertinent information about the study can be found at: *https://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Study/*. Interested parties are welcome to send written comments and suggestions concerning the scope of issues to be evaluated within the Tiered EIS to Steven D. Allen, Environmental Resources Branch, Planning Division, U.S. Army Corps of Engineers, Philadelphia District. Mail: Steven D. Allen, U.S. Army Corps of Engineers, Philadelphia District, CENAP–PL–E, Wanamaker Building, 100 Penn Square East, Philadelphia, PA 19107–3390; phone: (215) 656–6559; email: *Steven.D.Allen@usace.army.mil.*

FOR FURTHER INFORMATION CONTACT: Questions about the overall NJBB study should be directed to J.B. Smith, Project Manager, U.S. Army Corps of Engineers, Philadelphia District, Planning Division, Project Development Branch. Mail: J.B. Smith, U.S. Army Corps of Engineers, Philadelphia District, CENAP–PL–PC, Wanamaker Building, 100 Penn Square East, Philadelphia, PA 19107–3390; Phone: (215) 656–6579; email: *J.B.Smith@usace.army.mil.*

SUPPLEMENTARY INFORMATION:

1. Background

The U.S. Army Corps of Engineers (Corps), in partnership with the New Jersey Department of Environmental Protection (NJDEP), as the non-federal sponsor, are undertaking this study. The NJBB CSRM Feasibility Study area is one of 9 focus areas with vulnerable coastal populations identified in the North Atlantic Coast Comprehensive Study (NACCS). The NACCS was conducted in response to Public Law 113–2 and the Water Resource and Reform Development Act (WRRDA) of 2014 following the devastation in the wake of Hurricane Sandy, which greatly affected the study area in October of 2012. The purpose of the NJBB CSRM Feasibility Study is to identify comprehensive CSRM strategies to increase coastal resilience, and to reduce flooding risk from future storms and impacts of sea level change. The objective of the Study is to investigate CSRM problems and solutions to reduce damages from coastal flooding that affect population, critical infrastructure, critical facilities, property, and ecosystems. The authority for the proposed project is the resolution adopted by the U.S. House of Representatives Committee on Public Works and Transportation and the U. S. Senate Committee on Environment and Public Works dated December 1987. A Feasibility Cost Sharing Agreement (FCSA) was executed in 2016 with the NJDEP.

2. Study Area

The study area encompasses approximately 950 square miles located behind the New Jersey barrier islands of Monmouth, Ocean, Burlington, Atlantic and Cape May Counties, and includes the set of interconnected water bodies and coastal lakes that are separated from the Atlantic Ocean.

3. Corps Decision Making

As required by Council on Environmental Quality's Principles, Requirements and Guidelines for Water and Land Related Resources Implementation Studies all reasonable alternatives to the proposed Federal action that meet the purpose and need will be considered in the Tiered EIS. Tiering, which is defined in 40 CFR 1508.28, is a means of making the environmental review process more efficient by allowing parties to ''eliminate repetitive discussions of the same issues and to focus on the actual issues suitable for decision at each level of environmental review'' (40 CFR 1502.20). The Study will consider the full array of structural, non-structural, and natural and nature-based measures, and will consider past, current, and future coastal storm risk management and resilience planning initiatives and projects underway by the USACE and other Federal, State, and local agencies.

4. Public Participation

The Corps and the NJDEP hosted two agency workshop meetings in June 2017, with representatives from federal and state agencies, counties, municipalities, non-governmental organizations (NGOs), elected officials and academia. The Corps initially announced the preparation of an integrated Feasibility Report/EIS for study in the December 27, 2017 **Federal Register**. Two public NEPA scoping meetings were later held in the southern and northern regions of the study area in September 2018. Subsequent to the publication of the December 27, 2017 NOI, the Study was granted an exemption from the requirement to complete the feasibility study within 3 years, as required in Section 1001(a) of the Water Resources Reform and Development Act of 2014. This exemption was granted on October 31, 2018 on an interim basis, and allowed for an additional 17 months to complete the Draft Integrated Feasibility Report and Tier 1 EIS. Therefore, in order to align the revised study schedule with Executive Order 13807, Notice to Withdraw the original NOI was published in the February 20, 2019 **Federal Register**. To further provide the public with study information, an Interim Feasibility Report and Environmental Scoping Document was released on February 28, 2019 that identified the preliminary economic, environmental, engineering and other studies performed to date of the above referenced alternatives. This report presented the selection of a focused array of alternatives for further evaluation. A webinar was later held on March 14, 2019 to present the findings of the report and to solicit comments from the general public and stakeholders. In addition, comments,

concerns and information submitted to the Corps are being evaluated and considered during the development of the Draft EIS. Comments received are continuing to aid the study progress and included in the draft report and will be part of the administrative record

5. Lead and Cooperating Agencies

The U.S. Army Corps of Engineers is the lead federal agency for the preparation of a Tiered EIS in order to meet the requirements of the NEPA and the NEPA Implementing Regulations of the President's Council on Environmental Quality (40 CFR 1500–1508). The following agencies have accepted the invitation to be Cooperating Agencies: The U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the National Marine Fisheries Service. The preparation of a Tiered EIS will be coordinated with New Jersey State and local municipalities with discretionary authority relative to the proposed actions. The Draft Integrated Feasibility Report/Tiered EIS is currently scheduled for distribution to the public in March of 2020.

Dated: December 9, 2019.

Jeffrey L. Milhorn,

Major General, U.S. Army, Commander, North Atlantic Division.

[FR Doc. 2019–27122 Filed 12–16–19; 8:45 am]

BILLING CODE 3720–58–P

DEPARTMENT OF EDUCATION

[Docket No.: ED–2019–ICCD–0154]

Agency Information Collection Activities; Comment Request; Foreign Gifts and Contracts Disclosures

AGENCY: Department of Education (ED), Office of the General Counsel (OGC)

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, ED is requesting the Office of Management and Budget (OMB) to conduct an emergency review of a new information collection.

DATES: Approval by the OMB has been requested by January 2, 2020. Interested persons are invited to submit comments on or before December 27, 2019.

ADDRESSES: To access and review all the documents related to the information collection listed in this notice, please use *http://www.regulations.gov* by searching the Docket ID number ED–2019–ICCD–0154. Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting the Docket ID number or via postal mail, commercial delivery, or hand delivery. If the *regulations.gov* site is not available to the public for any reason, ED will temporarily accept comments at *ICDocketMgr@ed.gov.* Please include the docket ID number and the title of the information collection request when requesting documents or submitting comments. *Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted.* Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Strategic Collections and Clearance Governance and Strategy Division, U.S. Department of Education, 400 Maryland Ave. SW, LBJ, Room 6W–208D, Washington, DC 20202–4537.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Hilary Malawer, Deputy General Counsel, 202–401–6148.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Foreign Gifts and Contracts Disclosures.

OMB Control Number: 1801–NEW.

Type of Review: A new information collection.

Respondents/Affected Public: Private and Public Institutions of Higher Education (IHEs).

Total Estimated Number of Annual Responses: 400.

Total Estimated Number of Annual Burden Hours: 8,000.

Abstract: Section 117 of the Higher Education Act of 1965 (HEA), as amended, provides that institutions of higher education must file a disclosure report with the Secretary of Education under the following circumstances: Whenever any institution is owned or controlled by a foreign source or receives a gift from or enters into a contract with a foreign source, the value of which is $250,000 or more, considered alone or in combination with all other gifts from or contracts with that foreign source within a calendar year, the institution shall file a disclosure report with the Secretary on January 31 or July 31, whichever is sooner. (see *https://www.govinfo.gov/content/pkg/USCODE-2017-title20/pdf/USCODE-2017-title20-chap28-subchapI-partB-sec1011e.pdf*).

This collection of information is necessary to implement 20 U.S.C. 1011f.

Dated: December 13, 2019.

Stephanie Valentine,

PRA Coordinator, Strategic Collections and Clearance, Governance and Strategy Division, Office of Chief Data Officer.

[FR Doc. 2019–27262 Filed 12–13–19; 4:15 pm]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Applications for New Awards; Fulbright-Hays Group Projects Abroad Program

AGENCY: Office of Postsecondary Education, Department of Education.

ACTION: Notice.

SUMMARY: The Department of Education is issuing a notice inviting applications for fiscal year (FY) 2020 for the Fulbright-Hays Group Projects Abroad (GPA) Program, Catalog of Federal Domestic Assistance (CFDA) number 84.021A and 84.021B. This notice relates to the approved information collection under OMB control number 1840–0792.

DATES:

Applications Available: December 17, 2019.

Deadline for Transmittal of Applications: February 18, 2020.

Pre-Application Webinar information: The Department will hold a pre-application meeting via webinar for prospective applicants. Detailed information regarding this webinar will