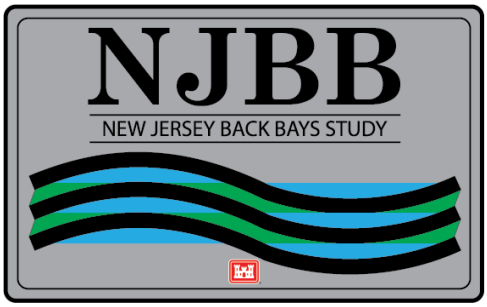
CORRESPONDENCE AND COMMUNICATION APPENDIX

NEW JERSEY BACK BAYS COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY

PHILADELPHIA, PENNSYLVANIA

APPENDIX E (Abbrievated)

March 2020



E-1) AGENCY COORDINATION AND COLLABORATION PLAN

Background

The New Jersey coastline is a complex and vulnerable system that provides substantial value to the nation. The New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study will identify critical data needs to develop and recommend a comprehensive strategy for improving preparedness and reducing coastal storm flood risk through structural and/or nonstructural measures. The United States Army Corps of Engineers (USACE) and the New Jersey Department of Environmental Protection (NJDEP) are working with local, state and Federal agencies as well as stakeholders to achieve a shared vision that will continue to support a vibrant economy, cultivate resilient communities and encourage a healthy ecosystem.

Hurricane Sandy impacted the New Jersey Coastline in October of 2012. In response to the storm, Congress passed PL 113-2 (The Disaster Relief Appropriations Act, of 2013). This act provided funds for the North Atlantic Comprehensive Study (NACCS) that was tasked with identifying coastal communities at risk from hurricane and storm damages. In support of this goal, the NACCS identified nine high risk areas on the Atlantic Coast for an in-depth feasibility level study based on preliminary analyses.

The NJBB CSRM Study is one of the high risk areas severely impacted by Hurricane Sandy that warrants an in-depth investigation into potential coastal storm risk management solutions. The study is evaluating alternatives, including the No Action Alternative, to determine if a recommendation in the Federal interest to manage the risk from coastal storm flooding can be made.

The NJBB CSRM study area is located landward of the New Jersey barrier islands of Monmouth, Ocean, Atlantic and Cape May Counties and includes the set of interconnected water bodies that are separated from the Atlantic Ocean. The non-Federal sponsor for this study is the NJDEP and the original $3,000,000 feasibility study was initiated in April of 2016 with the signature of the Feasibility Costs Sharing Agreement between the NJDEP and the USACE. Given the complexities and scale of the study, subsequent cost sharing agreements have been signed that have increased the study costs based on the complexity of the study area and the level of work to make a recommendation for a CSRM project. Current time and cost estimates for completing this study are $18,050,000 over a six-year period beginning in April of 2016. A study schedule is provided in

and the USACE and the NJDEP are scheduled to conclude the study in the form of a Chief of Engineers Report in April of 2022.

USACE will continue to work with NJDEP and others to develop a comprehensive characterization of the entire NJ bay coastline for the purpose of identifying Federal interest in examining the feasibility for recommendations for CSRM coastal storm damage risk management projects within the NJ Back bays.

Introduction

The purpose of the USACE NJBB CSRM Feasibility Study is to evaluate strategies to increase resilience and preparedness, and to reduce risk from future storms and the future impacts of sea level change (SLC). The objective of the NJBB CSRM Feasibility Study is to investigate CSRM problems and solutions to reduce damages from coastal flooding affecting communities, critical infrastructure, critical facilities, property, and ecosystems.

The end product of this study will be a comprehensive CSRM Feasibility Report and Environmental Impact Statement for the NJBB developed amongst the USACE Vertical Team, decision makers, elected officials and coastal community stakeholders. With this approach, the NJBB study will align with broader climate change preparedness and adaptation, community resilience planning, and sustainability principles coupled with the ongoing systems approach to geomorphic engineering practices currently being incorporated into USACE Civil Works planning processes.

Communications Goals

The Communication Goals of the NJBB Study are summarized by seven succinct messages.

1. Provide timely and accurate information about the study
2. Socialize and communicate the potential coastal storm risk management measures designed to increase safety and reduce storm damage and associated risk and uncertainty
3. Inform and educate the public and local officials about potential long-term resolutions, including findings of the NJBB Study
4. Provide timely and relevant information to targeted audiences that demonstrates the USACE is a partner with the expertise and commitment to continuing to protect residents along the NJ coast
5. Elicit internal/external feedback throughout the study period
6. Build relationships, promote transparency, understanding, commitment and action to encourage community participation
7. Be honest, transparent, effective and professional

Throughout this study, the Project Delivery Team (PDT) and Communication Team will communicate with the public in a transparent manner, providing maximum disclosure with minimal delay. The Communication Team will use illustrative language to address the important points and provide the public with an understanding of the importance of the NJBB CSRM Feasibility Study.

To reach these goals, the Communication Team will abide by the following guidelines.

- Engage in meaningful collaboration with stakeholders and communities through partnering and communication, face to face meetings, webinars, email inquiries and videos
- Increase situational awareness of the NJBB CSRM project's goals and economic impact
- Share information about how the PDT is using the best available scientific information to make sound recommendations
- Actively communicate information about the study schedule and findings
- Proactively lead public dialogue about the USACE and NJDEP coastal mission

- Reduce misconceptions, misinformation or distractions that could negatively impact efficiency or effectiveness

Plan Overview

The NJBB CSRM Feasibility Study Communications and Outreach Plan (CoOP) has been developed to coordinate with Federal agencies and state, local and tribal officials, academic institutions, private non-profit organizations and the international community to ensure the development of a shared vision for community coastal resilience in a systems context and to ensure consistency with other plans, projects and programs. The goal of this CoOP is to increase the opportunities for stakeholders to understand the purpose, outcomes, and technical products of the NJBB Study. Events include USACE-facilitated workshops, NEPA coordination meetings and webinars on key study topics.

This CoOP outlines the communication goals and approach, stakeholders, outreach efforts with overview, and a summary of key outreach efforts. NJBB CSRM Feasibility Study reading material, talking points, and FAQs are included in Appendix A.

Internal and External Project Communications

Target audiences can be divided into two groups:

1. Vertical Team stakeholders within USACE, NJDEP and the Back Bay Region Communities, the Planning Mentor and Risk Champion, Agency Technical Review and Independent External Peer Review teams, ad-hoc technical advisory committees and/or workgroups, and cooperating and participating Federal agencies and;
2. External stakeholders, including the public, elected officials, media outlets, civic leaders, and businesses, as well as Federal, state, and local regulatory agencies.

1. Internal Communications Plan: Due to the large study scope, the Assistant Secretary of the Army – Civil Works (ASA-CW) recommended that the NJBB CSRM Feasibility Study develop reporting and communications requirements in his recent October of 2018 exemption approval memorandum. For internal communications the project development team and the Vertical Team are proposing the development of a Risk Panel, creations of a new Supplemental Governance Structure, and the continuation of the internal Focus Area Meetings.

Risk Panels - With direction and oversight provided by its higher headquarters, the USACE Philadelphia District will conduct a Risk Panel within 30 days of the receipt of comments of both the Draft Interim Report and the Draft Feasibility Report. These reports are scheduled to be released for public review and Agency Technical Review in March of 2019 and March of 2020, respectively. A public meeting or webinar will be held to present the content of each Draft Report and its role in the study process. The contents of the public meeting as with all public meetings and webinars will be archived on the study web portal. There will be 30 days to review the Draft Interim Report and 45 days to review the Draft Feasibility Report and each report will be posted online for the general public to download. The Risk Panel will meet after the receipt of comments on the draft report(s) to discuss how the study will move forward with the feasibility analysis to the development and release of the Final Feasibility Report in November 2021. The Risk Panel will focus on identification and analysis of significant study risks, the plan to respond to those risks, and methods that will be employed to manage/control

those risks. For the panel, the study team will provide substantial detail on the strategy to identify a Tentatively Selected Plan and will analyze potential reductions in scope, schedule, and budget for the remainder of the study. The panel will include all pertinent members of the Vertical Team.

Supplemental Governance Structure - The USACE Philadelphia District will immediately implement a 3-tier supplemental governance utilizing the template in the Coastal NJ Protection and Restoration Feasibility Study, Addendum to Project Management Plan dated 06 January 2016.

This governance structure will facilitate conflict resolution and ensure successful partnering at all levels of the organizations. The following three tiers will be responsible for project oversight and ensuring successful project execution.

Tier 1: The Executive Leadership Team: *Tier 1 Members are responsible for executive level coordination to ensure resource availability and project execution. The Chair will ensure distribution of the quarterly updates or other important materials to appropriate team members. Meetings will occur as scheduled by the chair.*

Tier 2: The Business Process Assurance Team: *Members are responsible for engaging at the senior district and PCX level (GS-15) and assuring that appropriate business processes are employed. The Chair will ensure distribution of the quarterly updates or other important materials to appropriate team members. Meetings will be as scheduled by the chair.*

Tier 3: The Active Management Team: *Members are responsible for engaging at the middle management level providing direct project oversight to assist with project implementation and to inform Tier 1 and 2 decision makers. The Chair will ensure distribution of the monthly meeting brief, quarterly updates, or other important materials to appropriate team members. Meetings will be held at least monthly after district Project Review Board and as scheduled by the chair.*

Focus Area Evaluation (FAE) meetings – These meetings will be organized by the USACE North Atlantic Division in Brooklyn, New York and will include the HQUSACE Regional Integration Team, the Policy Review Team, USACE North Atlantic Division staff, and the PDT. Meetings will be held quarterly or before critical project decisions, whichever is appropriate, and will detail recent plan evaluation results, decisions to be made, schedule and budget performance, and 6 month projection of activities. Currently these meetings are held bi-weekly (every two weeks) with Philadelphia District, USACE North Atlantic Division staff and the HQ RIT.

Senior Executive Accountability – This leader is accountable to the Director of Civil Works for project/program success. He will provide guidance and mentoring to the PDT. The Senior Executive will provide written quarterly updates and a briefing by the Deputy District Engineer will be provided to the USACE North Atlantic Division Programs Director that detail the following:

1. *Graphical depiction of the project baseline;*
2. *Financial data indicating the status of funds obligated, expended, and anticipated;*
3. *A summary level update report on any outstanding issues identified;*
4. *An over-arching roll-up of the above items at the program level; and,*

5. *A projected look at upcoming milestones, significant developments, outreach events, and FAE meetings.*

Project Delivery Team (PDT): An enterprise solution to staffing the study has been employed. Team members currently include experts from the USACE Philadelphia and New York Districts, the USACE Engineering Research and Development Center, and an Architecture/Engineering firm. In addition to PDT members, advisors from across USACE have been engaged to ensure the highest level of technical quality. Team members from the NACCS team have been engaged to help scope this complex and large scale regional study. Staff from the USACE Coastal Storm Risk Management Community of Practice, the Climate Community of Practice and the Cost Engineering Center of Expertise are engaged in the Study to review and critique methods and application. While this project may be managed from within North Atlantic Division, the PDT is truly an enterprise service made up of the best and brightest from USACE and the private sector.

PDT meetings are held on a weekly basis, with issue-specific ad-hoc meetings held more frequently. Face-to-face meetings, phone calls, teleconferences, webinars, video chats, and emails are employed to facilitate PDT communication**.**

2. External Communications Plan: External communications with the public will be maintained through direct interaction at public meetings, maintaining a robust website and a mailing list to distribute project updates, upcoming milestones and upcoming public events to people who have signed up to receive these communications.

Communications and Outreach Plan (CoOP): As part of the CoOP (included herein), the Philadelphia District has developed and maintained an, public website that details study progress, communication opportunities, and solicitation of feedback. Stakeholder, Congressional, and public outreach opportunities will be delineated and dates for future meetings will be established. This document will serve as the CoOP for the NJBB Feasibility Study.

Methods & Tools

Public Meetings
Face-to-face meetings are necessary to meet communication objectives. Public meetings are held periodically. The PDT works with elected officials and stakeholder groups to advertise meetings. A list of previously held public meeting is provided in Table 2. In addition, videos of previous public meetings have been posted on the study webpage for those who were unable to attend in person

News Releases
The PDT writes and disseminates news releases and media advisories to targeted media outlets. USACE leadership will continue to discuss the study via radio and television interviews on programs whose audience demographics align with target audiences. News releases will be sent prior to public meetings and the release of publicly- available reports.

Emails
The PDT has set up an email distribution list with over 500 email addresses for elected officials, regulatory agencies, stakeholder groups, and residents.

Study Webpage
The PDT has launched a dedicated webpage with a simple, visually-compelling layout that provides quick access to study updates, fact sheets, reports, maps, public comment forms, a project fact card and a project fact sheet, past presentations and poster boards, and other online resources. In addition, videos of previous public meetings have been posted for those who were unable to attend in person. The website is located at:

https://www.nap.usace.army.mil/Missions/Civil-Works/New-Jersey-Back-Bays-Coastal-Storm-Risk-Management/

Study Email Address
The PDT has set up the study email address PDPA-NAP@USACE.ARMY.MIL to receive emails from the public.

Small Group Meetings
The PDT has met with residents in small group meetings to learn about hyper-local problems and opportunities. Generally, the project planner, project manager, and/or coastal engineer will be toured through neighborhoods by residents and community groups. The PDT remains available to meet in such a way.

Public Outreach and Feedback

Communication is critical to study success and the team wants to communicate study goals and objectives, study schedule and findings to date to the public, and also wants the public to be able to voice their concerns to us. That is why all public meetings have had a Public Comment form printed out and available to return to the meeting organizers as well as a location on the Philadelphia District website where people can communicate their problems directly to a PDT member.

A series of public meeting will be held to share information and analyses associated with the release of the draft feasibility Report and Tentatively Selected Plan Milestone Meeting in the period from December 2019 to March 2020.

These forms are on the NJBB website below.
https://www.nap.usace.army.mil/Portals/39/docs/Civil/NJBB/Public-Comment-Form-Sept-2018.pdf

Summary of Past Public Outreach-

https://www.nap.usace.army.mil/Portals/39/docs/Civil/NJBB/NJBB%20Public%20Outreach%20Summary.pdf

Stakeholder Coordination

Coordination with stakeholders has been a critical component of the Study and the development of a regional vision for managing coastal storm risk. Table 1 documents the meetings,

workshops, and charrettes that have taken place since the commencement of the study in April of 2016. Stakeholders, as presented below, include but are not limited to, citizens, elected municipal officials, federal agencies, state agencies, non-profit environmental organizations, local and regional planning commissions, and commercial and recreational interests.

Partner/Sponsor:
Study Sponsor:
New Jersey Department of Environmental Protection
Division of Coastal Engineering
1510 Hooper Avenue
Toms River, NJ 08753
PH: (732) 255-0770
FX: (732) 255-0774

Cooperating Agencies:
United State Army Corps of Engineers - USACE
United States Environmental Protection Agency - USEPA
United States Fish and Wildlife Service - USFWS
National Marine Fisheries Service - NMFS

Stakeholders:

Monmouth County	City of Cape May	City of Long Branch
Ocean County	Borough of Cape May Point	Borough of Manasquan
Atlantic County	Township of Dennis	Borough of Neptune City
Cape May County	Township of Lower	Township of Neptune
City of Absecon	Township of Middle	Township of Ocean
City of Atlantic City	City of North Wildwood	Borough of Sea Girt
City of Brigantine	City of Ocean City	Borough of Spring Lake
City of Corbin City	City of Sea Isle City	Bor. of Spring Lake Heights
City of Egg Harbor City	Borough of Stone Harbor	Township of Wall
Township of Egg Harbor	Township of Upper	Borough of West Long Branch
City of Estell Manor	Borough of West Cape May	Borough of Barnegat Light
Township of Galloway	Borough of West Wildwood	Township of Barnegat
Township of Hamilton	City of Wildwood	Borough of Bay Head
City of Linwood	Borough of Wildwood Crest	Borough of Beach Haven
Borough of Longport	Borough of Woodbine	Borough of Beachwood
City of Margate City	Borough of Allenhurst	Borough of Barnegat Light
Township of Mullica	City of Asbury Park	Township of Barnegat
City of Northfield	Borough of Avon-by-the-Sea	Borough of Bay Head
City of Pleasantville	Borough of Belmar	Borough of Beach Haven
City of Port Republic	Borough of Bradley Beach	Borough of Beachwood
City of Somers Point	Borough of Brielle	Township of Berkeley
City of Ventnor City	Borough of Deal	Township of Brick
Township of Weymouth	Township of Howell	Township of Eagleswood
Township of Bass River	Borough of Interlaken	Borough of Harvey Cedars

Township of Washington
Borough of Avalon
Township of Lakewood
Borough of Lavallette
Twp. of Little Egg Harbor
Township of Long Beach
Borough of Mantoloking
Borough of Ocean Gate
Township of Ocean
Borough of Pine Beach
Bor. of Point Pleasant Beach
Borough of Point Pleasant
Borough of Seaside Heights
Borough of Seaside Park
Borough of Ship Bottom
Borough of South Toms Riv.
Township of Stafford
Borough of Surf City
Township of Toms River
Borough of Tuckerton
Borough of Lake Como
Village of Loch Arbour
Borough of Island Heights
Township of Lacey

A more complete list of stakeholders that also contains an email distribution list is maintained by the Public Affairs office and the Project Manager. This list contains over 500 contacts obtained at past public workshops/meetings listed in Table 1 and is and will be used to distribute mass mailings on upcoming project milestones, report releases, upcoming events and will not be provided as input to the COOP plan for privacy reasons.

Table 1: Stakeholder, Public and Agency Coordination Meetings

Session	Date	Description	Stakeholders
Southern Counties Planning Workshop	06/17/2016	Obtain feedback about Problems, Objectives, and Potential Measures within the NJBB CSRM Study Area	Academia, Elected Officials, NGOs, Municipalities, Counties, State and Federal Agencies
Northern Counties Planning Workshop	06/21/2016		
Public Meeting	12/01/2016	First Public Meeting about the NJBB CRSM Feasibility Study	
USACE/NJDEP Partnering Meeting	03/06/2018	NJBB Study overview with several NJDEP Divisions	USACE and NJDEP
USACE & NJDEP Outreach Meeting	05/18/2018	Cape May County Municipal Outreach	Academia, Elected Officials, NGOs, Municipalities, Counties, State and Federal Agencies
USACE & NJDEP Outreach Meeting	05/24/2018	Atlantic County Municipal Outreach	

Session	Date	Description	Stakeholders
USACE & NJDEP Outreach Meeting	05/31/2018	Monmouth County Municipal Outreach	
Interagency Regulatory Resource Meeting (#1)	06/06/2018	NJBB Status Update and Perimeter Plan Focus	State and Federal Agencies
USACE & NJDEP Outreach Meeting	06/19/2018	Ocean County Municipal Outreach	Academia, Elected Officials, NGOs, Municipalities, Counties, State and Federal Agencies
Southern Counties Public Meeting	09/12/2018	Update citizens about Problems, Objectives, and Potential Measures within the NJBB CSRM Study Area	Academia, Elected Officials, NGOs, Municipalities, Counties, State, Federal Agencies and Media
Northern Counties Public Meeting	09/13/2018		
USACE Outreach Meeting	11/13/218	Barnegat Bay Estuary Program	Academia, NGOs, State and Federal Agencies
Interagency Regulatory Resource Meeting (#2)	11/29/2018	NJBB Status Update and Perimeter Plan Focus	State and Federal Agencies
Public Webinar	3/14/2019	Draft Interim Report Overview	Academia, Elected Officials, NGOs, Municipalities, Counties, State, Federal Agencies and Media
USACE Outreach Meeting	3/20/2019	Barnegat Bay Estuary Program	Academia, NGOs, State and Federal Agencies
USACE Cooperating Agency Webinar	4/24/2019	Initial webinar with Cooperating Agencies	USFWS, NOAA, USEPA
Nonstructural Working Group Meeting	5/17/2019	Convene State and Federal Agencies that partner in NJ nonstructural flood risk management activities to share information, ideas and help guide implementation activities.	USACE, NJDEP (Flood Control, Coastal Engineering), NJOEM, FEMA Region 2, NJ Governor's Office of Recovery & Rebuilding
NNBF Workgroup Teleconference	5/21/2019	Working meeting to discuss the application and implementation of NNBFs in the NJBB study area	USACE, NJDEP, TNC, Jacques Cousteau National Estuarine Reserve, Wetlands Institute, Barnegat Bay Partnership
Environmental Impact Assessment for USACE Coastal Storm Risk	6/6/2019	Demonstrate and discuss Conceptual Ecological Impact Model	State and Federal Agencies

Session	Date	Description	Stakeholders
Management Studies Meeting			
USACE Cooperating Agency Webinar	6/26/2019	Regularly scheduled quarterly webinar with Cooperating Agencies	USFWS, NOAA, USEPA
Barnegat Bay Partnership Advisory Committee	7/9/2019	Science and Technical Advisory Committee (STAC) Status meeting	Barnegat Bay Partnership
USACE Cooperating Agency Webinar	7/31/2019	Regularly scheduled quarterly webinar with Cooperating Agencies	USFWS, NOAA, USEPA
USACE Cooperating Agency Webinar	8/28/2019	Regularly scheduled quarterly webinar with Cooperating Agencies	USFWS, NOAA, USEPA
NNBF Workgroup Teleconference	9/9/2019	Working meeting to discuss the application and implementation of NNBFs in the NJBB study area	USACE, NJDEP, TNC, Jacques Cousteau National Estuarine Reserve, Wetlands Institute, Barnegat Bay Partnership
Brigantine Community Rating System Users Group	9/12/2019	Working meeting to discuss the NJBB Study and coastal resilience applications with the City of Brigantine	City of Brigantine
USACE Cooperating Agency Status Meeting	9/25/2019	Regularly scheduled status meeting with Cooperating Agencies	USFWS, NOAA, USEPA
Ecological Impact Modeling Preliminary Findings Stakeholder Meeting for USACE Coastal Storm Risk Management Studies Meeting	11/14/2019	Demonstrate and discuss Ecological Impact Model	State and Federal Agencies
Atlantic City Community Rating System Users Group	11/20/2019	Working meeting to discuss the NJBB Study and coastal resilience applications with the City of Atlantic City	City of Atlantic City
USACE Cooperating Agency Webinar	11/27/2019	Regularly scheduled quarterly webinar with Cooperating Agencies	USFWS, NOAA, USEPA

Session	Date	Description	Stakeholders
Coastal Coalition	12/5/2019	Working meeting to discuss the NJBB Study and coastal resilience applications with the Coastal Coalition	Coastal Coalition including elected, planners and engineers from individual municipalities in southern New Jersey
Ocean County Community Rating System Users Group	12/19/2019	Working meeting to discuss the NJBB Study and coastal resilience applications with Ocean County	Ocean County
NJBB OFD Meeting w/ NOAA Fisheries and NAD	12/20/2019	Working meeting to discuss the NJBB One Federal Decision path forward and scheduling	NOAA Fisheries
NJBB OFD Meeting w/ USFWS and NAD	12/23/2019	Working meeting to discuss the NJBB One Federal Decision path forward and scheduling	USFWS

A variety of stakeholders have been identified that will be interested in the conduct of the NJBB Study. These groups include:

- Federal and State Agencies
- Regional entities and non-governmental agencies
- Tribes
- Academia
- Communities affected by Hurricane Sandy (including local governments and community groups)
- Congressional and Political Leaders
- Media

Federal agency stakeholders include USACE (Institute of Water Resources, Engineering Research and Development Center, Sliver Jackets), FEMA, USGS, NOAA (NWS and NMFS), USDOI, USDA/NRCS, HUD, BOEM, NASA, SBA, USFWS, USEPA, and NPS. State agency stakeholders include NJDEP, NJDOT, NJOEM, NJ Department of Community Affairs (CDBG), NJSHPO and NJFWS. Private Non-Profit organizations include TNC, NFWF, Barnegat Bay Partnership, Rockefeller Foundation, Jacques Cousteau National Estuarine Research Reserve, NJ Adapt, American Littoral Society, Sustainable Jersey, and the Trust for Public Lands. Future stakeholder meetings will be coordinated around the TSP milestone, the release of the draft report and the release of the final report.

Future coordination and outreach for the NJBB CSRM Feasibility Study will include:

- Two public meetings with the general public, and regional stakeholders associated with the release of the Draft Feasibility Report to discuss the findings/progress of the study to date;
- Environmental agency coordination meetings to be held on a monthly basis;
- Cooperating agency meetings to be held on a quarterly basis;
- Environmental Conceptual Model meeting with resource agencies to be held in May 2019 and;
- Regular updates to the NJBB web portal.

APPENDIX A. KEY MESSAGES AND FAQS

NEW JERSEY BACK BAYS COASTAL STORM RISK MANAGEMENT FEASIBILITY STUDY

KEY MESSAGES

1) Study Purpose & Problem - Historic storms have severely impacted the Back Bay communities of coastal New Jersey. The study area includes nearly 3,500 miles of shoreline with more than 180,000 structures, many of which are vulnerable to flooding and impacts associated with sea level change. USACE is committed to studying potential solutions to this complex problem in New Jersey.

2) Managing Risk: No coastal storm risk management project can eliminate the risk of flooding. The study is looking at measures that can cost-effectively ***reduce*** the risk of damages from coastal flooding that affects population, critical infrastructure, critical facilities, property, and ecosystems.

3) Difficult Choices and Shared Responsibility: Managing flood risk in the New Jersey Back Bays Study area is a highly complicated endeavor from an economic, environmental and engineering standpoint. It will require difficult choices and involve all levels of government and society at large.

4) Collaboration, Environmental & Future Process: The study is being conducted in collaboration with Federal agencies, the state of New Jersey, local government, non-profit organizations, academia and other stakeholders to ensure the development of a shared vision of coastal resilience and consistency with other plans, projects and programs. Specific emphasis will be placed upon the environmental analyses and will be communicated through various avenues through the NEPA process.

Common Questions:

Why does it take so long to study and construct one of these projects?

Simply put, studying and constructing large-scale projects takes time. There's a detailed process in place to make sure projects are done in accordance with the law. With a feasibility study, we're looking at a general problem and answering the question of whether we can

implement a solution that is economically justified, environmentally acceptable, and technically sound. Specifically, the geographic scope of this study is large, and the problem is complex, requiring significant data gathering, detailed analyses, and coordination with other government agencies.

STUDY OVERVIEW AND GENERAL QUESTIONS

Q: Why didn't you look at this earlier? Everyone has known this is THE problem in coastal New Jersey.

It's important to note that U.S. Army Corps of Engineers studies are developed in partnership with non-Federal entities (primarily state and local government) and at the direction of Congress (with the need for authorization and funding to initiate a study). The problem was further demonstrated with devastating flooding impacts associated with Hurricane Sandy and the development of the North Atlantic Coast Comprehensive Study in January 2015.

Q: What does this prove/demonstrate about the USACE beachfill program?

The dune and berm systems along the New Jersey Shore reduce the risk of storm damages primarily from erosion, wave attack and inundation during storm events. Bay flooding is a different problem – one where storm surge is pushed through coastal inlets, raising the water surface elevations of the bays, which floods homes, businesses and infrastructure. The dune and beachfill projects mitigate against breaching and overwash, which can exacerbate bay flooding. This occurred at Mantoloking during Hurricane Sandy. Ultimately, the solution on the oceanfront is more straightforward from a technical standpoint. Simply put, these are different problems with different solutions.

Q: Is this a sure thing to happen?

A: No, if it is determined that alternative plans or the selected plan does not meet USACE planning criteria or are environmentally or economically unacceptable, the study can be terminated.

Q. What if the public, interested stakeholders and/or resource agencies are opposed to the plan with the highest economic benefits to the nation?

USACE is required to identify the plan with the highest net benefits to the Nation (National Economic Development – NED Plan); however, the non-Federal sponsor may direct the USACE to recommend a Locally Preferred Plan (LPP). A LPP is a deviation from the NED Plan that can be requested by the non-Federal sponsor and approved by the Assistant Secretary of the Army for Civil Works (ASA - CW). If the LPP is smaller in scope, it must not only have positive net benefits (i.e a positive benefit/cost ratio), but also must have greater net benefits than smaller scale plans. If the sponsor prefers a LPP that is more costly than the NED Plan and the increased scope of the plan is not sufficient to warrant full Federal participation, the ASA - CW may grant an exception as long as the sponsor pays the difference in cost between the NED and the LPP. In this case, the LPP must have outputs similar in kind, and equal to or greater than the outputs of the NED Plan.

Q: What if nothing comes out of this study? Is it a waste of money?

If nothing comes out of the study in the near-term, that does not mean something won't come out of the study in the future. Future storms could change priorities and the funding mechanisms at the Federal and state level. Back bay flooding remains a significant problem in New Jersey so it's important for us to study and analyze potential solutions. The final plan will likely include an array of measures and recommendations that can be implemented incrementally at different scales and various levels (Federal, state, and local). Additionally, the study team is conducting modeling and economic analyses that will remain useful tools in the future.

Q: Why is this important?

A: Historic storms, including Hurricane Sandy, have severely impacted the Back Bay communities of coastal New Jersey. The study area includes more than 182,000 structures, many of which are vulnerable to flooding and impacts associated with sea level change.

Q: Can I still submit a comment?

Yes, the study is ongoing, and comments will be a made a part of the record and taken into account. We will also have formal comment periods on the draft feasibility report in the future as part of the formal National Environmental Policy Act process.

ENVIRONMENTAL, NON-STRUCTURAL AND NNBF:

Q: Can you give examples of what "Possible nonstructural measures" and "Possible natural and nature-based features" are?

A: Natural and Nature-based features include measures like living shorelines, tidal marshes, vegetated dunes, and oyster reefs. Nonstructural features are structure elevation, acquisition, wet, and dry flood proofing.

Q: For nonstructural elevation and acquisition measures – is USACE and/or the state going to pay for certain homes to elevated?

A: If the final plan includes non-structural elevation and acquisition, then construction of that alternative would be cost-shared by the Federal government and non-Federal/local sponsor. However, at this stage of the process, the implementation of such a recommendation has not been developed.

Q: What are the environmental impacts of surge barriers?

We're currently conducting modeling to better understand the impact surge barriers have on tidal flow. Impacts will be addressed in an Environmental Impact Statement and will involve extensive coordination with Federal and state resource agencies (including National Marine Fisheries Service, U.S. Fish & Wildlife Service). Additionally, it should be noted that there are significant environmental benefits associated with reducing flooding via surge barriers including reducing the risks to leaks of chemical/fuel/sewage and wastewater treatment facilities.

ENGINEERING

Q: Are there places in America with similar measures already in place? Other places in the world?

A: All measures that have been identified in all the conceptual alternatives have been constructed successfully, quite often in ecologically sensitive areas and in recent years, both in this country and a number of other countries. Having said that, every estuary is unique so we do need to evaluate them for the specific features and resources of the New Jersey Back Bays area. There are storm surge barriers in Rhode Island, Connecticut, and Louisiana. Additionally, there are several studies ongoing now which are considering similar measures in Texas, Connecticut, New York, Maryland and Virginia.

Q: How far above the waterline would the floodwalls or surge barriers reach?

A. The height of seawalls as well as storm surge barrier gates depend heavily upon the specific design features of the seawall or the storm surge barrier gates and the location in which they are sited. While all seawalls would be above the waterline (based on the prior description), not all storm surge barrier gates are above the waterline during normal conditions.

Q: Would a surge barrier limit the ability of the bay to drain during a storm?

A. Under normal conditions no, but this is a significant design consideration for when the barriers might be closed. Storm surge barriers will most likely be built with associated pump stations that would address fluvial/riverine flooding that typically empties into the coastal estuary environment.

Q: How would surge barriers allow the bay waters to reach the Atlantic?

A. Generally, surge barriers are designed to have as minimal impact to existing flows during normal conditions as feasible. That being said, USACE is preliminarily evaluating the possible effects to daily tidal flows (as well as storm event conditions) related to the various alternatives that involve storm surge barriers.

Q: Would these surge barriers restrict tidal flow?

A. Storm surge barriers typically involve gate type mechanisms that allow for flow during normal conditions and that close during impending storm event conditions to prevent storm surges from entering the areas behind the barriers, whereas seawalls are structures that permanently block tidal flows. Detailed circulation and environmental impact modeling to assess tidal flow effects will be conducted after the Tentatively Selected Plan.

Q: How would the U.S. Coast Guard, fishing and recreational vessels enter an inlet with a surge barrier?

It's important to note that surge barriers would remain open for the vast majority of the time. If a surge barrier measure moves forward as part of this process, those issues would be addressed, but at this time we do not have detailed information to share about the logistical and operational components of a surge barrier.

Q: Can you explain the perimeter-based measures? Are these basically rings of levees around towns that face extreme flood-risk?

A: When we refer to a "perimeter plan", we are referencing floodwalls and levee type structures that would encircle developed portions of the Back Bay area.

ECONOMICS & COSTS:

Q: How do you calculate a "Benefit to Cost" ratio?

Preliminary estimated Benefit to Cost ratios have been developed based on the preliminary screening of estimated damages of structures and cost estimated based on a limited level design.

Q: How is the study funded? How will construction be funded?

A. This study is funded 50% by the Federal government with Energy and Water appropriations made to the U.S. Army Corps of Engineers. The other 50% is funded by the non-Federal study sponsor, the New Jersey Department of Environmental Protection. Construction would be Federally funded through Energy and Water Appropriations by Congress. Construction would also involve a "non-Federal" cost share.

E-2) JUNE 2016 STAKEHOLDER WORKSHOPS

Summary

On June 17, 2016 and June 21, 2016 the United States Army Corps of Engineers (USACE) Philadelphia District (NAP) and New Jersey Department of Environmental Protection (NJDEP) conducted Stakeholder Planning Workshops for the New Jersey Back Bays (NJBB) Coastal Storm Risk Management (CSRM) Feasibility Study. The purpose of these workshops was to obtain feedback from stakeholders to assist NAP in developing problems, objectives, and potential measures throughout the NJBB study area. In recognition of the diversity of the existing conditions and CSRM issues throughout the study area, NAP sent out invitations to a wide range of stakeholders including representatives from Federal agencies, state agencies, counties, municipalities, non-governmental organizations (NGOs), elected officials, and academia.

A total of 39 and 52 stakeholders attended the June 17 and June 26 workshops, respectively. Feedback was gathered from discussion at the meetings as well as written responses submitted during and after the meetings. Analysis of stakeholder feedback on coastal flooding issues identified problems, opportunities, considerations and constraints in the NJBB study.

Several approaches were used to assess feedback from the public meeting. Meeting attendees were invited to fill out Coastal Flooding Problem Identification forms to be submitted either at the meeting or after the meeting via e-mail. PDT members also took notes during the Q&A and open house sessions of the meeting to collect public input.

NAP will use the problems, opportunities, considerations, constraints, and potential measures discussed at the stakeholder workshops and public meeting to inform the plan formulation process and develop different alternatives to address coastal flooding in the NJBB study area.

E-3) DECEMBER 2016 PUBLIC MEETINGS

Summary

On the evening of December 01, 2016 from 6:00 pm to 8:00 pm at the Campus Center of Richard Stockton University, the NAP conducted a Public Meeting for the NJBB CSRM Feasibility Study. The purpose of this meeting was to provide an introduction of the study to the general public and obtain feedback from the general public to assist NAP in identifying problems, opportunities, objectives, constraints, potential CSRM measures throughout the NJBB study area.

The public meeting consisted of a brief 15 minute introductory presentation to the NJBB study area with welcomes from both USACE and NJDEP, a question and answer session of approximately 45 minutes, and an hour long "open house" session with tables related to the USACE study process and different management measures for more in-depth and personalized interactions between the public and USACE Project delivery Team (PDT) members. At least 119 people attended the meeting, as counted using the sign in sheet at the "Welcome Table" at the meeting. Approximately a quarter of attendees were from the general public.

Several approaches were used to assess feedback from the public meeting. Meeting attendees were invited to fill out Coastal Flooding Problem Identification forms to be submitted either at the meeting or after the meeting via e-mail. PDT members also took notes during the Q&A and open house sessions of the meeting to collect public input.

NAP will use the problems, opportunities, considerations, constraints, and potential measures discussed at the stakeholder workshops and public meeting to inform the plan formulation process and develop different alternatives to address coastal flooding in the NJBB study area.

E-4) SEPTEMBER 2018 PUBLIC MEETINGS

Summary

On the evenings of September 12 and 13, 2018 from 6:00 pm to 8:00 pm at the Ventnor Education Community Complex (September 12) and the Campus Center of Richard Stockton University (September 13), the NAP conducted a Public Meeting for the NJBB CSRM Feasibility Study. The purpose of this meeting was to update the general public and stakeholder about the study process and results to date.

The public meetings consisted of a 30 minute "open house" session with posters staffed by PDT members that provided background on the various measures under consideration in the study. The open house session also allowed the public the opportunity to directly interact with the study team and ask questions. After the open house session, the meeting transitioned into a formal presentation by NJBB Project Manager, J.B. Smith, on the current status of analyses underway for the NJBB Study. The last hour of each meeting was an open question and answer session. Meeting attendees had the option to state their questions at a microphone or were able to submit questions written on index cards if they would rather remain anonymous or were not comfortable speaking. At least 147 people attended the meeting on September 13th, as counted on the sign in sheet located at the "Welcome Table" at the meeting. Approximately a third of attendees were from the general public.

Several approaches were used to assess feedback from the public meeting. Meeting attendees were invited to submit comments either in writing at the meeting or after the meeting via e-mail. PDT members also took notes during the Q&A and open house sessions of the meeting to collect public input.

NAP will use the feedback obtained at the September 2018 public meetings to inform the plan formulation process; specifically, the feedback will help to inform the PDT's approach to evaluating various alternatives under the Other Social Effects account.

Public and Stakeholder Question and Responses

New Jersey Back Bays Feasibility Study
September 2018 Public Meeting
Stakeholder Input and Questions
With USACE Responses

Questions from index cards

QUESTION: Why isn't dredging being considered as a measure to reduce coastal storm risk in the New Jersey Back Bays?

RESPONSE: Dredging specifically to deepen channels does not reduce coastal storm risk. While it seems intuitive that dredging increases the volume of the backs bays, this increase in volume does not correlate to the ability of bays to absorb floodwaters and subsequently does not reduce water levels associated with coastal flooding.

QUESTION: How will the study include recommendations for local land use development management strategies as park of risk management options?

RESPONSE: Recommendations for local land use development management strategies including stormwater management, drainage and associated pump stations will be identified by local municipal entities and integrated into the more regional, large-scale Federal effort through the New Jersey Back Bays (NJBB) Feasibility Study though a collaborative effort between both entities. This collaboration and solutions will be developed as the study identifies a recommended plan.

QUESTION: How will the height of a floodwall be established? Existing bulkheads vary in elevation from property to property.

RESPONSE: Floodwalls and Levees are designed specifically to manage flood risk for an entire community and will be designed as a comprehensive approach rather than on a property by property basis. Crest elevations for floodwalls and levees will be established based on the design water levels and waves. Traditionally, the crest elevation of floodwalls and levees is determined by limiting wave overtopping below a tolerable limit for the design condition. In subsequent phases of the NJBB study, the performance and crest elevation of structures will be optimized (cost vs benefits) over a range of design water levels to aid in the selection of the final floodwall/levee crest elevation.

QUESTION: Some of the coastal areas are "within" the jurisdiction of the Pinelands Land National Reserve. What is the involvement of the state Pineland's managers as to alternative consideration?

RESPONSE: The focused array of alternatives include several measures that are within the Pinelands National Reserve that include the SSB at Barnegat Inlet and a number of non-structural areas that are also within the State Pinelands Area. The Philadelphia District is engaged with the Pinelands Commission, and will coordinate all future actions that occur within either the national reserve or Pinelands Commission boundary.

QUESTION: This is a macro-project (Huge area, very broad brush look at problems)! Looking ahead when (how many years) do you anticipate that you will be doing design level engineering and cost estimation at a municipality project level? When could it be started?

RESPONSE: Design level engineering and cost estimation will not be performed at a municipality project level. Detailed design for the Federal project will occur at 2026 at the earliest.

QUESTION: How do you plan on correcting road flooding on high tides?

RESPONSE: High-frequency flooding, also known as nuisance flooding, recurrent flooding, or sunny-day flooding, are flood events caused by tides and/or minor storm surge that occur more than once per year. High-frequency flooding mostly affects low-lying and exposed assets or infrastructure, such as roads, public storm-, waste- and fresh-water systems (Sweet et. al 2018) and is likely more disruptive (a nuisance) than damaging. However, the cumulative effects of high-frequency flooding may be a serious problem to

residents who live and work in these low-lying areas. The number of high-frequency flood days is accelerating in the study area in response to RSLC.

Flooding from rainfall and inadequate stormwater systems are closely related to high-frequency flooding but are treated separately in this study. It is common for municipalities in the study area to have gravity based stormwater systems that are unable to drain water when tidal level exceeds the elevation of the storm drain. When this happens, water starts ponding around the drain and may flood many of the same low-lying areas as high-frequency flooding. The frequency and impact of rainfall flooding will increase as the probability of the tide level exceeding storm drains will increases in response to RSLC. Some municipalities are actively addressing this problem by installing pump stations that are capable of draining water during elevated water levels.

The primary focus of the NJBB study is managing risk to severe storm surge events (i.e. Hurricane Sandy), not flooding associated with inadequate storm sewer systems and/or high-frequency flooding. It is USACE policy (ER 1165-2-21) that stormwater systems are a local non-federal responsibility. While flooding from high frequency flooding and inadequate stormwater systems is not the focus of the NJBB study, it is acknowledged that nonstructural and storm surge barrier measures may not provide any relief from these problems. Therefore, complementary measures to address these problems will be investigated and may be recommended as part of a comprehensive Federal project or recommended for implementation at the local non-federal level.

QUESTION: Have you considered the impact to Island Beach State Park by not include it in the beach replenishment project. Also, what are the considerations on impact will the bay project have on IBSP?
RESPONSE: IBSP is a natural area and has no development which needs to be protected and therefore is not included in the beach nourishment project. Based on previous experiences, there will be minimal impacts from the beach nourishment project on IBSP which will be limited to shoreline changes. Also, there will be limited impacts on IBSP from the constriction of NJBB measures as these measures will not be constructed in IBSP proper. Effects of the construction of storm surge barriers at inlets have not been identified yet but will be during future phases of the study.

QUESTION: Are wind generated waves considered in the study?

RESPONSE: Yes, wind generated waves are considered in the study. Wind generated waves are factored into the design crest elevations of floodwalls, levees, and storm surge barriers. Wave overtopping calculations were performed to determine the necessary freeboard, height of structure above the still water level, to limit wave overtopping below tolerable thresholds.

QUESTION: How do you do an economic analysis to determine if a plan is justified with a BCR > 1.0?

RESPONSE: Economic analysis of the study area is a complex and iterative process, but essentially boils down to determining whether the avoided future storm damages (benefits) for an area are greater than the cost to construct and maintain a project to avoid those damages in that area. Analysis includes constructing a detailed structure inventory of the study area and then simulating the storm impacts on that structure inventory for the next 50 years. By combining the value and characteristics of the inventory with the estimated frequency and intensity of future coastal storm events, USACE can estimate the total experienced

damages and compare that number to the proposed cost of the storm surge barrier / levee / floodwall/ etc. plan.

QUESTION: Considering the size of the study area, will there be multiple project sites with individuals BCRs (that can stand alone) or will there be one project that either gets approved/built or not?

RESPONSE: This is an ongoing discussion and will ultimately depend on the final recommended plan. If the plan contains interdependent pieces (multiple storm surge barriers / bay closures acting in tandem) then it necessitates only a single BCR and construction schedule. If the plan contains mostly independent pieces (non-interacting perimeter floodwalls) then each independent piece can be assigned a BCR and perhaps appropriated/constructed independently. The final decision will be made once the recommended plan is determined.

QUESTION: Regarding environmental regulations: USFWS is the process of updating/revisiting the Costal Barrier Resource system under the CBRA. Will USACE be able to request a moratorium on the revisions until this study is completed and the proposed CBRAS revisited to accommodate the preferred selection?

RESPONSE: In a letter dated July 10, 2018, the Philadelphia District provided formal comments for the proposed CBRA changes. In this letter the Philadelphia District identified a number of changes to existing CBRS units and Otherwise Protected Areas that involved expansions or reclassifications that would have impacts on existing CSRM and Navigation projects or have potential impacts on future CSRM projects (including the NJBB Study). In this letter a number of concerns were identified where CBRA changes were proposed, and the Philadelphia District provided recommendations to avoid or minimize the CBRA change impacts on USACE missions in the area such as CSRM and Navigation.

QUESTION: How is flow through the inlets measured for Storm Surge Barriers? Will they stand up to our winters?

RESPONSE: Numerical model simulations were conducted with CSTORM, to calculate storm surge propagation through inlets. The numerical model is capable to simulating back bay water levels with and without storm surge barriers and evaluate the effectiveness of stand-alone storm surge barriers (i.e. Barnegat Bay) or alternatives several storm surge barriers. The storm surge barriers will be designed, constructed, and maintained to New Jersey's winters. Several storm surge barriers designed and built by the USACE are still in operation in New England (i.e. New Bedford, Fox Point)

QUESTION: Why does it seem that all studies are done on Coastal Waterways and not back bays?

RESPONSE: Studies are authorized by Congress to address societal and economic needs. Many of the studies in the past have addressed navigation needs which includes the NJ IntraCoastal Waterway. Other studies in the past have addressed environmental needs. The awareness of the risk of coastal flooding in back bay regions has heighted since Hurricane Sandy in 2012. Since that time, the NJBB Study as well as many smaller Continuing Authority Studies have been initiated and are being conducted which address back bay flooding concerns.

QUESTION: Why use Army Corps for work?

RESPONSE: The USACE is the Nation's engineer and is authorized by congress to conduct efforts such as the NJBB Study by Congress.

QUESTION: Will there be funding in WRDA to not only undertake the selected measures BUT ALSO to undertake the environmental mitigation associated with the damage to resources caused by these measures?

RESPONSE: Congress authorizes laws such as WRDA as well as appropriations to fund the detailed design and construction of the selected plan and associated environmental mitigation. It is difficult to say at this time if congress will fund these efforts during that phase of the project, but the USACE will identify the path forward to Congress to reach that goal.

QUESTION: In Ocean County between Bay Head and Seaside Park, the NJDOT has installed 12 pump stations to move rain water from the street. How are these existing pump stations going to be incorporated into your plan?

QUESTION: Will sewers be improved? Water backs up into street.

RESPONSE: The primary focus of the NJBB study is managing risk to severe storm surge events (i.e. Hurricane Sandy), not flooding associated with inadequate storm sewer systems and/or high-frequency flooding. It is USACE policy (ER 1165-2-21) that stormwater systems are a local non-federal responsibility. While flooding from high frequency flooding and inadequate stormwater systems is not the focus of the NJBB study, it is acknowledged that nonstructural and storm surge barrier measures may not provide any relief from these problems. Therefore, complementary measures to address these problems will be investigated and may be recommended as part of a comprehensive Federal project or recommended for implementation at the local non-federal level.

Some of the structural measures such as floodwalls and levees may require pump stations and stormwater system improvements to ensure that structural measures don't make any existing stormwater problems worse by blocking runoff at the location of the structural measures. Existing pump stations will be incorporated into the study during detailed investigations of whether additional pump stations and stormwater improvements are required as part of floodwall and levee measures.

QUESTION: Make walls more visually attractive. Colors, painted scenes, texture.

RESPONSE: The improvement of floodwalls aesthetics is being considered in the NJBB Study both in terms of color, painted scenes and texture.

QUESTION: Many of these lagoon communities have little water flow toward the rear end – several community associations want to put pipes in to connect back lagoons to the adjoining marshes. This would greatly increase water flow, help with cleaning the upland rain runoff that now collects first in back lagoons

Running lagoon water out through the marsh naturally filters it and returns it on the next incoming tide seem a simple solution.

RESPONSE: Connecting the rear end of the lagoons hydraulically with adjacent marshes would improve circulation and water quality in the lagoons, although it could possibly have adverse impacts on the adjacent marsh. Measures that improve water quality and environmental services are not the primary focus of the NJBB study authority. The focus of the study is managing risk to severe storm surge events (i.e. Hurricane Sandy). However, there may be opportunities to incorporate measures that improve the environment as part of a comprehensive plan.

Comments from Letters

QUESTION: I understand the need to, in very many cases, protect existing property. Can't always be avoided for now. However the practical, cost-efficient long-term solution that benefits the majority of citizens is to restore/return vulnerable lands to nature. It may not be your job to convince homeowners to accept buy-outs, that would perhaps threaten your role in all of this, but that is the only real RESPONSE to climate change and the losses that will ensue.

RESPONSE: The acquisition of property is definitely an alternative that will be addressed during the conduct of the study. The specific methodology for acquisition of property has not be conducted yet. However, both the Federal government on behalf of the US Army Corps of Engineers and the State of New Jersey have program which have been implemented at other locations to acquire these properties. The NJBB Study will build upon these experiences. This effort will be a collaborative effort between the Federal government and the State of New Jersey regardless.

QUESTION: I do not wish to see a Storm Wall being built along the bayside - this would impede our access to boating - which is why we chose to live at the beach - we did not build a steel wall along the beach - but instead built dunes - this same idea could be implemented along the bay side - or put in the levee along the inlet - that could be closed when a storm is brewing.

RESPONSE: Dunes are an appropriate alternative to reducing the risk of coastal flooding on the beach side of a barrier island. On the bay side of a barrier island, levees and floodwalls are a more appropriate alternative than dunes and are under consideration in the NJBB Study. Storm surge barriers are being considered for tidal inlet localities associated with the NJBB Study.

QUESTION: I was wondering if there was any information on the potential jobs created by these projects. If there's any estimation on how many jobs are required to complete these projects, the skill level required of workers, etc. I understand this might be a little wonky, but I thought I'd ask. Thank you for your time and hope to hear from you soon.

RESPONSE: The construction of flood management features associated with the NJBB Study will definitely create jobs. A analyses per se has not been performed regarding the exact number of jobs that will be created and will not be performed until the selected plan for construction is identified.

QUESTION: How is flooding coming up from storm sewers considered in the study?

RESPONSE: The intake for storm sewers located on the bay are often below storm high tides and therefore are submerged during these conditions. As a result, given the lack of a flap gate to prevent water entry, the water enters the storm sewer and exists at the path of least resistance which is the storm drain on the street.

QUESTION: Will oyster reefs be considered for wave attenuation?

RESPONSE: Oyster reefs are a viable NNBF component that while not considered in the draft interim report to be released in the Spring 2019, these reefs will be considered in future reports and associated analyses to be released in 2020 and 2021.

QUESTION: Require the NJ Dept. of Transportation with NJ DEP buy-in to allow our bayside street outfalls to tie into their bayside pump stations to quickly evacuate street flooding which always follows a strong NE wind for a few days, or a spring tide, etc.

RESPONSE: The primary focus of the NJBB study is managing risk to severe storm surge events (i.e. Hurricane Sandy), not flooding associated with inadequate storm sewer systems and/or high-frequency flooding. It is USACE policy (ER 1165-2-21) that stormwater systems are a local non-federal responsibility. While flooding from high frequency flooding and inadequate stormwater systems is not the focus of the NJBB study, it is acknowledged that nonstructural and storm surge barrier measures may not provide any relief from these problems. Therefore, complementary measures to address these problems will be investigated and may be recommended as part of a comprehensive Federal project or recommended for implementation at the local non-federal level.

QUESTION: I know that Back Bay flooding is an issue that is plaguing the entire East Coast as time continues to pass and ocean levels continue to rise. I was wondering if there was any cooperation with other States in regards to coming up with solutions to this problem? In particular I know that when faced with solving this problem, the city of Boston is considering implementing canals, similar to Venice or Amsterdam, which they found would help absorb a majority of the flooding caused specifically by Back Bay flooding.

RESPONSE: Yes, there is coordination at the Federal Level between several active coastal storm risk management studies being conducted for New York City, NY, Nassau County, NY, Norfolk, VA and Houston, TX. These studies are all focused on managing coastal storm risk with the threat of accelerated sea level rise.

QUESTION: I am in favor of tidal doors at Manasquan, Shark River and Barnegat Inlets. I feel very strongly that this will stop the back-bay flooding by limiting the amount of water entering the rivers and being held in by the storm surges. However, one must consider these facts; 1. The flow of water down the rivers from the land behind the doors. Pumps would have to be installed to remove river/rainwater flow out from behind the doors. 2. Speaking of flow by placing the design presented at the meeting you are going to create an increase in water flow in the inlets on incoming and outgoing tides in the area of the piers.

RESPONSE: Storm surge barriers at Shark River, Manasquan, and Barnegat Inlet are under consideration. Preliminary engineering and economic analyses indicate that a storm surge barrier at Shark River is not justified (i.e. Costs >> Damages Prevented). However, storm surge barriers at Manasquan Inlet and Barnegat Inlet are still under consideration. Yes, the flow of water from the watershed and rivers needs to be evaluated and consideration given to whether pump stations are needed. It appears unlikely that pump stations at the storm surge barriers would be required because the back bay provides sufficient storage to accommodate the discharge (flow), additional investigations will be performed before the completion of the feasibility to confirm these assumptions.

QUESTION: How will concrete floodwalls stand up to winter and estuary conditions?

RESPONSE: Floodwalls will be constructed of steel or concrete and will be designed to stand up to winter and tidal estuary conditions in New Jersey. These floodwall types have been constructed in other areas in the northeast US and have demonstrated capabilities to hold up to these conditions.

E-5) MARCH 2019 WEBINAR

A virtual meeting for the public was held via webinar on March 14, 2019 to summarize the results of the NJBB CSRM Interim Feasibility Report and Environmental Scoping Document. The presentation highlighted some of the take home messages of the Report and provided specific locations where that information could be located. Approximately thirty attendees participated in the webinar.