

Fire Island Inlet to Moriches Inlet (FIMI) Stabilization Project

Topic: Why easement is perpetual

In an effort to understand why easements for the FIMI project need to be “perpetual,” (DPA directors) have pursued the County and Army Corps for a better explanation.

We were provided with the following written clarification by County Attorney (Gail M. Lolis Deputy County Attorney)

(To DPA Directors)

There have been numerous inquiries concerning why the Fire Island Inlet to Moriches Inlet Stabilization Project (FIMI) requires that perpetual easements be acquired by the County. This is intended to serve as a general explanation. Easements are required in order to authorize the governmental entities to access and place sand upon private property in the first instance, and thereafter to permit the County and other governmental entities to maintain the constructed dune and berm in the future. The maintenance primarily consists of inspecting, measuring, photographing etc., as well as protecting the project from destructive forces such as people walking on or encroaching upon the easement area. See generally FIMI HSLRR June 2014 pg. 89, a copy of which is attached (SEE APPENDIX '1')

In order to understand why the easement must be perpetual for a project which calls for a one-time placement of sand, it is necessary to understand that the life of the project is determined by the duration of its functionality. As long as there remains a functioning dune and berm (which means it is providing some level of protection) and the County is performing the required maintenance, pursuant to the Local Project Partnership Agreement with the State and pursuant to the Operations and Maintenance plan prepared by the United States Army Corps of Engineers (USACE), under 33 U.S.C. 701n, as amended (also commonly referred to as PL 84-99), the USACE will come in and make repairs if the functionality of the project is lost due to an extraordinary storm event (“wind, wave or water action of other than an ordinary nature”). As it is impossible to predict natural processes which will occur over time, a perpetual functioning dune, even without any further repairs or restoration, remains a possibility. In such instance, the County’s obligation for maintenance would continue in perpetuity as would the USACE authority to conduct repairs and restoration under PL 84-99. If the easements were to terminate on a date certain, even if the project was still “functional” i.e. providing some level of protection, the County’s authority to maintain the project would cease as would the USACE authority to repair or restore pursuant to PL 84-99.

Not only is it impossible to predict the duration of functionality of the project (due to inability to predict natural processes such as weather) it is also impossible to predict if, when, or how often the project may be restored or repaired by the USACE after severe weather events in the future. Unquestionably, PL 84-99 repairs would further extend the duration of functionality and protection provided.

For your reference, also attached are the following legal authorities relative to this inquiry: Public Law 84-99 codified at 33 USC 701n and the 2014 amendment to that law.

We hope this answers your inquiry. Please note this is only a general reply and not intended to be all inclusive or encompassing.

**Gail M. Lolis
Deputy County Attorney**

APPENDIX

APPENDIX '1' - FIMI_HSLRR_June2014_MainReport ... **Pages 1 ~ 111**

APPENDIX '2' - Public Law 84-99 codified at 33 USC 701n ... **Pages 112 & 113**
Emergency response to natural disasters

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**FIRE ISLAND INLET TO MORICHES INLET
FIRE ISLAND STABILIZATION PROJECT
HURRICANE SANDY LIMITED REEVALUATION REPORT**

DRAFT

**Evaluation of a Stabilization Plan for Coastal Storm Risk Management
In Response to Hurricane Sandy
&
Public Law 113-2**



MAIN REPORT

U.S. Army Corps of Engineers

New York District



June 2014



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I. EXECUTIVE SUMMARY

This project is designed to provide coastal storm risk management from coastal erosion and tidal inundation through construction of a beach berm and dune, at Fire Island Inlet to Moriches Inlet, New York. The project area stretches from Robert Moses State Park in the west to Smith Point County Park in the east for a total of 19 miles. The purpose of the project is to provide a level of storm damage protection to mainland development protected by the barrier island.

As a consequence of the severe coastal erosion during Hurricane Sandy in October 2012, the dune and berm system along Fire Island is now depleted and vulnerable to overwash and breaching during future storm events, which increases the potential for storm damage to the shore and particularly back-bay communities along Great South Bay and Moriches Bay.

The Fire Island to Moriches to Inlet (FIMI) Plan was developed using background material and existing information and data to expedite the FIMI Hurricane Sandy Limited Reevaluation Report (HSLRR) in accordance with approach approved by HQUSACE in a memorandum dated 8 January 2014 and consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2).

This Stabilization Project is a one-time, stand-alone project with its own independent utility. As developed, this project does not limit the options available in the Fire Island to Montauk Point (FIMP) Reformulation Study or pre-suppose the outcome of the Reformulation Study. After the initial placement of 6,992,145 cubic yards (cy) of sand, the project is expected to erode, and diminish in its protective capacity, eventually returning to a pre-project condition.

The Project is designed with advance fill to maintain design conditions for a period of 5 years, and it is estimated that the residual effect of the fill placement would last another 5 years. After the residual effect of beachfill has diminished, there is further residual effect of 10 years that is provided by the acquisition and relocation of structures. The total period over which residual effects are expected is 10 years for sand and 20 years for structure acquisition.

The project's annual benefits and annual costs were developed using October 2013 price levels and are \$18.8M and \$17.5M, respectively. The Benefit to Cost Ratio is 1.1 (at 3.50% FY14 Discount Rate). The project is economically justified and the District recommends that the Stabilization project be constructed at a project cost of \$207,100,000 with a total investment cost of \$223,324,000.

The Draft HSLRR and Environmental Assessment (EA) were released for public review. The report has been revised to account for public comments received on the project, as well as agency input received through coordination and consultation that occurred concurrently with public review of the EA. Based upon consideration of the public and agency review and consultation, including a favorable Biological Opinion, the District intends to sign a Finding of No Significant Impact (FONSI), upon approval of the HSLRR and EA by the North Atlantic Division.



II. PERTINENT DATA

Pertinent project information is summarized below.

1. Project Design and Layout

The proposed project is comprised of three (3) design templates identified as “berm only” “small” and “medium”, which are described below. These features are described relative to NGVD throughout the report. The conversion to NAVD is provided below.

a. The “berm only” design template includes a berm width of 90 ft at elevation +9.5 NGVD (+8.5 ft NAVD), and no dune behind the berm (no vegetation is proposed for this design template). It includes a foreshore slope of 12 horizontal (H) on 1 vertical (V) from +9.5 to +2 ft NGVD, or mean high water (MHW), equating to an additional 115 ft of beach above MHW. This template is proposed in areas where eroded berm conditions have been observed, but where existing dune elevation and width are sufficient to reduce the risk of overwashing and breaching. Areas that meet these criteria include Robert Moses State Park, western Smith Point County Park and the TWA Memorial Beach.

b. The “small” template is intended to reduce the risk of breaching. It is proposed for areas with limited oceanfront structures. The “small” fill template includes a berm width of 90 ft, at elevation +9.5 ft NGVD (+8.5 ft NAVD) and a vegetated dune with a crest width of 25 ft at an elevation of +13 ft NGVD (+12 ft NAVD). It also includes a foreshore slope of 12H:1V from +9.5 to +2 ft NGVD, equating to an additional 115 ft of beach above MHW. It is proposed for areas with limited oceanfront structures, including Smith Point County Park.

c. Fire Island Lighthouse Tract (modified “small” design template): The dune and beach design template the NPS Fire Island Lighthouse Beach would include an unvegetated dune. The proposed 3,800 ft length of dune would be constructed at +13 NGVD (+12 ft NAVD) and have side slopes of 1V:10H, and a 25 ft crest width.

d. The “medium” design template is proposed for areas that have the greatest potential for damages to oceanfront structures and includes the 17 communities on Fire Island (including Kismet to Lonelyville, Town Beach to Corneille Estates, Ocean Beach to Seaview, Ocean Bay Park to Point O’ Woods, Cherry Grove, Fire Island Pines, Water Island, and Davis Park). The medium design template includes a berm width of 90 ft at an elevation at +9.5 ft NGVD (+8.5 ft NAVD), and a vegetated dune with a crest width of 25 ft at an elevation of +15 ft NGVD (+14 ft NAVD). It also includes a dune slope of 1V:5H and a foreshore slope of 12H:1V.

e. West of Robbins Rest (modified “medium” design template): In the area between Atlantique and Robbins Rest, approximately 900 ft of the proposed dune northward to the existing vegetation will be re-aligned in an effort to conserve partial overwash habitat that formed in this area due to Hurricane Sandy. The dune design template in this area includes a berm width of 90 ft at an elevation at +9.5 ft NGVD (+8.5 ft NAVD), and a vegetated dune with a crest width of 25 ft at an elevation of +15 ft NGVD (+14 ft NAVD). It also includes a dune slope of 1V:5H and a foreshore slope of 12H:1V.

f. Based upon consultation with the U.S.F.W.S. under Section 7 of the Endangered Species Act, project features have been incorporated as habitat offsets for Piping Plover. These features have been included as non-discretionary measures in the project as defined in the Reasonable and Prudent Measures of the Biological Opinion. These features are provided in detail in the report, and generally include:



1 – Devegetation and topographical alteration and management in the Vicinity of Great Gunn Beach and extending eastward to Moriches Inlet, to provide approximately 33.7 hectares of piping plover nesting and foraging habitats including ephemeral pools.

2 – The creation of plover foraging and nesting habitat on six hectares of habitat in the vicinity of the dredge material management site located near New Made Island.

3 – The adaptive management of plover habitat through vegetation management to achieve sparsely vegetated overwash areas in Smith Point County Park at the Pattersquash Island Overwash, Smith Point Breach Location, and New Made Island Overwash.

4 – The development and implementation of a coordinated plover monitoring program, coordinated mammalian predator management plan, coordinated stewardship, and coordinated effectiveness monitoring to inform the adaptive management of these habitat offset areas.

2. Offshore Sand Borrow Areas Locations and Dredged Material Volumes

The total initial project fill volume would be 6,992,145 yd³ which represents the volume of sand necessary to achieve the design fill, advance fill, overflow, and contingency profiles for 19 mi of beach. No renourishment cycles are planned for the proposed project.

The sandy offshore habitats that are designated as sand mining areas are known as Borrow Area 2C, Borrow Area 4C and Borrow Area 5B. Material for initial construction is proposed as follows: approximately 5,000,000 cy of sand to be removed from Borrow Area 2C and placed in the fill areas between Fire Island Inlet and Davis Park. Approximately 700,000 cy to be removed from Borrow Area 4C, and approximately 1,300,000 cy to be removed from Borrow Area 5B for fill areas between Smith Point County Park and Moriches Inlet.

3. Real Estate Requirements

Easements:

Perpetual Beach Storm Risk Management Easements - 663

Temporary Construction Easements - 26

Staging Right-of-Entries - 2

(Total 691 Properties)

Relocations:

Home On-Site Relocations - 6

Well Relocation - 1 Well Utility

Fee Acquisition:

Purchase of Privately-Owned Homes - 41 Properties

Perpetual Beach Easement - 410 privately owned properties

Damage - 17 Pools and Decks

Public Law 91-646 Relocation Assistance:

Relocation Construction - 6 homes

Relocation Benefits/Moving Expenses - 47 Properties

Relocation and Reconstruction of Ocean Beach Well System



4. Costs

(October 2013 price levels)

Beachfill	\$105,000,000
Monitoring & Adaptive Management Costs	\$15.5M (10 years)
O&M Costs	\$100K (10 years)
Total Real Estate Costs	\$68,820,316
Total Project First Cost	\$207,100,000
Total Investment Cost – Fully Funded	\$223,324,000

5. Economics

(Discounted at 3.50% over a 20-year period – FY14)

Annual Project Cost	\$17.5M
Average Annual Benefits	\$18.8M
Benefit to Cost Ratio	1.1

COST ALLOCATION (FIRST COST – HSLRR Plan)

Federal (100%)	\$207,100,000
Non-Federal (0 %)	\$0
TOTAL	\$207,100,000

The construction and pre-construction sequence and time schedule of the Stabilization Project is dependent on the timeliness of this report’s approval, the foregoing construction procedures, and the ability of local interests to implement items of local cooperation. These items of local cooperation are principally the furnishing of offshore borrow easements by the State of New York as well as required shoreline real estate easements, and structure acquisition and relocation.

Due to the anticipated delay in obtaining the necessary real estate requirements in the communities, the construction will be split into three contracts:

- Contract 1: Smith Point County Park (MB-1A, MB-1B, MB-2A);
- Contract 2: Lonelyville to Robert Moses State Park (GSB-1A, GSB-1B, GSB-2A);
- Contract 3: Davis Park to Town Beach (GSB-2B, GSB-2C, GSB-2D, GSB-3A, GSB-3C, GSB-3E, GSB-3G).

The proposed construction schedule is as follows:

- Contract 1: September 2014 to April 2015



Relocations:	\$ 0	
Lands & Damages:	\$ 22,407.00	
• Contract 2: November 2014 to March 2015		
Relocations:	\$ 166,892.00	(On-site relocation - Saltaire)
Lands & Damages:	\$ <u>6,706,301.00</u>	
Fee Acquisition (2 Homes/Kismet) (1)	\$ 1,448,200.00	
	\$ 6,873,373.00	
(2)	\$ 833,625.00	
Labor for Fee Acquisitions	\$ 14,341.48	
Easement Costs (104 easements)	\$ 4,207,714.16	
Labor for Easements	\$ 179,253.36	
PL91-646 1 on-site relocation	\$ 5,000.00	
PL 91-646 Benefits 2 Fee Homes	\$ 10,000.00	
Labor for 1 on-site relocation	\$ <u>8,167.00</u>	
	\$6,706,301.00	
• Contract 3: December 2014 to Aug 2015		
Relocations:	\$ 834,460	(5 On-site relocations)
	\$ <u>2,600,000</u>	(1 Municipal Well relocation-Ocean Beach)
	\$3,434,460	
Lands & Damages:	\$ <u>58,091,608</u>	
	\$61,526,068	
Fee Acquisition (39 Homes)	\$43,743,175.00	
Labor for Fee Acquisitions	\$279,646.00	
Easement Costs (306 easements)	\$12,380,390.00	
Labor for 587 Easements	\$1,178,397.00	
Labor 1 Well Relocation	\$5,000.00	
Damages Cost (Pools/Decks)	\$285,000.00	
PL 91-646 Benefits 5 relo Homes	\$ 25,000.00	
PL 91-646 Benefits 39 fee Homes	\$ <u>195,000.00</u>	
	\$58,091,608.00	
Total Real Estate Costs		\$68,820,316

The Smith Point County Park in the FIMI project area is the most vulnerable area of the entire FIMI Project. Smith Point County Park has the lowest existing elevation that leaves it highly vulnerable to overwash and breaching. The potential for breaching and back-bay flooding is great in this location. Therefore, the construction of the beachfill and the dune and berm system has been identified for implementation as expeditiously as possible as Contract 1.



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1.0 INTRODUCTION

The Fire Island Inlet to Montauk Point, New York, Combined Beach Erosion Control and Hurricane Protection Project (FIMP) was first authorized by the River and Harbor Act of 14 July 1960 in accordance with House Document (HD) 425, 86th Congress, 2d Session, dated 21 June 1960, which established the authorized project. The project is being reformulated by the U.S. Army Corps of Engineers, New York District (USACE) as the lead Federal agency to identify a comprehensive long-term solution to manage the risk of coastal storm damages along the south shore of Long Island in a manner which balances the risks to human life and property while maintaining, enhancing, and restoring ecosystem integrity and coastal biodiversity.

The overall FIMP reformulation study was undertaken to evaluate alternatives to determine Federal interest in participating in one or more of these alternatives, and identify a mutually agreeable joint Federal/state/locally supported plan for addressing the storm risk management needs in the study area. In addition to addressing the USACE's national objectives of storm risk management and environmental sustainability, this collaborative effort identified alternatives for implementation by other Federal, state and local agencies to achieve broader study objectives.

Prior to the Fall of 2012, the most recent effort in the FIMP Reformulation Study had been the refinement of the plan alternatives developed in 2009 and presented by the federal agencies to state and local officials in 2011, as a *Tentative Federally Supported Plan (TFSP)* in preparation for finalizing the overall study's recommendation in the form of a General Reevaluation Report (GRR). The planning for the FIMP Overall Project progressed to the point of identifying a Tentative Federally Supported Plan (TFSP) through the fall of 2012 and is being finalized in the GRR.

However, on October 29, 2012, Hurricane Sandy made landfall approximately five (5) miles south of Atlantic City, NJ, where it collided with a blast of arctic air from the north, creating conditions for an extraordinary and historic storm along the East Coast with the worst coastal impacts centered on the northern New Jersey, New York City, and the Long Island coastline. The highest water level ever recorded at Battery Park within nearby New York City exceeded predicted tidal elevations of the storm at 9.4 feet. Coastal erosion and damages within the FIMP study area as a result of Hurricane Sandy were severe, substantial and devastating. Post-Sandy measurements of volume loss of the beach and dunes on Fire Island indicate that on average the beach lost 55 percent of its pre-storm volume equating to a loss of 4.5 million cubic yards. A majority of the dunes on Fire Island either were flattened or experienced severe erosion and scarping,

As a consequence of this severe coastal erosion during Hurricane Sandy, the dune and berm system along Fire Island is now depleted and particularly vulnerable to overwash and breaching during future storm events, which increases the potential for storm damage to shore and particularly back-bay communities along Great South Bay and Moriches Bay. In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate risk management measures, particularly in the Fire Island to Moriches Inlet (FIMI) study area, USACE has proposed an approach to expedite implementation of construction through stabilization efforts independent of the FIMP Reformulation Study. This approach has gained widespread approval from New York State, Suffolk County, N.Y. and the local municipalities, who recognize the extreme vulnerability of the coast, and the need to move quickly to address this need. This approach has also gained approval from Steven L. Stockton, P.E., Director of Civil Works, USACE in a memorandum dated 8 January 2014 (Appendix I – Pertinent Correspondence) and multiple regulatory agencies.



The subject post-Sandy Fire Island Stabilization Project, which encompasses Fire Island to Moriches Inlet, which is also known as the Fire Island to Moriches Inlet Project (FIMI) was developed based upon the Engineering, Economic, Environmental, and Planning efforts that have been undertaken through the on-going FIMP Reformulation Study that compared alternatives to identify the recommended scale and scope of a beachfill project from the TFSP, as an independent stabilization effort. The FIMI Plan was derived from utilizing background material and existing information/data that is currently included in the FIMP study to expedite the FIMI HSLRR in accordance with the HQUSACE above referenced approved Strategy Paper (dated January 8, 2014) and in response to PL 113-2.

Stabilization efforts were focused on FIMI as this reach is the most subject to barrier island overwash and breach thereby exposing the back-bay to considerable damages. There is a more urgent need to advance the stabilization of this reach due to its vulnerability and potential for major damage and risk to life and property.

This Stabilization effort is being undertaken in response to the highly vulnerable condition following Hurricane Sandy's erosive forces, where expedited action is needed to stabilize this area. This FIMI stabilization effort (Reach 1) has been developed as a one-time, initial construction project to repair damages caused by Hurricane Sandy and to stabilize the island. This report demonstrates that the Stabilization Project has its own independent utility, and as developed does not limit the options available in the Reformulation Study or pre-suppose the outcome of the Reformulation Study.

The Smith Point County Park in the FIMI project area is the most vulnerable area of the entire FIMI Project. Smith Point County Park has the lowest existing elevation that leaves it highly vulnerable to overwash and breaching. The potential for breaching and back-bay flooding is great in this location. Therefore, the construction of the beachfill and the dune and berm system in this reach has been identified for implementation as expeditiously as possible.

1.1 Report Purpose & Report Format

This report has been prepared to satisfy the requirements of P.L. 113-2. Interim Report 1, prepared in response to PL 113-2, specifically designated FIMP as an "Authorized but Unconstructed" project.

This report will serve as the USACE's decision document to support the justification for the implementation of a stabilization plan for the Fire Island Inlet to Moriches Inlet (FIMI) as a post- Sandy stabilization project.

This report contains an Environmental Assessment, per the requirements of the National Environmental Policy Act (NEPA) and USACE implementing regulation as contained in ER-200-1 to provide environmental analyses and determination of a Finding of No Significant Impact (FONSI) for the project area covered by this stabilization effort.

This report also addresses necessary changes in the implementation of the authorized but unconstructed (ABU) overall FIMP project (authorized by the River and Harbor Act of 14 July 1960, dated 21 June 1960, which established the authorized project. in accordance with the Disaster Relief Appropriations Act of 2013 (P.L. 113-2). Specifically, this report addresses:

1. The costs and cost-sharing to support a Project Partnership Agreement (PPA) for the FIMI Project for Coastal Storm Risk Management.



2. The requirements of P.L. 113-2 to demonstrate that the project is economically justified, technically feasible, and environmentally acceptable.
3. The requirements of P.L. 113-2 to demonstrate resiliency, sustainability, and consistency with the North Atlantic Coast Comprehensive Study (NACCS).

This report is arranged to provide the following information:

Chapter 1 provides an overview of the overall FIMP Study Area and history of construction, the project authorization, an introduction to the FIMI Project, and an overview of the project partners.

Chapter 2 provides an overview of the storm history in the FIMP Reformulation study area and an overview of the current vulnerability of the FIMI Project Area as a result of Hurricane Sandy.

Chapter 3 provides a description of the existing conditions within the Project Area.

Chapter 4 provides a brief overview of the Future Without Project Conditions for the Project.

Chapter 5 provides the problem identification, including a detailed description of the damages expected in the without project condition for the FIMI project, and the methods used to develop these damages.

Chapter 6 introduces the planning considerations used in developing alternatives for the project, including the goals, objectives and constraints.

Chapter 7 provides an overview of the formulation of plans that was undertaken to arrive at the Tentative Federally Supported Plan (TFSP).

Chapter 8 introduces the FIMI Stabilization project, provides the specific details associated with the recommended FIMI plan and provides the costs and economic justification for the FIMI Stabilization Project.

Chapter 9 provides a brief overview of the physical, environmental and cultural effects associated with the project. Full discussion of these effects is contained in the accompanying Environmental Assessment.

Chapter 10 provides an overview of how the recommended plan meets the requirements of P.L. 113-2.

Chapter 11 provides the details of the implementation required for the Project.

Finally Chapters 12 and 13 provide the conclusions and recommendations for this Stabilization Project.

Additional supporting information for the report is provided as Appendices.



1.2 Study Area

1.2.1 Overall Fire Island to Montauk Point (FIMP) Study Area

The congressionally authorized FIMP Study Area extends from Fire Island Inlet east to Montauk Point along the Atlantic Coast of Suffolk County, Long Island, New York. The study area includes the barrier island chain from Fire Island Inlet to Southampton, inclusive of the Atlantic Ocean shorelines and adjacent back-bay areas along Great South, Moriches, and Shinnecock Bays. The FIMP study area also includes Atlantic Ocean shoreline of Long Island from Southampton to Montauk Point. New York State Route 27 (the landward limit of the FIMP Study Area) runs east to west extending approximately 120 miles from Interstate 278 in Brooklyn to Montauk Point State Park on Long Island. Its two most prominent components are Sunrise Highway and Montauk Highway. Every town on the South Shore of Long Island is accessible through Sunrise Highway.

A total of 83 miles of Atlantic Ocean shoreline and over 200 miles of estuarine shorelines lie within the FIMP study area. The study area is shown in Figure 1.

This overall FIMP study area consists of a complex mosaic of ocean fronting shorelines, barrier islands, tidal inlets, estuaries, and back-bay mainland area. It functions as an interconnected system driven by large scale coastal processes with respect to hydrodynamic and sediment exchange that support diverse biological and natural resources.

1.2.2 Fire Island Inlet to Moriches Inlet

The Fire Island to Moriches Inlet (FIMI) project includes one reach within the overall FIMP project area. This HSLRR describes the immediate actions necessary for the FIMI barrier island.

Fire Island extends approximately 31 miles east from Fire Island Inlet to Moriches Inlet. Fire Island Inlet and Moriches Inlet are Federal navigation channels that connect the ocean and the bays. Beaches along the barrier island chain are generally characterized by a well-defined dune system with crest elevations ranging from +6 to +40 ft NGVD. Beach berm widths vary, ranging from approximately 30 feet to 150 feet, with average beach berm elevations of approximately +6 to +10 ft NGVD.

Fire Island includes the Fire Island National Seashore (FIIS), Robert Moses State Park and Smith Point County Park, which is included in the Fire Island National Seashore Boundary. The FIIS is approximately 26 miles long, including the 7-mile long Otis Pike Wilderness Area. The mission statement of the National Park Service (NPS) for the FIIS is to preserve natural processes and protect ecological resource such as open coast, intertidal and back-bay habitats and maritime forest.

The FIMI study area also includes portions of the Towns of Babylon, Islip and Brookhaven, as well as two incorporated Villages. Of the buildings within the study area, including the back-bay area, more than 9,000 fall within the modeled 100-yr floodplain (storm with a 1% probability of occurring in any given year). The FIMI project area is shown in Figure 2.

Fire Island National Seashore

Fire Island National Seashore (FIIS) was established by Public Law 88-587 on September 11, 1964, and placed under the jurisdiction of the DOI, National Park Service. FIIS encompasses much of Fire Island, with only Robert Moses State Park on the far western end of the barrier island excluded, and represents 26 miles of the approximately 31 miles of Atlantic Ocean shoreline under consideration in this HSLRR



for the FIMI project. The boundaries of the seashore extend 1,000 feet into the Atlantic Ocean and 4,000 feet into the Great South and Moriches Bays. The islands and marshlands adjacent to Fire Island are also included in FIIS. A General Management Plan (GMP) and the Final EIS on the General Management Plan were accepted in 1978, and have served as the basis for park management. The GMP is currently under revision, but not yet finalized.

The management strategy for the FIIS recognizes that significant areas of shorelines and back lands on Fire Island have been affected by human manipulation and population growth and now support stable communities. NPS policy directs that “Natural shoreline processes (such as erosion, deposition, dune formation, overwash, inlet formation, and shoreline migration) will be allowed to continue without interference. Where human activities or structures have altered the nature or rate of natural shoreline processes, the Service will, in consultation with appropriate state and federal agencies, investigate alternatives for mitigating the effects of such activities or structures and for restoring natural conditions.

Intervention in natural geologic processes will be permitted only when

- directed by Congress;
- necessary in emergencies that threaten human life and property;
- there is no other feasible way to protect natural resources, park facilities, or historic properties;
- intervention is necessary to restore impacted conditions and processes, such as restoring habitat for threatened or endangered species.

The Wilderness Act, which was passed by Congress on September 3, 1964, established the National Wilderness Preservation System. The Otis G. Pike High Dunes Wilderness Areas was established on December 20, 1980 under Public Law 95-585 and comprises 1,360 acres of the FIIS, the only federal wilderness area in New York State. The Wilderness Area encompasses 6 miles of alongshore distance immediately west of Smith Point Park. The cross-shore extent of the wilderness boundaries extend from the seaward toe of the dune to the bay shoreline. The Wilderness Management Plan for FIIS was accepted by the Secretary of the Interior in November 1983 and governs activities in the Wilderness Area.

The Fire Island Light Station Historic District is located at the west end of the FIIS. Established in 2010, the District expanded the original Fire Island Light Station National Register property boundaries to include the Fire Island Light Station, consisting of the present Lighthouse, the Radio Compass Station, the First Lighthouse Foundation, Keeper’s Quarters and the Old House, to incorporate the contributing landscape features of Burma Road, historic pathways from the Light Station to the shoreline, and the surrounding coastal grasslands, thicket zones and upper beach and dune vegetation. Significant views contributing to the historic district include the view to and from the Fire Island Light Station (NPS 2004).

The authorizing law for the Fire Island National Seashore also contains specific language that requires that any plan for shore protection within the boundary of Fire Island National Seashore be mutually acceptable to with the Secretary of the Interior and the Secretary of the Army, as a requirement for the project to be implemented.

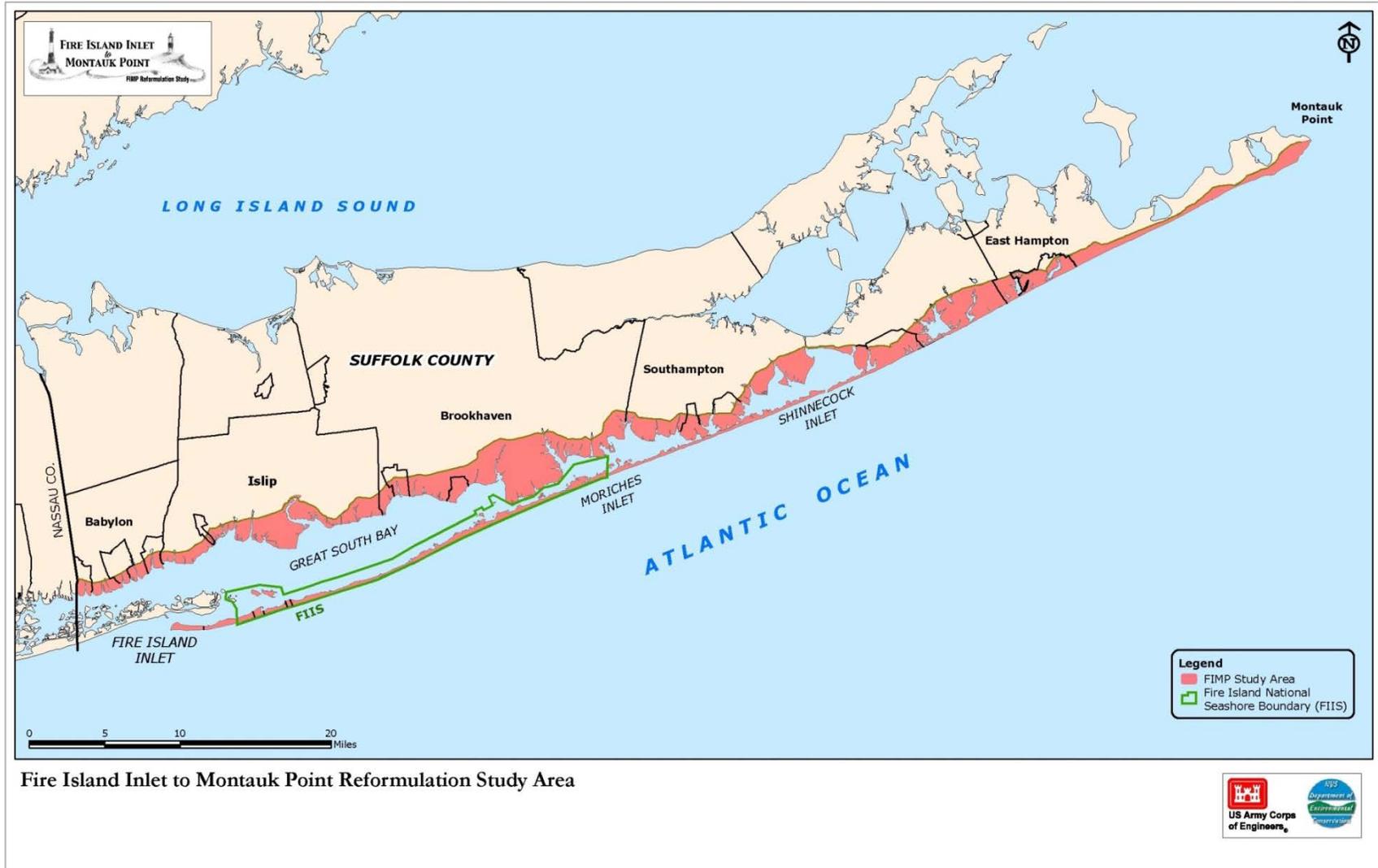


Figure 1: FIMP Study Area

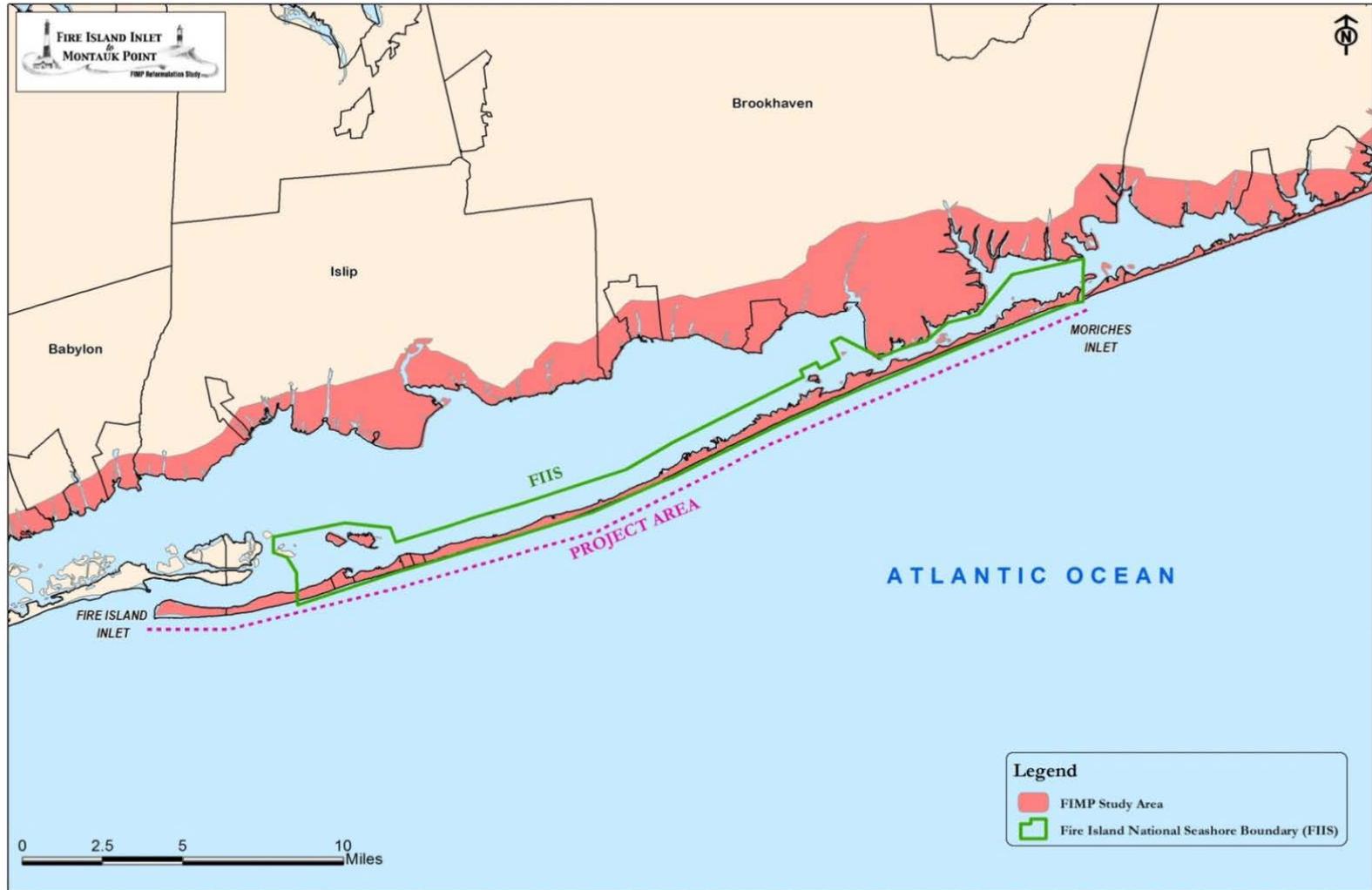


Figure 2: FIMI Project Area



1.3 Study Authority

The Fire Island Inlet to Montauk Point (FIMP), NY, Combined Beach Erosion Control and Hurricane Protection Project was originally authorized by the River and Harbor Act of 14 July 1960 in accordance with House Document (HD) 425, 86th Congress, 2d Session, dated 21 June 1960, which established the authorized overall FIMP project. The authorized project provides for beach erosion control and hurricane protection along five reaches of the Atlantic Coast of New York from Fire Island Inlet to Montauk Point by widening the beaches along the developed areas to a minimum width of 100 feet, with an elevation of 14 feet above mean sea level, and by raising dunes to an elevation of 20 feet above mean sea level, from Fire Island Inlet to Hither Hills State Park, at Montauk and opposite Lake Montauk Harbor. This construction would be supplemented by grass planting on the dunes, by interior drainage structures at Mecox Bay, Sagaponack Lake and Georgica Pond and the construction of up to 50 groins, and by providing for subsequent beach nourishment for a period of ten years, as amended.

This authorization has been modified by Section 31 of the Water Resources Development Act (WRDA) of 1974 (P.L. 93-251), and Sections 103, 502, and 934 of the WRDA of 1986 (P.L. 99-662), which principally impact cost-sharing percentages and the period of renourishment. The project is also presented in this report considering the cost-sharing provisions within Public Law (PL) 113-2 of January 29, 2013, Disaster Relief Appropriations. The initial construction cost in accordance with the provisions of P.L. 113-2 is 100% Federal. PL 113-2 states that 'the completion of ongoing construction projects receiving funds provided by this division shall be at full Federal expense with respect to such funds.

The authorized project was developed and implemented along five reaches. These reaches are used in the description of the implementation of the project, and are as follows:

Reach 1 – Fire Island Inlet to Moriches Inlet (FIMI)

Reach 2 – Moriches Inlet to Shinnecock Inlet

Reach 3 – Shinnecock Inlet to Southampton

Reach 4 – Southampton to Beach Hampton

Reach 5 – Beach Hampton to Montauk Point

1.4 Study History

1.4.1 1960's Project Implementation

Following the original project authorization in 1960, the preparation of a series of design memoranda (reports) covering the entire project along the South Shore of Long Island from Fire Island Inlet to Montauk Point, New York was planned. General Design Memorandum (GDM) No. 1, covering the portion of the project between Moriches and Shinnecock Inlets, was prepared and approved by the Chief of Engineers on 9 January 1964, and recommended improvements including 13 of the 23 groins authorized for construction in this portion. Local interests objected to the placement of dune and beachfill concurrently with groin construction. Therefore, the plan included initially constructing eleven groins in Reach 2 and two groins in Reach 4, with beach fill to be added as necessary but not sooner than 3 years after groin completion. The need for, and the design of, the two groins at East Hampton, in the vicinity of Georgica Pond (Reach 4), was addressed in a special report of design memorandum scope dated July 1964. Construction of 11 groins in Reach 2 was completed in September 1966. Construction of two groins in Reach 4 was completed in September 1965.



In the years following construction of the eleven groins in Reach 2, erosion was evident in the area west of the eleven groins. In February 1969, Supplement No.1 to GDM No. 1 (Moriches to Shinnecock Reach) was prepared. That document recommended the construction of four more groins and placement of beach fill backed by a dune at an elevation of 16 ft above mean sea level (M.S.L.) in the 6,000 ft section of beach west of the 11 groin field. The four new groins were filled with 1.95 million cubic yards of sand to construct a beach and dune. This groin construction was completed in July 1970, bringing the total number of groins in Reach 2 to fifteen. Dune and beach fill was placed between October 1969 and October 1970.

1.4.2 Renewed Interest in 1978

Because of renewed interest by the New York State Department of Environmental Conservation (NYSDEC), an EIS was prepared in 1978 for the FIMP study area. The Council on Environmental Quality (CEQ) indicated that the plan formulation did not address all alternatives or adequately assess their impact. The CEQ further indicated that the entire study area should be treated as a system. The USACE concurred and directed a project reformulation.

In 1980, a plan of study for project reformulation was approved by the Chief of Engineers and initiated shortly thereafter. The study was halted in 1984 due to an issue regarding the cost sharing requirements for periodic renourishment. NYSDEC withdrew its support for the project until a Congressional change was made to the authorization regarding periodic renourishment.

1.4.3 Reformulation Efforts, 1994

The cost sharing issue, including periodic renourishment, was resolved with the WRDA of 1986, in which cost sharing provisions provided for 70 percent Federal funding for periodic nourishment of continuing construction at Westhampton Beach for a period of 20 years. With this resolution, the State was willing to participate in a plan for Reach 2 (Westhampton Beach).

In light of the State of New York's willingness to participate in a plan for this reach, the most critically eroded of the overall study area; the USACE resumed the efforts of the Reformulation Study in 1994. The USACE, as requested by Congressional and local interests, was charged to evaluate the feasibility of interim projects which could be implemented pending completion of the Reformulation Study. Several interim projects were considered for sections of the study area including a Breach Contingency Plan (BCP) designed to achieve breach closure within 3 months.

The Westhampton Interim Project, which was already under study prior to the breach in December 1992, culminated in a Technical Support Document for Westhampton which was finalized in July 1995. That report demonstrated the feasibility of this interim project by evaluating the project costs and benefits, and comparing it to the authorized plan to establish that the interim plan was within the envelope of a larger (potentially National Economic Development - NED) plan, which would provide greater net excess benefits than the proposed interim plan. The report identified a plan to provide interim protection to the Westhampton Beach area west of Groin 15 and affected mainland communities north of Moriches Bay.

The project provides for a protective beach berm 90 feet wide and a dune of +15 ft NGVD¹, tapering of the western two existing groins (groins 14 and 15) and construction of an intermediate groin (groin 14a)

¹ National Geodetic Vertical Datum of 1929 (NGVD29 or NGVD) is approximately 1.06 feet higher than North American Vertical Datum of 1988 (NAVD88 or NAVD) within the FIMP study area.



between these two. The project also includes periodic nourishment, as necessary to ensure the integrity of the project design, for up to 30 years, until 2027.

Beachfill for this interim project also includes placement within the existing groin field to fill the groin compartments and encourage sand transport to the areas west of groin 15. The interim plan was determined to be in the Federal interest to provide protection until the findings of the FIMP reformulation effort are available. Initial construction of the project was completed in December 1997. The interim project has been subsequently renourished in 2001, 2004 and 2008, and has required less sand at longer intervals than was estimated when designed.

In 1996, the USACE Headquarters (HQUSACE) approved a Breach Contingency Plan (BCP) which provides a rapid response to close breaches along the barrier islands within the authorized project area. However, this is only a response action to restore the barrier island to an elevation of +9 feet NGVD in order to provide a limited level of protection and to provide the basis for future efforts (a 5-year level of protection). A barrier island where the BCP is to be implemented is characterized by low-lying areas likely to be overwashed and subsequently breached again during relatively minor events.

In parallel with these interim efforts, the Reformulation Study continued with a goal to identify a long-term (50-year) plan to manage the risk of storm damages, while maintaining, enhancing or restoring the existing environment. In order to address the data collection and analysis challenges of the study area the Interagency Reformulation Group (IRG) was assembled, including representatives from the USACE, New York State, the Cooperating Agencies of National Park Service and U.S. Fish and Wildlife Service, as well as representatives from National Marine Fisheries Service, and the Environmental Protection Agency.

A number of Technical Management Groups (TMG's) were also established, responsive to this IRG, who were responsible for the scoping, and reviewing of specific technical issues, and included members from the agencies, non-governmental organizations, and academics.

1.5 Non-Federal Partners and Stakeholders

The non-Federal partner for the overall FIMP project and also for this FIMI Stabilization project is the New York State Department of Environmental Conservation (NYSDEC). In addition to the non-Federal partner, there has been extensive coordination with study stakeholders including:

- Department of the Interior; U.S. National Parks Service; U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- NOAA/National Marine Fisheries Service
- Federal Emergency Management Agency
- New York State Department of State; Emergency Management Office
- Suffolk County
- Associated Towns and Villages

NPS is a land owner on Fire Island, and Suffolk County is both a landowner for Smith Point County Park and a sub-sponsor for the project. The role of the Fire Island National Seashore is addressed in the prior section. Specific roles of the regulatory agencies are described in the Environmental Assessment.



2.0 PROJECT AREA VULNERABILITY

2.1 Storm History

A detailed storm history is provided in Appendix A. The following is a discussion of the most recent storms impacting the area.

This history and the recent experience with Hurricane Sandy illustrate the potential for storm risk now and in the future, and illustrate the immediate need for action to address vulnerable areas on Fire Island. Severe coastal storms in the last few decades have caused significant damage and resulted in the barrier island even more susceptible to overwashes and breaching.

The December 1992 Nor'easter resulted in significant damages along barrier islands and back-bays. Overwashes of the island were also observed along western Fire Island, at Smith Point County Park, Old Inlet. On the mainland at Mastic Beach the water reached 2 to 4 feet deep in the streets as a result of back-bay flooding from the breaches.

The March 1993 ("Storm of the Century") resulted in severe wave action that scoured the beaches along the entire barrier island. The dunes were overtopped, lowering the height of the dunes. It was reported that homes were destroyed or severely damaged in several communities on Fire Island and in the back-bay.

The most recent major storm events to impact the project area are Hurricane Irene (2011) and Hurricane Sandy (2012). Hurricane Irene caused coastal flooding along Fire Island as water levels reached 7.0 feet NAVD 88 at Sandy Hook, NJ. Measured wave heights 15 nautical miles offshore exceeded 25 feet during the peak of the storm.

Hurricane Sandy made landfall near Atlantic City, NJ on October 29th with wind speeds equivalent to a Category 1 hurricane. The orientation of Hurricane Sandy's wind field prior to landfall caused strong winds to blow across the continental shelf towards New York. Because the peak storm surge was in phase with the peak high tide, storm-induced flooding was exacerbated. Hurricane Sandy's unusually large diameter resulted in long fetch lengths generating extreme wave heights at the study area. These three factors (track, timing, and extraordinary size) resulted in record water levels and wave heights in the New York Bight. The maximum water level at the Battery, NY is estimated to have reached elevation 11.6 feet NAVD88 exceeding the previous record by over 4 feet (USACE, 2013).

A team from the USGS went to Fire Island before and after Hurricane Sandy to survey the beach and assess morphological changes. The following excerpt from their field report provides a summary of the impacts along Fire Island immediately after the storm (USGS, 2012):

"The impacts to the island were extensive. The majority of oceanfront homes in the communities within Fire Island National Seashore were damaged or destroyed. Enormous volumes of sand were carried from the beach and dunes to the central portion of the island, forming large overwash deposits, and the island was breached in multiple locations. With few exceptions, lower-relief dunes were overwashed and flattened. High dunes, which are more commonly found within undeveloped portions of the island, experienced severe erosion and overwash. The elevation of the beach was lowered and the dunes form vertical scarps where they survived."

An oblique aerial photo, Figure 3, taken after Hurricane Sandy at Otis G. Pike Wilderness Area looking east towards Smith Point County Park shows a typical overwash fan and the breach at Old Inlet. An



example of dune scarping and berm lowering during Hurricane Sandy is shown in Figure 4. Pre- and post-Sandy aerial photos at Ocean Beach show an example of a location where the dunes were overwashed and flattened as well as the extensive damage to ocean front structures as shown in Figure 5. Another example dune flattening and severe damage is provided in Figure 6 at Davis Park.

Two of the breaches, Smith Point County Park and Cupsogue (just east of Moriches Inlet), were closed shortly after the storm following the protocol established by the Breach Contingency Plan. A third breach at Old Inlet within the boundaries of the Otis G. Pike Wilderness Area on Fire Island has not been closed, and remains a relatively stable small tidal inlet. It continues to be monitored by the National Park Service, SOMAS, and USGS.

Additional storm history for the study area is located in Appendix A.



Figure 3: Post Sandy Photo of Breach at Old Inlet (looking east towards Smith Point County Park)



Figure 4: Post Sandy Photo Dune Erosion and Berm Lowering at Fire Island



Figure 5: Pre- and Post-Sandy Photo at Ocean Beach



Figure 6: Post-Hurricane Sandy Photo at Davis Park



3.0 EXISTING CONDITIONS

This section provides a detailed summary of the natural and human environment within the FIMI study area and serves as a reference point to understand future without project condition and impacts associated with project alternatives. More detailed physical existing conditions information pertaining to the overall FIMP study is included in Appendix B.

3.1 Barrier Island & Shorefront Geological Processes

Fire Island is a barrier island, which extends approximately 30 miles west from Moriches Inlet to Fire Island Inlet. Great South Bay and Moriches Bay are located on the leeward side of Fire Island and are generally less than 6 feet deep. The barrier island is generally less than 2,500 feet wide, and contains irregular sand dunes ranging in height from 10 to 40 feet above mean sea level. The beach berm in the study area ranges in width from 30 to 150 feet with the berm elevation approximately 7 to 10 feet above mean sea level.

The Fire Island barrier island serves to protect both the mainland and the leeward side of the barrier from ocean waves and filters the offshore signal of high water levels from storm tides. The principal features of the Fire Island barrier system are illustrated in Figure 7: Barrier Island Features (after USACE, 2002).

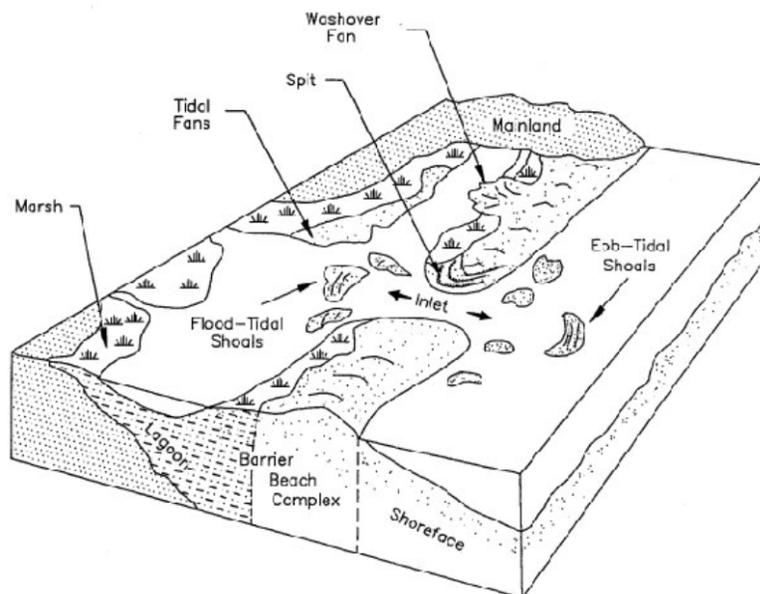


Figure 7: Barrier Island Features (after USACE, 2002)

The natural beach of the barrier island consist of these general features, from sea to land, a submerged beach, a shoreface, a berm and coastal dune. This natural shorefront encompasses a range of geometries depending on wave climate, sand supply and condition of the near shore bar. Specifically, the beach may erode under large waves and elevated water levels to assume a storm or “winter” profile. The beach may recover post-storm to assume a “summer” profile.



Natural dunes provide the last line of defense on a natural beach and normally have elevations a few meters higher than normal high tides. During severe storms dunes may be overtopped (i.e., overwashed) or breached; the latter can lead to the formation of a new tidal inlet.

The dynamics of island overwashing, breaching and new inlet formation are dictated by the complicated interaction of numerous geomorphologic and hydrodynamic factors. A distinction is made between island overwash, island breaching and permanent inlet formation is shown illustrated in Figure 8. Overwash is the flow of water in restricted areas over low parts of barriers that typically occur especially during high tides or storms. Depending on the storm magnitude and island width, overwash areas of newly transported sand may penetrate no farther than the dunes, or may be spread onto the marshes or into the bay. In general, major overwashes extending into the bay occur only during exceptionally severe storms. Therefore, overwash has a more significant impact on subaerial and intertidal barrier island resources (e.g., back-bay marshes) than on back-bay areas located away from the barrier.

Breaching refers to the condition where a channel across the island is formed that permits the exchange of ocean and bay waters under normal tidal conditions. The breach may be temporary or permanent (i.e., a new inlet) depending on its size, adjacent bay water depths, potential tidal prism, littoral drift, and water level and wave conditions following the storm. The recent stability of the existing inlets in the study area is largely due to maintenance and stabilization efforts that have included dredging of navigation channels and jetty construction. Breaches that remain open and become new inlets have the greatest influence on decadal or century-long sediment transport dynamics by redirecting/trapping longshore sediment transport into ebb and flood shoals during the period that the breach remains open (USACE-NAN, 1999a). The process of opening-migration-closing of inlets is fundamental to the long-term geologic resilience of barrier islands. Flood shoals serve as platforms for new marsh development. Most of the marshes in Great South, Moriches, and Shinnecock Bays are associated with former flood shoals (Leatherman and Allen, 1985).

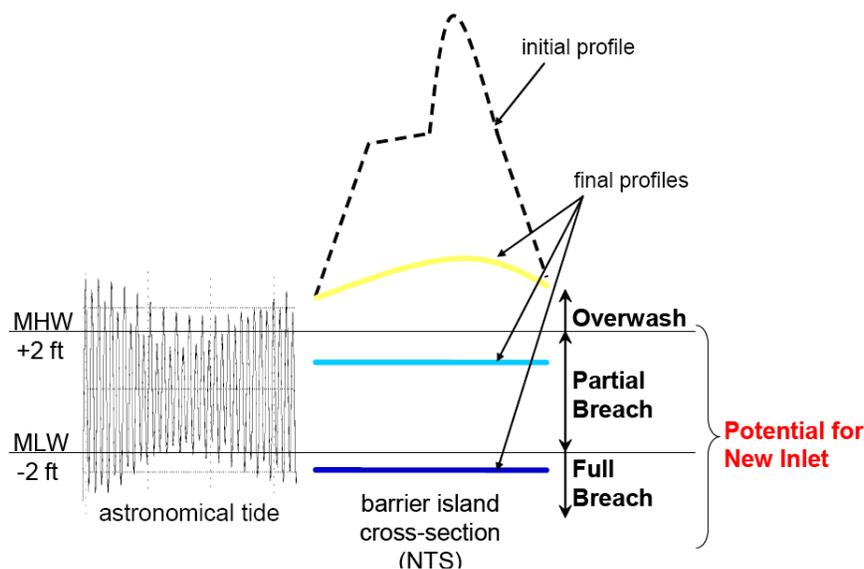


Figure 8: Morphological Responses to Overwash and Breaching



Sea Level Rise

By definition, sea level rise (SLR) is an increase in the mean level of the ocean. Eustatic sea level rise is a change in global average sea level brought about by an alteration to the volume of the world's oceans. Relative sea level rise takes into consideration the eustatic increases in sea level as well as local land movements of subsidence or lifting. The historic sea level rise rate is approximately 0.0126 feet/year or about 1.3 feet/century. There are various projections of accelerated sea level rise, from 2.6 feet/century up to almost 5.4 feet/century. A significant increase in relative sea level could result in extensive shoreline erosion and inundation. Higher relative sea level elevates flood levels, and as a result, smaller, more frequent storms could result in flooding equivalent to larger less frequent storms. The more frequent flood events on top of higher sea level may affect more property, resulting in greater damages as sea level increases,

The current guidance (ER 1165-2-212) from the USACE states that proposed alternatives should be formulated and evaluated for a range of possible future eustatic rates of SLR. Three possible eustatic SLR rates, low, intermediate, and high, are provided in the guidance. These rates of rise correspond to 0.7 ft, 1.3 ft, and 2.7 ft over the 50 year period of analysis for the low, medium and high rates of relative sea level rise.

Offshore Sediment Characteristics

Since the 1960's, efforts have been undertaken in the study area to identify locations offshore which contain sediment (sand) that would be a suitable source for beach nourishment. This includes considerations for compatibility to native beach grain size, the amount of volume available, environmental considerations, and distance to the project site. Twelve potential offshore sites and seven potential upland source sites were identified as possible sources for the beach nourishment measures (across the FIMP area). The specific results of the borrow area investigations for design purposes are included in the Borrow Area Appendix E.

Shoreline Changes

Historic Shoreline Rate-of-Change (SRC) values in the FIMP study are documented in Gravens et al. (1999), which examined three non-overlapping time intervals using available shoreline data sets. The first period, representative of the epoch prior to significant human influence on the barriers, is 63 years long (1870 to 1933). The second period, representative of initial development on the barriers and the initiation of human intervention with natural processes including inlet stabilization and significant beach fill placements, is approximately 46 years long (1933 to 1979). The third period, reflecting the beach nourishment practices, is approximately 15 years long (1979 to 1995).

The Fire Island barrier has, in general, been eroding at a historically consistent rate of about 0.4 m/year (1.3 feet/year). Average shoreline recession has increased to 0.7 m/year (2.3 feet/year) over the last 15-year time interval studied by Gravens on Fire Island. It is important to note that these SRC values are average values for the entire 30-mile barrier island and that the standard deviation in the SRC is between 3 and 4 times larger than the mean. The comparatively large SRC standard deviation indicates significant variation in the shoreline change signal along Fire Island.

The Back-Up Calculations Appendix includes more recent data on placed beachfill volumes from 2000 to 2009 and volumetric erosion rates (1998-2012 and 2009-2012) based on profile data collected in the communities. This data was primarily used to estimate future renourishment volumes (which will not be used in this FIMI project) and to support the beachfill diffusion analysis used to locate the fill baseline.



Figure 7 in the Back Calculations Appendix shows the volumetric erosion rates from Fire Island Lighthouse Tract to Davis Park after removing placed beachfill volumes.

In relationship with shoreline change, Lentz, et al, 2013 examined three shoreline data sets (1969 Aerial Photography, 1999 and 2009 Lidar data). The analysis includes the influence of human modifications (beachfills) within the time periods to develop shoreline change rates.

Inlets

As presented previously, there are two inlets in the Project Area: Fire Island Inlet and Moriches Inlet, both of which are Federal navigation projects. Moriches and Fire Island inlets also increase the tidal prism and amplitude within the bays because the navigation channels are larger and more efficient than the unstructured tidal exchange. Both inlets allow the exchange of water, sediments, nutrients, planktonic organisms, and pollutants. These existing inlets contribute to flooding in the back-bay that occurs during storm events. They are exchanged between the open sea and the protected back-bays behind the barriers. The inlets play an important role in the regional sediment budget by either trapping sediment within its ebb and flood tidal shoals or bypassing sediment downdrift. Mature inlets with well-developed ebb and flood shoals are generally more efficient at bypassing sediment. The stabilization / jetties of the inlets act to confine flows within a relatively narrow area compared to natural inlets; they also act to deepen the inlet throat and shift the ebb tidal delta further offshore than a natural inlet. Accordingly, the inlets have acted to trap sand.

Existing Shore Protection Activities

In response to the storm history described in Chapter 2, a number of construction measures have been implemented within the FIMI project area to mitigate storm impacts. These include measures which have been implemented either as other Federal initiatives, State actions, or undertaken by local municipalities, taxing districts, or by individual homeowners. Collectively, these actions have had a dramatic influence on the functioning of the existing coastal system.

The following section provides a description of the major coastal engineering actions which have been undertaken in the project area, which shape the current conditions. This section focuses on the major constructed elements along Fire Island since these activities influence the functioning of the barrier island system and need to be accounted for in planning. This does not try to capture all of the local projects that have been constructed, or all of the activities that have taken place along the back-bay areas.

It is recognized that there have been significant activities undertaken in the backbay area. Much of the bay shoreline both on the north side of the barrier island and along the mainland shoreline has been bulkheaded or otherwise stabilized, with the exception of the remaining natural areas. There is also an extensive network of navigation channels in the bay systems that have been dredged and maintained. Additionally, in recent years, there have also been a number of home elevation programs that have been implemented under various programs.

Beachfill

Following the hurricane of 1938, there is a consistent record of beachfill activities undertaken in response to storm events. A large percentage of historical beachfill volumes have been placed adjacent to Fire Island and Moriches Inlet as a byproduct of inlet dredging. Following the 1962 nor'easter, USACE contracted the placement of 9,529 linear feet of dune and 37,000 linear feet of berm along Fire Island as



part of the Disaster Recovery Operation (USACE, 1963). Beachfill projects were also undertaken by local communities at Point of Woods, Cherry Grove and Ocean Beach following 1962. It is estimated that a total of 6.9 million cubic yards of beachfill was placed along Fire Island from 1933-1989 (Gravens et al, 1999).

Since 1990, beachfill has been performed by the USACE adjacent to the inlets as a byproduct of inlet maintenance dredging, and by the local communities in response to storm events. In response to the storms in the 1990's local communities placed approximately 1 million cubic yards of beachfill (CPE, 2013). In 1997 an additional 650,000 cubic yards of beachfill was placed by the communities in Fire Island Pines.

Two major beachfill projects were undertaken by local communities along Fire Island between 2000 and 2009. In 2003-2004 several communities in Fire Island placed approximately 1.28 million cubic yards of beachfill in Western Fire Island and Fire Island Pines, and in 2009 1.82 million cubic yards of sand was placed in eleven communities along Fire Island (CPE, 2013). In addition to these two major beachfill projects, 172,000 cy and 21,000 cy of sand were placed at Smith County Park and Davis Park respectively in 2007.

Ocean Beach Groins

Two shore perpendicular structures were constructed in the winter of 1970 within the Village of Ocean Beach, on Fire Island. Both groins are 200 feet long from landward crest to seaward crest, with the offshore portion about 85 feet of the total length. The groins were constructed in an area of higher erosion, to add stability to the ocean shoreline seaward of the Ocean Beach water tower and pumping stations (wells). Since this time, the water tower has been moved north in the Village, on Village owned land, however the three wells remain just landward of the eastern groin, within three village owned facilities. A separate Village maintenance facility is also located in the same Village property containing the wells.

Smith Point County Park Bulkhead

Following the storms of the early and mid-1990's Suffolk County constructed a steel sheetpile bulkhead fronting the existing pavilion at Smith Point County Park. In the mid-1990's conditions were such that the pavilion and its infrastructure were at risk to future damage. The structure was constructed in conjunction with a beachfill project, to protect the bulkhead. Following construction of the structure, a memorial for TWA Flight 800 (which crashed in the Atlantic Ocean off of Moriches Inlet in July 1996) was constructed. The memorial was located outside the alongshore extent of the sheetpile structure, and in a location vulnerable to erosion. In 2005, Suffolk County extended the sheetpile structure to provide protection inclusive of the memorial.

Fire Island Inlet

Fire Island Inlet is located at the western end of Fire Island and connects the Atlantic Ocean with Great South Bay. Available records indicate that Fire Island Inlet has existed continuously since the early 1700's. The position of the inlet, however, has varied significantly over time and has migrated a total distance of about 5 miles from a point east of its present position between 1825 and 1940. Federal jetty construction at Democrat Point in 1941, as part of the Fire Island Inlet Navigation Project halted this westward migration. Due to chronic erosion on the western shore, modification of the Federal project was authorized in 1971 to provide for a sand bypassing system at Fire Island Inlet. Since this time, continued dredging of the inlet has been performed to both maintain a navigable channel, and to provide shore



protection on the westerly, downdrift beaches and to protect the Ocean Parkway. Dredged material has also been placed in Robert Moses State Park to alleviate chronic erosion.

Moriches Inlet

Moriches Inlet is located along the Atlantic Coast in the Town of Brookhaven and connects the Atlantic Ocean with Moriches Bay through the narrow barrier island. Available maps and records indicate that numerous inlets to Moriches Bay have existed during the last several centuries. The present Moriches Inlet was opened during a storm on 4 March 1931. The inlet migrated about 3,500 feet west from 1931 to 1947 at which time its migration was halted when non-federal interests constructed a long stone revetment on its western bank in an effort to stabilize the Inlet. During a storm on 15 May 1951 Moriches Inlet closed as a result of reduced hydraulic efficiency. Non-federal interests constructed jetties on both sides of the inlet from 1952 to 1953 and the inlet was reopened during construction by a storm on 18 September 1953.

In 1983, the USACE completed a General Design Memorandum for Moriches Inlet Navigation, which recommended Federal participation in inlet improvements including the following: (1) a 100-foot wide by 6-foot deep inner channel extending from the Intercoastal Waterway to Moriches Inlet, (2) an outer channel extending from the ocean to the inner channel with a width of 200 feet, a low water depth of 10 feet and an advanced maintenance deposition basin. Construction activities were completed by 1986, and since this time the inlet has been maintained as a Federal Navigation Channel.

3.1.2 Estuarial (Bayside) System Conditions

The project area estuarial system is comprised of Great South Bay and Moriches Bay and is connected to the Atlantic Ocean through Fire Island and Moriches Inlets respectively. The bays are also connected to each other through narrow tidal waterways of the Long Island Intracoastal Waterway (ICW). A summary of hydrodynamic and water quality conditions is presented in the following paragraphs.

Hydrodynamics and Hydrology

Bay water levels are generally controlled by tidal elevations at Fire Island and Moriches Inlets. The uniformity of tide ranges throughout both Great South and Moriches Bays is a characteristic of the so-called “pumping mode” of inlet-bay hydraulics where water levels within an embayment remain nearly horizontal during ebb and flood tide phases. Bay tide amplitudes are generally less than ocean tides and lag the ocean tides. The difference between ocean and bay tides is particularly significant within eastern Great South Bay. The tidal range at the ocean end of Fire Island Inlet is approximately 4.0 feet, whereas the average tidal range in the bay is approximately 1 foot. The tidal range at the ocean side of Moriches Inlet is approximately 3.4 feet; the average tidal range within the bay is estimate to be 2 feet (NOAA Technical Memorandum NOS CS 21, Yang, et al. 2010). Maximum current velocities occur near the inlet mouth, where values exceed 4 feet/second. Peak velocities in the bays away from the inlets are typically less than 1 feet/sec. Additional details for the hydrodynamics and hydrology are included in Appendix B of this report.



3.2 Socio-Economic Conditions

The following details the development patterns and land use on Fire Island and the back-bay areas of Great South Bay and Moriches Bay.

Intensive human habitation was not documented on Fire Island until the second half of the 19th century. The establishment of permanent communities began shortly before the 20th century. The first of these, the Point O' Woods Association, began in 1898. Other communities quickly followed, although the youngest community, Dunewood, was formed in 1958. The number of buildings and the summer population began to grow. According to an analysis of aerial photographs, approximately 950 structures were found on Fire Island in 1928. This number grew slowly to 1,260 in 1955, and the number of structures had doubled to about 2,400 in 1962. The number of structures reached about 3,500 in the 1970's and now stands at approximately 4,150. All of the communities on Fire Island have greatly increased populations during the summer months from an influx of day visitors, short-term renters, and seasonal homeowners.

Land Use and Management

Land use differs throughout the study area. The FIMI barrier island study area is generally more developed to the west in the communities of Saltaire, Ocean Beach, Cherry Grove and Fire Island Pines with no development in the middle, wilderness area. Smith Point County Park is located on the easternmost side of the FIMI project area, while Robert Moses State Park is located on the westernmost end of Fire Island. State coastal policies support protecting natural protective features, siting buildings and development in places that minimize risk, and avoiding actions that impair natural sediment processes. Additional Land Use and Management is included in Section 10.4 of this Report and Appendix J.

There is significant variation in the per capita and family income among study area towns as shown in Table 1. Per capita income in most of the study area is slightly above the state average. Median family incomes in the study area towns are all higher than the median family income for New York State.

Table 1: Per Capita and Family Income

Location	Per Capita Income	Median Family Income
New York State	\$31,796	\$69,202
Suffolk County	\$36,588	\$99,474
Town of Babylon	\$31,255	\$90,853
Town of Islip	\$31,493	\$92,482
Town of Brookhaven	\$34,201	\$97,520

Source: American Community Survey 2007-2011 5-year Estimate

Economy

The largest segment of the study area population is employed in the education, health and social services sector. Retail trade, professional/management services and manufacturing also employ a large portion of the population. In the eastern end of the study area more people are employed in the agricultural field, while fewer are employed in the retail and manufacturing sectors.



Transportation

The Robert Moses Causeway provides access over Great South Bay to Captree State Park and then over the Fire Island Inlet to Robert Moses State Park. The William Floyd Parkway (County Route 46) provides access over Narrow Bay to Smith Point County Park and the FIIS Smith Point Visitor Center.

Private transportation is the predominant method of access to Fire Island, with approximately 5.1 million visitors (70 percent of total visitors) accessing the island by automobile. 3.8 million visitors travel to Robert Moses State Park annually and over 1.5 million visitors travel to Smith Point County Park on an annual basis. Private access is also provided by boat, water taxi, bicycle and seaplane. Ferries account for approximately 1.2 million visitors travel to Fire Island annually.

On Island Circulation

The only vehicular traffic currently on Fire Island is at the western and eastern ends of the island. Vehicular access to Fire Island is allowed at Robert Moses State Park and Smith Point County Park; other areas on the island are vehicle accessible only by a special permit issued by the town. Due to the lack of roadway infrastructure and prohibition of cars, travel around the island is an access issue. While on the island, day visitors can venture to neighboring communities by water taxi or on foot. Vehicles without a special permit are prohibited in the Fire Island National Seashore.

Water taxis provide convenient lateral transportation between the communities. The sandy "Burma Road" provides a route for construction, utility, and pedestrian traffic between the communities. Segments of Burma Road are difficult for pedestrian transit because of the large distance separating several communities. In addition, the sandy composition of Burma Road makes bicycle use difficult.

3.3 Environmental Resources

The study area is a complex array of marine, coastal and estuarine ecosystems expected in a barrier island environment. Several habitats within the study area, including Marine Offshore, Marine Nearshore, Marine Intertidal, Inlets, Bay Intertidal, Sand Shoals and Mudflats, Salt Marsh, Bay Subtidal, and Submerged Aquatic Vegetation, have been designated as Essential Fish Habitat (EFH) for one or more managed fish species. The study area contains EFH for various life stages for 27 species of managed fish.

There are 25 Federally/State-listed species in the study area including sturgeon, two mammals, 10 reptiles, 10 birds, and three plant species. The habitats, EFH, species, and impacts are discussed in detail in the Environmental Assessment.

Threatened and Endangered Species

Two Federal agencies, the Fish and Wildlife Service (USFWS), in the Department of the Interior, and the National Oceanic and Atmospheric Administration (NOAA) Fisheries, in the Department of Commerce, share responsibility for administration of the Endangered Species Act (ESA). The USFWS is responsible for terrestrial and avian listed species, as well as freshwater aquatic species. NOAA, through the Protected Resources Division of the National Marine Fisheries Service (NMFS) is responsible for marine aquatic species. In addition to species protected under the Federal ESA, the State of New York maintains a list of species that are Threatened, Endangered, Rare, or of Special Concern in the State. Table 7 of the Environmental Assessment (attached) provides the listed species that may occur within the study area, and their Federal and/or State status. Table 8 of the



Environmental Assessment lists each species and presents a summary of the habitats that they may utilize within the study area.

Four species of whales: finback (*Balaenoptera physalus*), humpback (*Megaptera novaeangliae*), sei (*Balaenoptera borealis*) and right (*Eubalaena glacialis*), have the potential to pass through the waters above the borrow area. All four species are state and Federally listed endangered species. They are typically found significantly farther offshore, but have limited potential to enter the area during spring and fall migration periods. No records, present or past, indicate that the New York Bight is a high use foraging area for large cetaceans.

The New York District completed coordination with the USFWS regarding implementation of the Stabilization Project and received the Biological Opinion (Attachment D of the Environmental Assessment) on May 23, 2014. The USACE also coordinated under Emergency Consultation procedures with the NMFS for threatened and endangered marine species.

Based on habitat and life history assessments, recommendations from the USFWS and a Biological Assessment (Attachment D) prepared by the USACE and the Biological Opinion, it was determined that the following Federally- listed species are likely to occur in the FIMP Project Area:

- Piping Plover (*Charadrius melodus*), Federally Threatened;
- Roseate Tern (*Sterna dougallii*), Federally Endangered;
- Rufa red knot (*Calidris canutus rufa*), Proposed; and
- Seabeach Amaranth (*Amaranthus pumilus*), Federally Threatened

These Federally listed species are found within essentially the same habitats. This habitat encompasses areas located between the high tide line and the area of dune formation and consists of sand or sand/cobble beaches along ocean shores, bays and inlets and occasionally in blowout areas located behind dunes. The piping plover population in the project area (Fire Island) has supported as many as 54 pairs of piping plovers (in 2008), declining to 27 pairs in 2013. According to USFWS, Hurricane Sandy created approximately 200 acres of new potential overwash habitat located within the project area (for more information, refer to the attached BO in the EA).

3.4 Cultural and Archeological Resources

This section provides an overview of known and potential cultural resources and historic properties, including archaeological and architectural resources, within the Area of Potential Effect (APE). The Area of Potential effect for this proposed project extends the entire length of the Atlantic shoreline of Fire Island, from Fire Island Inlet to Moriches Inlet, extending seaward from the existing dune line into the nearshore sand placement area. The APE also includes the source locations of sand from the offshore borrow areas. A number of cultural resource surveys of the study area have been prepared and are used as part of this assessment. .

Coordination with the New York State Office of Parks, Recreation and Historic Preservation (NYS SHPO), the Advisory Council on Historic Preservation (ACHP), the National Park Service, other interested parties as well as the Shinnecock Nation, is ongoing. A Programmatic Agreement is being prepared to assess potential effect, and develop strategies to avoid or minimize adverse effects of proposed project elements.



3.4.1 Tidal Zone, Near Shore and Borrow Areas

Submerged Archaeological Resources

Known and potential submerged archaeological resources, primarily shipwrecks, in the tidal zone, near shore and borrow areas along the south shore of Fire Island have been inventoried through a number of studies.

Tidal Zone and Near Shore Beachfill Area

A remote sensing investigation of the tidal zone and the near-shore beachfill area along portions of Fire Island was conducted. The survey was designed to determine the location, if present, of any targets that might represent potentially significant cultural resources or sites in the form of historic shipwrecks. The survey included a side scan sonar and magnetometer. The survey identified 26 magnetic anomalies that had characteristics potentially representative of significant submerged cultural resources. Most of the anomalies were buried beneath the seabed, with no associated, discernible above seabed side scan sonar returns. Four of the anomalies had both a magnetometer signature and an associated above seabed side-scan sonar return. These four anomalies will need additional investigation if located in an area where sand will be placed (Panamerican 2003).

Shipwrecks

Numerous shipwrecks have been documented along the Atlantic coast of Long Island and the potential number of undocumented shipwrecks far exceeds the list of known shipwrecks. Research conducted in 1998 identified approximately 155 documented wrecks in the near-shore and offshore area from Fire Island Inlet to Moriches Inlet. Some of these wrecks were later re-floated and/or removed or were wrecked at sea, offshore Fire Island; some more than 12 miles. A few were scuttled to form artificial reefs. This research identified approximately 46 vessels that were documented as having wrecked on or near the beach with locations identified as Fire Island, Fire Island Inlet, or opposite Moriches. The exact location of these vessels has not been identified but portions of wrecks have been periodically exposed or washed up along Fire Island. Based on initial historic research a number of these vessels, if identified, could be eligible for the National Register of Historic Places (Greeley-Polhemus Group 1998). In 1998 and 1999, USACE completed a remote sensing survey of much of the tidal zone and near-shore area of Fire Island to the east of Robert Moses State Park. The survey identified four anomalies with an associated above-seabed side scan sonar return located along the length of Fire Island that would require additional investigations to determine what the anomalies represent and, if any represent a potential historic property (Panamerican Consultants 2003).

The *USS San Diego*, an armored cruiser, also known as the *USS California* (Armored Cruiser No. 6) was added to the National Register of Historic Places in 1998. Launched in 1904 as the second *USS California* (ACR-6), it was renamed *USS San Diego* in 1914 and served as a flagship for the Commander-in-Chief of the Pacific Fleet. By 1918, it was ordered to the Atlantic Fleet to act as escort for convoys heading across the North Atlantic to Europe. The *San Diego* was sunk in July 1918 by a German mine. It currently lies in about 110 feet of water several miles off the Fire Island coastline and is a popular dive site.

Two additional dive sites, the *Drumelzier* and the *Gluckhaufl*, are located within Fire Island. The *Drumelzier*, also known as the "Fire Island Wreck" was British steamship, which sunk in 1904 and is located offshore Robert Moses State Park. The *Gluckhaufl*, a German tanker, ran aground in a storm in 1893. Portions of the wreck are spread over a wide area, with the stern as the most dived section.



In 2001, USACE completed a survey of 11 borrow areas located off-shore of Fire Island and Westhampton and Southampton Beaches. This included Borrow Area 2C, located south of central section of Fire Island and 5B located off of Westhampton. The survey, consisting of magnetometer and side scan sonar, did not identify any magnetic or acoustic anomalies within the borrow area.

Drowned Terrestrial Sites

No underwater, former terrestrial archaeological sites have been identified off-shore of Long Island.

Borrow Areas

In 2001, a remote sensing survey of eleven borrow areas, including Borrow Areas 2C and 5B, was conducted to assess the potential impact of proposed activities on submerged cultural resources. A total of 10 magnetic and/or acoustic anomalies were identified as follows: one in Area 2A, four in 4A, three in 5A, one in 6A, and one in 7A. No magnetic and/or acoustic anomalies were identified in Areas 2B, 2C, 3A, 4B, 5B and 8A. No additional work will be required in Areas 2C and 5B, however Borrow Area 4C will require its own survey (Tidewater Atlantic Research 2001).

3.4.2 Onshore Portion of the Study Area.

Archaeological Resources

According to NY SHPO's archaeological site files, Site A103-05-000605, lies within Robert Moses State Park, was a recreational facility built for handicapped children in the early part of the 20th century. It is located within the dunes bordering Great South Beach and is considered to be potentially eligible for the National Register of Historic Places (John Milner and Associates 2000).

In 2005, the National Park Service completed an archaeological overview and assessment of sites within the FIIS (Gray and Pape 2005). The report relocated and assessed 13 previously identified archaeological sites within FIIS. Sites located on Fire Island include Whalehouse Point, Point O' Woods Refuse Midden, Blue Point Lifesaving Station, Smith Point Coast Guard Station, Forge River Life Saving Station, Fire Island Lighthouse Tract (two areas), the Razed Factory, the Greenburg House Site, Saltaire Dump and the Casino Site. Several of these sites, including the Blue Point Lifesaving Station, the Smith Point Coast Guard Station, Whalehouse Point, and the Forge River Lifesaving Station are located or have features that are located in the dunes to the south of Burma Road (Gray and Pape 2005).

Architectural Resources

The Fire Island Light Station Historic District is located at the west end of the FIIS. Established in 2010, the District expanded the original Fire Island Light Station National Register property boundaries to include the Fire Island Light Station, consisting of the present Lighthouse, the Radio Compass Station, the First Lighthouse Foundation, Keeper's Quarters and the Old House, to incorporate the contributing landscape features of Burma Road, historic pathways from the Light Station to the shoreline, and the surrounding coastal grasslands, thicket zones and upper beach and dune vegetation. Significant views contributing to the historic district include the view to and from the Fire Island Light Station (NPS 2004). In architectural investigation identified several potentially eligible historic resources within the study area, which were related to the historical settlement and pre-resort development, vacation/resort industry, and maritime histories of the barriers. Reconnaissance field surveys identified 22 potentially eligible resources that meet the 50-year age consideration of the NRHP. Potentially affected architectural properties were considered to be only those visible from the beach itself. It is noted that a formal



determination of eligibility requires additional research. The properties recommended for additional consideration are:

- The Robert Moses State Park Tower as a landmark within the park and along the western end of the barrier island;
- Colonial Revival House, Corneille Estates, Ocean Beach vicinity, c. 1930s;
- Hip-roofed House, Corneille Estates, Ocean Beach vicinity, 1920s;
- Dutch Gable, Wood-framed House, Ocean Bay Park, c. 1930s;
- Gable-roofed house with shed dormers, Seaview, c. 1930s;
- Former Point O'Woods Life Saving Station (present Fire Island Hotel and Resort), Ocean Bay Park, c.1900;
- Point O'Woods, former Chautauqua community with numerous examples of Shingle-style architecture;
- Gable-front bungalow, Cherry Grove, c. 1920s;
- Two Eaves front bungalow, Cherry Grove, c. 1920s;
- One and one-half story eaves front home, Cherry Grove, c. 1920s;
- Gable and hip-roofed house, Cherry Grove, c. 1920s;
- Eaves front house, Fire Island Pines, c. 1920s;

3.5 Essential Fish Habitat

Essential Fish Habitat

The NMFS is responsible for enforcing the Magnuson-Stevens Fishery Conservation and Management Act (1996 amendments) (MSA), which is intended to promote sustainable fisheries. To implement the MSA, the NMFS and the eight regional Fishery Management Councils have identified and described Essential Fish Habitat (EFH) for each managed fish species. EFH can consist of both the water column (pelagic) and the underlying surface (seafloor) of a particular area. Areas designated as EFH contain habitat essential to the long-term survival and health of our nation's fisheries.

Several habitats within the study area, including Marine Offshore, Marine Nearshore, Marine Intertidal, Inlets, Bay Intertidal, Sand Shoals and Mudflats, Salt Marsh, Bay Subtidal, and SAV, have been designated as EFH for one or more managed fish species. The overall FIMP study area contains EFH for various life stages for 27 species of managed fish. In compliance with Section 305(b)(2) of the MSA, the Reformulation Study will include an assessment of the potential effects of the proposed alternatives on Essential Fish Habitat (EFH), including all pelagic and benthic fish habitat off of Long Island, 1,000 feet seaward of mean low water (MLW) and coastal and open Atlantic Ocean. In addition, a separate EFH assessment has been prepared specifically for the FIMI Stabilization Project and is included as Attachment B.

Fish occupation of waters within the project impact areas is highly variable spatially and temporally. Some of the species are strictly offshore, while others may occupy both nearshore and offshore waters. In addition, some species may be suited for the open ocean or pelagic waters, while others may be more oriented to bottom or demersal waters. This can also vary between life stages of Federally managed species. Also, seasonal abundances are highly variable, as many species are highly migratory.



Significant Habitats

The USFWS has identified Shinnecock Bay, Moriches Bay, Great South Bay, Montauk Peninsula, and South Fork Long Island Beaches as Significant Habitats and Complexes of the New York Bight Watershed. These areas have been recognized as regionally significant habitats and species populations. In addition, all of the backbay waters, including Bay Intertidal and Bay Subtidal habitats within the study area have been designated as Significant Coastal Fish and Wildlife Habitats (SCFWH) by the New York State Department of State (NYSDOS). All or portions of the following specific SCFWH areas are within the FIMI Stabilization Project area: Great South Bay, Democrat Point, Moriches Bay and Smith Point County Park.

Within the Dunes and Swales habitat, the maritime freshwater interdunal swale community, which occupies the low-lying and wet areas between the dunes, generally supports a variety of plants designated as rare or unique by the NYSDEC Natural Heritage Program and hence, has been designated as a Significant Habitat by NYSDEC.

The Sunken Forest is one of three locations where maritime forests persist on the eastern seaboard. The Sunken Forest is from 200 to 300 years old and is located within Fire Island National Seashore, near the Sailors Haven marina and visitor center. Because of its uniqueness as a maritime forest community, the Sunken Forest is of particular ecological importance and warrants special protection.

Submerged aquatic vegetation (SAV) is a unique vegetated intertidal habitat. The establishment of SAV is dependent on suitable water quality, substrate, depth and water currents. SAV is one of the most important features of the Backbay Ecosystem since it provides nursery areas for finfish and a niche for colonization of epiphytic algae and invertebrates.



4.0 WITHOUT PROJECT FUTURE CONDITION

The Without Project Future Condition (WOPFC) is by definition the projection of the most-likely future conditions in the study area in the absence of a proposed project from the current study. The WOPFC serves as the base conditions for all the alternative analyses, including the engineering design, economic evaluation of alternatives, comparison of alternatives, as well as environmental, social and cultural impact assessment.

The WOPFC is a forecast based upon what has actually occurred, is currently occurring or is expected to occur in the study area if no actions are taken as a result of this study. As it is impossible to predict specifically what may occur, future activities that impact the without-project condition must be representative of what is most likely to occur, and as such must be based upon historic practice and trends, unless there is definitive evidence of new actions or policies scheduled for implementation that would influence past practices. The goal is to choose the most likely future scenario (not the only future scenario), based upon reasoned, documentable forecasting. The period of analysis for this plan is 50 years. This section provides a summary of the elements within the WOPFC, followed by a description of the likely effects of this condition.

In defining the WOPFC, the following assumptions were made to establish the framework of what is likely to occur.

1. As defined by existing Federal/State navigation authorities, the existing inlets (Fire Island, and Moriches Inlets) and their corresponding approach and back-bay navigation channels will be maintained near the present widths depths, and locations through the study period. These existing inlets will continue to contribute to back-bay flooding in the WOPFC.
2. Periodic beach fills and beach scraping will continue to be implemented by local governments and home owner associations to maintain some threshold beach condition. This condition is based on a review of historic activities including the extent of local and private activities. It is likely that future regulatory requirements may limit the size, scope, and timing of future local projects; but even with these conditions, it is expected that within their available resources, local groups will continue to maintain a minimum beach and dune condition.
3. No Federal interim storm protection projects will be considered in place except for the Westhampton Interim Project, which will be maintained until the end of the renourishment period in 2027. After 2027, the Westhampton Interim Project will be subject to agreements outside the USACE jurisdiction. Further, the West of Shinnecock Inlet (WOSI) Interim Project period of renourishment has expired as a WOPFC. (Although these projects are outside the footprint of the FIMI area, their influence has been accounted for in this project).
4. The Interim Breach Contingency Plan (BCP), which is presently in place, will not be considered as part of the WOPFC because it is intended as a temporary measure to be superseded by the results of the Reformulation Study. BCP was approved in 1996 and implemented under Advanced Measures (PL 84-99).
5. It is recognized that even in the absence of a BCP that breaches in the barrier islands will be closed either through natural closure or human intervention. This condition is based on the historic pattern of repeated breach closures, including after the storms of 1938, 1954, 1962, 1980, & 1992, and the State's history to close breaches and conduct breach maintenance activities. In the absence of a streamlined approval process it is estimated that breach closure would occur within approximately 12 months in all areas outside of the Otis G. Pike Wilderness Area. Within



the Wilderness Area of the Fire Island National Seashore, closure of a breach would be subject to agreement with the National Park Service, and require additional compliance to satisfy the Wilderness Management Plan.

6. It is recognized that there is an existing breach at Old Inlet, which was formed during Hurricane Sandy, and is currently open with a width greater than 1,000 ft. It is acknowledged that the decision to take action with this breach is subject to a separate decision-making process. There is the possibility that the breach could close naturally, another storm could trigger the need to close the breach under emergency provisions, a decision could be made to close the breach, or another decision could be reached as a result of the separate, decision-making process.



5.0 PROBLEM IDENTIFICATION

5.1 General

Northeasters and hurricanes periodically impact the southern shores of Fire Island. These storms produce storm tides (predicted tides plus storm surge) and waves that cause extensive flooding and erosion to the study area. Mainland flooding along Great South and Moriches Bays is intensified when Fire Island is breached or overwashed as additional elevated ocean water can enter the bays over the island or through the breaches during storms. The topography of Fire Island serves as a barrier between Great South and Moriches Bays and the Atlantic Ocean.

While long-term erosion and large storms have posed a significant threat to the project area for many years, Hurricane Sandy has created a potentially imminent hazard of widespread overwashing and breaching at Fire Island. Severe beach erosion and dune flattening has left Fire Island vulnerable to overwash, breaching, and property damages to any storm. Although the beach width has recovered somewhat following Sandy, the dune remains in a vulnerable condition. The lack of dry beach seaward of some dunes also impedes vehicular access by residents, Park Service, and emergency personnel. This creates a potential safety hazard by limiting options for emergency response and evacuation. For discussion purposes, problems are presented as a sequence of the following three closely related components: erosion of the barrier beach and dune; leading to storm overwash and/or breaching of the barrier; resulting in widespread flooding within Great South and Moriches Bays. This section of the report draws from a recent study of coastal change from Hurricane Sandy at Fire Island published by Cheryl J. Hapke et al. (2013).

5.1.2 Beach and Dune Change

The beaches and dunes on Fire Island were severely eroded during Hurricane Sandy, resulting overwash along approximately 45 percent of the island and breaches in three locations on the eastern segment of the island (Hapke et al., 2013). Enormous volumes of sand were carried from the beach and dunes to the central portion of the island, forming large overwash deposits. Figure 9: Post-Sandy Images Showing Overwash (Hapke et al. 2013) shows the alongshore patterns of overwash and upper beach (+ 10.5 feet NGVD) migration from Hurricane Sandy (Figure from Hapke et al., 2013). A majority of the dunes were either flattened or experienced severe erosion/scarping. In addition, the elevation of the beach was lowered leaving any surviving dunes vulnerable. Hapke et al. (2013) estimates that the upper portion of the profile lost on average 54.5 percent of its volume. However, the beach width has experienced some recovery since Hurricane Sandy but remains vulnerable. Examples of pre- and post-Sandy survey profiles at three locations along Fire Island are presented in Figure 10: Observed Beach and Dune Change on Fire Island (Hapke et al. 2013).

5.1.3 Breach and Overwash Impacts

Breaches and overtopping of the barrier island occur periodically in conjunction with larger storms. During Hurricane Sandy two breaches occurred along Fire Island and one along the reach between Moriches Inlet and Shinnecock Inlet. The overwash occurred along approximately 45 percent of the island. The physical impacts of a breach or severe overwash at Great South and Moriches Bays include:

- Increase in bay tide levels if breach is large enough to expose bayshore to open ocean conditions;
- Increase in bay storm tide levels due to presence of large persistent breach or ocean storm tide levels overwashing the barrier island;



- Changes in bay circulation patterns, residence times, and salinity due to breaches;
- Increase in sediment shoaling in navigation channels and shellfish areas due to a major breach;
- Increased transport and deposition of sediment to bay including creations of overwash corridors.

Barrier island breaching often results in the formation of flood tidal deltas on the bay side of the barrier. These breaches are likely to provide suitable substrate for future SAV growth or the development of emergent tidal marshes, if the elevation is sufficient. These flood tidal deltas typically benefit a variety of wildlife species, especially shorebirds, by increasing the available foraging and loafing area, and potential nesting sites. Flood tidal deltas and the dynamic sand spits associated with bay inlets also provide optimal habitat for the rare plants, sea beach amaranth and sea beach knotweed. Overwash deposits are beneficial to natural accumulation of sand on the barrier, but suggests regional processes favor northward migration of the barrier from its present location.

5.1.4 Tidal Flooding Impacts

The presence of the existing barrier island system and topography reduces widespread inundation of low lying areas on the mainland. Both Fire Island Inlet and Narrow Bay act both as hydraulic conveyances and hydraulic constrictions which severely limit the storm surge volume entering Great South and Moriches Bays. As the tidal surge spreads out away from the inlets, the corresponding flood stage decreases. This attenuation of ocean surges becomes less pronounced for larger storm events which can overwash and breach the barrier island. Therefore, the flood problem along the mainland is linked to the topographic condition of the barrier system. Flooding occurs as a result of surge propagating through the inlets, but more severe mainland flooding can occur as a result of overtopping or breaching of a degraded barrier island, which brings more storm ocean water into the bay system during the times of moderate to severe storms.

The numerical model framework developed for FIMP is the state of the art and most advanced and comprehensive modeling study involving storm surge and barrier island system breaching and morphology. The numerical model includes all the necessary processes to accurately simulate the inlet and barrier island overwash processes and breaching processes in a system-wide and comprehensive manner for the complete FIMP project area, considering the three bay and inlet system. (Irish and Cañizares, (2009); Cañizares and Irish, (2008); Irish and Cañizares R.(2006); Alfageme and Cañizares (2005); Irish, et al., (2004); Canizares, et al., (2004); Irish, et al., (2004); Roelvink, et al., (2003); Cañizares' et al.,(2003).

The FIMI project will not provide additional risk management from low and moderate intensity storms events that do not cause overwashing or breaching of the barrier island (even of the post-Sandy condition of the barrier), that occur frequently (monthly or yearly), elevate bay water levels by minor storm tide flooding, and cause localized, minor flooding in low lying segments along the bay shoreline of Long Island and Fire Island. Since Hurricane Sandy in October 2012, high frequency, low intensity storms have occurred (Aretxabaleta, A. L., *et al.*, (2014)). With or without the FIMI project, localized flooding impacts along the bay shorelines will continue to occur. Aretxabaleta, A. L., *et al.*, (2014) compared ocean water levels with western Great South Bay water levels to examine water level influence of the Old Inlet breach (which is in eastern Great South Bay) over a five month period. The model presented in Cañizares and Irish (2008) was also used to evaluate the impact of breach open conditions on bay water levels during storm conditions and that results indicated that a small breach (or even bigger than the existing breach at Old Inlet) in eastern Great South Bay has very little influence on water levels during low intensity storms at locations in western Great South Bay. Additional information on the modeling is included in Appendix B – Physical Conditions.

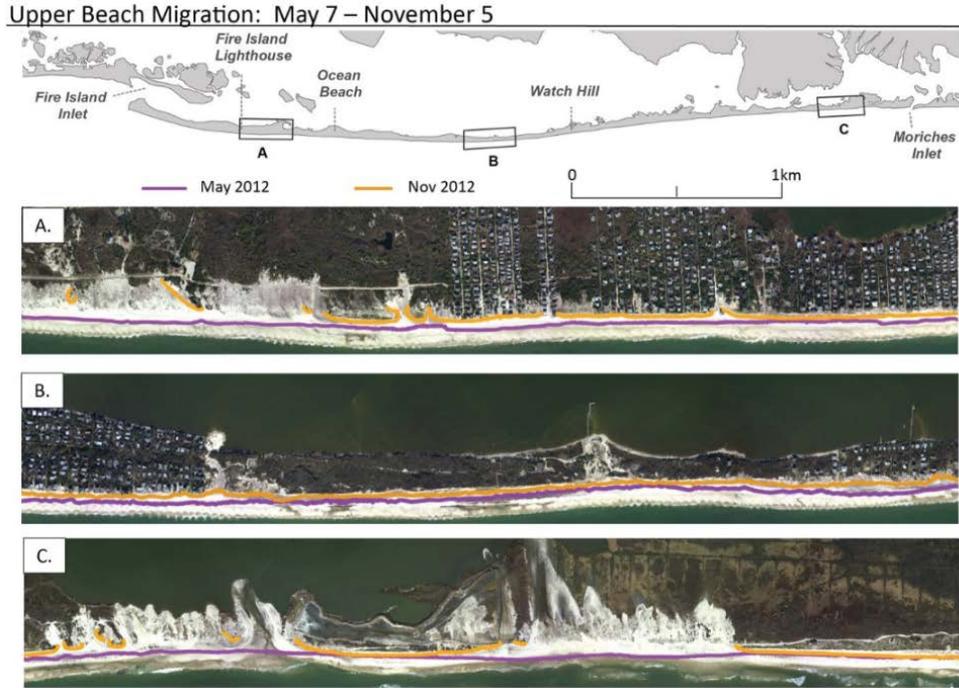


Figure 9: Post-Sandy Images Showing Overwash (Hapke et al. 2013)

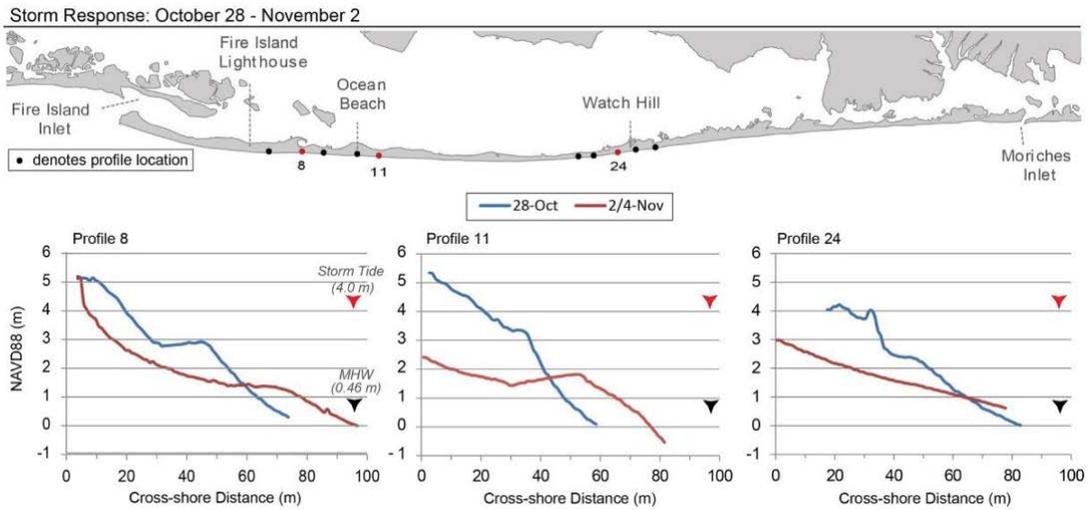


Figure 10: Observed Beach and Dune Change on Fire Island (Hapke et al. 2013)

5.2 Storm Damage Analysis

The development in the study area is vulnerable to damage from three mechanisms, inundation due to storm surge, undermining due to storm erosion or shoreline change, and structural failure due to intense force of wave impacts. The interaction of these processes creates complexities in the physical modeling efforts and also adds complexity to the identification of vulnerable areas to anticipate impacts to structures and populations.



Storm-induced damages to developed areas occur due to wave attack, erosion of the beach and dune, and tidal flooding when the beach and dune elevations are exceeded. There is a long history of buildings and infrastructure being damaged or destroyed during storms, which is described further in this chapter. In addition to storm-induced infrastructure damage, the stability of the barrier island is also vulnerable and the barrier island is inherently transitional as erosion of the beach and dune system may lead to breaches of the barrier island. When a breach occurs, it impacts the Barrier Island and back-bay systems during and after the storm. If the breach continues to grow, it may migrate (move along the island), leading to further damage of buildings and infrastructure on the barrier island. Breaches also impact the hydraulic stability of the existing inlets, which may result in increased sediment deposition in the inlet channels and compromised navigability of the inlet.

In general when a breach occurs, flood elevations and damages in the back-bay and mainland increase. The overall reformulation for the FIMP project includes measures to reduce vulnerability in these Bay Shore communities. However, until those measures are implemented there is significant concern about the potential for increased damages should additional barrier breaches occur.

For analysis purposes, the study area has been divided into shorefront development and non-shorefront development. Development was considered part of the shorefront analysis if it is subject to damage from storm surge inundation, plus waves and/or erosion. Shorefront development was evaluated for all three damage mechanisms for each individual structure under a full range of storm conditions. The largest, or “critical”, damage was then identified for each building for a series of storms over the without project future conditions.

Development outside of the zone of likely erosion or wave impact was considered part of the non-shorefront analysis. The non-shorefront analysis only evaluates damage due to inundation, and includes development both on the northern side of the barrier island and along the mainland areas.

The storm damage analysis considered physical damage to structures, building contents, and cars, as well as non-physical costs, such as cleanup and temporary housing expenses. Public emergency costs associated with extreme events such as barrier island breaching are also included in the analysis.

Until Hurricane Sandy, the most recent analyses of storm damages were last completed in 2009 as part of the ongoing FIMP Reformation Study efforts. In support of this Hurricane Sandy, FIMI Stabilization Limited Reevaluation Report, the study economics were updated to current price levels and provided for the FIMI study area only. Shorefront damage models were revised to reflect post-Sandy changes to the existing condition beach morphology such as the dune crest elevation and to account for changes in the structure inventory due to the destruction of shorefront houses by Sandy. Lifecycle flood inundation models were revised to reflect post-Sandy changes to the barrier islands including the existing condition beach profile width plus accumulated sea level rise in the years since the models were developed. Models used to calculate damages specifically incurred by open breaches over the project life were revised to reflect current beach profile widths and sea level rise as per the lifecycle inundation model but also to incorporate recently acquired data related to the maximum size of potential breaches in Great South Bay. Revisions to the breach damage model also included updated breach closure costs for all potential breach locations and current mobilization and unit costs applicable in BCP maintenance actions. The component models that were developed to compute damages and benefits for this study are discussed in more detail in Section 5.2.2.

All lifecycle simulation models were adjusted to incorporate a revised project base year of 2015 and the current FY interest rate of 3.50%. The damages resulting from all revised simulation models were also updated using an index factor derived from the Engineering News-Record Building Cost Index, to



account for increases in structure inventory value from 2005-2013 which have not been subject to detailed surveys or analysis for this interim report.

5.2.1 *Shorefront Damages*

For structures located along the south shore shorefront, wave attack and erosion combined with inundation to create frequent structural failures. Therefore, in addition to considering damage from inundation, the stability of the shorefront structures was analyzed to relate the wave forces at any depth of storm-induced water elevation to the structural failure and the potential for failure from the effects of long-term and storm-induced erosion, including scouring and vertical erosion.

In addition to storm-induced infrastructure damage, the stability of the barrier island is also vulnerable and the barrier island is inherently transitional as erosion of the beach and dune system may lead to breaches of the barrier island.

Wave Failure

Over half of the structures located along the south shore shorefront are constructed on piles. However, based on the results of the wave failure analysis, the anticipated primary source of storm damage to structures on piles was failure from erosion; these structures are assumed to be able to withstand wave attack as long as the wave height is below the main floor. Therefore, no wave damages are calculated for wave heights below the main floor. At wave heights at or above the main floor, damage from waves was assumed to be 100% of the value based on the analysis of the pier supported structure analysis.

Erosion

Erosion damages to shorefront structures were different based on the type of foundation of the structure.

Structures Not on Piles. Most of the structures not on piles consist of slab-on-grade foundations; thus, any undermining of the structure by erosion is expected to result in damage. Damage for erosion limits between the setback and the midpoint was assumed to be linear, from 0% to 50% of the structure value.

Structure on Piles. The combination of erosion and wave forces is the primary source of failure for structures on piles. To determine when structure failure occurs, the first task was to determine what pile embedment depth is necessary to resist wave forces at various flood depths. The stability of pile-supported structures was analyzed using both the Griffith and Czerniak equations, relating the stability at any depth of storm surge to the required pile embedment depth. The pile embedment depth at any structure was determined by comparing the eroded ground elevation to an assumed pile tip elevation of -10 feet NGVD.

Shorefront Storm Simulations

Storm Response Data. A key input to the shorefront storm damage analysis was the Storm Induced Beach Change Model (SBEACH) numerical simulation model. The SBEACH model was used to calculate beach profile changes for range of storm events. The model predicts profile response to storms as well as wave heights, wave setup and wave run-up. For the present SBEACH modeling analysis, a total of 19 specific responses were identified to satisfy input requirements for overtopping and economic analyses. These responses allow the interpolation of the profile elevation and water levels at each point on the shorefront profile. This analysis was conducted for 22 representative existing condition profiles, plus additional profiles representing potential without project future condition beach conditions.



Storm Simulation. Because the study area shorefront is such a dynamic environment, the storm damage analysis incorporates a lifecycle approach to track the impact of multiple storm events on the future vulnerability of each individual structure. The life-cycle approach requires development of potential storm sequences which represent the random occurrence of future events. The shorefront analysis used the multivariate Empirical Simulation Technique (EST). The only assumption in the EST is that future events will be statistically similar in magnitude and frequency to past events.

Shorefront Damage Simulations. The shorefront damage simulation model is a SAS® object-oriented program that analyzes the impact of multiple storms on each shorefront structure independently, using a database of approximately one thousand 100-year storm simulations (100,000 years). Using this SBEACH, EST data, the model applied the previously described damage criteria to calculate expected flooding damage, wave impact damage, and erosion damage to each shorefront structure. Cumulative damages for each year of the project life for each simulation are tabulated, and the annual damage for the project life calculated. From the 1,000 simulations, the mean annual damage for each structure is determined and the mean annual damage for all structures combined to yield the aggregate expected annual damage.

Future Conditions. Over the project life storm damages will vary in response to several factors. The model incorporates adjustments for future variation in shoreline positions, profile shape, sea level rise and limitations on structure rebuilding. While long term erosion trends and rising sea level will contribute to an increase in future storm damages, the majority of the shorefront structures fall within the Coastal Erosion Hazard Area (CEHA) and the National Flood Insurance Program (NFIP) Special Flood Hazard Area (V-Zone), which regulate rebuilding of damaged structures. These regulations have an important impact in limiting future increases in damage.

Coastal Erosion Hazard Area: In 1981, the CEHA Act, Article 34 of Environmental Conservation Law was enacted to provide for the identification and regulation of critical erosion hazard areas along New York's coastlines, in order to minimize damage from erosion. Article 34 established statutory authority for identifying these erosion hazard areas, restricting development in these areas, and establishing criteria for the development of a statewide Coastal Erosion Management (CEM) regulatory program. 6 NYCRR Part 505, Coastal Erosion Management Regulations, provides the framework and criteria which allow the State and local governments to administer a local CEM program that is consistent with Article 34 for affected shoreline communities. Under Article 34 and Part 505, CEHA consists of two separate jurisdictions, which include the Natural Protective Feature Area (NPFA), which is defined by the natural protective features (dune, beach, bluff and near shore areas) found along a particular stretch of shoreline, and the Structural Hazard Area (SHA), which is delineated landward of the NPFA along shorelines with a long term annual rate of shoreline recession greater than one foot per year.

Currently no SHA has been identified within the study area. Therefore, the terms CEHA and NPFA are used interchangeably throughout this report, because only the NPFA jurisdiction is applicable within the study area. However, SHA may be delineated within the project area in the future if technical data determines it to be appropriate.

CEHA jurisdiction extends from the seaward limit of the near shore area (1,000 feet seaward of mean low water or a water depth of 15 feet; whichever is greater) to the landward edge of the most landward natural protective feature. For most of the study area, the primary dune is the most landward natural protective feature. The primary dune extends 25 feet from the landward toe, as identified on the Coastal Erosion Hazard Area maps and is the landward limit of CEHA jurisdiction. Where the landward most natural protective feature is a bluff or a beach, the CEHA jurisdiction extends 25 feet landward from the crest of a bluff or 100 feet from the change of vegetation or physiographic form on a beach. Presently, all of the



towns within the study area have in effect either a State CEHA program administered by the Department of Environmental Conservation or a certified local law administered locally.

National Flood Insurance Program: Any community seeking to register with the Federal Insurance Association, which allows homeowners to obtain flood insurance, must join FEMA's NFIP. Participation in the NFIP requires a municipality to adopt a local floodplain management ordinance that regulates floodplain development and redevelopment following damage. The intent of the local ordinance is to reduce damage to buildings and property through the establishment of base flood elevations, building code requirements, and restrictions on allowable development in floodplain areas. Specific provisions include the requirement that the first finished floor or new construction must be elevated above the base flood elevation. All municipalities within the study area participate in the NFIP.

Damage Results

The model simulations calculate damage for each year of the lifecycle starting at year 2000. The damage in each year is multiplied by the present worth factor to adjust to base year values. The present worth of damage is summed and multiplied by the capital recovery factor (<http://www.soi.wide.ad.jp/class/20070041/slides/08/18.html>) to calculate the equivalent annual damage for each simulated lifecycle. Table 2 provides a summary of the equivalent annual damages for the period of analysis, a period from 2015 to 2065. This table illustrates the areas with the highest levels of expected damages along the shorefront. When looking at these numbers, it is important to consider that the damages are aggregated over different size reaches. This table illustrates that the largest amount of shorefront damages are along the area of Fire Island.

5.2.2 *Non-shorefront Damages*

The analysis of non-shorefront damage considers the developed areas that are not subject to direct impacts from ocean waves, erosion or inundation. The analysis includes areas on the Long Island mainland that are heavily developed, primarily with year round residential structures, and the northern, or bayside portions of the barrier islands that are primarily developed with seasonal housing.

Bayside Damage Criteria

Previously developed relationships between depth of flooding and damage as a percent of value were used to assess the inundation damages to each non-shorefront structure to estimate damage for the full range of flood events. These relationships included a series of generalized functions for residential structure and content damage developed by the USACE-IWR based on post flood inspections. Non-physical damage, including evacuation, temporary housing, and re-occupation/cleanup costs, was related to depth and structure value using a series of 1500 on site interviews distributed throughout the study area. These interviews were also used to develop physical damage relationships for non-residential structures.



Table 2: Without Project Damage

Project Reach		Critical Asset	Name	Approximate Length (ft)	Equivalent Annual Damage 2015-2065
Fire Island Inlet					
GSB	GSB-1	1A	Robert Moses State Park	25,700	\$0
		1B	FI Lighthouse Tract	6,700	\$0
	GSB-2	2A	Kismet to Lonelyville	8,900	\$2,301,000
		2B	Town Beach to Corneille States	5,100	\$1,230,000
		2C	Ocean Beach & Seaview	3,800	\$406,000
		2D	OBP to Point O' Woods	7,400	\$628,000
		2E	Sailors Haven	8,100	\$0
	GSB-3	3A	Cherry Grove	3,000	\$319,000
		3B	Carrington Tract	1,500	\$0
		3C	Fire Island Pines	6,600	\$232,000
		3D	Talisman to Water Island	7,300	\$19,000
		3E	Water Island	2,000	\$26,000
		3F	Water Island to Davis Park	4,700	\$1,000
		3G	Davis Park	4,100	\$166,000
		3H	Watch Hill	5,000	\$0
	GSB-4	4A	Wilderness Area - West	19,000	\$0
		4B	Old Inlet	16,000	\$0
				GSB Subtotal:	\$5,328,000
MB	MB-1	1A	Smith Point CP- West	6,300	\$0
		1B	Smith Point CP - East	13,500	\$0
	MB-2	2A	Great Gunn	7,600	\$0
		2B	Moriches Inlet - West	6,200	\$0
		2C	Cupsogue Co Park	7,500	\$1,000
		2D	Pikes	9,700	\$295,000
		2E	Westhampton	18,300	\$14,000
				MB Subtotal:	\$310,000
				TOTAL	\$5,638,000

Bayside Damage Models

Lifecycle Simulation Models. In order to develop a true understanding of the impact of flooding, the flood stage vs. damage curves are typically combined with flood frequency data to express damage in average annual terms. Often this is completed using the HEC-FDA program, which can evaluate annual damages for both a baseline and a future condition. HEC-FDA, however, requires that changes in damage conditions occur in a predictable linear manner. Within the FIMP study area however, flood levels and therefore damages are expected to vary in relation to both future sea level and barrier island conditions. Because future barrier island conditions are strongly influenced by storm activity in prior years, it was determined that a lifecycle approach was needed to allow conditions and damages to vary in response to



prior storm events. It should be noted that during Hurricane Sandy two (2) breaches occurred along Fire Island and one (1) breach along the reach between Moriches Inlet and Shinnecock Inlet.

Three separate damage simulation models were developed to link the hydrodynamic modeling of flood depths to the stage vs. damage data. The first simulation model was developed to evaluate Breach Open Conditions and the impact a barrier island breach will have on storm damages. The model quantifies the change in damages if a breach is open and provides input to the second model, the Breach Lifecycle Analysis. This model simulates breach occurrence and calculates average annual closure costs (including breach maintenance costs) and breach induced increases in damage over project life. The model was developed to quantify lifecycle impacts and to compare breach management alternatives. The third model is the Lifecycle Damage Analysis, which simulates storms and bay water levels including the impacts of erosion/storms in creating Future Vulnerable Conditions. Each of the models uses the @-Risk add-in to Excel to allow the calculation and processing of multiple lifecycle iterations, each representing a different series of random storms. Uncertainty in other parameters including sea level rise, erosion rates, and stage damage relationships, are also reflected using Monte Carlo sampling techniques. The reported results represent the average of numerous possible future lifecycles (between 12,500 and 25,000 depending on model) to ensure the full range of conditions are reflected in the results.

The Breach Open Condition model calculates the increase in storm damage while a breach is open. The model assumes a breach has occurred and simulates breach condition/size in the following months. Peak water levels are estimated based on the breach size, predicted increase in tide range, and the increased storm surge associated with random storm events. For each peak water level the damage is identified using the stage vs. damage curves. The key inputs to the model are the breach open water levels related to breach size, breach growth and closure rates, and the stage vs. damage relationship. A total of 27 conditions were modeled for each of the 43 reaches for each breach closure alternative. These reflect combinations of 5 different breach location scenarios (No Breach & 4 Breach Open Conditions), breaches occurring in Tropical or Ex-tropical seasons, and sea level conditions of baseline, 0.5 foot rise and 1.0 foot rise. The model results were tabulated to provide a summary of increased inundation damage for various breach conditions, closure rates and sea level rise conditions.

The Breach Only Lifecycle Model was developed to evaluate the impact of barrier island breaches and alternative closure designs and response times on the average annual storm damage and closure costs. The model considers the impacts of random storm events, and both long term and short term shoreline change at the 10 locations identified as most vulnerable to breaching. Key inputs to the model include stage frequency and storm erosion frequency relationships, post storm profile recovery rates, threshold surge elevations causing overwash, partial breaching and full breaching for various profile conditions, short term profile variability associated with shoreline undulations, and incremental damage associated with increased back-bay flood elevations and undermining of barrier island development. The model uses the @-Risk add-in to Excel to simulate the random occurrence of storms in future years, and if the surge elevation is sufficient to cause an overwash or breaching condition it calculates the associated damages, breach closure cost, or profile maintenance costs. The model tracks changes in the profile condition, and relates the breach and overwash threshold surge elevations to these changes.

The Lifecycle Damage Analysis model was developed to quantify baseline and future condition non-shorefront inundation damage. The model simulates storms and water levels including the impacts of erosion/storms in creating the Future Vulnerable Conditions and the associated increases in bay water levels. A Future Vulnerable Condition (FVC) has been developed based on historic erosion rates, the Existing Conditions Sediment Budget, Baseline Conditions numerical modeling storm surge and morphological results, historic storm impacts, and the assumed without project future condition regarding locally sponsored beach restoration and maintenance projects. The key model inputs include the bay stage frequency relationships for Baseline, Future Vulnerable, With Project and Breach Closed Conditions.



The model applies weighting factors to interpolate between Baseline and Future Vulnerable conditions. Breach water level thresholds, ocean stage frequency, storm/long term erosion and recovery rates, temporal shoreline undulations and stage vs. damage relationships are also critical to the analysis.

The model simulates the random occurrence of both tropical and extra-tropical storms (not including Hurricane Sandy as data was not yet available), and tracks the impact of storms in altering the beach profile at the 10 locations most vulnerable to overwash and breaching. As the profile at these locations approaches the Future Vulnerable Conditions used to develop the FVC stage vs. frequency relationship, the model interpolates bay water levels between the Baseline condition stage and the FVC stage. For each year storms are simulated and the damage is identified from the stage vs. damage curves. This model was originally conducted for the GRR, and evaluated damages over a 50 year evaluation length (period of analysis). The Stabilization project will be evaluated for an evaluation period of 20 years. Since the model was used to establish stage damage relationships, this difference in study length does not overstate the impacts.

Table 3 illustrates that the greatest amount of damages are expected to occur in the area of Western and Central Great South Bay. Damages are also relatively high for Moriches Bay.

Table 4 provides a summary of the total without project equivalent annual damages for all damage categories. Following the table is an explanation of each of the damage categories.



Table 3: Simulated Damages by Design Reach

Number	Mainland Reach ID	Name	Buildings #	Sub Bay	Equivalent Annual Inundation Damages
26.1	GSB-M-1A	Unqua Point (County Line) to Copiague Beach	1,715	WGSB	\$4,941,000
26.2	GSB-M-1B	Copiague Beach to Venetian Shores Beach	4,703	WGSB	\$3,413,000
26.3	GSB-M-1C	Venetian Shores Beach to NeGunntatogue Creek	2,323	WGSB	\$5,237,000
25.1	GSB-M-1D	NeGunntatogue Creek to Santapogue Point	1,960	WGSB	\$1,510,000
25.2	GSB-M-1E	Santapogue Point to Sampawams Point (Town Line)	2,413	WGSB	\$4,375,000
24	GSB-M-2A	Sampawams Point (Town Line) to Great Cove	3,175	WGSB	\$2,104,000
23.1	GSB-M-2B	Brightwaters	364	WGSB	\$186,000
23.2	GSB-M-2C	Lawrence Creek to Seatuck Refuge	1,746	WGSB	\$4,367,000
23.3	GSB-M-2D	Seatuck Refuge to Heckscher Park (Nicoll Point)	2,985	WGSB	\$1,419,000
28		Fire Island Lighthouse to Seaview (Fire Island)	1,998	WGSB	\$10,836,000
27.1		Ocean Bay Park to Oakleyville (Fire Island)	433	WGSB	\$995,000
		Subtotal - Western Great South Bay Sub-Bay	23,815		\$39,383,000
27.2		Sailors Haven to Water Island (Fire Island)	712	CGSB	\$2,242,000
27.3		Water Island to Watch Hill (Fire Island)	188	CGSB	\$585,000
22.1	GSB-M-3A	Heckscher Park (Nicoll Point) to Green Point	1,961	CGSB	\$9,239,000
22.2	GSB-M-3B	Green Point to Blue Point (Town Line)	2,095	CGSB	\$3,502,000
21.1	GSB-M-4A	Blue Point (Town Line to Tuthill Creek (BluePoint)	517	CGSB	\$794,000
21.2	GSB-M-4B	Tuthill Creek to Swan River (Patchogue)	1,641	CGSB	\$3,911,000
21.3	GSB-M-4C	Swan River to Mud Creek	755	CGSB	\$461,000
		Subtotal - Central Great South Bay Sub-Bay	7,869		\$20,734,000
21.4	GSB-M-5A	Mud Creek to Howell Creek	747	EGSB	\$1,353,000
21.5	GSB-M-5B	Howell Creek to Bellport Marina	225	EGSB	\$120,000
21.6	GSB-M-5C	Bellport Marina to Carmans River	428	EGSB	\$845,000
20	GSB-M-6A	Carmans River to Smith Point Bridge	571	EGSB	\$479,000
		Subtotal - Eastern Great South Bay Sub-Bay	1,971		\$2,796,000
19		Moriches Inlet to Quantuck Canal (Westhampton Barrier)	258	MOR	\$5,000
18.1	MB-M-1A	Smith Point Bridge to William	3,070	MOR	\$9,176,000



Number	Mainland Reach ID	Name	Buildings #	Sub Bay	Equivalent Annual Inundation Damages
		Floyd Estate			
18.2	MB-M-1B	William Floyd Estate to Forge River	208	MOR	\$422,000
18.3	MB-M-1C	Forge River to Radio Point	1,343	MOR	\$5,737,000
17.1	MB-M-2A	Radio Point to Harts Cove	226	MOR	\$1,434,000
17.2	MB-M-2B	Harts Cove to Seatuck Creek (Town Line)	94	MOR	\$22,000
16.1	MB-M-3A	Seatuck Creek (Town Line) to Fish Creek	137	MOR	\$366,000
16.2	MB-M-3B	Fish Creek to Speonk Point	318	MOR	\$1,427,000
16.3	MB-M-3C	Speonk Point to Apacuck Point	432	MOR	\$1,668,000
16.4	MB-M-3D	Apacuck Point to Quantuck Bay	611	MOR	\$3,158,000
		Subtotal - Moriches Bay Sub-Bay	6,697		\$23,416,000
		Total: Back-bay Area	40,352		\$86,329,000

Discount Rate 3.50%, Period of Analysis: 20 yrs
 Damages include the effects of Sea Level Rise over the 50 year Analysis Period

Table 4: Summary of Without Project Equivalent Annual Damages

Damage Category	Without Project Equivalent Annual Damage
Inundation from inlet and back-bay wave, breaching, and overwash:	
Mainland	\$71,666,000
Barrier	\$14,663,000
<i>Subtotal Inundation</i>	<i>\$86,329,000</i>
Damages due to a breach remaining open:	
Inundation	\$7,601,000
Structure Failure (barrier island)	\$507,000
<i>Subtotal Breach Open Damages</i>	<i>\$8,229,000</i>
Shorefront Damages (Fire Island Sub-Reaches only)	\$2,250,000
Total Storm Damage	\$96,868,000

Discount Rate 3.50%, Period of Analysis: 20 years
 Damages include the effects of Sea Level Rise over the 50 year Analysis Period



5.2.3 Damage Categories

Inundation Damages. These occur when vulnerable structures are flooded by high tides and storm surges in the back-bay, where the water levels are sensitive to the conditions of the barrier islands. In order to illustrate the relative contribution of barrier island breaching and overwash to the total damages, these inundation damages have been separated out to show those damages which occur due to flooding through the inlets, and wave setup in the bay; and those damages that arise due to the increased flooding during the storm event that results in breaching and overwash. This breakout has been developed by evaluating the damages that occur if the barrier island is in a condition to preclude breaching and overwash. For each of these categories, inundation damages have been divided into those occurring on the back-bay mainland and those on the back-bay side of the barrier islands.

Breach - Inundation. Breach inundation damages occur when structures are flooded by increases in back-bay water elevations caused by breaches in the barrier islands remaining open for a period of time. These damages are limited to structures in back-bay mainland areas and on the back-bay side of the barrier islands.

The without project assumption is that the breach closure will begin 9 months after the breach occurs and that the breach will be closed 12 months after the breach occurs. The maximum breach size and growth rate were based on prior observations. Hydrodynamic models evaluated the impact of various open breach dimensions at locations throughout the bays. The simulations of breach open conditions allowed the breach to grow at an asymptotic rate up to the estimated maximum stable breach area. Simulations were based on the following breach characteristics.

Breach Growth Rate Parameter			
Bay	Min	Most Likely	Max
Great South Bay	0.15	0.20	0.30
Moriches Bay	0.15	0.30	0.40

Max Stable Breach Area (Sq Ft)		
Bay	Min	Max
Great South Bay	6,000	33,500
Moriches Bay	16,000	16,000

Breach - Structure Failure. These damages occur on the barrier islands only and occur when structures are undermined and lost to erosion when breaches in the barrier islands are allowed to grow in directions parallel to the shoreline.

Shorefront. These damages occur only in the shorefront areas of the barrier islands and the mainland area east of the barrier island system, and are caused by cross-shore erosion, wave action, ocean inundation, or combinations thereof.

Public Emergency. These are costs related to efforts made by local communities and other entities to ensure the safety of the public during storm events. Public emergency costs have not been specifically evaluated at this stage in the study.



Other. These damages include other items which have not been specifically evaluated at this stage in the study, such as damage to roads, utilities and coastal protection structures, and impacts on locally-based fishing fleets.

In addition to the damage categories outlined above, there are several additional sources of benefits which are to be analyzed separately. These include an increase in recreation use value, and prevention of loss of land. It is anticipated that the inclusion of these additional benefits (along with the damage categories mentioned above which have yet to be specifically evaluated) will not alter the results of the economic analyses completed thus far.

Table 4 helps to illustrate the storm damages that can occur, as a basis for presenting the alternatives that are available to address these problems, and the relative magnitude of each problem. This illustrates that of the \$97 Million in annual damages calculated \$72 Million (74%) of the damages is because of flooding of the back-bay areas that is likely to occur due to overwashing or breaching (regardless of the barrier island condition). These are the damages that need to be addressed with alternatives that directly affect these mainland areas. Another \$15 Million (15%) in damages are incurred by flooding on the back-bay side of the barrier islands.

\$8.2 Million in damages (8%) are due to damages that occur when a breach remains open. These are damages that can be reduced with alternatives to both reduce the likelihood of breaching, and respond to close breaches quickly.

\$2.3 Million in damages, representing 2% of the total damages arise due to damages to the shorefront. These damages are reduced by the alternatives to reduce the potential for breaching, as well as with alternatives specifically developed to address shorefront damages.

5.2.4 *Damage Sensitivity and Uncertainty*

As described above, annual damages represent the expected average or mean results. The actual amount of future damages is highly sensitive to the timing and sequence of storms, future events that cannot be predicted. The life cycle simulation has incorporated the uncertainty of these parameters by allowing the values to vary in each simulation. In order to account for uncertainties in the timing and impacts of various storms, calculations are performed for a large number of lifecycles and mean or average value is reported.

In the WOPFC it is expected that future changes will occur within the estuaries and along the bay shores. It is expected that changes in the estuary will continue as a result of increases in sea level, and also because of future barrier island breaches. As is the case for the barrier island condition, it is expected that the spatial and temporal magnitude of the hydrodynamic changes in the estuary due to breaching and overwash would be reduced by human intervention to reduce the potential for breaching, and through breach closure. While there may be short-term changes in the inlet regime associated with Barrier Island breaching, it is expected that the future bay hydrodynamic processes would be represented by the current inlet conditions.

Sea Level Rise

In addition to considering the statistical uncertainty of damages discussed above, the analysis also considered the sensitivity of the results to the potential for accelerated rates of future sea level rise (SLR). The mean damages are based on a projection of the historic (low) mean Sea level rise trend of 0.0127 feet/year at Sandy Hook, New Jersey, as specified in ER-1100-2-8162. There are various projections of



accelerated sea level rise which would significantly increase the storm damage risk within the study area. In order to evaluate the impact of potentially higher rates, additional lifecycle simulations were performed using a sea level rise rate (intermediate rate) of .026 feet/year, or 1.3 feet in 50 years. While the impacts of accelerated SLR on the annual damages varied considerably between the reaches (from about a 30% to a 70% increase), the overall impact of such an accelerated sea level rise is about a 45% increase in the without project damages. The sea level rise analysis was conducted for the on-going FIMP reformulation and evaluated the impacts over a 50 year evaluation length. The Stabilization effort considered the sea level rise impacts over a 20 year evaluation period, so that the impacts were not overstated. Changes in sea level over the 20 year FIMI analysis period are minimal, even using the high rate of sea level change per ER 1110-2-8162. Based on current projected sea level rise rates, impacts to barrier island morphology caused by the implementation of the FIMI project (one time placement of dune and beach berm) will be negligible over the next 20 years.

It is acknowledged that there are projections for larger increases in sea level rise, an increase of up to 2.7 feet (high rate per ER 1100-2-8162) over 50 years period of analysis. This scenario was not evaluated. This increase is so large that it is unlikely that the analysis framework we have established would predict accurate results. As an example, in Great South Bay, an increase of 2.7 feet in sea level rise would result in the flooding due to a 2-yr event (with 2.7 feet of SLR included) to have a flooding effect greater than the currently modeled 500-yr event. Under such extreme changes in sea level rise, it is highly likely that the assumptions made for actions to occur in the WOPFC would not be valid.



6.0 STUDY GOALS AND OBJECTIVES

6.1 Study/Project Goals

The goal of the on-going and overall parallel FIMP Reformulation Study effort is to manage risks along the mainland and barrier island by reducing the potential for breaching and overwash of the barrier island, and directly addressing residual flooding risks along the bayside shoreline that occur independent of the barrier island condition.

Future breaching and overwash is considered imminent given the eroded state of the barrier as a result of the impacts of Hurricane Sandy. Therefore, the short-term goal of this FIMI Stabilization effort is to provide immediate stabilization and storm risk management to the communities on or behind the Fire Island barrier island. The stabilization project utilizes analysis conducted to date for the overall FIMP Reformulation Study, described below but does not pre-suppose the outcome of the Reformulation or limit the range of options that could be implemented as part of the overall FIMP project.

6.2 Planning Objectives

Engineering Regulation 1105-2-100 defines the Federal objective of water and related land resources project planning is to contribute to national economic development (NED), consistent with protecting the nation's environment, pursuant to national environmental statutes, applicable executive orders, and other federal planning requirements. A secondary objective of this project is to integrate opportunities for advancing National Ecosystem Restoration (NER) objectives, consistent with the NED objectives that restore the coastal processes in a manner to advance the USACE's Strategic Vision, Environmental Operating Principles, and Regional Sediment Management Principles. These objectives have been established by the U.S Water Resources Council's Economic and Environmental Principles and Guidelines for Water and related Land Resources Implementation Studies (P&G's) on 10 March 1983.

The objective of this stabilization effort is to provide a separate, independent Coastal Storm Risk Management Plan that can address the extensive and immediate problems associated with the extremely vulnerable Fire Island barrier island conditions, that can proceed independent of the ongoing FIMP Study.

6.3 Project Constraints

Formulation and evaluation of alternative improvement plans are constrained by technical, environmental, economic, regional, social, and institutional considerations. These constraints must be considered in current and future project planning efforts, as summarized below.

Technical Constraints

- Plans must represent sound, safe, acceptable engineering solutions.
- Plans must be in compliance with sound engineering practice and satisfy USACE regulations.
- Plans must be realistic and state-of-the-art. Reliance on future research and development of key components is unacceptable.
- Plans must provide storm risk management.



Economic Constraints

- Plans must be efficient. They must represent optimal use of resources overall. Accomplishment of one economic purpose cannot unreasonably impact another economic system.
- The economic justification of the proposed project must be determined by comparing the anticipated annual tangible economic benefits which should be realized over the project life with the average annual costs

Environmental Constraints

- Plans cannot unreasonably impact environmental resources.
- If a potential adverse impact is established, plans must consider replacement measures and should adopt such measures, if justified.
- Where opportunities exist to enhance significant environmental resources, the plan should incorporate all justified measures.

Regional and Social Constraints

- Reasonable opportunities for development within the study scope must be weighed relative to others, and views of State and local public interests must be solicited.
- The needs of other regions must be considered and one area cannot be favored to the unacceptable detriment of another.

Institutional Constraints

- The State must be willing to participate in a plan to provide storm risk management, cost-share and be responsible for the operations and maintenance of the completed project.
- Federal and State participation must be contracted for the recommended period of time for implementation, although no assurances can be made that future Federal budgets will accommodate the capability funding against competing needs.
- Plans must be consistent with existing Federal, State, and local laws.
- Plans must be locally supported to the extent that local interests must, in the form of a signed Project Partnership Agreement (PPA), guarantee all items of local cooperation.
- Local interests must agree to provide public access to the beach in accordance with Federal guidelines and with requirements of State laws and regulations.
- The plan must be fair and find overall support in the region and State.
- Plans must be consistent with State Coastal Zone Management Policies to the maximum extent practicable and consider such policies in plan formulation.
- Each considered measure must identify environmental impacts and appropriate mitigation (mitigation measures for the FIMI project are not required).
- Any plan within the jurisdictional boundaries of the National Park Service, Fire Island National Seashore must be compatible with the goals and objectives of the Fire Island National Seashore, and be mutually acceptable to the Secretary of the Army and Secretary of the Interior.



Stabilization Constraints

- The Stabilization Plan must have independent utility
- The Stabilization Plan cannot foreclose on alternatives under evaluation in the overall FIMP Reformulation Study
- The Stabilization Plan must be within the current FIMP authorities as authorized in the River and Harbor Act of 14 July 1960 in accordance with House Document (HD) 425, 86th Congress, 2d Session, dated 21 June 1960, which established the authorized project. The FIMP authorization precedes authorization of PL 113-2 in 2013; thus providing the authority for the Stabilization Plan as an HSLRR.



7.0 FORMULATION OF FIMP ALTERNATIVE PLANS

This Chapter of the report provides a summary of the formulation of plans for the Reformulation Study that culminated in the identification of a Tentative Federal Selected Plan (TFSP) as an introduction to the FIMI Stabilization effort.

The Fire Island Inlet to Montauk Point, New York, Combined Beach Erosion Control and Hurricane Protection Project (FIMP) was first authorized by the River and Harbor Act of 14 July 1960 which established the authorized project. The project is being reformulated by USACE as the lead Federal agency to identify a comprehensive long-term solution to manage the risk of coastal storm damages along the south shore of Long Island in a manner which balances the risks to human life and property while maintaining, enhancing, and restoring ecosystem integrity and coastal biodiversity.

The overall FIMP reformulation study was undertaken to evaluate alternatives to determine Federal interest in participating in one or more of these alternatives, and identify a mutually agreeable joint Federal/state/locally supported plan for addressing the storm risk management needs in the study area.

Prior to the Fall of 2012, the most recent effort in the FIMP Reformulation Study had been the refinement of the plan alternatives developed in 2009 and presented by the federal agencies to state and local officials in 2011, as a *Tentative Federally Supported Plan* (TFSP) in preparation for finalizing the overall study's recommendation in the form of a General Reevaluation Report (GRR). The planning for the FIMP Overall Project progressed to the point of identifying a Tentative Supported Plan (TSP) through the fall of 2012 and is being finalized in the overall FIMP GRR.

7.1 FIMP Reformulation Overview

The FIMP authorized project provides for beach erosion control and hurricane protection along five reaches of the Atlantic Coast of New York from Fire Island Inlet to Montauk Point by widening the beaches along the developed areas and by raising dunes to an elevation of 20 feet above mean sea level, from Fire Island Inlet to Hither Hills State Park, at Montauk and opposite Lake Montauk Harbor. This construction would be supplemented by grass planting on the dunes, by interior drainage structures and the possible construction of 50 groins, and by providing for subsequent beach nourishment.

As described in the Project history section of the report, the Council on Environmental Quality (CEQ) in 1978 recommended project reformulation, to ensure the entire project is being addressed as a system. Detailed discussion and presentation of the multi-phased screening and analysis of study measures will be presented in the overall FIMP reformulation study in a draft GRR.

7.1.1 *Plan Evaluation Criteria*

The proposed FIMP alternatives and plans were evaluated against several different sets of evaluation criteria. Each storm risk management alternative was first evaluated relative to the NED criteria, to identify the effectiveness of the proposed alternative in addressing the primary objective. For measures developed for purposes of habitat restoration, these alternatives were evaluated relative to their ability to contribute to the NER objective. The effectiveness of the alternative in meeting a national objective is the primary evaluation method to determine if the alternative should be considered further.



7.1.2 *Summary of Alternative Plan Comparison*

The following is a summary of the formulation process to date which identified the TSP.

The FIMP Reformulation Study followed three-iterations of planning to arrive at the TSP, including first an initial screening of measures, to identify what types of solutions warranted further consideration. This initial screening was followed with a design and evaluation of alternatives where each measure from the screening phase was developed for different scales of risk management and compared relative to each other to identify the optimal scale of protection. The third phase of the alternative analysis was the combination of these optimized features into plans.

The result of the design and evaluation analyses of proposed alternatives identified that a wide range of the individual alternatives are cost effective options for Storm Risk management within the Study Area. The analysis also indicated that there is not one alternative that addresses all the storm risk management problems, but rather, addressing multiple problems requires multiple solutions. In this respect, many of the alternatives considered complement each other, and Alternative Plans benefit from combinations of alternatives. In addition, the NER evaluation of measures identified that various restoration alternatives are complimentary to, or compatible with each of the Storm Risk management Plans. This phase recommended the following features be integrated into overall Plans of improvement:

- Inlet bypassing Plans
- Breach Response Plans (Responsive Plan at +9.5 ft NGVD, Responsive or Proactive Plans at +13 ft NGVD)
- Non-Structural Plans (6-year and 10-year levels of risk management) - defined as those activities to minimize potential damages through elevation, relocation, flood proofing, buyout, etc
- Beachfill (13 ft Dune and 15 ft Dune) - soft structural measures, generally are those constructed of sand and are designed to “augment and/or” mimic the existing natural protective features

These Alternative Plans were developed by combining the above alternatives in accordance with the procedures in the Planning Overview Chapter. The approach gives first priority to management options, particularly options that restore natural processes. The second priority is to include non-structural alternatives with beach nourishment or other structural alternatives considered last. This formulation approach ensures that Plans are consistent with the NY State Coastal Zone Management policies, and also places a priority on avoiding or minimizing any negative environmental impacts.

Based on the evaluation of the individual alternatives, combined plans were developed. First, Second and Third added plans were developed by incrementally adding Management Alternatives (Plan 1), Non-Structural Alternatives (Plan 2), and Structural Alternatives (Plan 3). The scale of the alternatives selected for inclusion was based on the results of the optimization of individual alternatives and the potential for the combined alternatives to more fully satisfy the project objectives and evaluation criteria.

Plan 1

The first series of plans (Plans 1.a and 1.b) reflect combinations of Management Alternatives & have combined the Inlet Management and BCP Alternatives. The Inlet Management Alternative includes continuation of the authorized project at the inlet, plus additional bypassing of sand from the ebb shoal to offset the erosion deficit. Inlet Management is compatible with all plans in the Great South Bay, Moriches Bay and Shinnecock Bay reaches. Plan 1.a is based on the combination of the economically optimum Inlet Management Alternative and BCP Alternative (13 feet NGVD BCP). Plan 1.b combines the optimum Inlet Management Alternative with the 9.5 feet NGVD BCP Alternative.



Plan 1 includes breach response plans along the barrier island, and inlet bypassing at the inlets achieved by continuation of the authorized projects at the inlets, and the additional bypassing of sand through dredging of the ebb shoal in the amount of 100,000 cubic yards per year at each inlet. The results of the above analysis, shows that plan 1 (both 1a, and 1b) is marginally effective.

This plan was not a complete solution, in that it only addresses damages that occur due to a breach remaining open, and as a result reduces only a minimal percentage of the overall damages. The remaining damages that arise due to a combination of breach occurrence, bayside flooding, and shorefront damages remain unaddressed.

Plan 2

The second series of plans (Plan 2.a through Plan 2.h) reflect the addition of non-structural protection to Plan 1.a and Plan 1.b. The inclusion of non-structural protection is considered essential to address flooding from storm surge propagating through inlets into the bays and wind and wave setup within the bays. Plans 2.a through 2.d include combinations of the Management and Non-structural Alternatives without the Road Raising features, while plans 2.e through 2.h include the same combinations but with the addition of road raising at four locations.

Plan 2 includes breach response, inlet modifications, and mainland non-structural measures. All of the alternative plans are cost-effective. The plans that provide the greatest net benefits are Alternative 2F and 2H. Alternative 2H includes inlet management at the inlets (consistent with each alternative), a breach response plan with the +13 feet NGVD cross-section, non-structural plan 3, which addresses structures in the existing 10-yr floodplain, and road raising at 4 locations.

Plan 3

The third series of plans (Plan 3.a through Plan 3.g) reflects the addition of beach nourishment to Plans 2.e through Plan 2.h. The inclusion of Beach Nourishment will more fully address the various sources of flooding and will also address any significant erosion resulting from alterations of the existing shoreline stabilization structures. The Non-structural Alternatives selected for inclusion in these Plans include the Road Raising feature, which provides significant benefits above Plans 2.a through 2.d that exclude this feature.

The Beach Nourishment Alternative included in these Plans is the + 15 feet NGVD dune/ 90 foot berm width design with the minimum real estate alignment. Within the Shinnecock Bay reach the Breach Contingency Plan with the +13 feet NGVD design section has been included. For Reaches protected by Beach Nourishment, breaches would be closed to the design section as part of the project maintenance or major rehabilitation.

Within the Great South Bay and Moriches Bay Reaches there are several environmentally sensitive areas along the barrier island that present a risk of future breaching with significant damage to back-bay development, but with little or no human development on the barrier. These locations include the Otis Pike Wilderness Area (OPWA), areas designated as Major Federal Tracts (MFT) by the Fire Island National Seashore (FIIS), and the Smith Point County Park (SPCP). Plans were developed to evaluate the impact of excluding these locations on Storm Risk management Benefits, Costs and BCRs. For Plans 3.b through 3.g, at any location in the Great South Bay and Moriches Bay Reaches where beachfill has been excluded due to environmental concerns, the Breach Contingency Plan with a + 9.5 feet NGVD closure design has been included. The lower level closure design has been selected for these locations as the alternative most compatible with special environmental concerns.



The plans, with the inclusion of beachfill advance a greater number of objectives than plan 2, (particularly in addressing all the contributors to storm damages) but still have shortcomings when compared with the criteria. These Plans are considered to provide results that vary depending upon the extent of fill that is proposed, particularly as it relates to the criteria to balance storm risk management considerations with ecosystem restoration considerations. Plan 3A is the alternative which best addresses the Storm Risk management needs, but includes beachfill throughout, and as a result does not rank highly with respect to the criteria for balancing storm risk management needs and environmental needs, and also does not rank highly with consideration of the P&G criteria for implementability, since it is contrary to NPS policies for fill within undeveloped tracts of land. Alternative 3G includes beachfill in the developed areas, and replaces beachfill within the major public tracts of land with breach response plans. While this plan is less effective in managing the risk of storm damages, it is a plan which is economically viable, is better aligned with the P&G criteria, as being more consistent with the NPS policies, and better achieves the project objectives in that this plan balances storm risk management needs and ecosystem restoration needs.

7.1.3 *Summary of Reformulation Results*

Alternative Plan 3 is the plan that more completely addresses the NED criteria, the USACE Planning Guidance criteria. From the Alternative Plans evaluated within the framework of Plan 3, Plan 3A is the plan that best accomplishes the storm risk management objectives, while plan 3G is identified as the plan that best balances the storm risk management objectives, the P&G criteria..

While Plan 3G advances the P&G requirements the plan still does not achieve all of the objectives of the Vision Statement. Therefore, integration of additional alternatives to satisfy these requirements was considered, including the following:

- Inclusion of the groin modification plan at Westhampton, and Ocean Beach
- Inclusion of the recommended restoration alternatives
- Inclusion of Land Management Measures
- Inclusion of an incremental adaptive management strategy over the project life to address the uncertainties in project implementation, including consideration of climate change and adaptive management

A plan consisting of the above features was identified as the plan that meets the project objectives. This plan was briefed to the Federal, State and local government officials, and further presented at public meetings in summer 2010. The result of this analysis and outreach was the identification of a Tentative Federally Supported Plan (TFSP), which was transmitted to New York State for their consideration.



8.0 IDENTIFICATION OF FIMI STABILIZATION PLAN

On October 29, 2012 as a consequence of severe coastal erosion during Hurricane Sandy, the dune and berm system along Fire Island reach in the FIMI study area is now depleted and particularly vulnerable to overwash and breaching during future storm events, which increases the potential for storm damage to shore and particularly back-bay communities. In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, particularly in the Fire Island to Moriches Inlet (FIMI) study area, USACE has proposed an approach to expedite implementation of construction of necessary stabilization efforts independent of the FIMP Reformulation Study. This approach has gained widespread approval from New York State, Suffolk County, N.Y. and the local municipalities, who recognize the extreme vulnerability of the coast, and the need to move quickly to address this need. This approach has also gained approval from Steven L. Stockton, P.E., Director of Civil Works, USACE in a memorandum dated 8 January 2014.

The post-Sandy Fire Island Stabilization Project, which encompasses Fire Island to Moriches Inlet, was developed based upon the Engineering, Economic, Environmental, and Planning efforts that have been undertaken through the ongoing FIMP Reformulation Study that compared alternatives referenced in Chapter 7 of this report to identify the recommended scale and scope of a beachfill project from the TSP, as an independent stabilization effort. Stabilization efforts were focused on FIMI as this reach is the most populated and subject to barrier island overwash and breach thereby exposing the back-bay to considerable damages. There is a more urgent need to advance the stabilization of this reach due to its vulnerability and potential for major damage and risk to life and property.

This stabilization effort has been developed as a one-time, stand-alone construction project to repair damages caused by Hurricane Sandy and to stabilize the island. This Chapter demonstrates that the FIMI Stabilization Project has its own independent utility, and as developed does not limit the options available in the overall FIMP Reformulation Study or pre-suppose the outcome of the Reformulation Study. After the initial placement of sand, the project is expected to erode, and diminish in its protective capacity, eventually returning to a pre-project condition. In the absence of a future decision, the area is expected to continue to be managed consistent with current practices.

Effective Project Life

The Stabilization Project has been evaluated over a 50 year period to determine that 20 year is the period of time over which there is a measurable difference between the without project future condition and with-project condition. This difference is based upon a combination of factors including the effects of both sand placement and structure acquisition. The Project is designed with advance fill to ensure that the design conditions are maintained for a period of 5 years, under normal conditions. After this time, the project will erode into the design template, and offer residual, diminished protection. It is difficult to project the amount of time that residual protection from the fill will remain. It is estimated, under typical conditions, that the residual effect of the fill placement could last another 5 years. Even after the residual effect of beachfill has diminished, there is a longer residual effect that is provided by the acquisition and relocation of structures. Based upon the setback distances and background erosion rate, it has been projected that the residual effects of relocating these buildings would be an additional 10 years. The economics modeling has confirmed that the WOPFC and with-project condition results converge after 20 years, supporting a period of analysis of 20 years.



8.1 Hurricane Sandy Design Considerations

Hurricane Sandy caused widespread beach and dune erosion along Fire Island. Post-Sandy measurements of volume loss of the beach and dunes indicate that on average the sub-aerial profile lost approximately 55 percent of its pre-storm volume equating to a loss of 4.5 million cubic yards (Hapke et al., 2013). A majority of the dunes were either flattened or experienced severe erosion / scarping. These changes were considered in the development of the FIMI plan. There has been substantial post-storm recovery of the beach in the months since Hurricane Sandy. Construction beach fill volumes required for the design condition will be based on project implementation surveys taken prior to the development of plans and specifications. Consideration was given to the alignment of the beachfill, extent of beachfill, and the impact of these on Real Estate needs.

8.1.1 *Alignment and Real Estate*

In the absence of oceanfront structures, the most cost effective alignment is one that ties into the existing dune line and extends seaward from the existing shoreline only the distance necessary to achieve the required level of protection. The beachfill alignment also affects costs, as beachfill losses caused by “spreading out” or diffusion of beachfill will be greater the farther seaward an alignment is located.

Prior to Hurricane Sandy, the selected beachfill alignment, Minimum Real Estate Impacts (MREI), generally followed the existing dune alignment except within the communities where it was aligned seaward of the existing buildings to minimize real estate costs. Because of the extensive morphological changes observed during Hurricane Sandy, a landward shift in the beachfill alignment was evaluated and is required to account for, as much as possible the new existing (Post-Sandy) dune alignment.

The beachfill alignment, Updated Middle Alignment (MIDU), preserves as much as possible the existing (Post-Hurricane Sandy) dune alignment while balancing the cost of acquiring or relocating oceanfront structures versus increased beachfill needs. The selected plan requires approximately 3 million cubic yards less of initial beachfill. However, the selected alignment requires 41 real estate acquisitions, 6 real estate relocations and over 600 permanent easements for construction.

Lifecycle cost estimates for the MIDU and Minimum Real Estate Alignment (MREI) indicate that reduced annual costs in the MIDU due to the reduced initial fill volumes (\$2.0 million per year) exceed the additional expense of the real estate acquisitions and relocations in the MIDU. This more landward alignment, which requires less sand is also more sustainable, and environmentally preferred, as it requires fewer sand resources.

8.1.2 *Beachfill Extent*

As a result of widespread dune erosion and berm flattening during Hurricane Sandy the alongshore extent of initial berm and dune fill construction was increased from the previously recommended plan. The construction has been developed to reinforce the existing dune and berm system along the island. The selected design includes beachfill at Robert Moses State Park, Fire Island Lighthouse Tract, all of the communities outside of Federal Tracts, and Smith Point County Park. Beachfill is not included in any Major Federal Tracts, except Fire Island Lighthouse which was requested by the National Park Service to protect the Lighthouse and the critical access road on and off the island. There are also incidental beachfill tapers onto adjacent Federal properties that are a necessary component of the Project. The beachfill in Smith Point County Park was also expanded to include a berm and dune features in portions of Smith Point County Park that are in an eroded condition due to the interruption of alongshore transport from updrift structures.



8.2 Stabilization Plan Details

This Section provides the details of the Stabilization plan features recommended in this report for construction as a stabilization project. Stabilization efforts were focused on FIMI as this reach is subject to barrier island breach which exposes the back-bay to considerable damages. There is a more urgent need to advance the stabilization of this reach due to its vulnerability and potential for major damage and risk to life and property.

The Stabilization Project has been developed to reinforce the existing dune and berm system along the island. The selected design includes beachfill at Robert Moses State Park, Fire Island Lighthouse Tract, all of the communities outside of Federal Tracts, and Smith Point County Park. Beachfill is not included in any Major Federal Tracts, except within Fire Island Lighthouse which was requested by the National Park Service to protect the Lighthouse, and the access road. Beachfill is also located on Federal tracts where incidental tapers are necessary for the project.

The Stabilization Project also includes acquisition and relocation of oceanfront structures, as well as construction easements. The Stabilization Project does not include renourishment of the project but is a one-time, stand-alone action.

8.2.1 Design Section

The *Berm Only*, *Small*, and *Medium* design templates are used in the selected plan. The *Small* and *Medium* design templates have a dune with a crest width of 25 feet and dune elevations of +13 and +15 feet NGVD, respectively. All three design templates have a berm width of 90 feet at elevation +9.5 feet NGVD. The proposed design (not construction) foreshore slope (from +9.5 to +2 feet NGVD) is roughly 12.1 on 1. Below MHW (roughly +2 feet NGVD) the submerged morphological profile, representative of each specific reach, is translated and used as the design profile.

Figure 12 shows typical design sections for a few reaches considered representative of the complete set of reaches where fill placement is considered provides an overview of the dune elevations by location along the selected plan. Detailed plan layouts (1 on 100 scale) are presented in Appendix C of this report.

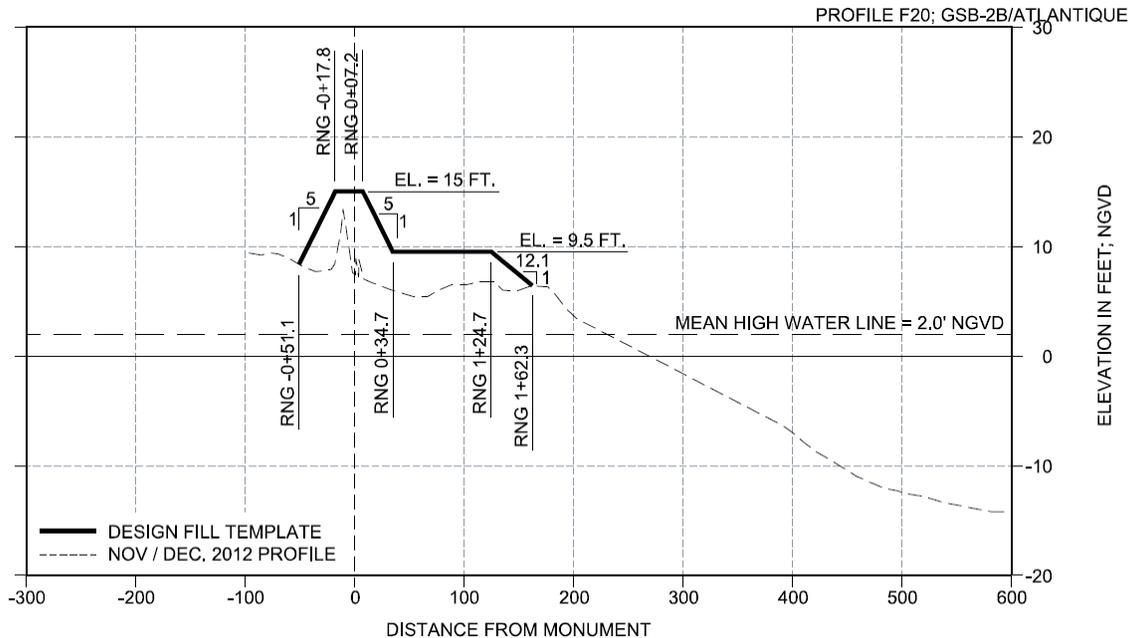


Figure 12: “Medium” Beachfill Section

The *Berm Only* template is applicable to areas in which the existing condition dune elevation and width reduce the risk of breaching but have eroded beach berm conditions. The 90 feet design berm provides protection to the existing dunes and ensure vehicular access during emergency response and evacuation. The *Berm Only* template is applied to Robert Moses State Park (GSB-1A) and Smith Point County Park-TWA (MB-1A). At Smith Point County Park the design provides protection to the existing park facilities and TWA memorial.

The *Small* template is sufficient to reduce the risk of breaching but does not prevent a significant portion of the damages to oceanfront structures. Therefore, the *Small* template is applied to areas with limited oceanfront structures: Robert Moses State Park (GSB-1A), Fire Island Lighthouse Tract (GSB-1B), and the eastern section of Smith Point County Park (MB-1B, and MB-2A) that also includes ESA offset areas (Pattersquash Island Overwash, Smith Point Beach Overwash, New Made Island Overwash – 2 locations, and the Great Gunn Area.

The *Medium* template was identified as having the highest net benefits and provides for approximately a 50-yr level of protection. The *Medium* template is applied to the areas with the greatest potential for damages to oceanfront structures: Kismet to Lonelyville (GSB-2A), Town Beach to Corneille Estates (GSB-2B), Ocean Beach to Seaview (GSB-2C), Ocean Bay Park to Point O’ Woods (GSB-2D), Cherry Grove (GSB-3A), Fire Island Pines (GSB-3C), Water Island (GSB-3E), Davis Park (GSB-3G), and the western section of Smith Point County Park (MB-1A).

The selected plan does not include beachfill in any Major Federal Tracts except Fire Island Lighthouse Tract, which suffered significant beach and dune erosion during Hurricane Sandy. There are also incidental tapers into the Federal tracts as necessary transitions from adjacent communities. The Major Federal Tracts are: (Sailors Haven (GSB-2E), Carrington Tract (GSB-3B), Talisman to Water Island (GSB-3D), Water Island to Davis Park (GSB-3F), Watch Hill (GSB-3H), Bellport Beach (GSB-4A), and Old Inlet (GSB-4B).



Additional information on the Stabilization Project design sections is provided in Table 5: Overview of Selected Design Sections

8.2.1.1 *Project Design Adjustments as Conservation Measures.*

Extensive consultation was undertaken with the U.S. Fish and Wildlife Service and National Park Service, in coordination with New York State and Suffolk County in order to balance the needs and objectives of each party. This consultation is documented in the Biological Opinion which is attached to the Environmental Assessment. This consultation resulted in the evolution of project features for the FIMI project that were made to minimize potential effects to endangered species, maintain the effectiveness of the storm damage reduction plan, and balance the recreational use of the area.

Consultation has resulted in adjustments to the plan that have been proposed as conservation measures, and adopted by the USFWS as reasonable and prudent measures, which are required for project implementation. These plan adjustments include the following:

1. Adaptive management of plover habitat through vegetation management to achieve sparsely vegetated overwash areas in Smith Point County Park at the Pattersquash Island Overwash, Smith Point Breach Location, and New Made Island Overwash
2. Devegetation and topographical alteration and management in the Vicinity of Great Gunn Beach, extending eastward to Moriches Inlet, to provide approximately 33.7 hectares of piping plover nesting and foraging habitats including ephemeral pools.
3. The creation of plover foraging and nesting habitat on six hectares of habitat in the vicinity of the dredge material management site located near New Made Island.
4. In the area of the Fire Island Lighthouse Tract, modification to the dune slope, and elimination of dune vegetation.
5. In the area of Robbins Rest, modification to the dune alignment to increase the amount of beach habitat.
6. The development and implementation of a coordinated plover monitoring program, coordinated mammalian predator management plan, coordinated stewardship, and coordinated effectiveness monitoring to inform the adaptive management of these habitat offset areas (described in Section 11.6).

Adaptive management of plover habitat through vegetation management. There are three overwash locations in Smith Point County Park (at the Pattersquash Island Overwash (13 hectares), Smith Point Breach Location (6.1 hectares), and New Made Island Overwash (10.5 hectares)) that have been identified as priority locations for maintaining early successional habitat for endangered species usage along the bayside. These areas have been identified as the area 75 feet north of the landward toe of the dune system north to the bay shoreline. In these areas the plan includes devegetation to more closely mimic conditions suitable to plovers. In addition, the plan also includes a commitment to monitor and adaptively manage these habitats should they begin to fill in with vegetation, or otherwise undergo succession to a habitat unsuitable to plovers. The proposed areas for devegetation and adaptive management are shown in Appendix C.

Great Gunn Ephemeral Pool Area. The plan includes the devegetation and topographical alteration in the area of Great Gunn Beach, extending eastward to Moriches Inlet. The beach height will be lowered in this area to provide approximately 33.7 hectares of piping plover nesting and foraging habitats. The plan features (both layout and cross-section) are included in Appendix C. The plan layout reconfigures the existing dune, as necessary to maintain the existing dune height, and setback the protective dune alignment adjacent to Burma Road. Fronting the dune, the beach berm is graded to elevation +9 ft NGVD, and stepping down to an elevation of +7 ft NGVD to promote the formation of ephemeral pools.



These plans will be further refined in plans and specifications to account for land-owner and resource agency input. This area will be adaptively managed for a period of 10 years.

New Made Island Foraging and Nesting Habitat. The plan includes the creation of piping plover foraging and nesting habitat on six hectares of habitat in the vicinity of the dredge material management site located near New Made Island. Up to 6 hectare of bayside habitat will be created by lowering a portion of the existing dredge disposal dike to adjacent grades (+4 feet NGVD), regrading the existing substrate, and covering with 2 ft of clean sand. The plans are shown in Appendix C. These plans will be further refined in plans and specifications to account for land-owner and resource agency input. This area will be adaptively managed for a period of 10 years.

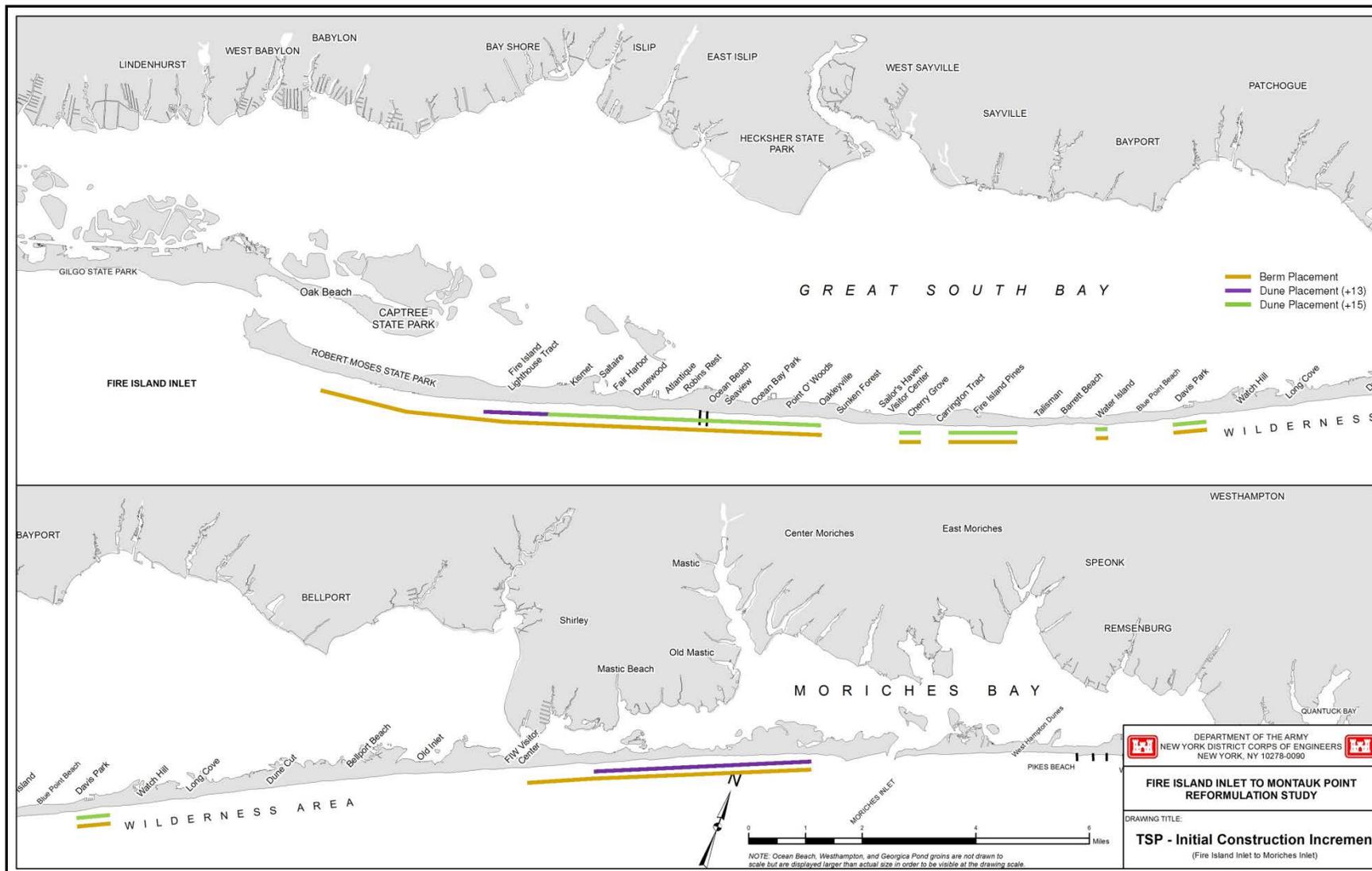
Fire Island Lighthouse Tract. Within the Fire Island Lighthouse Tract, a portion of the area will also include modification of the dune slope, and planting. The plan includes a dune template aligned with the adjacent toe of dune, with 1V:10H seaward slope, 25 ft crest width, and 1V:10H landward slope to intersection of existing topography. These slopes have been selected to allow for shorebirds to cross the dune structure. To ensure the continued access across the dune, no vegetation planting or snow fencing would be included as a component of the project in this location. This dune alignment is shown in the attached plan sheets in Appendix C.

Robbins Rest. In the Federal tract of land west of the community of Robbins Rest, the dune alignment has been adjusted landward to maintain a larger beach area for shorebird usage. This dune alignment is shown in the attached plan sheets in Appendix C.

Additional information on all these features is further described in the District's Biological Assessment, the USFWS Biological Opinion and Finding of No Significant Impact in the attached Environmental Assessment.



Figure 13: Tentatively Selected Plan - FIMI



**Table 5: Overview of Selected Design Sections**

Design Reach	Location	Length (ft)	Dune Elevation (ft NGVD)
GSB-1A	RMSP	23,200	-
GSB-1B	FILT	5,400	13
GSB-2A	Kismet to Lonelyville	9,000	15
GSB-2B	Town Beach to Corneille Estates	4,400	15
GSB-2C	Ocean Beach to Seaview	3,800	15
GSB-2D	OBP to POW	7,200	15
GSB-3A	Cherry Grove	3,000	15
GSB-3C	Fire Island Pines	6,400	15
GSB-3E	Water Island	2,000	15
GSB-3G	Davis Park	4,200	15
MB-1A	SPCP-TWA	6,400	-
MB-1B	SPCP	13,000	13
MB-2A	MB-2A	7,800	13

8.2.2 *Alignment*

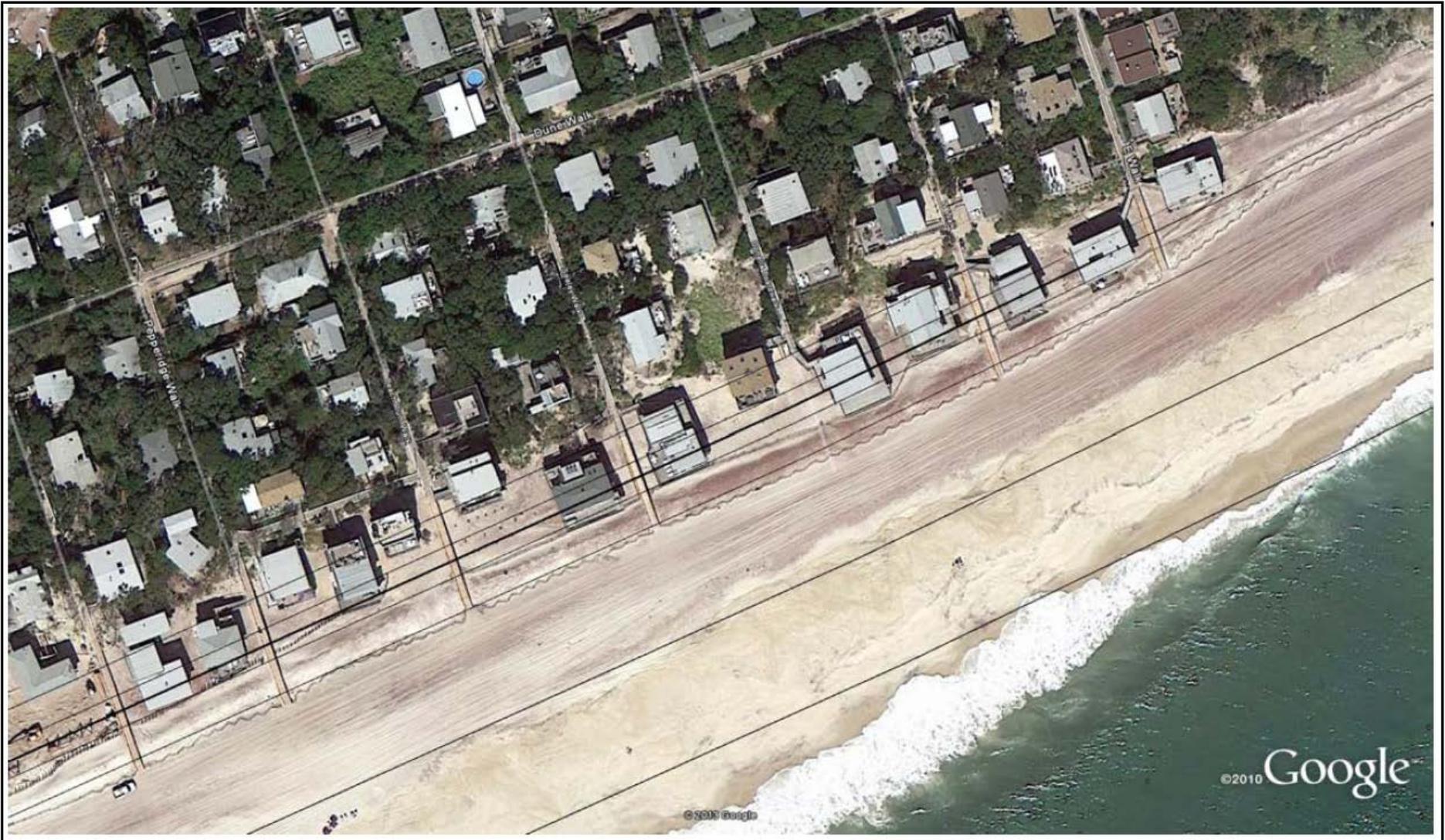
The beachfill alignment or baseline defines the cross-shore location of design section. The design sections are oriented to the baseline by setting the centerline of the design dune coincident with the baseline. In the absence of oceanfront real estate, the most cost effective alignment is one that ties into the existing dune line and extends seaward from the existing shoreline only the distance necessary to achieve the required level of protection.

The selected beachfill alignment, Updated Middle Alignment (MIDU), preserves as much as possible the existing (Post-Hurricane Sandy) dune alignment while balancing the cost of acquiring or relocating oceanfront structures. Lifecycle cost estimates for the MIDU and Minimum Real Estate Alignment (MREI) indicate that cost savings from the reduced initial fill volumes offset the expense of the real estate acquisitions and relocations.

The selected alignment requires a total of approximately 41 real estate acquisitions, 6 real estate relocations and over 600 permanent easements. The majority of the acquisitions are in either Ocean Bay Park (19) or Davis Park (19). The other three acquisitions are located in Dunewood (2) and Robbins Rest (1). The proposed relocations are located in Davis Park (3), Fire Island Pines (2) – Figure 14, Saltaire (1) and Ocean Beach (1). The Ocean Beach real estate relocation includes the water supply.



Figure 14: Fire Island Pines Alignment





The above numbers represent the most likely number of acquisitions. In the further refinement of the plan layout for construction, and in coordination with the impacted communities, the USACE is working to identify alternatives to acquisition, which may include relocation of houses set-back on the existing lot, or relocation of the house to vacant land, both of which could increase the number of willing homeowners, accelerate the timeframe for acquisition, and would likely be less expensive than acquisition. As part of this plan refinement, the houses, docks and pools that are on the back-slope of the dune will be assessed to ensure that project can be implemented within the alignment. The primary consideration will be if there is sufficient clearance (3 feet) between the proposed elevation and the structure. There may be additional real estate needs that are identified based on this requirement. The current Real Estate Plan, Appendix G, provides detail for these real estate needs required and Section 8.2.7.

8.2.3 Beachfill Tapers

Typically, six degree beachfill tapers are incorporated into the design to limit end losses resulting from sharp gradients at the ends of the fill planform. High end losses in the absence of beachfill tapers threaten the integrity of the project by decreasing the level of protection at the ends of the beachfill placement. These tapers extend onto federally owned lands in several locations. These tapers are required to ensure the proper functioning of the design. Further, these tapers would provide some degree of risk management to the dune crossing structures located in these areas. Since these tapers are on Federal properties, in some cases the length of the tapers have been reduced to meet NPS objectives. In areas where tapers have been reduced an equivalent volume of sand will be placed in the community as overfill to account for the shorter taper length.

8.2.4 Advance Fill

Advance fill is a sacrificial quantity of sand which acts as an erosional buffer against long-term and storm-induced erosion as well as beachfill losses cause by “spreading out” or diffusion. The required advance berm width was computed based on representative erosion rates. The representative erosion rates were calculated based on the historical sediment budget, volumetric changes in measured profiles between 1988 and 2012, the performance of recent beach fill projects on the island, and anticipated beachfill spreading. This analysis is provided in Appendix D. A summary of the representative erosion rates and advance fill berm widths is provided in

Table 6: Advance Fill Berm Widths

Design Reach	Location	Length (ft)	Representative Erosion Rate (ft/yr)	Advance Berm Width (ft)
GSB-1A	RMSP	23,200	5	20
GSB-1B	FILT	5,400	5	20
GSB-2A	Kismet to Lonelyville	9,000	5	20
GSB-2B	Town Beach to Corneille Estates	4,400	5	20
GSB-2C	Ocean Beach to Seaview	3,800	5	20
GSB-2D	OBP to POW	7,200	5	20
GSB-3A	Cherry Grove	3,000	2	8
GSB-3C	Fire Island Pines	6,400	10	40
GSB-3E	Water Island	2,000	2	8
GSB-3G	Davis Park	4,200	12	48



MB-1A	SPCP-TWA	6,400	2	8
MB-1B	SPCP	13,000	2	8
MB-2A	MB-2A	7,800	2	8

8.2.5 Fill Volumes

The total initial project fill volume is the sum of the design fill, advance fill, and overfill and contingency. The total initial fill volumes for each design reach are presented in Table 7. The total initial fill volume for implementation is estimated at 6,992,145 cubic yards.

8.2.6 Borrow Areas

Fourteen suitable borrow areas offshore of the overall study area have been identified based on core samples. Suitability between native beach sediments and borrow sediments was evaluated using the 1984 Shore Protection Manual Overfill Method. Three of the fourteen borrow areas were selected for initial construction. These borrow areas were selected considering sand compatibility and to minimize adverse impacts to potential onshore sediment transport processes supported by data collection efforts of the USGS.

The sand required for initial construction will be obtained from three offshore borrow sites: 2C, 4C, and 5B. Borrow area 2C is located approximately 2 miles offshore of Point O' Woods and contains an estimated 9,000,000 cubic yards of compatible sediment. In order to limit potential impacts to shoreface ridges containing modern Holocene sediments only the northeastern half of the borrow area will be dredged as shown in Figure 15. Borrow area 4C is located approximately 1.5 miles offshore of Pikes Beach and contains an estimated 700,000 cubic yards of compatible sediment. Borrow Area 5B is located approximately 1.5 miles offshore of the beach at Quantuck Bay and contains an estimated 9.5 million cy of compatible sediment. Figure 15: Selected Plan Borrow Area Locations provides the Selected Plan Borrow Area Locations.

The Borrow Area Appendix E provides further details on the selected borrow areas. Coordination with resource agencies such as NYSDEC, NYSDOS, NMFS, USGS, and NPS is ongoing.



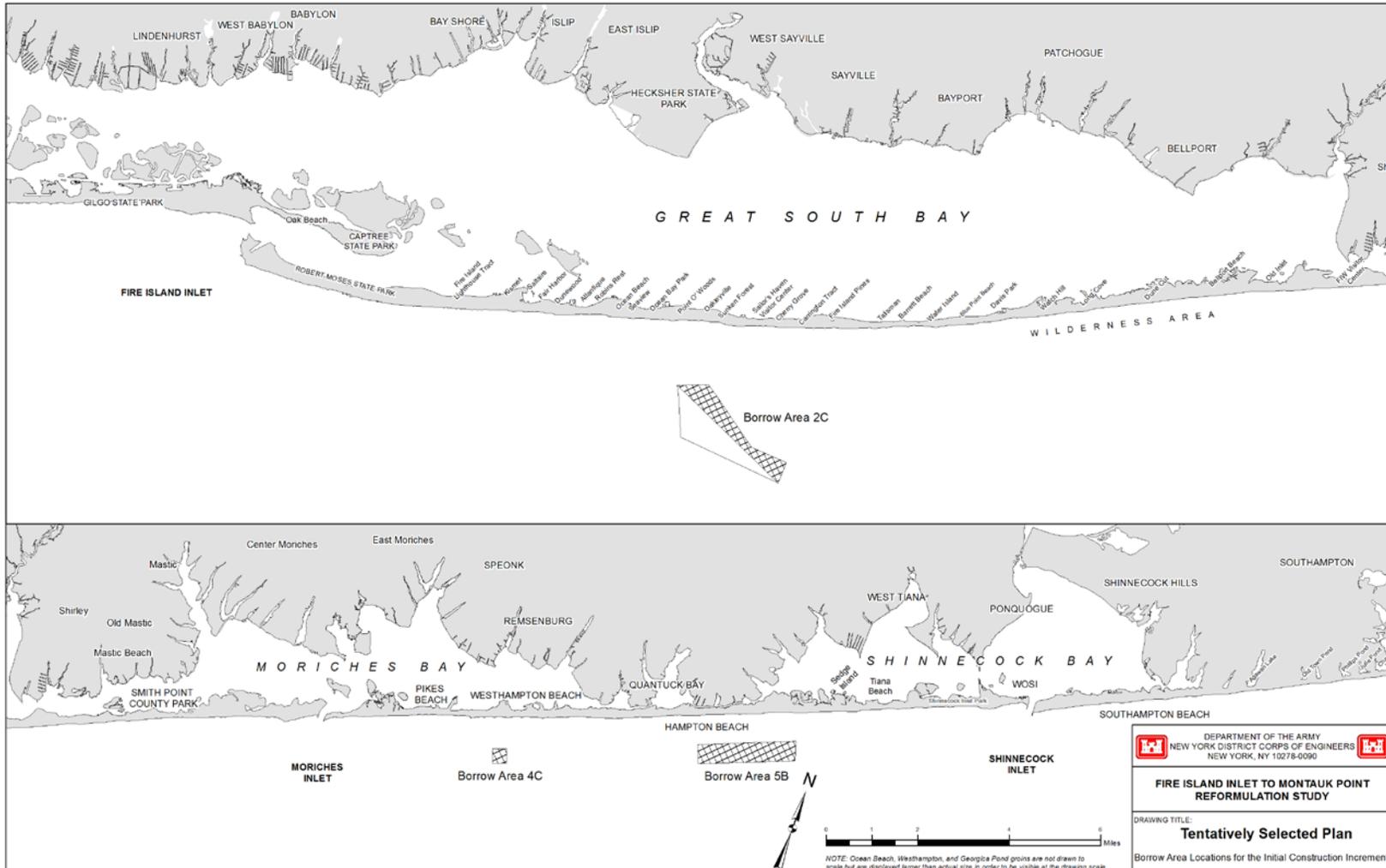
Table 7: Total Initial Fill Volume Estimate

Location	Design Reach	Fill Length (ft)	Design Fill Volume (cy)	Advance Fill Volume (cy)	10% Overfill Factor (cy)	Subtotal Volume (cy)	15% Contingency (cy)	Total Initial Fill (cy)
RMSP	GSB-1A	16,562	458,164	110,942	56,911	635,238	95,286	730,524
FILT	GSB-1B	5,461	253,025	98,301	35,133	386,459	57,969	444,428
Kismet to Lonelyville	GSB-2A	8,918	200,098	109,770	30,987	340,855	51,128	391,983
Town Beach to Corneille Est.	GSB-2B	4,529	313,822	92,548	40,637	447,008	67,051	514,059
Ocean Beach to Seaview	GSB-2C	3,752	147,569	75,401	22,297	245,267	36,790	282,057
OBP to POW	GSB-2D	7,228	250,258	97,956	34,821	384,077	57,612	441,689
Cherry Grove	GSB-3A	2,950	10,278	0	1,028	14,041	2,106	16,147
Fire Island Pines	GSB-3C	6,457	549,255	346,159	89,541	1,029,435	154,415	1,183,850
Water Island	GSB-3E	1,196	30,676	9,127	3,980	59,670	8,951	68,621
Davis Park	GSB-3G	4,167	305,013	215,297	52,031	639,880	95,982	735,862
SPCP-TWA	MB-1A	6,342	265,725	13,872	27,960	373,830	56,075	429,905
SPCP	MB-1B	13,095	681,702	96,696	77,840	856,239	128,436	984,675
Great Gunn	MB-2A	4,461	525,019	43,725	56,874	668,126	100,219	768,345
Total		85,118	3,990,604	1,309,794	530,040	6,080,125	912,020	6,992,145

Note: Taper volumes and lengths were included within the provided reaches under the subtotal tab.



Figure 15: Selected Plan Borrow Area Locations





8.2.7 Real Estate

Real Estate requirements include the lands, easements, and rights of way, and relocations to implement the initial construction, and are described in complete detail in the Real Estate Appendix G. The lands, easements, rights of ways, and relocations necessary for implementing the project are described herein. The two types of easements required for the interim project include a perpetual easement, and a temporary work easement. A perpetual easement would be obtained along all areas where beachfill material is placed to allow continual access to construct, operate, maintain, patrol, repair, and replace the beach berm and dune. This easement precludes development, other than approved dune crossings and ensures that the design section would be held inviolate from future development. There are over 600 easements required, of which 440 are on private properties. Since the Project alignment has been pulled landward, there are a number of buildings that could remain on the back-slope of the dune without interference with construction. A temporary work area easement would be obtained to allow right of way in, over, and across the land for a period of three years for construction operations. These easements are in addition to the acquisition of 41 houses and relocation of 6 homes, and a water supply that are necessary for constructing the project. The acquisition of the necessary lands and easements are a responsibility of the non-federal interests.

8.2.8 Public Access

Suitable public access is required for any areas where Federal expenditure of funds will be utilized for beach restoration. Analysis and acceptability of public access on Fire Island is complicated by the unique nature of the project area, including both the fact that the project area is largely within a national park, and that there is limited vehicular access to the majority of the area. Typically, public access analysis focuses on alongshore access relative to available parking areas. In the areas of Robert Moses State Park, and Smith Point County Park, the existing access clearly meets Federal and State Requirements. Within the boundary of FIIS, the existing public access has been established based upon the Fire Island National Seashore General Management Plan and EIS, which established a visitor usage pattern consistent with the park objectives (including low recreational usage areas). As the existing public access has been established by the NPS under its own EIS, the intent of the FIMI Stabilization project is not to change the existing access, but to ensure that existing access is acceptable, recognizing the park objectives. Analysis of the existing public access is detailed in the Public Access Plan (Appendix F). The analysis of public access, indicates that the areas where sand is being placed is fully accessible and in compliance with ER 1165-2-130.

8.3 Project Costs & Economics

Because of Hurricane Sandy's impacts on the barrier island portion of the study area and the resulting degradation of the existing dune and berm features, the barrier island is exceptionally vulnerable to future severe storm impacts. The resultant degradation of the protection afforded the back-bay by the barrier island makes it imperative to immediately implement restorative measures and project betterments to the barrier island to prevent future damage to the study area. Therefore, a beachfill stabilization plan within the FIMI project area is being developed as a separate effort. The following paragraphs detail the costs and benefits of the FIMI project features.

8.3.1 Cost

An overview of the cost of the Stabilization plan features identified above are provided in this section and the following tables. The cost estimates form the basis for the economic analysis and benefit cost ratio. All cost estimates are based on October 2013 price levels.



First Costs

First costs include charges arising from the acquisition or construction of each individual component, as well as the cost of easements, planning and environmental compliance, engineering and design, monitoring, engineering during construction, construction management (supervision & administration), and contingencies.

Real Estate

The Real Estate requirements, for this project, include the lands, easements, relocations and rights of way (LERR) to implement the initial construction increment. The project will require the following estates: Fee Acquisition, Perpetual Beach Storm Reduction Easement and Temporary Work Area Easement. Right of Entries, Special Use Permits and License Agreement may be used for parcels owned by Municipalities and local government. Approximately 733 properties will be impacted by the Fire Island Inlet to Moriches Inlet portion of the Project which includes 689 Easements: 663 Perpetual Beach Storm Damage Reduction Easements and 26 Temporary Work Area Easements (including the borrow areas). The 689 easements include the on-site relocation of 6 homes. 41 Fee Acquisitions of primarily summer residences are required and 2 Right-of-Entries for staging, storage of materials and equipment in the Robert Moses State Park and Smith Point County Park West, as well as for Bridge Access to project areas. The project also includes the Relocation of 1 Municipal Well in the Town of Ocean Beach. A Temporary Work Area Easement is required for the current and future location of the Municipal Well. A Temporary Work Area Easement for the well's current location is included list of 26 required Temporary Easements. The new location of the well is currently undetermined, but will be located on property owned by the Town of Ocean Beach. The owners of the 41 fee acquisitions and 6 owners of the homes to be relocated may be eligible for relocation benefits under P.L. 91-646, as amended.

A Standard Perpetual Beach Storm Damage Reduction Easement (Standard Estate No. 26, EC 405-1-11) is required for property along all areas where beachfill material is placed, or could potentially be placed, during construction, to allow continual access to construct, operate, maintain patrol, repair, renourish, and replace the beach berm and dune. This Easement precludes development, other than approved dune crossings and ensures that the design section, including 25 feet landward of the landward toe of the dune, would be held inviolate from future development. Temporary Work Area Easements are necessary to allow access in, over and across the land for a period of three years for construction operations. Lands in Fee will also be required for beachfill placement where the project footprint impacts an existing dwelling.

The market value of 41 oceanfront structures that would be acquired under the MIDU alignment was obtained from a market gross appraisal completed on June 10, 2013. The market gross appraisal reflects the value of the real estate post-Hurricane Sandy. The estimated market Gross Appraisal value is, as of June 10, 2013, \$46,025,000 (including a 40% contingency). In addition to the costs associated with the acquisition of oceanfront structures, the cost of obtaining 689 construction easements is included.

The cost estimate for relocation of six (6) structures and relocation/reconstruction of the Ocean Beach well complex component required as part of the initial construction are estimated as \$3,601,350, relied on the following:

- Structure relocations will be performed in conjunction with the beach replenishment contract and therefore additional barging costs for mobilization /demobilization are not included.
- Quantities are primarily based on the structure square foot areas obtained from Tax maps and aerial photographs.



- Unit pricing based on utilizing RSMMeans® construction cost data with a 30% city cost index adjustment

Administration costs for real estate acquisitions, relocations, and easements were compiled from the Appraisal dated 10 June 2013 and total \$1,687,400.

Since Federal funds will be applied in New York State, the Baseline Cost Estimate for Real Estate will be reviewed as the project progresses, and make adjustments to costs as necessary. The Baseline Cost for Real Estate includes Easement costs for the authorized project.

The Total Baseline Cost for Real Estate for the project is \$68,421,848 summarized as follows:

Administrative and Acquisition Costs:

Administrative Costs:

Perpetual Beach Storm Risk Management Easements (663),	
Temporary Construction Easements(26)	
And Staging Right-of-Entries(2): (Total 691 Properties).....	\$1,191,000
Administration of 6-home On-Site relocations	\$ 49,000
Administration of Fee Acquisitions: (41 homes).....	\$ 294,000
	\$ 1,534,000
Contingency : 10%	
	\$ 1,687,400

Fee Acquisition Costs:

Purchase of Privately-Owned Homes (41 Properties)	\$46,025,000
Perpetual Beach Easement Costs – 410 privately owned properties.....	\$16,588,101
Damage Costs (17 Pools and Decks).....	\$285,000
<i>Damages to 7 Pools @ \$25k = \$175k</i>	
<i>Damages to 4 Small Decks @ \$5 = \$20k</i>	
<i>Damages to 6 Large Decks @ \$15k = \$90k</i>	
Relocation Benefits/Moving Expenses (47 Properties) @ \$5k each...	\$ 235,000
	\$63,133,101

Public Law 91-646 Relocation Assistance:

Relocation Construction Cost for 6 homes.....	\$ 1,001,347
Relocation and Reconstruction of Ocean Beach Well System.....	\$ 2,600,000
TOTAL	\$68,421,848

Beachfill

The Project consists of beachfill along Fire Island to reinforce the existing dune and berm system and the acquisition and relocation of ocean front structures.

The construction includes beachfill at Robert Moses State Park, Fire Island Lighthouse Tract, all of the communities outside of Federal Tracts, and Smith Point County Park. Beachfill is not included in any Major Federal Tracts, except Fire Island Lighthouse and in other Federal tracts when residential tapers are required. The beachfill sand will be obtained from three offshore borrow areas at the western and eastern ends of the project area.



Beachfill construction costs include dredging, mobilization, and demobilization required for construction of the selected plan. Dredging costs per cubic yard by reach/borrow area and mobilization costs per dredging contract were provided by the USACE, using CEDEP (Corps of Engineers Dredge Estimating Program). The program assumes the use of 6,500 cy hopper dredges working 24 hours per day, 7 days per week with two daily 12-hours shifts. CEDEP incorporates influencing factors such as hopper capacity and safe load, area of borrow site, distance to borrow site, and current fuel, labor, and equipment costs. A \$6,000,000 mobilization/demobilization cost is assumed per dredging contract. Engineering and design (E&D) and supervision and administration (S&A) costs are estimated to be 0.95% and 4.34% respectively of the total construction cost.

The Total Project Cost Summary is provided in Table 8: Annual Costs. The estimated first cost is \$207,100,000 and the total project cost is \$223,324,000. The estimate costs for each contract are escalated to the midpoint of construction (described above).

The Fire Island Stabilization Project has 100% Federal funding. The non-Federal partner is responsible for 0% of the total project cost. Administrative costs for real estate acquisition will be 100% non-Federal.

The complete Cost Estimate details may be found in Appendix H of this report.

Account Code	Description	Quantity	UOM	Amount	% Contingency	Contingency Amount	Total
2	02 - RELOCATIONS						
	Relocations	1	LS	\$ 3,601,352	19.44%	\$ 700,103	\$ 4,301,455
	TOTAL RELOCATIONS			\$ 3,601,352		\$ 700,103	\$ 4,301,455
17	17 - BEACH REPLENISHMENT						
	Hydraulic Beach Fill	1	LS	\$ 87,731,216	19.44%	\$ 17,054,948	\$ 104,786,164
	TOTAL BEACH REPLENISHMENT	1	LS	\$ 87,731,216		\$17,054,948	\$ 104,786,164
1	01 - LAND & DAMAGES	1	LS	\$ 64,820,316	10.00%	\$ 6,482,032	\$ 71,302,348
30	30 - PLANNING, ENG., DESIGN						
	Planning, Eng, Design	1	LS	\$ 1,388,000	12.97%	\$ 180,024	\$ 1,568,024
	Coastal & Environmental Management	1	LS	\$ 15,500,000	12.97%	\$ 2,010,350	\$ 17,510,350
	OMRR&R	1	LS	\$ 100,000	12.97%	\$ 12,970	\$ 112,970
	TOTAL PLANNING, ENG., DESIGN	1	LS	\$ 16,988,000		\$ 2,203,344	\$ 19,191,344
31	31 - CONSTRUCTION MANAGEMENT	1	LS	\$ 6,731,000	12.60%	\$ 848,106	\$ 7,579,106
	TOTAL PROJECT FIRST COST			\$ 179,871,884		\$27,288,532	\$207,160,416



Breach Response

Breach Response Costs have been calculated, and are shown below for purposes of the economic analysis, but are not included in the project costs. Breach closure is expected to occur in the without project condition and in the with-project condition, but with different probabilities of occurrence and different response protocols. These costs are developed to show the differences in expected breach closure costs, under the two scenarios and are factored into the benefits as a calculation of costs avoided. If FIMI is constructed under an approved PL 113-2 HSLRR, any necessary future breach response in the FIMI footprint would be implemented under PL 84-99.

The breach closure costs are a function of the breach growth rate, dredging production rates, washout losses, and the dredging costs. The cost of closing a breach increases non-linearly as the breach grows in size because not only is a greater volume of sediment required to fill the breach cross-section but washout losses increase. In general it is less expensive to close a breach with a 30" cutter head dredge because it has a faster dredging production rate than a smaller hopper dredge and consequently is capable of more immediate breach closure.

Breach Response Costs have been calculated, and are shown below for purposes of the economic analysis, but are not included in the project costs. Breach closure is expected to occur in the without project condition and in the with-project condition, but with different probability of occurrence. These costs are developed to show the differences in expected breach closure costs, under the two scenarios and are factored into a calculation of costs avoided. Historical breach observations in Great South and Moriches Bay were used to determine appropriate breach growth rates. The unit costs of dredge placement applied for breach closure cost estimates are similar to the unit prices determined with CEDEP for initial construction and a \$4 million mobilization / demobilization cost is applied for each breach (assuming a 3,800 cy hopper dredge).

Annual Costs

Annual costs incorporate the first costs, beachfill, and berm and fill maintenance costs. Annual costs assume a project life of 20 years and an interest rate of 3.50%. Annual costs are presented in Table 9: FIMI Project Residual Storm Damages and presents an estimated breach closure cost for the with project condition, which is lower than the breach closure cost presented in Table 11, which is the avoided cost of breach closure activities in the absence of a federal project. It is assumed that the formal breach response protocol implemented as part of the project will trigger breach closure sooner, resulting in a smaller size of the breach, and less volume of sediment for repair.

Table 8: Annual Costs

Cost Category	
Beach Fill	\$207,100,000
Nonstructural	\$0
Road Raising	\$0
<i>Total First Cost</i>	<i>\$207,100,000</i>
Total IDC*	\$3,553,000
<i>Total Investment Cost</i>	<i>\$210,714,000</i>
Interest and Amortization	\$14,826,000



Operation & Maintenance**	\$6,000
BCP Maintenance***	\$561,000
Inlet Bypassing	\$0
Renourishment	\$0
<i>Subtotal (Annual)</i>	<i>\$15,392,000</i>
Annual Breach Closure Cost ***	\$2,088,000
Major Rehabilitation	\$0
<i>Total Annual Cost</i>	<i>\$17,480,000</i>
* Calculated at 11 months (September 2014 to August 2015)	
** OMRR&R costs are assumed to be nominal for this project, since it is a one-time action project. \$10k cost in each of the first 10 years, converting that to a single present worth, then annualizing that over the 20 years of the project life	
*** Breach Response Costs are shown in the table for purposes of economic analysis. These are not included in the Project Costs.	



8.3.2 Benefits

To model the with-project damages and hence allow benefits to be computed, revisions were made to key inputs in the lifecycle simulation models. Beach fill at the relevant locations was simulated by adjusting the effective baseline beach width and the threshold water surface elevations at which overwash, partial breaches, and full breaches are triggered. Similar revisions were applied to the with-project breach-only model, which was also revised to reference the modeled breach-open inundation damages arising from a breach closure period of three months, which reflects an assumed implementation of breach response protocols under PL84-99, with the project in place.

Tables 2-4 in Section 5.2.2 detail the annual equivalent damages of the without project condition. Section 5 details the modeling approach and the affected reaches where damages are expected. The types of damages are explained fully in that summary of the without project condition.

Table 9 presents the damages that are likely to occur with the project in place. This table illustrates that while the damages along the mainland shorefront are reduced by stabilizing the barrier island and reducing the potential for overwash and breaching that there are relatively high residual damages that are expected to occur with the project in place. These damages are due in part to the flooding that is expected to occur as a result of water that is exchanged through the inlets and within the bays. The relatively short life of the proposed project, and the fact that protection is diminished after 5 years also contributes to these residual damages.

Table 10 presents the Storm Risk Management Benefits. The Benefit Cost Ratio for the project is presented in Table 11. The results of the analyses is based on a project life of 20 years and an interest rate of 3.5%. The benefit category 'Structure Failure' covers the loss of homes buildings on the barrier island located on land likely to be lost as breaches grow in the interval before they can be closed. Costs avoided include the projected outlay on breach closure actions and beach maintenance activities which are still assumed to occur under without project conditions. The analysis of the plan for the FIMI project area shows that the project is economically justified as a one-time action. The analysis is included in Appendix D

Table 9: FIMI Project Residual Storm Damages

Benefit Category	Annual Equivalent Damage
Inundation	
Mainland	\$65,921,000
Barrier	\$12,093,000
<i>Total Inundation</i>	<i>\$78,013,000</i>
Breach	
Inundation	\$346,000
Structure Failure	\$202,000
<i>Total Breach</i>	<i>\$584,000</i>
Shorefront*	\$2,250,000
<i>Total With-Project Storm Damage</i>	<i>\$80,811,000</i>

*Residual Damage Analysis not yet finalized

**Table 10: FIMI Project Benefits**

<i>Benefit Category</i>	<i>Annual Equivalent Damage Avoided</i>
<i>Inundation</i>	
<i>Mainland</i>	<i>\$5,745,000</i>
<i>Barrier</i>	<i>\$2,571,000</i>
<i>Total Inundation</i>	<i>\$8,316,000</i>
<i>Breach</i>	
<i>Inundation</i>	<i>\$7,254,000</i>
<i>Structure Failure</i>	<i>\$305,000</i>
<i>Total Breach</i>	<i>\$7,559,000</i>
<i>Shorefront*</i>	<i>\$0</i>
<i>Total Storm Damage Reduction</i>	<i>\$15,875,000</i>
<i>Costs Avoided</i>	
<i>Breach Closure</i>	<i>\$2,930,000</i>
<i>Beach Maintenance</i>	<i>\$0</i>
<i>Total Annual Benefits</i>	<i>\$18,805,000</i>

Table 11: FIMI Benefit to Cost Ratio

Component	
Total Annual Cost	\$17,480,000
Total Benefits	\$18,805,000
Net Benefits	\$1,325,000
Benefit-Cost Ratio	1.1



9.0 PROJECT IMPACTS

9.1 Environmental Impacts

Implementation of the FIMI project features is not expected to have any significant adverse impact on the environment. The following is a summary of potential impacts; details of specific impacts are outlined in the accompanying EA.

9.1.1 *Human Environment Impacts*

Under the FIMI Stabilization Project, the risk of storm damage on Fire Island would be greatly reduced in the areas proposed for nourishment. The placement of beach fill in the designated areas would protect the residential, recreational, and commercial uses. Implementation of the beach nourishment alternative would enable residents and businesses to remain in the area during non- catastrophic events, while also affording increased protection to the communities along the bayshore. Due to the reduced likelihood of breaching and inundation of the bayshore, residential, recreational and commercial structures are much less likely to be damaged or destroyed, access to homes businesses is less likely to be interrupted, and utility service is less likely to be disrupted.

Storms analogous to historic trends, consisting of frequent minor to moderate events, are likely to result in minor adverse impacts to land use and communities, with repeat damage to structures and followed by subsequent rebuilding. These impacts would be expected to be short term, depending on storm frequency and severity.

9.1.2 *Cultural Resources*

Submerged Archaeological Resources:

As currently planned work within Robert Moses State Park will include areas that have historically been eroded and where the State of New York has placed sand previously. No wrecks have been identified as part of these operations and it is anticipated that the proposed project would not have an effect on historic properties in this area.

The 1999 survey identified four anomalies along Fire Island that had both a magnetic and acoustic anomaly. USACE will relocate these anomalies and determine if they are within the current project boundaries for sand placement. If these anomalies are within the current sand placement areas, additional investigations may be necessary including (but not limited to) underwater investigations. This work will be identified and included in a Programmatic Agreement developed for this project and coordinated with the NYSHPO, the ACHP, the National Park Service, the Shinnecock Nation and other interested parties.

Borrow Area 2C and 5B were included in the 2001 survey of borrow areas off the coast of Fire Island. No magnetic or acoustic anomalies were identified in this borrow area as part of this survey. Borrow Area 4C was not included in this survey. Completing a magnetometer and side scan sonar of this borrow areas will be included in the Programmatic Agreement (Attachment H of Environmental Assessment).



If anomalies are identified that have the potential to represent wrecks or other significant features, additional investigations, including diving, will be conducted and/or the areas of the anomalies may be avoided during construction.

Archaeological Resources

Terrestrial Archaeological Sites

The archaeological sites identified within the FIIS are either located on the bay side of the barrier island or in the Federal Tract areas that are being avoided by this project. Sand placement would not disturb the sites buried under the barrier island or in the near shore zone. The use of sand fill may help to protect these sites from being exposed and destroyed (JMA 1998). Therefore, the proposed project is not expected to have an adverse impact on these sites.

Architectural Resources:

Fire Island Light Station National Historic District.

As per the request of the National Park Service, sand will be placed along the shoreline south of Burma Road within the historic district. Placement of sand in this area will help protect the historic district and its contributing elements of Burma Road, the vegetated dune and pathways to the shoreline. As currently planned, the proposed project will not have an adverse effect on these resources, but rather serve to protect the historic district.

Other Architectural Resources.

Based on the currently planned acquisitions and relocations, USACE will verify that the properties recommended for additional consideration by the 2000 study would not be affected. Currently, this would require the review of houses in Ocean Bay Park and Fire Island Pines.

USACE will monitor the development of construction plans and specifications to ensure that the sand placement will not disturb these sites or the required acquisitions and relocations will not affect these structures. If designs change, USACE will conduct additional investigations to determine if the project will cause an adverse effect on these sites.



9.1.3 *Physical Environment*

From a physical perspective, the project would alter the beach /dune profile substantially, reducing the potential for breaching and overwash during storm events and creating greater stability of the barrier island features.

With the FIMI Stabilization Plan, sand would be removed from the borrow areas, altering the bottom profile of the ocean floor. Sand taken from the borrow areas will be extracted to a depth no greater than 20 feet below the existing bottom. The total initial fill volume for the proposed action is estimated at approximately 7,000,000 cy. Following completion of the project, substrate characteristics are expected to be similar to existing conditions.

Assuming the large volume of offshore sand that is moving shoreward, removal of minimal quantities in the borrow areas on sand ridges on the shoreface would not impact the morphodynamic system that occurs along Fire Island. In addition, given the immense size of the offshore sand ridges near our study area, relatively lesser sized borrow areas can provide ample sediments for nourishment projects with minimal or no impact to the onshore movement of sediments (NPS 2008).

Impacts to the physical characteristics of the borrow areas would be expected to be adverse, minor to moderate and short term.

9.1.4 *Natural Environment*

Aquatic and Terrestrial Habitats. Construction of the FIMI TSP would impact shoreline intertidal, subtidal, and upper beach and dune habitats. The upper beach zone and dunes represent terrestrial communities in the Project area. These areas are dominated by sand and beachgrass. Anticipated short-term impacts to the vegetated beach and dune communities are anticipated. Overall habitat within the intertidal zone would increase as the beach is widened as a result of proposed beach fill activities. The physical characteristics of the intertidal habitat will not be altered since the grain size of fill material will be the same as that of native sand in the Project area.

Finfish and Shellfish. Impacts during construction of the FIMI TSP may include the mortality of clams, benthic fish communities (e.g., toadfish), and other invertebrates present in the sandy habitat of the Project area during placement of fill material and construction/extension of groins (Reilley et al. 1978, Courtenay et al. 1980, Naqvi and Pullen 1982). However, once constructed, the groins would improve habitat for some intertidal organisms (Carter 1989). For example, the crevices between the groin stones would provide protection from larger predators for the young of many species of finfish and shellfish.

Benthic feeding fish species (e.g., windowpane, summer and winter flounder) would experience temporary displacement until appropriate food sources recolonize the Project area (Courtenay et al. 1980). However, these and other fish that are present at the time of construction are expected to feed in the surrounding area and therefore will be unaffected by the temporary localized reduction in available benthic food sources.

The FIMI project would impose minimal impacts during construction for the local shellfish species within the Project area. Most sessile species present directly underneath the Project footprint would be buried during construction. Motile shellfish species would be able to relocate temporarily outside of the immediate Project area.



In addition to the temporary impact to the fish and shellfish species of the Project area, a slight temporary increase in turbidity is also expected near the Project area during construction (Reilley et al. 1978, Courtenay et al. 1980, Naqvi and Pullen 1982). Increases in turbidity could affect the settling rate of shellfish ova and larva, and can clog and damage the gills of fish species (Uncles et al. 1998). However, the churned sediment would settle quickly and any impacts to the benthic fish and shellfish community would be minimal. The Project would result in a long-term beneficial impact to both fish and shellfish species of the Project area. The groins would create areas suitable for recruitment and protection for numerous shellfish species. In addition, the groins would provide habitat and food source locations for fish species.

Benthic Resources. The FIMI Selected Plan would cause short-term negative and long-term beneficial impacts to the benthic communities in the Project area. Negative impacts to the benthic community would be a result of increased turbidity during construction.

Reptiles and Amphibians. No reptiles or amphibians are expected to occur within the Project area due to lack of suitable habitat. Therefore, there will be no long-term impacts to reptiles and amphibians as a result of the Project.

Birds. The shoreline of Fire Island provides feeding and resting areas for birds that pass through the area along the Atlantic flyway during annual migration in early spring and late fall. Heavy machinery and the increased noise levels may temporarily affect birds in the Project area during construction activities. However, in addition, in accordance with coordination with USFWS most of the Project activities in the area of active nesting plovers will occur from September through April, outside the key spring and fall migration periods (Piping plover) to avoid disruption of migration activities. Recreational use of the Fire Island shoreline is currently high. Birds have adapted to the human use of the area and birds have continued to use the upper beach/dune area for nesting and foraging. Impacts to birds from the additional access areas to the beach are expected to be minimal.

Mammals. Although there is potential for FIMI project construction activities to temporarily displace any mammals present in the area and limit access to feeding or nesting habitats, these species are mobile and are expected to avoid direct mortality. In addition, the sparsely vegetated terrestrial habitats impacted by the project (upper beach and dune) typically provide low quality habitat for mammals and are used only for foraging activities. Mammals are expected to utilize other suitable areas for foraging.

Threatened and Endangered Species and Habitats. The USACE has completed coordination with USFWS, NYSDEC, and NMFS to assess impacts to threatened and endangered terrestrial and aquatic species and habitats as a result of the Project. Agencies evaluated the existing resources and anticipated Project impacts in conjunction with the public and agency review period for this Draft EA and USFWS review of a Biological Assessment (BA) prepared by the USACE for this Project. The Fish and Wildlife Coordination Act 2(b) report for this Project has been provided. Traditionally for water resource projects the draft FWCA report is included in the draft NEPA documentation, and the final FWCA report appears in the final NEPA documentation. As this project has already been coordinated with USFWS, the District has coordinated with USFWS to update impacts to wildlife resources. The District received a FWCA report and gave full consideration. Where applicable, the recommendations have been incorporated into the final NEPA document.

The Project would potentially result in direct and/or indirect disturbances to nesting shorebirds and their broods, if any are present in the Project vicinity for this purpose at the time of construction. USACE will restrict construction activities to September 1 through April 1 in areas with nesting plovers to avoid direct adverse impacts to the shorebirds. To facilitate the implementation of the USFWS' piping plover recovery plans through appropriate habitat management within the project boundaries, USACE will



perform pre-construction surveys to evaluate and document use of the Project Area by Federal or state-listed species.

In accordance with the USFWS recommendations for protection of the seabeach amaranth, the USACE will survey the beach area prior to construction and avoid disturbing locations of the plant during the growing season (July 1 through November 1). Any seabeach amaranth plants identified in the construction area will be protected from incidental disturbance by construction equipment/materials by surrounding them with safety fence for avoidance. Construction activities will avoid all delineated locations of the plant and will undertake all practicable measures to avoid incidental taking of the plant.

The Federally-listed threatened loggerhead, as well as the endangered Kemp's ridley, leatherback, and green turtles may utilize coastal resources in the Project vicinity for foraging. However, no nesting is likely to occur in the Project area because these species of sea turtles nest south of the Project area. In addition, NMFS has indicated that the leatherback turtle feeds on pelagic prey and would not be affected by the Project. In accordance with NMFS recommendations, if hopper dredges are used in the inlets or offshore borrow area between mid-June and mid-November, NMFS-approved observers will be onboard the vessels to monitor construction activities.

Dredging offshore areas has the potential to impact the Atlantic Sturgeon aquatic ecosystems by removal/burial of benthic organisms, increased turbidity, alterations to the hydrodynamic regime. Hydraulic dredges can directly impact sturgeon and other fish by entrainment in the dredge. Dredging may also impact important habitat features of Atlantic sturgeon if these actions disturb benthic fauna, or alter rock substrates (which do not occur in the project area). Indirect impacts to sturgeon from either mechanical or hydraulic dredging include the potential disturbance of benthic feeding areas, disruption of spawning migration, or detrimental physiological effects of resuspension of sediments in spawning areas.

Although little is known about natural predators of Atlantic sturgeon, there are several documented fish and mammal predators, such as sea lampreys, striped bass, common carp, minnow, smallmouth bass, walleye, grey seal, and fallfish. There are some concerns that predation may adversely affect sturgeon recovery efforts in fish conservation and restoration programs, and by fishery management agencies. However, further research is needed on predation affects on Atlantic sturgeon. Best Management Practices (BMP) will be exercised to ensure the recovery of this species.

State Species or Habitats of Concern. No State-listed threatened or endangered species of reptiles, amphibians, mammals, or vegetation were identified in the Project area, although several State-listed bird species are known to use habitats similar to those found in the Project area. Impacts and considerations that offset the impacts to the State-listed least tern, roseate tern, and common tern and special concern species black skimmer, would be similar as described for Federally-listed species.

Other State-listed threatened species that occur in the general area include the northern harrier, osprey, and the transient peregrine falcon and bald eagle. Construction and operation of the Project is not expected to significantly impact these species because the Project would not affect their preferred nesting habitat, and other foraging habitat is readily available in the vicinity of the Project.

Essential Fish Habitat. Temporary impacts on EFH are predicted during periods of active construction and would be the same as those described in draft EA. Benthic, finfish and sturgeon monitoring are planned in the borrow area for Spring 2014. Habitat would be temporarily degraded during groin construction and beach fill placement, as elevated suspended sediment levels would temporarily lower dissolved oxygen and visual feeding efficiency, and irritate gill tissue. Although sessile benthic invertebrates would likely be smothered during construction, and aquatic habitat would essentially be



unavailable to motile species during construction, implementation of the proposed Project is predicted to enhance EFH over the long term.

9.1.5 Cumulative Impacts

The cumulative impact assessment of federal nourishment projects on the south shore of Long Island indicate that federal project actions would occur in dynamic environment whose inhabitants have adapted to these conditions. Studies indicate that borrow area and sand placement areas re-colonize shortly after construction activities are completed. Additionally, the BMP described will lessen temporary impacts. Several other Federal projects are located along the Atlantic and south shore coast of Long Island. The four civil projects within close proximity to the proposed FIMI Stabilization Project are: 1) Shinnecock Inlet Navigation Project, 2) the Westhampton Interim Project, 3) the Moriches Inlet Navigation Project, and 4) the West of Shinnecock Project. Farther to the west, three Federal projects are under way: 1) Coney Island Project, 2) East Rockaway, and 3) Long Beach to determine the potential cumulative impacts from these projects under the No Action Alternative. The used and proposed borrow areas in the No Action Alternative would disturb about 2.3 percent of the total nearshore and offshore areas that could be used.

The cumulative impact assessment of federal nourishment projects on the south shore of Long Island indicate that federal project actions would occur in dynamic environments whose inhabitants have adapted to these conditions. Studies indicate that borrow areas and sand placement areas re-colonize shortly after construction activities are completed. Additionally, the measures described above will lessen temporary impacts. Therefore, it is concluded that since this project is designed to minimize adverse environmental impacts, the cumulative impacts to occur on the south shore of Long Island are not significant to the human environment/communities present within this region.

Within both the no-action and recommended alternatives, cumulative impacts to the study area may result from the potential impacts of other projects, including the potential implementation the Fire Island Inlet to Montauk Point Project and the maintenance dredging of Moriches Inlet and the potential of Smith Point County Park as a placement site. It should be noted that with the various ongoing unrelated to the no-action alternative that are influencing the ecological resources of the study area, it is not likely that the recommended stabilization alternative would contribute to the cumulative impacts on these resources. Therefore it is concluded that because this project is designed to minimize adverse environmental impacts, the cumulative impacts to occur on the south shore of Long Island are not significant

In addition to the Environmental Features (Project Modifications) discussed above, USACE will also follow recommendations provided by the NYSDEC and USFWS previously (USACE 1998, USFWS 1999, USFWS, 2014) and described below. These measures are expected to minimize potential adverse indirect impacts on other species that may use coastal habitats in the project area, including several state-listed shorebird species.

As stated earlier, except within the boundaries of the Communities, construction activities will not occur during the piping plover breeding and nesting season. To minimize indirect impacts, USACE will conduct surveys during the spring/summer, and prior to construction activities, to identify nesting plover in the Project area and to document all known locations of piping plover. In addition, the USACE will document any other Federal or state-listed wildlife species observed in the Project area during survey and will initiate consultation with appropriate state and Federal agencies.

The proposed project description includes a number of conservation measures that will be implemented for ten years. The intended purpose of these conservation measures is to avoid or minimize adverse effects of the beach nourishment project to Federally-listed species.



Project Design Features

- Dune planting at low densities (18 in. on center) on the dune/upper beach interface, reducing the density of beachgrass plantings on the south face of the dune.
- Contacting USFWS upon initiation and completion of construction activities. Pre-construction meetings with all project staff will be held to provide all information on resource protection and terms of the project .
- Providing all project personnel, construction staff, etc. with information regarding the conditions of the project (including all conservation measures).
- Time-of-Year Restrictions, which will provide for no activities between April 1 and September 1 to protect piping plovers and May 1 to October 15 to protect seabeach amaranth. If breeding piping plovers are not observed in a proposed project area, or are not within 1000 meters of the project area by July 15, then project activities may commence, following consultation with the USFWS, FIIS and NYSDEC.
- Provisions for the project to only undertake low impact construction activities, such as beach surveying during the piping plover breeding season, utilizing a 300-ft protective buffer zone.

Surveying, Monitoring, and Adaptive Management

- Surveying and monitoring for threatened and endangered species during the spring and summer nesting seasons will be implemented for 10 years as well as mammalian controls will be undertaken. The monitoring will be completed in coordination with the FIIS, Suffolk County and the USFWS. Monitoring will include identification of suitable habitat, nesting areas, symbolic fencing, and signage (see Section 11.6 – Monitoring and Adaptive Management).



10.0 PUBLIC LAW 113-2 CONSIDERATIONS

The subject post-Sandy Fire Island Stabilization Project, which encompasses Fire Island to Moriches Inlet was developed based upon the Engineering, Economic, Environmental, and Planning efforts undertaken through the FIMP Reformulation Study that compared alternatives to identify the recommended scale and scope of a beachfill project, as an independent stabilization effort. This stabilization project will address damages caused by Hurricane Sandy.

In response to extensive storm damages and increased vulnerability to future events, consistent with the Disaster Relief Appropriations Act of 2013 (Public Law. 113-2; herein P.L. 113-2), and recognizing the urgency to repair and implement immediate storm protection measures, particularly in the FIMI area, an approach to expedite implementation of construction of necessary stabilization efforts independent of the FIMP Reformulation Study was developed and approved by Steven L. Stockton, P.E., Director of Civil Works, USACE in a memorandum dated 8 January 2014. This approach has gained widespread approval from New York State, Suffolk County, N.Y. and the local municipalities, who recognize the extreme vulnerability of the coast, and the need to move quickly to address this need

Stabilization efforts were focused on FIMI as this reach is the most populated and subject to barrier island breach thereby exposing the back-bay to considerable damages. There is a more urgent need to advance the stabilization of this critical reach due to its vulnerability and potential for major damage and risk to life and property.

This FIMI HSLRR has been prepared in response to and accounting for the Disaster Relief Appropriations Act of 2013 (P.L. 113-2). Specifically, this report addresses:

1. The costs and cost-sharing to support a Project Partnership Agreement (PPA).
2. The specific requirements necessary to demonstrate that the project is economically justified, technically feasible, and environmentally acceptable.
3. The specific requirements necessary to demonstrate resiliency, sustainability, and consistency with the Comprehensive Study.

10.1 Fully Funded and Costs Apportionment

The summary of Total Project Cost for the FIMI Stabilization project area is provided in Section 8.3.1 of this report. The initial construction element includes beachfill at Robert Moses State Park, Fire Island Lighthouse Tract, all of the communities outside of Federal Tracts, and Smith Point County Park. In addition, real estate costs associated with the acquisition and relocation of ocean front structures, as well as obtaining the required easements for construction. The estimated total first cost of construction is \$207,100,000 and the total estimated investment project cost is \$223,324,000. The estimated costs for each contract are escalated to the midpoint of construction. Midpoint of construction is 2014Q2 for Contracts 1 & 2, and 2015Q1 for Contract 3.

The cost-sharing of the initial construction cost in accordance with the provisions of P.L. 113-2 is shown in Table 12. PL 113-2 states that 'the completion of ongoing construction projects receiving funds provided by this division shall be at full Federal expense with respect to such funds. The Fire Island Stabilization Project has 100% Federal funding (P.L. 113-2). Therefore, the Federal cost apportionment is **\$207,100,000**. The non-Federal partner is responsible for 0% of this total project cost.

**Table 12: Cost Allocation**

	Cost-Share	Total
Federal	100%	\$207,100,000
Non-Federal	0%	\$0
TOTAL	100%	\$207,100,000

10.2 Section 902 of WRDA 1986, as amended

PL 113-2 included language that changes the applicability of Section 902 of WRDA 1986, as amended, to projects funded by its appropriation. Specifically, it states in Title X, Chapter 4, "...Provided further, That for these projects, the provisions of section 902 of the Water Resources Development Act of 1986 shall not apply to these funds..." Notwithstanding P.L. 113-2, there are no Section 902 limits associated with the construction of the project, since it was authorized prior to WRDA 1986.

10.3 Risks, Economics and Environmental Compliance

The prior sections of the this report, notably Chapter 8, demonstrates how the recommended alternative reduces flood and coastal storm risks and contributes to improved capacity to manage such risks; and identifies that the recommended alternative is economically justified for the authorized period of federal participation

The attached EA has been prepared to meet the requirements of NEPA and demonstrate that the recommended alternative is compliant with environmental laws, regulations, and policies and has effectively addressed any environmental concerns of resource and regulatory agencies.

10.4 Resiliency, Sustainability and Consistency with the Comprehensive Study

This section has been prepared to address how the recommended alternative contributes to resiliency of affected coastal communities; how the recommended alternative affects the sustainability of environmental conditions in the affected area; and how the recommended alternative will be consistent with the findings and recommendations of the North Atlantic Coast Comprehensive Study (NACCS).

Resiliency is defined in the February 2013 USACE-NOAA Infrastructures Systems Rebuilding Principles white paper as the ability to adapt to changing conditions and withstand and rapidly recover from disruption due to emergencies.

Sustainability is defined as the ability to continue (in existence or a certain state, or in force or intensity); without interruption or diminution.

The proposed features described in this report for construction represent a resilient, sustainable solution, which when factoring the other elements included within the TSP reflect a model resilient, sustainable solution that integrates sand based features, improved systems management, and integrated non-structural with improved land management (Section 11.5 and Appendix J). Even as a stand-alone measure, the recommendations within this report contain a comprehensive system of sand dunes and beachfill that has been aligned in a more landward location that minimizes the need for sand placement under initial construction. The beaches and dunes are resilient, in that they can adapt to changes, and can recover after a major disturbance, both through natural recovery of the beach or major rehabilitation of the project.



The selected plan has also been identified as the most sustainable option, being the alternative alignment that minimizes the need for long-term placement of beachfill.

In assessing consistency with the North Atlantic Coast Comprehensive Study (NACCS), it is acknowledged that the results of the Comprehensive Study are not yet available, but that there are overriding principles which have been established for the NACCS that can be addressed for consistency. These principles recognize that preferred plans are those that provide protection with the use of sand features, which are readily adaptable, and could be modified or terminated based upon findings of the NACCS. The NACCS also emphasizes the need for integrated land-use planning, recognizing the need for local adoption of Flood Plain Management Regulations, based upon current understanding of risks.

The proposed features in this Technical Document for FIMI are consistent with these principles of the NACCS. The overall risk management is to be provided with a berm and dune system that could be readily adapted, based upon future findings. With respect to integrated land management, this report recognizes the importance of land management, and the need to integrate land management with the construction of project features, and could serve as a model for the NACCS in how this is accomplished. There are tremendous development pressures in the communities along Fire Island, and a history of difficulties in addressing the building and rebuilding of homes, and homes lost to storms within the primary dune. There are FEMA floodplain regulations, and NPS regulations that are in effect for Fire Island, and also regulations pursuant to New York State's Coastal Erosion Hazard Act (CEHA), to address development within the primary dune. Recognizing the Federal government's commitment to ensure no inducement of development in the floodplain, pursuant to Executive Order 11988, this project will identify in the Project Partnership Agreement, the need for the local sponsor to develop a Floodplain Management Plan, and a requirement for the local sponsor to certify that measures are in place to ensure the project does not induce development within the floodplain.



11. PROJECT IMPLEMENTATION

The completion of this Hurricane Sandy Limited Reevaluation Report and recommendation by the District Engineer is the first step toward implementing construction of the Stabilization project. Upon approval by USACE's North Atlantic Division, the project will be considered for construction with funding made available through P.L. 113-2.

11.1 Construction Schedule²

The pre-construction and construction sequence and time schedule of the Stabilization Project is dependent on the timeliness of this report's approval, the foregoing construction procedures, and the ability of local interests to implement items of local cooperation. These items of local cooperation are principally the furnishing of the required shoreline real estate easements, structure acquisition and relocation by the State of New York.

Recognizing the effort necessary for obtaining the necessary real estate requirements for the project, the initial construction is expected to be split into three contracts, based upon the scope of the Real Estate needs and the timeframe for securing the real estate:

- Contract 1: Smith Point County Park (MB-1A, MB-1B, MB-2A);
- Contract 2: Lonelyville to Robert Moses State Park (GSB-1A, GSB-1B, GSB-2A);
- Contract 3: Davis Park to Town Beach (GSB-2B, GSB-2C, GSB-2D, GSB-3A, GSB-3C, GSB-3E, GSB-3G).

Contract 1, Smith Point County Park is the most area of the entire project and requires the minimal timeframe to secure the required real estate. Smith Point County Park has the lowest existing elevation that leaves it highly vulnerable to overwash and especially breaching. This potential for breach (and therefore back-bay flooding) is highly susceptible in this location. Therefore, the construction of the beachfill and the dune and berm system must be implemented as expeditiously as possible. Implementation of the entire project will manage flood risk by also being eligible for Public Law 84-99. PL 84-99 authorizes the USACE to undertake preparedness, response, and recovery activities for natural disasters. The Water Resources Development Act of 1996 amended Public Law 84-99 to add the authority to include expansion of investigation ability for potential Advance Measures activities.

The proposed construction schedule is as follows:

- Contract 1: September 2014 through February 2015
- Contract 2: October 2014 through March 2015
- Contract 3: December 2014 through August 2015

² It is USACE's intent to proceed with contracts and implement reaches in areas where real estate is obtained to allow construction to start as soon as possible. Contract reaches may be modified, depending on real estate acquirement, accordingly.



11.2 Local Cooperation³

The initial project cost of the Stabilization Project will be funded 100% by the Federal Government. A fully coordinated Project Partnership Agreement (PPA) package has been prepared which will be coordinated and executed subsequent to the approval of this document and serves as the agreement for the next phase of the project. The PPA reflects the recommendations of this Hurricane Sandy Limited Reevaluation Report. The non-Federal partner, NYSDEC, has indicated support for recommendations presented in this document and its desire to execute a PPA for the FIMI Stabilization Project Selected Plan by letter dated July 14, 2013.

As the non-Federal project partner, NYSDEC must comply with all applicable Federal laws and policies and other requirements, including but not limited to:

- a. In coordination with the Federal Government, who shall provide 100% of the initial project cost,
 - (1) provide all lands, easements, rights of way and relocations (LERR), including suitable borrow areas, uncontaminated with hazardous and toxic wastes, and perform or ensure performance of any relocations determined by the Federal Government to be necessary for the initial construction, operation, and maintenance of this project.
 - (2) perform, or cause to be performed, any investigations for hazardous substances as are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law (PL) 96-510, as amended, 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the construction, operation, and maintenance of the Project. However, for lands that the Federal Government determines to be subject to the navigational servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-Federal project partner with prior specific written direction, in which case the non-Federal project partner shall perform such investigations in accordance with such written direction.
 - (3) coordinate all necessary cleanup and response costs of any CERCLA-regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, or maintenance of the Project.
 - (4) cost-share of the cost of mitigation and data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project.
- b. For ten years, operate, maintain, repair, replace, and rehabilitate the completed project, or functional portion of the project, at no cost to the Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and any specific directions prescribed by the Government in the Operations, Maintenance, Replacement, Repair and Rehabilitation (OMRR&R) manual and any subsequent

³ Subject to change based on the executed Project Partnership Agreement



- amendments thereto. These requirements are generally described in Section 11.4 of this report.
- c. Provide the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal project partner, now or hereafter, owns or controls for access to the Project for the purpose of inspection, and, if necessary after failure to perform by the non-Federal project partner, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Federal Government shall operate to relieve the non-Federal project partner of responsibility to meet the non-Federal project partner's obligations, or to preclude the Federal Government from pursuing any other remedy at law or equity to ensure faithful performance.
 - d. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the Project and any Project-related betterments, except for damages due to the fault or negligence of the United States or its contractors.
 - e. Keep, and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the Project in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Codes of Federal regulations (CFR) Section 33.20.
 - f. As between the Federal Government and the non-Federal project partner, the non-Federal project partner shall be considered the operator of the project for the purpose of CERCLA liability. To the maximum extent practicable, operate, maintain, repair, replace and rehabilitate the Project in a manner that will not cause liability to arise under CERCLA.
 - g. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1790, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required for the construction, operation, and maintenance of the Project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.
 - h. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense directive 5500.11 issued pursuant thereto, as well as Army regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army."
 - i. Participate in and comply with applicable Federal flood plain management and flood insurance programs and comply with the requirements in Section 402 of the Water Resources Development Act of 1986, as amended.
 - j. Not less than once each year inform affected interests of the extent of protection afforded by the Project.



- k. Publicize flood plain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the flood plain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with the protection provided by the project.
- l. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) which might hinder its operation and maintenance, or interfere with its proper function, such as any new development on project lands or the addition of facilities which would degrade the benefits of the project.
- m. Provide and maintain necessary access roads, parking areas, and other public use facilities, open and available to all on equal terms.
- n. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non- Federal project partner has entered into a written agreement to furnish its required cooperation for the project or separable element.
- o. Quarterly and after storm events, perform surveillance of the beach to determine losses or nourishment material from the project design section and provide the results of such surveillance to the Federal Government.



11.3 Operations, Maintenance, Repair, Replacement and Rehabilitation Plan

For ten (10) years after project turnover, the New York State Department of Environmental Conservation (NYSDEC) as the local sponsor will be responsible for the Operations and Maintenance (O&M) of the Fire Island Inlet to Moriches Inlet Stabilization Project. The O&M Responsibilities are generally described in this Hurricane Sandy Limited Reevaluation Report (HSLRR), but will be provided in greater specificity in the OMRR&R Plan (Operations, Maintenance, Repair, Replacement and Rehabilitation Plan), which will be provided to the sponsor after completion of initial construction and describes the specific requirements of the non-Federal sponsor. It should be noted that as the Stabilization Project is a one-time only placement the OMRR&R costs are assumed to be nominal (approximately \$10,000 annually). Refinements to OMRR&R responsibilities and Monitoring & Adaptive Management responsibilities will be defined in the OMRR&R manual, the Monitoring & Adaptive Management Plan and the Project Partnership Agreement (PPA). The following is a general statement of responsibilities.

Administrative and Operational Responsibilities:

- Maintain public ownership and public use of the project area which are the basis of the Federal participation in the project. This includes preventing trespass or encroachment by private interests by the placement, onto these shores or within the seaward portion of the project, of any temporary or permanent structures, except as specifically permitted by the District Engineer or authorized representative.
- Prohibit any excavation of or construction on, over, under, or through the dune or beach berm, without prior written approval of the District Engineer or authorized representative
- Prohibit alterations in any feature of the beach fill that may affect its functional performance unless prior written approval has been obtained from the District Engineer
- Prohibit unauthorized vehicular traffic on the beach and restrict authorized vehicle access to authorized access ways.
- Assure that no drains discharge onto the beach.
- Remove all trash and debris from beach (day to day operations of the facilities).
- Permit the District Engineer or authorized representative access to the project at all times.
- Maintain organized records of activities and costs covering maintenance, operation, inspection, repair and replacement of protective works
- Participate in a yearly joint inspection of the project with personnel from the New York District.
- Ensure that safe operation of recreational activities continues during construction and maintenance operations.

Maintenance Responsibilities:

- Undertake Quarterly Inspections of the beach and dunes, including Beach Width Measurements, as well as before and after each tropical and extratropical storm.

Reporting Responsibilities:

- Provide Annual Inspection Reports
- Provide organized records of activities and costs covering maintenance, operation, inspection, repair and replacement of protective works.
- Contact the District Engineer if at any time storm or other erosion reduces the berm to below the minimum beach fill cross-section width and maintenance measures to move sand from accreted areas to eroded areas prove inadequate to restore the design section



11.4 Land Use and Management

Land use differs throughout the project area. The FIMI barrier island study area is generally more developed to the west in the communities of Saltaire, Ocean Beach, Cherry Grove and Fire Island Pines with no development in the middle, wilderness area. Smith Point County Park is located on the easternmost side of the FIMI project area, while Robert Moses State Park is located on the westernmost end of Fire Island. State coastal policies support protecting natural protective features, siting buildings and development in places that minimize risk, and avoiding actions that impair natural sediment processes.

As described in the main text of this HSLRR, the Stabilization effort is being undertaken in response to the highly vulnerable condition following Hurricane Sandy's erosive forces, where expedited action is needed to stabilize this area. The Stabilization project emphasizes land management efforts to discourage building in high risk areas. Although USACE authority in land management decisions is limited to recommendations and complementary actions such as non-structural and acquisition actions, the Stabilization effort implements several actions consistent with sound land management policy (Appendix J). The following summaries detail the consistency of the Stabilization effort.

Acquisition

The Stabilization effort proposes a more landward alignment of the dune post-Sandy. This alignment requires acquisition and relocation of structures, prior to construction, and reduces the number of structures in the high-risk area.

Limiting Development

The Stabilization project will reduce development significantly within the high risk project areas. Forty-one properties will be acquired in fee and removed from the erosion area. Six properties will be relocated to a lower risk area. Approximately 689 perpetual easements will be obtained on properties in the dune/beach footprint where development is severely restricted. Greater detail of the real estate actions is provided within the Real Estate Appendix (Appendix G).

11.5 Monitoring & Adaptive Management

The project includes monitoring and adaptive management of the project over 10 years, which is consistent with the period over which physical differences in the beach configuration are expected to persist. The monitoring includes 1) physical monitoring of beach processes, 2) physical monitoring of borrow area processes, 3) biological monitoring and stewardship of endangered species along the beach from inlet to inlet, 4) biological monitoring of the borrow area. The adaptive management measures include: 1) mammalian predator management for endangered species, 2) topographic management and revegetation of critical areas for endangered species, and effectiveness monitoring for endangered species. Each of these tasks identified in the monitoring and adaptive management are necessary to satisfy state and Federal permitting requirements, and / or to confirm the magnitude of impacts assumed in the environmental assessment. As such, these costs are identified as costs associated with the initial construction of the project, and cost-shared at full Federal expense. These activities are estimated as a total cost of \$15.5 Million over 10 years, as described below.

Annual physical coastal processes monitoring will be conducted at an expected annual cost of \$250,000 per year (\$2,500,000 total). Physical Coastal Processes Monitoring will consist of beach surveys, and



beach sediment samples. All surveys and sampling will be taken once yearly (spring), with the exact method to be determined. Borrow Area bathymetric surveys, and assessment of borrow area recovery and adjacent area affects will be undertaken, with an estimated annual cost of \$150,000 (\$1,500,000 total).

Borrow area ecological monitoring is included, as detailed in the EA. This effort is being undertaken to verify the impact assessment contained in the EA, and includes annual monitoring for benthic recovery and finfish usage. This monitoring is estimated as \$100,000 annually (\$1,000,000 total).

The monitoring and adaptive management for endangered species includes annual monitoring for shorebirds at a cost of \$450,000 annually. Also included in this estimate is an annual estimate of \$200,000 for mammalian predator management, \$250,000 annually for adaptive management of topography and vegetation, to maintain conditions that are optimal for endangered species usage. There is also 150,000 annually included for effectiveness monitoring. The total costs for Endangered Species Monitoring and Adaptive Management, which was included as a project feature and habitat offset is \$10,500,000. Details of the endangered species monitoring and adaptive management are contained in the EA and BO.

The monitoring and adaptive management for endangered species includes annual monitoring for shorebirds at a cost of \$200,000 annually (including pre-construction monitoring). Also included in this estimate is an annual estimate of \$150,000 for mammalian predator management, and \$150,000 annually for adaptive management of vegetation, to maintain conditions that are optimal for endangered species usage. Details of the endangered species monitoring and adaptive management are contained in the EA.

Environmental Program

1. Monitoring Program.

The monitoring program will take place from Inlet to inlet to supplement (not replace) existing programs with the intent to add consistency to the monitoring and reporting. The program splits the plover reproductive activities into two phases: nest and incubation activities, from which breeding population size is estimated, and hatching and fledging activities from which reproductive success is estimated. A set of habitat maps will be provided annually to illustrate the location of nests and the outcome of each breeding attempt. The monitoring program will also note the ongoing influences by the project features. When nests are located, they are either inconspicuously marked or surveyed with GPS to facilitate relocation for monitoring and predator exclosure installation. The monitoring program will also complete a single annual census, standardized on the East Coast to occur during the first 10 days in June. The census numbers gathered during the designated window permits a count for the entire population on site, including non-breeding individuals. Results are compared to the nesting population to address any anomalies.

2. Predator management.

All agencies agreed to mammalian predator management (10yrs) inlet to inlet which will be a federally-funded program, and that implementation will be coordinated between all agencies and the affected land owners/managers. On Federal properties, there is a commitment of exclosures and stewardship, within available authorities, recognizing there are limitation on trapping and killing predators in the absence of more detailed studies and assessments. The primary management effort to reduce wildlife impacts to nesting plovers is the use of nest site predator exclosures, an effective non-lethal method of protection. It necessitates that staffing is adequate to find plover nests in a timely manner. It also requires personnel time to construct exclosures at the nest sites. There are not effective management options to address wildlife impacts on plovers during the courtship or brood rearing phases of the breeding cycle under the



current program. The secondary management tool to be used to reduce wildlife impacts is predator control. It was acknowledged that compliance and permitting for predator control needs to be established.

3. Stewardship/Visitor Management.

Attempts will be made to eliminate or reduce human disturbance to plovers during all phases of breeding. Plover habitat utilization and human use patterns are well established, facilitating installation of appropriate area closures. A 200 meter disturbance buffer is used to protect most breeding habitats. In areas where plover breeding activity occurs in close proximity to human use areas, an assessment will be made of the sensitivity of the birds on site. When possible, an attempt is made to maintain some level of recreational opportunities. When in doubt, visitor use is curtailed to ensure that breeding activities are protected. Park staff, researchers, operation and maintenance and emergency vehicles with a legitimate need to work in or travel through plover breeding areas will receive training to reduce the potential risk to the plovers. Staff and cooperators with irregular needs to access sensitive areas are provided escorts. Law enforcement officers are offered training to accommodate the need to patrol the beach and inlet areas.

4. Off Road Vehicle (ORV) Use.

All agencies recognized that there are federal ORV guidelines in place that are currently followed within Fire Island National Seashore and Smith Point County Park. Agencies agreed that the ORV guidelines will continue to be followed in the future. It was acknowledged that nesting distance from the beach, breeding bird behaviors and reaction to humans or vehicles vary from year to year. Dependent on foraging habitat condition at the time of brood rearing, chicks may or may not use the bay or ocean intertidal zone for foraging. Unpredictable behavior and habitat use has resulted in a stepped progression of visitor management actions in the past. Normally, observations are made of birds in courtship to identify management areas. As soon as nests are initiated, an assessment is made to determine the sensitivity of both breeding adults to human use. When birds react negatively to human disturbance, the normal travel corridor is reduced in width in an attempt to accommodate passage of vehicles and pedestrians. If traffic or pedestrian use cannot be accommodated, a full area closure is placed in effect. A similar assessment and closure progression is made for brood habitat needs if the nest successfully hatches. On the non-beach sides surrounding ORV area nests the standard 200 meter buffer distance is used to protect plover breeding activity.

5. Monitoring Effectiveness.

It was discussed that the conservation/protection measures and habitat restoration for threatened and endangered species are often guided by anecdotal evidence and there is a need to better utilize time and resources on effective strategies. The project will monitor and evaluate the effectiveness of the above mentioned measures and then provide revised recommendations if need be relating to the restoration of breeding habitat and the optimization of reproductive success. An interagency team will be assembled to define a strategy and identify the key questions to be addressed. It was noted that resources will be leveraged from other initiatives to compliment the project funds.

Physical Monitoring

In general, the purpose of monitoring shore protection projects can be summarized below:

- Measure project performance;
- Improve the understanding of the physical processes at work and their interaction with project performance; and



The Physical Monitoring Plan recommends inspection, measurement and analysis of the following physical phenomena and coastal processes within the project boundary and project life:

a. General:

- Periodic site inspection of shoreline condition and structure functionality;
- Aerial photography;
- Shoreline changes and sediment budget update;
- Ocean wave height, period and direction;
- Water level measurement;
- Borrow area infilling;

b. Beach Fill:

- Beachfill/dune profile evolution;
- Sediment sample collection and analysis;
- Post-placement fill characterization;

d. Sediment Transport Modeling:

- Inner-shelf bathymetric changes;
- Sub aerial morphologic change;
- Wave, current, bed load and suspended sediment concentration measurements;
- Sediment transport modeling between the inner shelf and western Fire Island;

The USGS is beginning a comprehensive hydrodynamic and morphodynamic evolution model of the Old Inlet breach. The results will provide a fully calibrated hydrodynamic model of the Fire Island and Great South Bay region that will examine the conditions that lead to the formation of the breach. Using the hydrodynamic results as boundary conditions, a longer-term morphodynamic model will be developed to hindcast the morphologic evolution of the breach. The objective of the modeling is to reproduce the documented evolution of the existing breach (using available field data) and determine the most feasible representation of waves that result in closure of the breach. One of the goals of this effort is to develop tools for application to breach processes that can help inform management decisions concerning future breaches at Fire Island and elsewhere.



12. FINDINGS AND CONCLUSIONS

The effects of Hurricane Sandy on the barrier island have made project implementation within the Fire Island Inlet to Moriches Inlet imperative to restore and augment the barrier island to provide storm risk management to both the barrier island and back-bay inhabitants and transients, including those using the roads, facilities, hospitals, beaches, etc.

In light of the changes provided in P.L. 113-2 with regard to the urgency, and cost-sharing of project implementation, the District recommends that the proposed project be implemented in accordance with this Hurricane Sandy Limited Reevaluation Report and the provisions of PL113-2 as a Stabilization project.

The Stabilization Project has been proposed to address the vulnerability of the barrier island to overwash, breaching and shorefront and backbay damages. The plan for the Stabilization Project has been developed based upon the Engineering, Economic, Environmental, and Planning efforts undertaken through the FIMP Reformulation Study that have compared alternatives to identify the recommended scale and scope of a beachfill project, as a separate, one-time, standalone stabilization effort.

The selected plan follows the Middle Update (MIDU) alignment along Fire Island. The selected alignment requires a total of approximately 41 real estate acquisitions and 6 real estate relocations and over 600 easements.

In the developed areas the selected plan includes the construction of a beach berm with a width of 90 feet at elevation +9.5 feet NGVD and a dune with a crest width of 25 feet at elevation +15 feet NGVD. In eastern Smith Point County Park, the Fire Island Lighthouse Tract, and portions of Robert Moses State Park, the selected plan includes the construction of a beach berm with a width of 90 feet at elevation +9.5 feet NGVD and a dune with a crest width of 25 feet at elevation +13 feet NGVD. In western sections of Robert Moses State Park and portions of Smith Point County Park, the selected plan includes the construction of a beach berm with a width of 90 feet at elevation +9.5 feet NGVD.

This stabilization effort has been developed as a one-time, initial construction project to repair damages caused by Hurricane Sandy and to stabilize the island. This Stabilization Project has its own independent utility, and as developed does not limit the options available in the Reformulation Study or pre-suppose the outcome of the Reformulation Study. After the initial placement of sand, the project is expected to erode, and diminish in its protective capacity, eventually returning to a pre-project condition.

The District has given consideration to all significant aspects in the overall public interest, including environmental, social and economic effects, engineering feasibility and compatibility of the project with the policies, desires and capabilities of the State of New York and other Federal and non-Federal interests. The project's annual benefits and annual costs were updated to October 2013 price levels and are \$18.8M and \$17.5M, respectively. The updated Benefit to Cost Ratio is 1.1 (at 3.50% FY13 Discount Rate). The project is economically justified and the District recommends that the Stabilization project be constructed at a total cost of **\$207,100,000**.



13. RECOMMENDATIONS

Prefatory Statement

In making the following recommendations, I have given consideration to all significant aspects of this study as well as the overall public interest in storm risk management within the Fire Island to Montauk Point Study Area and the Fire Island Inlet to Moriches Inlet project area in particular. The aspects considered include engineering feasibility, economic effects, environmental impacts, social concerns, and compatibility of the project with the policies, desires, and capabilities of the local government, State, Federal government, and other interested parties.

Recommendations

In accordance with the current analysis and the guidance outlined in P.L. 113-2, the Fire Island Inlet to Moriches Inlet described in this report is acceptable to the non-Federal partner, agencies, and stakeholders as a one-time action, stand-alone stabilization project for immediate implementation.

The period of analysis for the Stabilization Project has been developed based upon the period of time over which there is a measurable difference between the without project future condition and with-project condition. The Project is designed with advance fill to maintain design conditions for a period of 5 years, and it is estimated that the residual effect of the fill placement would last another 5 years. After the residual effect of beachfill has diminished, there is further residual effect of 10 years that is provided by the acquisition and relocation of structures. The total period over which residual effects are expected is 20 years.

Due to the currently degraded condition of the barrier island from Fire Island inlet to Moriches Inlet as a result of Hurricane Sandy, it is recommended that this stabilization project be constructed as authorized by P.L. 113-2. I make this recommendation based on findings that the Stabilization Plan constitutes engineering feasibility, economic justification, and environmental acceptability. These recommendations are made with such further modifications thereof, as in the discretion of the MSC may be advisable, at total project first cost of **\$207,100,000** (at October 2013 price levels), provided that non-Federal interests comply with all the requirements substantially in accordance with the Project Partnership Agreement which will be executed upon approval of this report.

Disclaimer

The recommendations contained herein reflect the information available at this time and current Department policies governing formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of the national Civil Works construction program nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before they are transmitted to higher authority as proposals for authorization and/or implementation funding.



Paul E. Owen
Colonel, U.S. Army Corps of Engineers
District Engineer

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33 U.S.C.A. § 701n

§ 701n. Emergency response to natural disasters

Currentness

(a) Emergency fund

(1) There is authorized an emergency fund to be expended in preparation for emergency response to any natural disaster, in flood fighting and rescue operations, or in the repair or restoration of any flood control work threatened or destroyed by flood, including the strengthening, raising, extending, or other modification thereof as may be necessary in the discretion of the Chief of Engineers for the adequate functioning of the work for flood control and subject to the condition that the Chief of Engineers may include modifications to the structure or project, or in implementation of nonstructural alternatives to the repair or restoration of such flood control work if requested by the non-Federal sponsor; in the emergency protection of federally authorized hurricane or shore protection being threatened when in the discretion of the Chief of Engineers such protection is warranted to protect against imminent and substantial loss to life and property; in the repair and restoration of any federally authorized hurricane or shore protective structure or project damaged or destroyed by wind, wave, or water action of other than an ordinary nature to the design level of protection when, in the discretion of the Chief of Engineers, such repair and restoration is warranted for the adequate functioning of the structure or project for hurricane or shore protection, subject to the condition that the Chief of Engineers may include modifications to the structure or project to address major deficiencies or implement nonstructural alternatives to the repair or restoration of the structure if requested by the non-Federal sponsor. The emergency fund may also be expended for emergency dredging for restoration of authorized project depths for Federal navigable channels and waterways made necessary by flood, drought, earthquake, or other natural disasters. In any case in which the Chief of Engineers is otherwise performing work under this section in an area for which the Governor of the affected State has requested a determination that an emergency exists or a declaration that a major disaster exists under the Disaster Relief and Emergency Assistance Act [[42 U.S.C.A. § 5121 et seq.](#)], the Chief of Engineers is further authorized to perform on public and private lands and waters for a period of ten days following the Governor's request any emergency work made necessary by such emergency or disaster which is essential for the preservation of life and property, including, but not limited to, channel clearance, emergency shore protection, clearance and removal of debris and wreckage endangering public health and safety, and temporary restoration of essential public facilities and services. The Chief of Engineers, in the exercise of his discretion, is further authorized to provide emergency supplies of clean water, on such terms as he determines to be advisable, to any locality which he finds is confronted with a source of contaminated water causing or likely to cause a substantial threat to the public health and welfare of the inhabitants of the

locality. The appropriation of such moneys for the initial establishment of this fund and for its replenishment on an annual basis, is authorized: *Provided*, That pending the appropriation of sums to such emergency fund, the Secretary of the Army may allot, from existing flood-control appropriations, such sums as may be necessary for the immediate prosecution of the work herein authorized, such appropriations to be reimbursed from the appropriation herein authorized when made. The Chief of Engineers is authorized, in the prosecution of work in connection with rescue operations, or in conducting other flood emergency work, to acquire on a rental basis such motor vehicles, including passenger cars and buses, as in his discretion are deemed necessary.

(2) In preparing a cost and benefit feasibility assessment for any emergency project described in paragraph (1), the Chief of Engineers shall consider the benefits to be gained by such project for the protection of--

(A) residential establishments;

(B) commercial establishments, including the protection of inventory; and

(C) agricultural establishments, including the protection of crops.

(b) Emergency supplies of drinking water; drought; well construction and water transportation

(1) The Secretary, upon a written request for assistance under this paragraph made by any farmer, rancher, or political subdivision within a distressed area, and after a determination by the Secretary that (A) as a result of the drought such farmer, rancher, or political subdivision has an inadequate supply of water, (B) an adequate supply of water can be made available to such farmer, rancher, or political subdivision through the construction of a well, and (C) as a result of the drought such well could not be constructed by a private business, the Secretary, subject to paragraph (3) of this subsection, may enter into an agreement with such farmer, rancher, or political subdivision for the construction of such well.

(2) The Secretary, upon a written request for assistance under this paragraph made by any farmer, rancher, or political subdivision within a distressed area, and after a determination by the Secretary that as a result of the drought such farmer, rancher, or political subdivision has an inadequate supply of water and water cannot be obtained by such farmer, rancher, or political subdivision, the Secretary may transport water to such farmer, rancher, or political subdivision by methods which include, but are not limited to, small-diameter emergency water lines and tank trucks, until such time as the Secretary determines that an adequate supply of water is available to such farmer, rancher, or political subdivision.

(3)(A) Any agreement entered into by the Secretary pursuant to paragraph (1) of this subsection shall require the farmer, rancher, or political subdivision for whom the well is constructed to pay to the United States the reasonable cost of such construction, with interest, over such number of years, not to exceed thirty, as the Secretary deems appropriate. The rate of interest shall be that rate which

the Secretary determines would apply if the amount to be repaid was a loan made pursuant to [section 636\(b\)\(2\) of Title 15](#).

(B) The Secretary shall not construct any well pursuant to this subsection unless the farmer, rancher, or political subdivision for whom the well is being constructed has obtained, prior to construction, all necessary State and local permits.

(4) The Federal share for the transportation of water pursuant to paragraph (2) of this subsection shall be 100 per centum.

(5) For purposes of this subsection--

(A) the term "construction" includes construction, reconstruction, or repair;

(B) the term "distressed area" means an area which the Secretary determines due to drought conditions has an inadequate water supply which is causing, or is likely to cause, a substantial threat to the health and welfare of the inhabitants of the area including threat of damage or loss of property;

(C) the term "political subdivision" means a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over the water supply of such public body;

(D) the term "reasonable cost" means the lesser of (i) the cost to the Secretary of constructing a well pursuant to this subsection exclusive of the cost of transporting equipment used in the construction of wells, or (ii) the cost to a private business of constructing such well;

(E) the term "Secretary" means the Secretary of the Army, acting through the Chief of Engineers; and

(F) the term "State" means a State, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Trust Territory of the Pacific Islands.

(c) Levee owners manual

(1) In general

Not later than 1 year after October 12, 1996, in accordance with chapter 5 of Title 5, the Secretary of the Army shall prepare a manual describing the maintenance and upkeep responsibilities that the Corps of Engineers requires of a non-Federal interest in order for the non-Federal interest to receive Federal assistance under this section. The Secretary shall provide a copy of the manual at no cost to each non-Federal interest that is eligible to receive Federal assistance under this section.

(2) Authorization of appropriations

There is authorized to be appropriated \$1,000,000 to carry out this subsection.

(3) Definitions

In this subsection, the following definitions apply:

(A) Maintenance and upkeep

The term "maintenance and upkeep" means all maintenance and general upkeep of a levee performed on a regular and consistent basis that is not repair and rehabilitation.

(B) Repair and rehabilitation

The term "repair and rehabilitation"--

(i) means the repair or rebuilding of a levee or other flood control structure, after the structure has been damaged by a flood, to the level of protection provided by the structure before the flood; but

(ii) does not include--

(I) any improvement to the structure; or

(II) repair or rebuilding described in clause (i) if, in the normal course of usage, the structure becomes structurally unsound and is no longer fit to provide the level of protection for which the structure was designed.

CREDIT(S)

(Aug. 18, 1941, c. 377, § 5, 55 Stat. 650; July 24, 1946, c. 596, § 12, 60 Stat. 652; June 30, 1948, c. 771, Title II, § 206, 62 Stat. 1182; May 17, 1950, c. 188, Title II, § 210, 64 Stat. 183; June 28, 1955, c. 194, 69 Stat. 186; Oct. 23, 1962, Pub.L. 87-874, Title II, § 206, 76 Stat. 1194; Mar. 7, 1974, Pub.L. 93-251, Title I, § 82, 88 Stat. 34; June 20, 1977, Pub.L. 95-51, § 2, 91 Stat. 233; Nov. 17, 1986, Pub.L. 99-662, Title IV, § 917, 100 Stat. 4192; May 27, 1987, Pub.L. 100-45, § 9, 101 Stat. 323; Nov. 23, 1988, Pub.L. 100-707, Title I, § 109(m), 102 Stat. 4709; Nov. 28, 1990, Pub.L. 101-640, Title III, § 302, 104 Stat. 4633; Oct. 12, 1996, Pub.L. 104-303, Title II, § 202(e), (f), 110 Stat. 3675; Pub.L. 113-121, Title III, § 3029(a), June 10, 2014, 128 Stat. 1305.)

One Hundred Thirteenth Congress
of the
United States of America

AT THE SECOND SESSION

*Begun and held at the City of Washington on Friday,
the third day of January, two thousand and fourteen*

An Act

To provide for improvements to the rivers and harbors of the United States, to provide for the conservation and development of water and related resources, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) **SHORT TITLE.**—This Act may be cited as the “Water Resources Reform and Development Act of 2014”.

(b) **TABLE OF CONTENTS.**—

Sec. 1. Short title; table of contents.
Sec. 2. Definition of Secretary.

TITLE I—PROGRAM REFORMS AND STREAMLINING

Sec. 1001. Vertical integration and acceleration of studies.
Sec. 1002. Consolidation of studies.
Sec. 1003. Expedited completion of reports.
Sec. 1004. Removal of duplicative analyses.
Sec. 1005. Project acceleration.
Sec. 1006. Expediting the evaluation and processing of permits.
Sec. 1007. Expediting approval of modifications and alterations of projects by non-Federal interests.
Sec. 1008. Expediting hydropower at Corps of Engineers facilities.
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- Sec. 6001. Deauthorization of inactive projects.
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- Sec. 7001. Annual report to Congress.
- Sec. 7002. Authorization of final feasibility studies.
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SEC. 2. DEFINITION OF SECRETARY.

In this Act, the term “Secretary” means the Secretary of the Army.

TITLE I—PROGRAM REFORMS AND STREAMLINING

SEC. 1001. VERTICAL INTEGRATION AND ACCELERATION OF STUDIES.

(a) **IN GENERAL.**—To the extent practicable, a feasibility study initiated by the Secretary, after the date of enactment of this Act, under section 905(a) of the Water Resources Development Act of 1986 (33 U.S.C. 2282(a)) shall—

(1) result in the completion of a final feasibility report not later than 3 years after the date of initiation;

(2) have a maximum Federal cost of \$3,000,000; and

(3) ensure that personnel from the district, division, and headquarters levels of the Corps of Engineers concurrently conduct the review required under that section.

(b) **EXTENSION.**—If the Secretary determines that a feasibility study described in subsection (a) will not be conducted in accordance with subsection (a), the Secretary, not later than 30 days after the date of making the determination, shall—

(1) prepare an updated feasibility study schedule and cost estimate;

(2) notify the non-Federal feasibility cost-sharing partner that the feasibility study has been delayed; and

(3) provide written notice to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives as to the reasons the requirements of subsection (a) are not attainable.

(c) **TERMINATION OF AUTHORIZATION.**—A feasibility study for which the Secretary has issued a determination under subsection (b) is not authorized after the last day of the 1-year period beginning on the date of the determination if the Secretary has not completed the study on or before such last day.

(d) **EXCEPTION.**—

(1) **IN GENERAL.**—Notwithstanding the requirements of subsection (c), the Secretary may extend the timeline of a study by a period not to exceed 3 years, if the Secretary determines that the feasibility study is too complex to comply with the requirements of subsections (a) and (c).

(2) **FACTORS.**—In making a determination that a study is too complex to comply with the requirements of subsections (a) and (c), the Secretary shall consider—

(A) the type, size, location, scope, and overall cost of the project;

(B) whether the project will use any innovative design or construction techniques;

(C) whether the project will require significant action by other Federal, State, or local agencies;

(D) whether there is significant public dispute as to the nature or effects of the project; and

(E) whether there is significant public dispute as to the economic or environmental costs or benefits of the project.

(3) **NOTIFICATION.**—Each time the Secretary makes a determination under this subsection, the Secretary shall provide written notice to the Committee on Environment and Public Works of the Senate and the Committee on Transportation

and Infrastructure of the House of Representatives as to the results of that determination, including an identification of the specific 1 or more factors used in making the determination that the project is complex.

(4) **LIMITATION.**—The Secretary shall not extend the timeline for a feasibility study for a period of more than 7 years, and any feasibility study that is not completed before that date shall no longer be authorized.

(e) **REVIEWS.**—Not later than 90 days after the date of the initiation of a study described in subsection (a) for a project, the Secretary shall—

(1) take all steps necessary to initiate the process for completing federally mandated reviews that the Secretary is required to complete as part of the study, including the environmental review process under section 1005;

(2) convene a meeting of all Federal, tribal, and State agencies identified under section 2045(e) of the Water Resources Development Act of 2007 (33 U.S.C. 2348(e)) that may be required by law to conduct or issue a review, analysis, or opinion on or to make a determination concerning a permit or license for the study; and

(3) take all steps necessary to provide information that will enable required reviews and analyses related to the project to be conducted by other agencies in a thorough and timely manner.

(f) **INTERIM REPORT.**—Not later than 18 months after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report that describes—

(1) the status of the implementation of the planning process under this section, including the number of participating projects;

(2) a review of project delivery schedules, including a description of any delays on those studies participating in the planning process under this section; and

(3) any recommendations for additional authority necessary to support efforts to expedite the feasibility study process for water resource projects.

(g) **FINAL REPORT.**—Not later than 4 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report that describes—

(1) the status of the implementation of this section, including a description of each feasibility study subject to the requirements of this section;

(2) the amount of time taken to complete each feasibility study; and

(3) any recommendations for additional authority necessary to support efforts to expedite the feasibility study process, including an analysis of whether the limitation established by subsection (a)(2) needs to be adjusted to address the impacts of inflation.

SEC. 1002. CONSOLIDATION OF STUDIES.

(a) **IN GENERAL.**—

(1) **REPEAL.**—Section 905(b) of the Water Resources Development Act of 1986 (33 U.S.C. 2282(b)) is repealed.

(2) **CONFORMING AMENDMENT.**—Section 905(a)(1) of the Water Resources Development Act of 1986 (33 U.S.C. 2282(a)(1)) is amended by striking “perform a reconnaissance study and”.

(b) **CONTENTS OF FEASIBILITY REPORTS.**—Section 905(a)(2) of the Water Resources Development Act of 1986 (33 U.S.C. 2282(a)(2)) is amended by adding at the end the following: “A feasibility report shall include a preliminary analysis of the Federal interest and the costs, benefits, and environmental impacts of the project.”.

(c) **FEASIBILITY STUDIES.**—Section 905 of the Water Resources Development Act of 1986 (33 U.S.C. 2282) is amended by adding at the end the following:

“(g) **DETAILED PROJECT SCHEDULE.**—

“(1) **IN GENERAL.**—Not later than 180 days after the date of enactment of this subsection, the Secretary shall determine a set of milestones needed for the completion of a feasibility study under this subsection, including all major actions, report submissions and responses, reviews, and comment periods.

“(2) **DETAILED PROJECT SCHEDULE MILESTONES.**—Each District Engineer shall, to the maximum extent practicable, establish a detailed project schedule, based on full funding capability, that lists all deadlines for milestones relating to feasibility studies in the District developed by the Secretary under paragraph (1).

“(3) **NON-FEDERAL INTEREST NOTIFICATION.**—Each District Engineer shall submit by certified mail the detailed project schedule under paragraph (2) to each relevant non-Federal interest—

“(A) for projects that have received funding from the General Investigations Account of the Corps of Engineers in the period beginning on October 1, 2009, and ending on the date of enactment of this subsection, not later than 180 days after the establishment of milestones under paragraph (1); and

“(B) for projects for which a feasibility cost-sharing agreement is executed after the establishment of milestones under paragraph (1), not later than 90 days after the date on which the agreement is executed.

“(4) **CONGRESSIONAL AND PUBLIC NOTIFICATION.**—Beginning in the first full fiscal year after the date of enactment of this subsection, the Secretary shall—

“(A) submit an annual report that lists all detailed project schedules under paragraph (2) and an explanation of any missed deadlines to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives; and

“(B) make publicly available, including on the Internet, a copy of the annual report described in subparagraph (A) not later than 14 days after date on which a report is submitted to Congress.

“(5) FAILURE TO ACT.—If a District Engineer fails to meet any of the deadlines in the project schedule under paragraph (2), the District Engineer shall—

“(A) not later than 30 days after each missed deadline, submit to the non-Federal interest a report detailing—

“(i) why the District Engineer failed to meet the deadline; and

“(ii) a revised project schedule reflecting amended deadlines for the feasibility study; and

“(B) not later than 30 days after each missed deadline, make publicly available, including on the Internet, a copy of the amended project schedule described in subparagraph (A)(ii).”

(d) APPLICABILITY.—The Secretary shall continue to carry out a study for which a reconnaissance level investigation has been initiated before the date of enactment of this Act as if this section, including the amendments made by this section, had not been enacted.

SEC. 1003. EXPEDITED COMPLETION OF REPORTS.

The Secretary shall—

(1) expedite the completion of any on-going feasibility study for a project initiated before the date of enactment of this Act; and

(2) if the Secretary determines that the project is justified in a completed report, proceed directly to preconstruction planning, engineering, and design of the project in accordance with section 910 of the Water Resources Development Act of 1986 (33 U.S.C. 2287).

SEC. 1004. REMOVAL OF DUPLICATIVE ANALYSES.

Section 911 of the Water Resources Development Act of 1986 (33 U.S.C. 2288) is repealed.

SEC. 1005. PROJECT ACCELERATION.

(a) PROJECT ACCELERATION.—

(1) AMENDMENT.—Section 2045 of the Water Resources Development Act of 2007 (33 U.S.C. 2348) is amended to read as follows:

“SEC. 2045. PROJECT ACCELERATION.

“(a) DEFINITIONS.—In this section:

“(1) ENVIRONMENTAL IMPACT STATEMENT.—The term ‘environmental impact statement’ means the detailed statement of environmental impacts of a project required to be prepared pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

“(2) ENVIRONMENTAL REVIEW PROCESS.—

“(A) IN GENERAL.—The term ‘environmental review process’ means the process of preparing an environmental impact statement, environmental assessment, categorical exclusion, or other document under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) for a project study.

“(B) INCLUSIONS.—The term ‘environmental review process’ includes the process for and completion of any environmental permit, approval, review, or study required for a project study under any Federal law other than the

National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

“(3) FEDERAL JURISDICTIONAL AGENCY.—The term ‘Federal jurisdictional agency’ means a Federal agency with jurisdiction delegated by law, regulation, order, or otherwise over a review, analysis, opinion, statement, permit, license, or other approval or decision required for a project study under applicable Federal laws (including regulations).

“(4) FEDERAL LEAD AGENCY.—The term ‘Federal lead agency’ means the Corps of Engineers.

“(5) PROJECT.—The term ‘project’ means a water resources development project to be carried out by the Secretary.

“(6) PROJECT SPONSOR.—The term ‘project sponsor’ has the meaning given the term ‘non-Federal interest’ in section 221(b) of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b(b)).

“(7) PROJECT STUDY.—The term ‘project study’ means a feasibility study for a project carried out pursuant to section 905 of the Water Resources Development Act of 1986 (33 U.S.C. 2282).

“(b) APPLICABILITY.—

“(1) IN GENERAL.—This section—

“(A) shall apply to each project study that is initiated after the date of enactment of the Water Resources Reform and Development Act of 2014 and for which an environmental impact statement is prepared under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); and

“(B) may be applied, to the extent determined appropriate by the Secretary, to other project studies initiated after such date of enactment and for which an environmental review process document is prepared under that Act.

“(2) FLEXIBILITY.—Any authority granted under this section may be exercised, and any requirement established under this section may be satisfied, for the conduct of an environmental review process for a project study, a class of project studies, or a program of project studies.

“(3) LIST OF PROJECT STUDIES.—

“(A) IN GENERAL.—The Secretary shall annually prepare, and make publicly available, a separate list of each study that the Secretary has determined—

“(i) meets the standards described in paragraph (1); and

“(ii) does not have adequate funding to make substantial progress toward the completion of the project study.

“(B) INCLUSIONS.—The Secretary shall include for each project study on the list under subparagraph (A) a description of the estimated amounts necessary to make substantial progress on the project study.

“(c) PROJECT REVIEW PROCESS.—

“(1) IN GENERAL.—The Secretary shall develop and implement a coordinated environmental review process for the development of project studies.

“(2) COORDINATED REVIEW.—The coordinated environmental review process described in paragraph (1) shall require that any review, analysis, opinion, statement, permit, license,

or other approval or decision issued or made by a Federal, State, or local governmental agency or an Indian tribe for a project study described in subsection (b) be conducted, to the maximum extent practicable, concurrently with any other applicable governmental agency or Indian tribe.

“(3) TIMING.—The coordinated environmental review process under this subsection shall be completed not later than the date on which the Secretary, in consultation and concurrence with the agencies identified under subsection (e), establishes with respect to the project study.

“(d) LEAD AGENCIES.—

“(1) JOINT LEAD AGENCIES.—

“(A) IN GENERAL.—At the discretion of the Secretary and subject to the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and the requirements of section 1506.8 of title 40, Code of Federal Regulations (or successor regulations), including the concurrence of the proposed joint lead agency, a project sponsor may serve as the joint lead agency.

“(B) PROJECT SPONSOR AS JOINT LEAD AGENCY.—A project sponsor that is a State or local governmental entity may—

“(i) with the concurrence of the Secretary, serve as a joint lead agency with the Federal lead agency for purposes of preparing any environmental document under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); and

“(ii) prepare any environmental review process document under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) required in support of any action or approval by the Secretary if—

“(I) the Secretary provides guidance in the preparation process and independently evaluates that document;

“(II) the project sponsor complies with all requirements applicable to the Secretary under—

“(aa) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.);

“(bb) any regulation implementing that Act; and

“(cc) any other applicable Federal law; and

“(III) the Secretary approves and adopts the document before the Secretary takes any subsequent action or makes any approval based on that document, regardless of whether the action or approval of the Secretary results in Federal funding.

“(2) DUTIES.—The Secretary shall ensure that—

“(A) the project sponsor complies with all design and mitigation commitments made jointly by the Secretary and the project sponsor in any environmental document prepared by the project sponsor in accordance with this subsection; and

“(B) any environmental document prepared by the project sponsor is appropriately supplemented to address any changes to the project the Secretary determines are necessary.

“(3) ADOPTION AND USE OF DOCUMENTS.—Any environmental document prepared in accordance with this subsection shall be adopted and used by any Federal agency making any determination related to the project study to the same extent that the Federal agency could adopt or use a document prepared by another Federal agency under—

“(A) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); and

“(B) parts 1500 through 1508 of title 40, Code of Federal Regulations (or successor regulations).

“(4) ROLES AND RESPONSIBILITY OF LEAD AGENCY.—With respect to the environmental review process for any project study, the Federal lead agency shall have authority and responsibility—

“(A) to take such actions as are necessary and proper and within the authority of the Federal lead agency to facilitate the expeditious resolution of the environmental review process for the project study; and

“(B) to prepare or ensure that any required environmental impact statement or other environmental review document for a project study required to be completed under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) is completed in accordance with this section and applicable Federal law.

“(e) PARTICIPATING AND COOPERATING AGENCIES.—

“(1) IDENTIFICATION OF JURISDICTIONAL AGENCIES.—With respect to carrying out the environmental review process for a project study, the Secretary shall identify, as early as practicable in the environmental review process, all Federal, State, and local government agencies and Indian tribes that may—

“(A) have jurisdiction over the project;

“(B) be required by law to conduct or issue a review, analysis, opinion, or statement for the project study; or

“(C) be required to make a determination on issuing a permit, license, or other approval or decision for the project study.

“(2) STATE AUTHORITY.—If the environmental review process is being implemented by the Secretary for a project study within the boundaries of a State, the State, consistent with State law, may choose to participate in the process and to make subject to the process all State agencies that—

“(A) have jurisdiction over the project;

“(B) are required to conduct or issue a review, analysis, opinion, or statement for the project study; or

“(C) are required to make a determination on issuing a permit, license, or other approval or decision for the project study.

“(3) INVITATION.—

“(A) IN GENERAL.—The Federal lead agency shall invite, as early as practicable in the environmental review process, any agency identified under paragraph (1) to become a participating or cooperating agency, as applicable, in the environmental review process for the project study.

“(B) DEADLINE.—An invitation to participate issued under subparagraph (A) shall set a deadline by which a response to the invitation shall be submitted, which

may be extended by the Federal lead agency for good cause.

“(4) PROCEDURES.—Section 1501.6 of title 40, Code of Federal Regulations (as in effect on the date of enactment of the Water Resources Reform and Development Act of 2014) shall govern the identification and the participation of a cooperating agency.

“(5) FEDERAL COOPERATING AGENCIES.—Any Federal agency that is invited by the Federal lead agency to participate in the environmental review process for a project study shall be designated as a cooperating agency by the Federal lead agency unless the invited agency informs the Federal lead agency, in writing, by the deadline specified in the invitation that the invited agency—

“(A)(i)(I) has no jurisdiction or authority with respect to the project;

“(II) has no expertise or information relevant to the project; or

“(III) does not have adequate funds to participate in the project; and

“(ii) does not intend to submit comments on the project;

or

“(B) does not intend to submit comments on the project.

“(6) ADMINISTRATION.—A participating or cooperating agency shall comply with this section and any schedule established under this section.

“(7) EFFECT OF DESIGNATION.—Designation as a participating or cooperating agency under this subsection shall not imply that the participating or cooperating agency—

“(A) supports a proposed project; or

“(B) has any jurisdiction over, or special expertise with respect to evaluation of, the project.

“(8) CONCURRENT REVIEWS.—Each participating or cooperating agency shall—

“(A) carry out the obligations of that agency under other applicable law concurrently and in conjunction with the required environmental review process, unless doing so would prevent the participating or cooperating agency from conducting needed analysis or otherwise carrying out those obligations; and

“(B) formulate and implement administrative, policy, and procedural mechanisms to enable the agency to ensure completion of the environmental review process in a timely, coordinated, and environmentally responsible manner.

“(f) PROGRAMMATIC COMPLIANCE.—

“(1) IN GENERAL.—The Secretary shall issue guidance regarding the use of programmatic approaches to carry out the environmental review process that—

“(A) eliminates repetitive discussions of the same issues;

“(B) focuses on the actual issues ripe for analyses at each level of review;

“(C) establishes a formal process for coordinating with participating and cooperating agencies, including the creation of a list of all data that is needed to carry out an environmental review process; and

“(D) complies with—

“(i) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); and

“(ii) all other applicable laws.

“(2) REQUIREMENTS.—In carrying out paragraph (1), the Secretary shall—

“(A) as the first step in drafting guidance under that paragraph, consult with relevant Federal, State, and local governmental agencies, Indian tribes, and the public on the appropriate use and scope of the programmatic approaches;

“(B) emphasize the importance of collaboration among relevant Federal, State, and local governmental agencies, and Indian tribes in undertaking programmatic reviews, especially with respect to including reviews with a broad geographical scope;

“(C) ensure that the programmatic reviews—

“(i) promote transparency, including of the analyses and data used in the environmental review process, the treatment of any deferred issues raised by Federal, State, and local governmental agencies, Indian tribes, or the public, and the temporal and special scales to be used to analyze those issues;

“(ii) use accurate and timely information in the environmental review process, including—

“(I) criteria for determining the general duration of the usefulness of the review; and

“(II) the timeline for updating any out-of-date review;

“(iii) describe—

“(I) the relationship between programmatic analysis and future tiered analysis; and

“(II) the role of the public in the creation of future tiered analysis; and

“(iv) are available to other relevant Federal, State, and local governmental agencies, Indian tribes, and the public;

“(D) allow not fewer than 60 days of public notice and comment on any proposed guidance; and

“(E) address any comments received under subparagraph (D).

“(g) COORDINATED REVIEWS.—

“(1) COORDINATION PLAN.—

“(A) ESTABLISHMENT.—

“(i) IN GENERAL.—The Federal lead agency shall, after consultation with and with the concurrence of each participating and cooperating agency and the project sponsor or joint lead agency, as applicable, establish a plan for coordinating public and agency participation in, and comment on, the environmental review process for a project study or a category of project studies.

“(ii) INCORPORATION.—The plan established under clause (i) shall be incorporated into the project schedule milestones set under section 905(g)(2) of the Water Resources Development Act of 1986 (33 U.S.C. 2282(g)(2)).

“(B) SCHEDULE.—

“(i) IN GENERAL.—As soon as practicable but not later than 45 days after the close of the public comment period on a draft environmental impact statement, the Federal lead agency, after consultation with and the concurrence of each participating and cooperating agency and the project sponsor or joint lead agency, as applicable, shall establish, as part of the coordination plan established in subparagraph (A), a schedule for completion of the environmental review process for the project study.

“(ii) FACTORS FOR CONSIDERATION.—In establishing a schedule, the Secretary shall consider factors such as—

“(I) the responsibilities of participating and cooperating agencies under applicable laws;

“(II) the resources available to the project sponsor, joint lead agency, and other relevant Federal and State agencies, as applicable;

“(III) the overall size and complexity of the project;

“(IV) the overall schedule for and cost of the project; and

“(V) the sensitivity of the natural and historical resources that could be affected by the project.

“(iii) MODIFICATIONS.—The Secretary may—

“(I) lengthen a schedule established under clause (i) for good cause; and

“(II) shorten a schedule only with concurrence of the affected participating and cooperating agencies and the project sponsor or joint lead agency, as applicable.

“(iv) DISSEMINATION.—A copy of a schedule established under clause (i) shall be—

“(I) provided to each participating and cooperating agency and the project sponsor or joint lead agency, as applicable; and

“(II) made available to the public.

“(2) COMMENT DEADLINES.—The Federal lead agency shall establish the following deadlines for comment during the environmental review process for a project study:

“(A) DRAFT ENVIRONMENTAL IMPACT STATEMENTS.—For comments by Federal and States agencies and the public on a draft environmental impact statement, a period of not more than 60 days after publication in the Federal Register of notice of the date of public availability of the draft environmental impact statement, unless—

“(i) a different deadline is established by agreement of the Federal lead agency, the project sponsor or joint lead agency, as applicable, and all participating and cooperating agencies; or

“(ii) the deadline is extended by the Federal lead agency for good cause.

“(B) OTHER ENVIRONMENTAL REVIEW PROCESSES.—For all other comment periods established by the Federal lead agency for agency or public comments in the environmental review process, a period of not more than 30 days after

the date on which the materials on which comment is requested are made available, unless—

“(i) a different deadline is established by agreement of the Federal lead agency, the project sponsor, or joint lead agency, as applicable, and all participating and cooperating agencies; or

“(ii) the deadline is extended by the Federal lead agency for good cause.

“(3) DEADLINES FOR DECISIONS UNDER OTHER LAWS.—In any case in which a decision under any Federal law relating to a project study, including the issuance or denial of a permit or license, is required to be made by the date described in subsection (h)(5)(B)(ii), the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives—

“(A) as soon as practicable after the 180-day period described in subsection (h)(5)(B)(ii), an initial notice of the failure of the Federal agency to make the decision; and

“(B) every 60 days thereafter until such date as all decisions of the Federal agency relating to the project study have been made by the Federal agency, an additional notice that describes the number of decisions of the Federal agency that remain outstanding as of the date of the additional notice.

“(4) INVOLVEMENT OF THE PUBLIC.—Nothing in this subsection reduces any time period provided for public comment in the environmental review process under applicable Federal law (including regulations).

“(5) TRANSPARENCY REPORTING.—

“(A) REPORTING REQUIREMENTS.—Not later than 1 year after the date of enactment of the Water Resources Reform and Development Act of 2014, the Secretary shall establish and maintain an electronic database and, in coordination with other Federal and State agencies, issue reporting requirements to make publicly available the status and progress with respect to compliance with applicable requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et. seq.) and any other Federal, State, or local approval or action required for a project study for which this section is applicable.

“(B) PROJECT STUDY TRANSPARENCY.—Consistent with the requirements established under subparagraph (A), the Secretary shall publish the status and progress of any Federal, State, or local decision, action, or approval required under applicable laws for each project study for which this section is applicable.

“(h) ISSUE IDENTIFICATION AND RESOLUTION.—

“(1) COOPERATION.—The Federal lead agency, the cooperating agencies, and any participating agencies shall work cooperatively in accordance with this section to identify and resolve issues that could delay completion of the environmental review process or result in the denial of any approval required for the project study under applicable laws.

“(2) FEDERAL LEAD AGENCY RESPONSIBILITIES.—

“(A) IN GENERAL.—The Federal lead agency shall make information available to the cooperating agencies and participating agencies as early as practicable in the environmental review process regarding the environmental and socioeconomic resources located within the project area and the general locations of the alternatives under consideration.

“(B) DATA SOURCES.—The information under subparagraph (A) may be based on existing data sources, including geographic information systems mapping.

“(3) COOPERATING AND PARTICIPATING AGENCY RESPONSIBILITIES.—Based on information received from the Federal lead agency, cooperating and participating agencies shall identify, as early as practicable, any issues of concern regarding the potential environmental or socioeconomic impacts of the project, including any issues that could substantially delay or prevent an agency from granting a permit or other approval that is needed for the project study.

“(4) ACCELERATED ISSUE RESOLUTION AND ELEVATION.—

“(A) IN GENERAL.—On the request of a participating or cooperating agency or project sponsor, the Secretary shall convene an issue resolution meeting with the relevant participating and cooperating agencies and the project sponsor or joint lead agency, as applicable, to resolve issues that may—

“(i) delay completion of the environmental review process; or

“(ii) result in denial of any approval required for the project study under applicable laws.

“(B) MEETING DATE.—A meeting requested under this paragraph shall be held not later than 21 days after the date on which the Secretary receives the request for the meeting, unless the Secretary determines that there is good cause to extend that deadline.

“(C) NOTIFICATION.—On receipt of a request for a meeting under this paragraph, the Secretary shall notify all relevant participating and cooperating agencies of the request, including the issue to be resolved and the date for the meeting.

“(D) ELEVATION OF ISSUE RESOLUTION.—If a resolution cannot be achieved within the 30 day-period beginning on the date of a meeting under this paragraph and a determination is made by the Secretary that all information necessary to resolve the issue has been obtained, the Secretary shall forward the dispute to the heads of the relevant agencies for resolution.

“(E) CONVENTION BY SECRETARY.—The Secretary may convene an issue resolution meeting under this paragraph at any time, at the discretion of the Secretary, regardless of whether a meeting is requested under subparagraph (A).

“(5) FINANCIAL PENALTY PROVISIONS.—

“(A) IN GENERAL.—A Federal jurisdictional agency shall complete any required approval or decision for the environmental review process on an expeditious basis using the shortest existing applicable process.

“(B) FAILURE TO DECIDE.—

“(i) IN GENERAL.—If a Federal jurisdictional agency fails to render a decision required under any Federal law relating to a project study that requires the preparation of an environmental impact statement or environmental assessment, including the issuance or denial of a permit, license, statement, opinion, or other approval by the date described in clause (ii), the amount of funds made available to support the office of the head of the Federal jurisdictional agency shall be reduced by an amount of funding equal to the amounts specified in subclause (I) or (II) and those funds shall be made available to the division of the Federal jurisdictional agency charged with rendering the decision by not later than 1 day after the applicable date under clause (ii), and once each week thereafter until a final decision is rendered, subject to subparagraph (C)—

“(I) \$20,000 for any project study requiring the preparation of an environmental assessment or environmental impact statement; or

“(II) \$10,000 for any project study requiring any type of review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) other than an environmental assessment or environmental impact statement.

“(ii) DESCRIPTION OF DATE.—The date referred to in clause (i) is the later of—

“(I) the date that is 180 days after the date on which an application for the permit, license, or approval is complete; and

“(II) the date that is 180 days after the date on which the Federal lead agency issues a decision on the project under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

“(C) LIMITATIONS.—

“(i) IN GENERAL.—No transfer of funds under subparagraph (B) relating to an individual project study shall exceed, in any fiscal year, an amount equal to 1 percent of the funds made available for the applicable agency office.

“(ii) FAILURE TO DECIDE.—The total amount transferred in a fiscal year as a result of a failure by an agency to make a decision by an applicable deadline shall not exceed an amount equal to 5 percent of the funds made available for the applicable agency office for that fiscal year.

“(iii) AGGREGATE.—Notwithstanding any other provision of law, for each fiscal year, the aggregate amount of financial penalties assessed against each applicable agency office under the Water Resources Reform and Development Act of 2014 and any other Federal law as a result of a failure of the agency to make a decision by an applicable deadline for environmental review, including the total amount transferred under this paragraph, shall not exceed an amount equal to 9.5 percent of the funds made available for the agency office for that fiscal year.

“(D) NO FAULT OF AGENCY.—

“(i) IN GENERAL.—A transfer of funds under this paragraph shall not be made if the applicable agency described in subparagraph (A) notifies, with a supporting explanation, the Federal lead agency, cooperating agencies, and project sponsor, as applicable, that—

“(I) the agency has not received necessary information or approvals from another entity in a manner that affects the ability of the agency to meet any requirements under Federal, State, or local law;

“(II) significant new information, including from public comments, or circumstances, including a major modification to an aspect of the project, requires additional analysis for the agency to make a decision on the project application; or

“(III) the agency lacks the financial resources to complete the review under the scheduled time frame, including a description of the number of full-time employees required to complete the review, the amount of funding required to complete the review, and a justification as to why not enough funding is available to complete the review by the deadline.

“(ii) LACK OF FINANCIAL RESOURCES.—If the agency provides notice under clause (i)(III), the Inspector General of the agency shall—

“(I) conduct a financial audit to review the notice; and

“(II) not later than 90 days after the date on which the review described in subclause (I) is completed, submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report on the notice.

“(E) LIMITATION.—The Federal agency from which funds are transferred pursuant to this paragraph shall not reprogram funds to the office of the head of the agency, or equivalent office, to reimburse that office for the loss of the funds.

“(F) EFFECT OF PARAGRAPH.—Nothing in this paragraph affects or limits the application of, or obligation to comply with, any Federal, State, local, or tribal law.

“(i) MEMORANDUM OF AGREEMENTS FOR EARLY COORDINATION.—

“(1) SENSE OF CONGRESS.—It is the sense of Congress that—

“(A) the Secretary and other Federal agencies with relevant jurisdiction in the environmental review process should cooperate with each other, State agencies, and Indian tribes on environmental review and project delivery activities at the earliest practicable time to avoid delays and duplication of effort later in the process, prevent potential conflicts, and ensure that planning and project development decisions reflect environmental values; and

“(B) the cooperation referred to in subparagraph (A) should include the development of policies and the designation of staff that advise planning agencies and project sponsors of studies or other information foreseeably required for later Federal action and early consultation with appropriate State and local agencies and Indian tribes.

“(2) TECHNICAL ASSISTANCE.—If requested at any time by a State or project sponsor, the Secretary and other Federal agencies with relevant jurisdiction in the environmental review process, shall, to the maximum extent practicable and appropriate, as determined by the agencies, provide technical assistance to the State or project sponsor in carrying out early coordination activities.

“(3) MEMORANDUM OF AGENCY AGREEMENT.—If requested at any time by a State or project sponsor, the Federal lead agency, in consultation with other Federal agencies with relevant jurisdiction in the environmental review process, may establish memoranda of agreement with the project sponsor, Indian tribe, State and local governments, and other appropriate entities to carry out the early coordination activities, including providing technical assistance in identifying potential impacts and mitigation issues in an integrated fashion.

“(j) LIMITATIONS.—Nothing in this section preempts or interferes with—

“(1) any obligation to comply with the provisions of any Federal law, including—

“(A) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); and

“(B) any other Federal environmental law;

“(2) the reviewability of any final Federal agency action in a court of the United States or in the court of any State;

“(3) any requirement for seeking, considering, or responding to public comment; or

“(4) any power, jurisdiction, responsibility, duty, or authority that a Federal, State, or local governmental agency, Indian tribe, or project sponsor has with respect to carrying out a project or any other provision of law applicable to projects.

“(k) TIMING OF CLAIMS.—

“(1) TIMING.—

“(A) IN GENERAL.—Notwithstanding any other provision of law, a claim arising under Federal law seeking judicial review of a permit, license, or other approval issued by a Federal agency for a project study shall be barred unless the claim is filed not later than 3 years after publication of a notice in the Federal Register announcing that the permit, license, or other approval is final pursuant to the law under which the agency action is taken, unless a shorter time is specified in the Federal law that allows judicial review.

“(B) APPLICABILITY.—Nothing in this subsection creates a right to judicial review or places any limit on filing a claim that a person has violated the terms of a permit, license, or other approval.

“(2) NEW INFORMATION.—

“(A) IN GENERAL.—The Secretary shall consider new information received after the close of a comment period

if the information satisfies the requirements for a supplemental environmental impact statement under title 40, Code of Federal Regulations (including successor regulations).

“(B) SEPARATE ACTION.—The preparation of a supplemental environmental impact statement or other environmental document, if required under this section, shall be considered a separate final agency action and the deadline for filing a claim for judicial review of the action shall be 3 years after the date of publication of a notice in the Federal Register announcing the action relating to such supplemental environmental impact statement or other environmental document.

“(1) CATEGORICAL EXCLUSIONS.—

“(1) IN GENERAL.—Not later than 180 days after the date of enactment of the Water Resources Reform and Development Act of 2014, the Secretary shall—

“(A) survey the use by the Corps of Engineers of categorical exclusions in projects since 2005;

“(B) publish a review of the survey that includes a description of—

“(i) the types of actions that were categorically excluded or could be the basis for developing a new categorical exclusion; and

“(ii) any requests previously received by the Secretary for new categorical exclusions; and

“(C) solicit requests from other Federal agencies and project sponsors for new categorical exclusions.

“(2) NEW CATEGORICAL EXCLUSIONS.—Not later than 1 year after the date of enactment of the Water Resources Reform and Development Act of 2014, if the Secretary has identified a category of activities that merit establishing a categorical exclusion that did not exist on the day before the date of enactment of the Water Resources Reform and Development Act of 2014 based on the review under paragraph (1), the Secretary shall publish a notice of proposed rulemaking to propose that new categorical exclusion, to the extent that the categorical exclusion meets the criteria for a categorical exclusion under section 1508.4 of title 40, Code of Federal Regulations (or successor regulation).

“(m) REVIEW OF PROJECT ACCELERATION REFORMS.—

“(1) IN GENERAL.—The Comptroller General of the United States shall—

“(A) assess the reforms carried out under this section; and

“(B) not later than 5 years and not later than 10 years after the date of enactment of the Water Resources Reform and Development Act of 2014, submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that describes the results of the assessment.

“(2) CONTENTS.—The reports under paragraph (1) shall include an evaluation of impacts of the reforms carried out under this section on—

“(A) project delivery;

“(B) compliance with environmental laws; and

“(C) the environmental impact of projects.

“(n) PERFORMANCE MEASUREMENT.—The Secretary shall establish a program to measure and report on progress made toward improving and expediting the planning and environmental review process.

“(o) IMPLEMENTATION GUIDANCE.—The Secretary shall prepare, in consultation with the Council on Environmental Quality and other Federal agencies with jurisdiction over actions or resources that may be impacted by a project, guidance documents that describe the coordinated environmental review processes that the Secretary intends to use to implement this section for the planning of projects, in accordance with the civil works program of the Corps of Engineers and all applicable law.”.

(2) CLERICAL AMENDMENT.—The table of contents contained in section 1(b) of the Water Resources Development Act of 2007 (121 Stat. 1042) is amended by striking the item relating to section 2045 and inserting the following:

“Sec. 2045. Project acceleration.”.

(b) CATEGORICAL EXCLUSIONS IN EMERGENCIES.—For the repair, reconstruction, or rehabilitation of a water resources project that is in operation or under construction when damaged by an event or incident that results in a declaration by the President of a major disaster or emergency pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.), the Secretary shall treat such repair, reconstruction, or rehabilitation activity as a class of action categorically excluded from the requirements relating to environmental assessments or environmental impact statements under section 1508.4 of title 40, Code of Federal Regulations (or successor regulations), if the repair or reconstruction activity is—

(1) in the same location with the same capacity, dimensions, and design as the original water resources project as before the declaration described in this section; and

(2) commenced within a 2-year period beginning on the date of a declaration described in this subsection.

SEC. 1006. EXPEDITING THE EVALUATION AND PROCESSING OF PERMITS.

Section 214 of the Water Resources Development Act of 2000 (Public Law 106–541; 33 U.S.C. 2201 note) is amended—

(1) in subsection (a)—

(A) by striking “(a) IN GENERAL.—The Secretary” and inserting the following:

“(a) FUNDING TO PROCESS PERMITS.—

“(1) DEFINITIONS.—In this subsection:

“(A) NATURAL GAS COMPANY.—The term ‘natural gas company’ has the meaning given the term in section 1262 of the Public Utility Holding Company Act of 2005 (42 U.S.C. 16451), except that the term also includes a person engaged in the transportation of natural gas in intrastate commerce.

“(B) PUBLIC-UTILITY COMPANY.—The term ‘public-utility company’ has the meaning given the term in section 1262 of the Public Utility Holding Company Act of 2005 (42 U.S.C. 16451).

“(2) PERMIT PROCESSING.—The Secretary”;

(B) in paragraph (2) (as so designated)—

(i) by inserting “or a public-utility company or natural gas company” after “non-Federal public entity”;

and

(ii) by inserting “or company” after “that entity”;

and

(C) by adding at the end the following:

“(3) LIMITATION FOR PUBLIC-UTILITY AND NATURAL GAS COMPANIES.—The authority provided under paragraph (2) to a public-utility company or natural gas company shall expire on the date that is 7 years after the date of enactment of this paragraph.

“(4) EFFECT ON OTHER ENTITIES.—To the maximum extent practicable, the Secretary shall ensure that expediting the evaluation of a permit through the use of funds accepted and expended under this section does not adversely affect the timeline for evaluation (in the Corps district in which the project or activity is located) of permits under the jurisdiction of the Department of the Army of other entities that have not contributed funds under this section.

“(5) GAO STUDY.—Not later than 4 years after the date of enactment of this paragraph, the Comptroller General of the United States shall carry out a study of the implementation by the Secretary of the authority provided under paragraph (2) to public-utility companies and natural gas companies.”;

and

(2) by striking subsections (d) and (e) and inserting the following:

“(d) PUBLIC AVAILABILITY.—

“(1) IN GENERAL.—The Secretary shall ensure that all final permit decisions carried out using funds authorized under this section are made available to the public in a common format, including on the Internet, and in a manner that distinguishes final permit decisions under this section from other final actions of the Secretary.

“(2) DECISION DOCUMENT.—The Secretary shall—

“(A) use a standard decision document for evaluating all permits using funds accepted under this section; and

“(B) make the standard decision document, along with all final permit decisions, available to the public, including on the Internet.

“(3) AGREEMENTS.—The Secretary shall make all active agreements to accept funds under this section available on a single public Internet site.

“(e) REPORTING.—

“(1) IN GENERAL.—The Secretary shall prepare an annual report on the implementation of this section, which, at a minimum, shall include for each district of the Corps of Engineers that accepts funds under this section—

“(A) a comprehensive list of any funds accepted under this section during the previous fiscal year;

“(B) a comprehensive list of the permits reviewed and approved using funds accepted under this section during the previous fiscal year, including a description of the size and type of resources impacted and the mitigation required for each permit; and

“(C) a description of the training offered in the previous fiscal year for employees that is funded in whole or in part with funds accepted under this section.

“(2) SUBMISSION.—Not later than 90 days after the end of each fiscal year, the Secretary shall—

“(A) submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives the annual report described in paragraph (1); and

“(B) make each report received under subparagraph (A) available on a single publicly accessible Internet site.”.

SEC. 1007. EXPEDITING APPROVAL OF MODIFICATIONS AND ALTERATIONS OF PROJECTS BY NON-FEDERAL INTERESTS.

(a) SECTION 14 APPLICATION DEFINED.—In this section, the term “section 14 application” means an application submitted by an applicant to the Secretary requesting permission for the temporary occupation or use of a public work, or the alteration or permanent occupation or use of a public work, under section 14 of the Act of March 3, 1899 (commonly known as the “Rivers and Harbors Appropriation Act of 1899”) (33 U.S.C. 408).

(b) REVIEW.—Not later than 1 year after the date of enactment of this Act, the Secretary, after providing notice and an opportunity for comment, shall establish a process for the review of section 14 applications in a timely and consistent manner.

(c) BENCHMARK GOALS.—

(1) ESTABLISHMENT OF BENCHMARK GOALS.—In carrying out subsection (b), the Secretary shall—

(A) establish benchmark goals for determining the amount of time it should take the Secretary to determine whether a section 14 application is complete;

(B) establish benchmark goals for determining the amount of time it should take the Secretary to approve or disapprove a section 14 application; and

(C) to the extent practicable, use such benchmark goals to make a decision on section 14 applications in a timely and consistent manner.

(2) BENCHMARK GOALS.—

(A) BENCHMARK GOALS FOR DETERMINING WHETHER SECTION 14 APPLICATIONS ARE COMPLETE.—To the extent practicable, the benchmark goals established under paragraph (1) shall provide that—

(i) the Secretary reach a decision on whether a section 14 application is complete not later than 15 days after the date of receipt of the application; and

(ii) if the Secretary determines that a section 14 application is not complete, the Secretary promptly notify the applicant of the specific information that is missing or the analysis that is needed to complete the application.

(B) BENCHMARK GOALS FOR REVIEWING COMPLETED APPLICATIONS.—To the extent practicable, the benchmark goals established under paragraph (1) shall provide that—

(i) the Secretary generally approve or disapprove a completed section 14 application not later than 45

days after the date of receipt of the completed application; and

(ii) in a case in which the Secretary determines that additional time is needed to review a completed section 14 application due to the type, size, cost, complexity, or impacts of the actions proposed in the application, the Secretary generally approve or disapprove the application not later than 180 days after the date of receipt of the completed application.

(3) NOTICE.—In any case in which the Secretary determines that it will take the Secretary more than 45 days to review a completed section 14 application, the Secretary shall—

(A) provide written notification to the applicant; and

(B) include in the written notice a best estimate of the Secretary as to the amount of time required for completion of the review.

(d) FAILURE TO ACHIEVE BENCHMARK GOALS.—In any case in which the Secretary fails to make a decision on a section 14 application in accordance with the process established under this section, the Secretary shall provide written notice to the applicant, including a detailed description of—

(1) why the Secretary failed to make a decision in accordance with such process;

(2) the additional actions required before the Secretary will issue a decision; and

(3) the amount of time the Secretary will require to issue a decision.

(e) NOTIFICATION.—

(1) SUBMISSION TO CONGRESS.—The Secretary shall provide a copy of any written notice provided under subsection (d) to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

(2) PUBLIC AVAILABILITY.—The Secretary shall maintain a publicly available database, including on the Internet, on—

(A) all section 14 applications received by the Secretary; and

(B) the current status of such applications.

SEC. 1008. EXPEDITING HYDROPOWER AT CORPS OF ENGINEERS FACILITIES.

(a) POLICY.—Congress declares that it is the policy of the United States that—

(1) the development of non-Federal hydroelectric power at Corps of Engineers civil works projects, including locks and dams, shall be given priority;

(2) Corps of Engineers approval of non-Federal hydroelectric power at Corps of Engineers civil works projects, including permitting required under section 14 of the Act of March 3, 1899 (33 U.S.C. 408), shall be completed by the Corps of Engineers in a timely and consistent manner; and

(3) approval of hydropower at Corps of Engineers civil works projects shall in no way diminish the other priorities and missions of the Corps of Engineers, including authorized project purposes and habitat and environmental protection.

(b) REPORT.—Not later than 2 years after the date of enactment of this Act and biennially thereafter, the Secretary shall submit

to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report that, at a minimum, shall include—

(1) a description of initiatives carried out by the Secretary to encourage the development of hydroelectric power by non-Federal entities at Corps of Engineers civil works projects;

(2) a list of all new hydroelectric power activities by non-Federal entities approved at Corps of Engineers civil works projects in that fiscal year, including the length of time the Secretary needed to approve those activities;

(3) a description of the status of each pending application from non-Federal entities for approval to develop hydroelectric power at Corps of Engineers civil works projects;

(4) a description of any benefits or impacts to the environment, recreation, or other uses associated with Corps of Engineers civil works projects at which non-Federal entities have developed hydroelectric power in the previous fiscal year; and

(5) the total annual amount of payments or other services provided to the Corps of Engineers, the Treasury, and any other Federal agency as a result of approved non-Federal hydro-power projects at Corps of Engineers civil works projects.

SEC. 1009. ENHANCED USE OF ELECTRONIC COMMERCE IN FEDERAL PROCUREMENT.

(a) **REPORT.**—Not later than 180 days after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report describing the actions of the Secretary in carrying out section 2301 of title 41, United States Code, regarding the use of electronic commerce in Federal procurement.

(b) **CONTENTS.**—The report submitted under subsection (a) shall include, with respect to the 2 fiscal years most recently ended before the fiscal year in which the report is submitted—

(1) an identification of the number, type, and dollar value of procurement solicitations with respect to which the public was permitted to respond to the solicitation electronically, which shall differentiate between solicitations that allowed full or partial electronic submission;

(2) an analysis of the information provided under paragraph (1) and actions that could be taken by the Secretary to refine and improve the use of electronic submission for procurement solicitation responses;

(3) an analysis of the potential benefits of and obstacles to full implementation of electronic submission for procurement solicitation responses, including with respect to cost savings, error reduction, paperwork reduction, increased bidder participation, and competition, and expanded use of electronic bid data collection for cost-effective contract management and timely reporting; and

(4) an analysis of the options and technologies available to facilitate expanded implementation of electronic submission for procurement solicitation responses and the suitability of each option and technology for contracts of various types and sizes.

SEC. 1010. DETERMINATION OF PROJECT COMPLETION.

(a) **IN GENERAL.**—The Secretary shall notify the applicable non-Federal interest when construction of a water resources project or a functional portion of the project is completed so the non-Federal interest may commence responsibilities, as applicable, for operating and maintaining the project.

(b) **NON-FEDERAL INTEREST APPEAL OF DETERMINATION.**—

(1) **IN GENERAL.**—Not later than 7 days after receiving a notification under subsection (a), the non-Federal interest may appeal the completion determination of the Secretary in writing with a detailed explanation of the basis for questioning the completeness of the project or functional portion of the project.

(2) **INDEPENDENT REVIEW.**—

(A) **IN GENERAL.**—On notification that a non-Federal interest has submitted an appeal under paragraph (1), the Secretary shall contract with 1 or more independent, non-Federal experts to evaluate whether the applicable water resources project or functional portion of the project is complete.

(B) **TIMELINE.**—An independent review carried out under subparagraph (A) shall be completed not later than 180 days after the date on which the Secretary receives an appeal from a non-Federal interest under paragraph (1).

SEC. 1011. PRIORITIZATION.

(a) **PRIORITIZATION OF HURRICANE AND STORM DAMAGE RISK REDUCTION EFFORTS.**—

(1) **PRIORITY.**—For authorized projects and ongoing feasibility studies with a primary purpose of hurricane and storm damage risk reduction, the Secretary shall give funding priority to projects and ongoing studies that—

(A) address an imminent threat to life and property;

(B) prevent storm surge from inundating populated areas;

(C) prevent the loss of coastal wetlands that help reduce the impact of storm surge;

(D) protect emergency hurricane evacuation routes or shelters;

(E) prevent adverse impacts to publicly owned or funded infrastructure and assets;

(F) minimize disaster relief costs to the Federal Government; and

(G) address hurricane and storm damage risk reduction in an area for which the President declared a major disaster in accordance with section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5170).

(2) **EXPEDITED CONSIDERATION OF CURRENTLY AUTHORIZED PROJECTS.**—Not later than 180 days after the date of enactment of this Act, the Secretary shall—

(A) submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a list of all—

(i) ongoing hurricane and storm damage reduction feasibility studies that have signed feasibility cost-share agreements and have received Federal funds since 2009; and

(ii) authorized hurricane and storm damage reduction projects that—

(I) have been authorized for more than 20 years but are less than 75 percent complete; or

(II) are undergoing a post-authorization change report, general reevaluation report, or limited reevaluation report;

(B) identify those projects on the list required under subparagraph (A) that meet the criteria described in paragraph (1); and

(C) provide a plan for expeditiously completing the projects identified under subparagraph (B), subject to available funding.

(b) **PRIORITIZATION OF ECOSYSTEM RESTORATION EFFORTS.**—For authorized projects with a primary purpose of ecosystem restoration, the Secretary shall give funding priority to projects—

(1) that—

(A) address an identified threat to public health, safety, or welfare;

(B) preserve or restore ecosystems of national significance; or

(C) preserve or restore habitats of importance for federally protected species, including migratory birds; and

(2) for which the restoration activities will contribute to other ongoing or planned Federal, State, or local restoration initiatives.

SEC. 1012. TRANSPARENCY IN ACCOUNTING AND ADMINISTRATIVE EXPENSES.

(a) **IN GENERAL.**—On the request of a non-Federal interest, the Secretary shall provide to the non-Federal interest a detailed accounting of the Federal expenses associated with a water resources project.

(b) **STUDY.**—

(1) **IN GENERAL.**—The Secretary shall contract with the National Academy of Public Administration to carry out a study on the efficiency of the Corps Engineers current staff salaries and administrative expense procedures as compared to using a separate administrative expense account.

(2) **CONTENTS.**—The study under paragraph (1) shall include any recommendations of the National Academy of Public Administration for improvements to the budgeting and administrative processes that will increase the efficiency of the Corps of Engineers project delivery.

SEC. 1013. EVALUATION OF PROJECT PARTNERSHIP AGREEMENTS.

(a) **IN GENERAL.**—The Secretary shall contract with the National Academy of Public Administration to carry out a comprehensive review of the process for preparing, negotiating, and approving Project Partnership Agreements and the Project Partnership Agreement template, which shall include—

(1) an evaluation of the process for preparing, negotiating, and approving Project Partnership Agreements, as in effect on the day before the date of enactment of this Act, including

suggested modifications to the process provided by non-Federal interests; and

(2) recommendations based on the evaluation under paragraph (1) to improve the Project Partnership Agreement template and the process for preparing, negotiating, and approving Project Partnership Agreements.

(b) SUBMISSION TO CONGRESS.—

(1) IN GENERAL.—The Secretary shall submit the findings of the National Academy of Public Administration to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

(2) REPORT.—Not later than 180 days after the date on which the findings are received under paragraph (1), the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a detailed response, including any recommendations the Secretary plans to implement, on the process for preparing, negotiating, and approving Project Partnership Agreements and the Project Partnership Agreement template.

SEC. 1014. STUDY AND CONSTRUCTION OF WATER RESOURCES DEVELOPMENT PROJECTS BY NON-FEDERAL INTERESTS.

(a) STUDIES.—Section 203 of the Water Resources Development Act of 1986 (33 U.S.C. 2231) is amended to read as follows:

“SEC. 203. STUDY OF WATER RESOURCES DEVELOPMENT PROJECTS BY NON-FEDERAL INTERESTS.

“(a) SUBMISSION TO SECRETARY.—

“(1) IN GENERAL.—A non-Federal interest may undertake a feasibility study of a proposed water resources development project and submit the study to the Secretary.

“(2) GUIDELINES.—To assist non-Federal interests, the Secretary, as soon as practicable, shall issue guidelines for feasibility studies of water resources development projects to provide sufficient information for the formulation of the studies.

“(b) REVIEW BY SECRETARY.—The Secretary shall review each feasibility study received under subsection (a)(1) for the purpose of determining whether or not the study, and the process under which the study was developed, each comply with Federal laws and regulations applicable to feasibility studies of water resources development projects.

“(c) SUBMISSION TO CONGRESS.—Not later than 180 days after the date of receipt of a feasibility study of a project under subsection (a)(1), the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that describes—

“(1) the results of the Secretary’s review of the study under subsection (b), including a determination of whether the project is feasible;

“(2) any recommendations the Secretary may have concerning the plan or design of the project; and

“(3) any conditions the Secretary may require for construction of the project.

“(d) CREDIT.—If a project for which a feasibility study has been submitted under subsection (a)(1) is authorized by a Federal

law enacted after the date of the submission to Congress under subsection (c), the Secretary shall credit toward the non-Federal share of the cost of construction of the project an amount equal to the portion of the cost of developing the study that would have been the responsibility of the United States if the study had been developed by the Secretary.”

(b) CONSTRUCTION.—

(1) IN GENERAL.—Section 204 of the Water Resources Development Act of 1986 (33 U.S.C. 2232) is amended to read as follows:

“SEC. 204. CONSTRUCTION OF WATER RESOURCES DEVELOPMENT PROJECTS BY NON-FEDERAL INTERESTS.

“(a) WATER RESOURCES DEVELOPMENT PROJECT DEFINED.—In this section, the term ‘water resources development project’ means a project recommendation that results from—

“(1) a feasibility report, as such term is defined in section 7001(f) of the Water Resources Reform and Development Act of 2014;

“(2) a completed feasibility study developed under section 203; or

“(3) a final feasibility study for water resources development and conservation and other purposes that is specifically authorized by Congress to be carried out by the Secretary.

“(b) AUTHORITY.—

“(1) IN GENERAL.—A non-Federal interest may carry out a water resources development project, or separable element thereof—

“(A) in accordance with a plan approved by the Secretary for the project or separable element; and

“(B) subject to any conditions that the Secretary may require, including any conditions specified under section 203(c)(3).

“(2) CONDITIONS.—Before carrying out a water resources development project, or separable element thereof, under this section, a non-Federal interest shall—

“(A) obtain any permit or approval required in connection with the project or separable element under Federal or State law; and

“(B) ensure that a final environmental impact statement or environmental assessment, as appropriate, for the project or separable element has been filed.

“(c) STUDIES AND ENGINEERING.—When requested by an appropriate non-Federal interest, the Secretary may undertake all necessary studies and engineering for any construction to be undertaken under subsection (b), and provide technical assistance in obtaining all necessary permits for the construction, if the non-Federal interest contracts with the Secretary to furnish the United States funds for the studies, engineering, or technical assistance in the period during which the studies and engineering are being conducted.

“(d) CREDIT OR REIMBURSEMENT.—

“(1) GENERAL RULE.—Subject to paragraph (3), a project or separable element of a project carried out by a non-Federal interest under this section shall be eligible for credit or reimbursement for the Federal share of work carried out on a project or separable element of a project if—

“(A) before initiation of construction of the project or separable element—

“(i) the Secretary approves the plans for construction of the project or separable element of the project by the non-Federal interest;

“(ii) the Secretary determines, before approval of the plans, that the project or separable element of the project is feasible; and

“(iii) the non-Federal interest enters into a written agreement with the Secretary under section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b), including an agreement to pay the non-Federal share, if any, of the cost of operation and maintenance of the project; and

“(B) the Secretary determines that all Federal laws and regulations applicable to the construction of a water resources development project, and any conditions identified under subsection (b)(1)(B), were complied with by the non-Federal interest during construction of the project or separable element of the project.

“(2) APPLICATION OF CREDIT.—The Secretary may apply credit toward—

“(A) the non-Federal share of authorized separable elements of the same project; or

“(B) subject to the requirements of this section and section 1020 of the Water Resources Reform and Development Act of 2014, at the request of the non-Federal interest, the non-Federal share of a different water resources development project.

“(3) REQUIREMENTS.—The Secretary may only apply credit or provide reimbursement under paragraph (1) if—

“(A) Congress has authorized construction of the project or separable element of the project; and

“(B) the Secretary certifies that the project has been constructed in accordance with—

“(i) all applicable permits or approvals; and

“(ii) this section.

“(4) MONITORING.—The Secretary shall regularly monitor and audit any water resources development project, or separable element of a water resources development project, constructed by a non-Federal interest under this section to ensure that—

“(A) the construction is carried out in compliance with the requirements of this section; and

“(B) the costs of the construction are reasonable.

“(e) NOTIFICATION OF COMMITTEES.—If a non-Federal interest notifies the Secretary that the non-Federal interest intends to carry out a project, or separable element thereof, under this section, the Secretary shall provide written notice to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives concerning the intent of the non-Federal interest.

“(f) OPERATION AND MAINTENANCE.—Whenever a non-Federal interest carries out improvements to a federally authorized harbor or inland harbor, the Secretary shall be responsible for operation and maintenance in accordance with section 101(b) if—

“(1) before construction of the improvements—

“(A) the Secretary determines that the improvements are feasible and consistent with the purposes of this title; and

“(B) the Secretary and the non-Federal interest execute a written agreement relating to operation and maintenance of the improvements;

“(2) the Secretary certifies that the project or separable element of the project is constructed in accordance with applicable permits and appropriate engineering and design standards; and

“(3) the Secretary does not find that the project or separable element is no longer feasible.”.

(c) REPEALS.—The following provisions are repealed:

(1) Section 404 of the Water Resources Development Act of 1990 (33 U.S.C. 2232 note; 104 Stat. 4646) and the item relating to that section in the table of contents contained in section 1(b) of that Act.

(2) Section 206 of the Water Resources Development Act of 1992 (33 U.S.C. 426i–1) and the item relating to that section in the table of contents contained in section 1(b) of that Act.

(3) Section 211 of the Water Resources Development Act of 1996 (33 U.S.C. 701b–13) and the item relating to that section in the table of contents contained in section 1(b) of that Act.

(d) SAVINGS PROVISION.—Nothing in this section may be construed to affect an agreement in effect on the date of enactment of this Act, or an agreement that is finalized between the Corps of Engineers and a non-Federal interest on or before December 31, 2014, under any of the following sections (as such sections were in effect on the day before such date of enactment):

(1) Section 204 of the Water Resources Development Act of 1986 (33 U.S.C. 2232).

(2) Section 206 of the Water Resources Development Act of 1992 (33 U.S.C. 426i–1).

(3) Section 211 of the Water Resources Development Act of 1996 (33 U.S.C. 701b–13).

SEC. 1015. CONTRIBUTIONS BY NON-FEDERAL INTERESTS.

(a) IN GENERAL.—Section 5 of the Act of June 22, 1936 (33 U.S.C. 701h), is amended—

(1) by inserting “and other non-Federal interests” after “States and political subdivisions thereof” each place it appears;

(2) by inserting “, including a project for navigation on the inland waterways,” after “study or project”;

(3) by striking “*Provided, That when*” and inserting “*Provided, That the Secretary is authorized to receive and expend funds from a State or a political subdivision thereof, and other non-Federal interests or private entities, to operate a hurricane barrier project to support recreational activities at or in the vicinity of the project, at no cost to the Federal Government, if the Secretary determines that operation for such purpose is not inconsistent with the operation and maintenance of the project for the authorized purposes of the project: Provided further, That when*”; and

(4) by striking the period at the end and inserting the following: “: *Provided further, That the term ‘non-Federal*

interest' has the meaning given that term in section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b).”.

(b) **NOTIFICATION FOR CONTRIBUTED FUNDS.**—Prior to accepting funds contributed under section 5 of the Act of June 22, 1936 (33 U.S.C. 701h), the Secretary shall provide written notice of the funds to the Committee on Environment and Public Works and the Committee on Appropriations of the Senate and the Committee on Transportation and Infrastructure and the Committee on Appropriations of the House of Representatives.

(c) **TECHNICAL AMENDMENT.**—Section 111(b) of the Energy and Water Development and Related Agencies Appropriations Act, 2012 (125 Stat. 858) is repealed.

SEC. 1016. OPERATION AND MAINTENANCE OF CERTAIN PROJECTS.

The Secretary may assume responsibility for operation and maintenance in accordance with section 101(b) of the Water Resources Development Act of 1986 (33 U.S.C. 2211(b)) (as amended by section 2102(b)) for improvements to a federally authorized harbor or inland harbor that are carried out by a non-Federal interest prior to December 31, 2014, if the Secretary determines that the requirements under paragraphs (2) and (3) of section 204(f) of the Water Resources Development Act of 1986 (33 U.S.C. 2232(f)) are met.

SEC. 1017. ACCEPTANCE OF CONTRIBUTED FUNDS TO INCREASE LOCK OPERATIONS.

(a) **IN GENERAL.**—The Secretary, after providing public notice, shall establish a pilot program for the acceptance and expenditure of funds contributed by non-Federal interests to increase the hours of operation of locks at water resources development projects.

(b) **APPLICABILITY.**—The establishment of the pilot program under this section shall not affect the periodic review and adjustment of hours of operation of locks based on increases in commercial traffic carried out by the Secretary.

(c) **PUBLIC COMMENT.**—Not later than 180 days before a proposed modification to the operation of a lock at a water resources development project will be carried out, the Secretary shall—

(1) publish the proposed modification in the Federal Register; and

(2) accept public comment on the proposed modification.

(d) **REPORTS.**—

(1) **IN GENERAL.**—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report that evaluates the cost-savings resulting from reduced lock hours and any economic impacts of modifying lock operations.

(2) **REVIEW OF PILOT PROGRAM.**—Not later than September 30, 2017, and each year thereafter, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that describes the effectiveness of the pilot program under this section.

(e) **ANNUAL REVIEW.**—The Secretary shall carry out an annual review of the commercial use of locks and make any necessary adjustments to lock operations based on that review.

(f) **TERMINATION.**—The authority to accept funds under this section shall terminate 5 years after the date of enactment of this Act.

SEC. 1018. CREDIT FOR IN-KIND CONTRIBUTIONS.

(a) **IN GENERAL.**—Section 221(a)(4) of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b(a)(4)) is amended—

(1) in subparagraph (A), in the matter preceding clause (i), by inserting “or a project under an environmental infrastructure assistance program” after “law”;

(2) in subparagraph (C) by striking “In any case” and all that follows through the period at the end and inserting the following:

“(i) **CONSTRUCTION.**—

“(I) **IN GENERAL.**—In any case in which the non-Federal interest is to receive credit under subparagraph (A) for the cost of construction carried out by the non-Federal interest before execution of a partnership agreement and that construction has not been carried out as of November 8, 2007, the Secretary and the non-Federal interest shall enter into an agreement under which the non-Federal interest shall carry out such work and shall do so prior to the non-Federal interest initiating construction or issuing a written notice to proceed for the construction.

“(II) **ELIGIBILITY.**—Construction that is carried out after the execution of an agreement to carry out work described in subclause (I) and any design activities that are required for that construction, even if the design activity is carried out prior to the execution of the agreement to carry out work, shall be eligible for credit.

“(ii) **PLANNING.**—

“(I) **IN GENERAL.**—In any case in which the non-Federal interest is to receive credit under subparagraph (A) for the cost of planning carried out by the non-Federal interest before execution of a feasibility cost-sharing agreement, the Secretary and the non-Federal interest shall enter into an agreement under which the non-Federal interest shall carry out such work and shall do so prior to the non-Federal interest initiating that planning.

“(II) **ELIGIBILITY.**—Planning that is carried out by the non-Federal interest after the execution of an agreement to carry out work described in subclause (I) shall be eligible for credit.”;

(3) in subparagraph (D)(iii) by striking “sections 101 and 103” and inserting “sections 101(a)(2) and 103(a)(1)(A) of the Water Resources Development Act of 1986 (33 U.S.C. 2211(a)(2); 33 U.S.C. 2213(a)(1)(A))”;

(4) by redesignating subparagraph (E) as subparagraph (H);

(5) by inserting after subparagraph (D) the following:

“(E) **ANALYSIS OF COSTS AND BENEFITS.**—In the evaluation of the costs and benefits of a project, the Secretary

shall not consider construction carried out by a non-Federal interest under this subsection as part of the future without project condition.

“(F) TRANSFER OF CREDIT BETWEEN SEPARABLE ELEMENTS OF A PROJECT.—Credit for in-kind contributions provided by a non-Federal interest that are in excess of the non-Federal cost share for an authorized separable element of a project may be applied toward the non-Federal cost share for a different authorized separable element of the same project.

“(G) APPLICATION OF CREDIT.—

“(i) IN GENERAL.—To the extent that credit for in-kind contributions, as limited by subparagraph (D), and credit for required land, easements, rights-of-way, dredged material disposal areas, and relocations provided by the non-Federal interest exceed the non-Federal share of the cost of construction of a project other than a navigation project, the Secretary, subject to the availability of funds, shall enter into a reimbursement agreement with the non-Federal interest, which shall be in addition to a partnership agreement under subparagraph (A), to reimburse the difference to the non-Federal interest.

“(ii) PRIORITY.—If appropriated funds are insufficient to cover the full cost of all requested reimbursement agreements under clause (i), the Secretary shall enter into reimbursement agreements in the order in which requests for such agreements are received.”; and

(6) in subparagraph (H) (as redesignated by paragraph (4))—

(A) in clause (i) by inserting “, and to water resources projects authorized prior to the date of enactment of the Water Resources Development Act of 1986 (Public Law 99-662), if correction of design deficiencies is necessary” before the period at the end; and

(B) by striking clause (ii) and inserting the following:

“(ii) AUTHORIZATION AS ADDITION TO OTHER AUTHORIZATIONS.—The authority of the Secretary to provide credit for in-kind contributions pursuant to this paragraph shall be in addition to any other authorization to provide credit for in-kind contributions and shall not be construed as a limitation on such other authorization. The Secretary shall apply the provisions of this paragraph, in lieu of provisions under other crediting authority, only if so requested by the non-Federal interest.”.

(b) APPLICABILITY.—Section 2003(e) of the Water Resources Development Act of 2007 (42 U.S.C. 1962d-5b note) is amended—

(1) by inserting “, or construction of design deficiency corrections on the project,” after “construction on the project”; and

(2) by inserting “, or under which construction of the project has not been completed and the work to be performed by

the non-Federal interests has not been carried out and is creditable only toward any remaining non-Federal cost share,” after “has not been initiated”.

(c) **EFFECTIVE DATE.**—The amendments made by subsections (a) and (b) take effect on November 8, 2007.

(d) **GUIDELINES.**—

(1) **IN GENERAL.**—Not later than 1 year after the date of enactment of this Act, the Secretary shall update any guidance or regulations for carrying out section 221(a)(4) of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b(a)(4)) (as amended by subsection (a)) that are in existence on the date of enactment of this Act or issue new guidelines, as determined to be appropriate by the Secretary.

(2) **INCLUSIONS.**—Any guidance, regulations, or guidelines updated or issued under paragraph (1) shall include, at a minimum—

(A) the milestone for executing an in-kind memorandum of understanding for construction by a non-Federal interest;

(B) criteria and procedures for evaluating a request to execute an in-kind memorandum of understanding for construction by a non-Federal interest that is earlier than the milestone under subparagraph (A) for that execution; and

(C) criteria and procedures for determining whether work carried out by a non-Federal interest is integral to a project.

(3) **PUBLIC AND STAKEHOLDER PARTICIPATION.**—Before issuing any new or revised guidance, regulations, or guidelines or any subsequent updates to those documents, the Secretary shall—

(A) consult with affected non-Federal interests;

(B) publish the proposed guidelines developed under this subsection in the Federal Register; and

(C) provide the public with an opportunity to comment on the proposed guidelines.

(e) **OTHER CREDIT.**—Nothing in section 221(a)(4) of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b(a)(4)) (as amended by subsection (a)) affects any eligibility for credit under section 104 of the Water Resources Development of 1986 (33 U.S.C. 2214) that was approved by the Secretary prior to the date of enactment of this Act.

SEC. 1019. CLARIFICATION OF IN-KIND CREDIT AUTHORITY.

(a) **NON-FEDERAL COST SHARE.**—Section 7007 of the Water Resources Development Act of 2007 (121 Stat. 1277) is amended—

(1) in subsection (a), by inserting “, on, or after” after “before”;

(2) by striking subsection (d) and inserting the following:

“(d) **TREATMENT OF CREDIT BETWEEN PROJECTS.**—The value of any land, easements, rights-of-way, relocations, and dredged material disposal areas and the costs of planning, design, and construction work provided by the non-Federal interest that exceed the non-Federal cost share for a study or project under this title may be applied toward the non-Federal cost share for any other study or project carried out under this title.”; and

(3) by adding at the end the following:

“(g) DEFINITION OF STUDY OR PROJECT.—In this section, the term ‘study or project’ includes any eligible activity that is—

“(1) carried out pursuant to the coastal Louisiana ecosystem science and technology program authorized under section 7006(a); and

“(2) in accordance with the restoration plan.”.

(b) IMPLEMENTATION.—Not later than 90 days after the date of enactment of this Act, the Secretary, in coordination with any relevant agencies of the State of Louisiana, shall establish a process by which to carry out the amendment made by subsection (a)(2).

(c) EFFECTIVE DATE.—The amendments made by subsection (a) take effect on November 8, 2007.

SEC. 1020. TRANSFER OF EXCESS CREDIT.

(a) IN GENERAL.—Subject to subsection (b), the Secretary may apply credit for in-kind contributions provided by a non-Federal interest that are in excess of the required non-Federal cost share for a water resources development study or project toward the required non-Federal cost share for a different water resources development study or project.

(b) RESTRICTIONS.—

(1) IN GENERAL.—Except for subsection (a)(4)(D)(i) of that section, the requirements of section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b) (as amended by section 1018(a)) shall apply to any credit under this section.

(2) CONDITIONS.—Credit in excess of the non-Federal share for a study or project may be approved under this section only if—

(A) the non-Federal interest submits a comprehensive plan to the Secretary that identifies—

(i) the studies and projects for which the non-Federal interest intends to provide in-kind contributions for credit that are in excess of the non-Federal cost share for the study or project; and

(ii) the authorized studies and projects to which that excess credit would be applied;

(B) the Secretary approves the comprehensive plan; and

(C) the total amount of credit does not exceed the total non-Federal share for the studies and projects in the approved comprehensive plan.

(c) ADDITIONAL CRITERIA.—In evaluating a request to apply credit in excess of the non-Federal share for a study or project toward a different study or project, the Secretary shall consider whether applying that credit will—

(1) help to expedite the completion of a project or group of projects;

(2) reduce costs to the Federal Government; and

(3) aid the completion of a project that provides significant flood risk reduction or environmental benefits.

(d) TERMINATION OF AUTHORITY.—The authority provided in this section shall terminate 10 years after the date of enactment of this Act.

(e) REPORT.—

(1) DEADLINES.—

(A) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, and once every 2 years

thereafter, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available an interim report on the use of the authority under this section.

(B) FINAL REPORT.—Not later than 10 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a final report on the use of the authority under this section.

(2) INCLUSIONS.—The reports described in paragraph (1) shall include—

(A) a description of the use of the authority under this section during the reporting period;

(B) an assessment of the impact of the authority under this section on the time required to complete projects; and

(C) an assessment of the impact of the authority under this section on other water resources projects.

SEC. 1021. CREDITING AUTHORITY FOR FEDERALLY AUTHORIZED NAVIGATION PROJECTS.

A non-Federal interest may carry out operation and maintenance activities for an authorized navigation project, subject to the condition that the non-Federal interest complies with all Federal laws and regulations applicable to such operation and maintenance activities, and may receive credit for the costs incurred by the non-Federal interest in carrying out such activities towards the share of construction costs of that non-Federal interest for another element of the same project or another authorized navigation project, except that in no instance may such credit exceed 20 percent of the total costs associated with construction of the general navigation features of the project for which such credit may be applied pursuant to this section.

SEC. 1022. CREDIT IN LIEU OF REIMBURSEMENT.

(a) REQUESTS FOR CREDITS.—With respect to an authorized flood damage reduction project, or separable element thereof, that has been constructed by a non-Federal interest under section 211 of the Water Resources Development Act of 1996 (33 U.S.C. 701b-13) before the date of enactment of this Act, the Secretary may provide to the non-Federal interest, at the request of the non-Federal interest, a credit in an amount equal to the estimated Federal share of the cost of the project or separable element, in lieu of providing to the non-Federal interest a reimbursement in that amount.

(b) APPLICATION OF CREDITS.—At the request of the non-Federal interest, the Secretary may apply such credit to the share of the cost of the non-Federal interest of carrying out other flood damage reduction projects or studies.

SEC. 1023. ADDITIONAL CONTRIBUTIONS BY NON-FEDERAL INTERESTS.

Section 902 of the Water Resources Development Act of 1986 (33 U.S.C. 2280) is amended—

(1) by striking “In order to insure” and inserting “(a) IN GENERAL.—In order to insure”; and

(2) by adding at the end the following:

“(b) CONTRIBUTIONS BY NON-FEDERAL INTERESTS.—Notwithstanding subsection (a), in accordance with section 5 of the Act of June 22, 1936 (33 U.S.C. 701h), the Secretary may accept funds from a non-Federal interest for any authorized water resources development project that has exceeded its maximum cost under subsection (a), and use such funds to carry out such project, if the use of such funds does not increase the Federal share of the cost of such project.”.

SEC. 1024. AUTHORITY TO ACCEPT AND USE MATERIALS AND SERVICES.

(a) IN GENERAL.—Subject to subsection (b), the Secretary is authorized to accept and use materials and services contributed by a non-Federal public entity, a nonprofit entity, or a private entity for the purpose of repairing, restoring, or replacing a water resources development project that has been damaged or destroyed as a result of an emergency if the Secretary determines that the acceptance and use of such materials and services is in the public interest.

(b) LIMITATION.—Any entity that contributes materials or services under subsection (a) shall not be eligible for credit or reimbursement for the value of such materials or services.

(c) REPORT.—Not later than 60 days after initiating an activity under this section, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that includes—

(1) a description of the activities undertaken, including the costs associated with the activities; and

(2) a comprehensive description of how the activities are necessary for maintaining a safe and reliable water resources project.

SEC. 1025. WATER RESOURCES PROJECTS ON FEDERAL LAND.

(a) IN GENERAL.—Subject to subsection (b), the Secretary may carry out an authorized water resources development project on Federal land that is under the administrative jurisdiction of another Federal agency where the cost of the acquisition of such Federal land has been paid for by the non-Federal interest for the project.

(b) MOU REQUIRED.—The Secretary may carry out a project pursuant to subsection (a) only after the non-Federal interest has entered into a memorandum of understanding with the Federal agency that includes such terms and conditions as the Secretary determines to be necessary.

(c) APPLICABILITY.—Nothing in this section alters any non-Federal cost-sharing requirements for the project.

SEC. 1026. CLARIFICATION OF IMPACTS TO OTHER FEDERAL FACILITIES.

In any case where the modification or construction of a water resources development project carried out by the Secretary adversely impacts other Federal facilities, the Secretary may accept from other Federal agencies such funds as may be necessary to address the adverse impact, including by removing, relocating, or reconstructing those facilities.

SEC. 1027. CLARIFICATION OF MUNITION DISPOSAL AUTHORITIES.

(a) **IN GENERAL.**—The Secretary may implement any response action the Secretary determines to be necessary at a site where—

(1) the Secretary has carried out a project under civil works authority of the Secretary that includes placing sand on a beach; and

(2) as a result of the project described in paragraph (1), military munitions that were originally released as a result of Department of Defense activities are deposited on the beach, posing a threat to human health or the environment.

(b) **RESPONSE ACTION FUNDING.**—A response action described in subsection (a) shall be funded from amounts made available to the agency within the Department of Defense responsible for the original release of the munitions.

SEC. 1028. CLARIFICATION OF MITIGATION AUTHORITY.

(a) **IN GENERAL.**—The Secretary may carry out measures to improve fish species habitat within the boundaries and downstream of a water resources project constructed by the Secretary that includes a fish hatchery if the Secretary—

(1) has been explicitly authorized to compensate for fish losses associated with the project; and

(2) determines that the measures are—

(A) feasible;

(B) consistent with authorized project purposes and the fish hatchery; and

(C) in the public interest.

(b) **COST SHARING.**—

(1) **IN GENERAL.**—Subject to paragraph (2), the non-Federal interest shall contribute 35 percent of the total cost of carrying out activities under this section, including the costs relating to the provision or acquisition of required land, easements, rights-of-way, dredged material disposal areas, and relocations.

(2) **OPERATION AND MAINTENANCE.**—The non-Federal interest shall contribute 100 percent of the costs of operation, maintenance, replacement, repair, and rehabilitation of the measures carried out under this section.

SEC. 1029. CLARIFICATION OF INTERAGENCY SUPPORT AUTHORITIES.

Section 234 of the Water Resources Development Act of 1996 (33 U.S.C. 2323a) is amended—

(1) in subsection (a), by striking “other Federal agencies,” and inserting “Federal departments or agencies, nongovernmental organizations,”;

(2) in subsection (b), by inserting “or foreign governments” after “organizations”;

(3) in subsection (c), by inserting “and restoration” after “protection”; and

(4) in subsection (d)—

(A) in the first sentence, by striking “There is” and inserting “(1) **IN GENERAL.**—There is”; and

(B) in the second sentence—

(i) by striking “The Secretary” and inserting “(2) **ACCEPTANCE OF FUNDS.**—The Secretary”; and

(ii) by striking “other Federal agencies,” and inserting “Federal departments or agencies, nongovernmental organizations,”.

SEC. 1030. CONTINUING AUTHORITY.

(a) CONTINUING AUTHORITY PROGRAMS.—

(1) DEFINITION OF CONTINUING AUTHORITY PROGRAM PROJECT.—In this subsection, the term “continuing authority program” means 1 of the following authorities:

(A) Section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s).

(B) Section 111 of the River and Harbor Act of 1968 (33 U.S.C. 426i).

(C) Section 206 of the Water Resources Development Act of 1996 (33 U.S.C. 2330).

(D) Section 1135 of the Water Resources Development Act of 1986 (33 U.S.C. 2309a).

(E) Section 107 of the River and Harbor Act of 1960 (33 U.S.C. 577).

(F) Section 3 of the Act of August 13, 1946 (33 U.S.C. 426g).

(G) Section 14 of the Flood Control Act of 1946 (33 U.S.C. 701r).

(H) Section 103 of the River and Harbor Act of 1962 (Public Law 87–874; 76 Stat. 1178).

(I) Section 204(e) of the Water Resources Development Act of 1992 (33 U.S.C. 2326(e)).

(J) Section 208 of the Flood Control Act of 1958 (33 U.S.C. 701b–8a).

(K) Section 104(a) of the River and Harbor Act of 1958 (33 U.S.C. 610(a)).

(2) PRIORITIZATION.—Not later than 1 year after the date of enactment of this Act, the Secretary shall publish in the Federal Register and on a publicly available website, the criteria the Secretary uses for prioritizing annual funding for continuing authority program projects.

(3) ANNUAL REPORT.—Not later than 1 year after the date of enactment of this Act and each year thereafter, the Secretary shall publish in the Federal Register and on a publicly available website, a report on the status of each continuing authority program, which, at a minimum, shall include—

(A) the name and a short description of each active continuing authority program project;

(B) the cost estimate to complete each active project;

and

(C) the funding available in that fiscal year for each continuing authority program.

(4) CONGRESSIONAL NOTIFICATION.—On publication in the Federal Register under paragraphs (2) and (3), the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a copy of all information published under those paragraphs.

(b) SMALL RIVER AND HARBOR IMPROVEMENT PROJECTS.—Section 107 of the River and Harbor Act of 1960 (33 U.S.C. 577) is amended—

(1) in subsection (a), by striking “\$35,000,000” and inserting “\$50,000,000”; and

(2) in subsection (b), by striking “\$7,000,000” and inserting “\$10,000,000”.

(c) SHORE DAMAGE PREVENTION OR MITIGATION.—Section 111(c) of the River and Harbor Act of 1968 (33 U.S.C. 426i(c)) is amended by striking “\$5,000,000” and inserting “\$10,000,000”.

(d) REGIONAL SEDIMENT MANAGEMENT.—

(1) IN GENERAL.—Section 204 of the Water Resources Development Act of 1992 (33 U.S.C. 2326) is amended—

(A) in subsection (c)(1)(C), by striking “\$5,000,000” and inserting “\$10,000,000”; and

(B) in subsection (g), by striking “\$30,000,000” and inserting “\$50,000,000”.

(2) APPLICABILITY.—Section 2037 of the Water Resources Development Act of 2007 (121 Stat. 1094) is amended by adding at the end the following:

“(c) APPLICABILITY.—The amendment made by subsection (a) shall not apply to any project authorized under this Act if a report of the Chief of Engineers for the project was completed prior to the date of enactment of this Act.”.

(e) SMALL FLOOD CONTROL PROJECTS.—Section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s) is amended in the third sentence by striking “\$7,000,000” and inserting “\$10,000,000”.

(f) PROJECT MODIFICATIONS FOR IMPROVEMENT OF ENVIRONMENT.—Section 1135(d) of the Water Resources Development Act of 1986 (33 U.S.C. 2309a(d)) is amended—

(1) in the second sentence, by striking “Not more than 80 percent of the non-Federal share may be” and inserting “The non-Federal share may be provided”; and

(2) in the third sentence, by striking “\$5,000,000” and inserting “\$10,000,000”.

(g) AQUATIC ECOSYSTEM RESTORATION.—Section 206(d) of the Water Resources Development Act of 1996 (33 U.S.C. 2330(d)) is amended by striking “\$5,000,000” and inserting “\$10,000,000”.

(h) FLOODPLAIN MANAGEMENT SERVICES.—Section 206(d) of the Flood Control Act of 1960 (33 U.S.C. 709a(d)) is amended by striking “\$15,000,000” and inserting “\$50,000,000”.

(i) EMERGENCY STREAMBANK AND SHORELINE PROTECTION.—Section 14 of the Flood Control Act of 1946 (33 U.S.C. 701r) is amended—

(1) by striking “\$15,000,000” and inserting “\$20,000,000”;

and

(2) by striking “\$1,500,000” and inserting “\$5,000,000”.

SEC. 1031. TRIBAL PARTNERSHIP PROGRAM.

(a) IN GENERAL.—Section 203 of the Water Resources Development Act of 2000 (33 U.S.C. 2269) is amended—

(1) in subsection (d)(1)(B)—

(A) by striking “The ability” and inserting the following:

“(i) IN GENERAL.—The ability”; and

(B) by adding at the end the following:

“(ii) DETERMINATION.—Not later than 180 days after the date of enactment of this clause, the Secretary shall issue guidance on the procedures described in clause (i).”; and

(2) by striking subsection (e) and inserting the following:

“(e) RESTRICTIONS.—The Secretary is authorized to carry out activities under this section for fiscal years 2015 through 2024.”.

(b) COOPERATIVE AGREEMENTS WITH INDIAN TRIBES.—The Secretary may enter into a cooperative agreement with an Indian tribe (or a designated representative of an Indian tribe) to carry out authorized activities of the Corps of Engineers to protect fish, wildlife, water quality, and cultural resources.

SEC. 1032. TERRITORIES OF THE UNITED STATES.

Section 1156 of the Water Resources Development Act of 1986 (33 U.S.C. 2310) is amended—

(1) by striking “The Secretary shall waive” and inserting “(a) IN GENERAL.—The Secretary shall waive”;

(2) in subsection (a) (as so designated), by inserting “Puerto Rico,” before “and the Trust Territory of the Pacific Islands”; and

(3) by adding at the end the following:

“(b) INFLATION ADJUSTMENT.—The Secretary shall adjust the dollar amount specified in subsection (a) for inflation for the period beginning on November 17, 1986, and ending on the date of enactment of this subsection.”.

SEC. 1033. CORROSION PREVENTION.

(a) IN GENERAL.—To the greatest extent practicable, the Secretary shall encourage and incorporate corrosion prevention activities at water resources development projects.

(b) ACTIVITIES.—In carrying out subsection (a), the Secretary, to the greatest extent practicable, shall ensure that contractors performing work for water resources development projects—

(1) use best practices to carry out corrosion prevention activities in the field;

(2) use industry-recognized standards and corrosion mitigation and prevention methods when—

(A) determining protective coatings;

(B) selecting materials; and

(C) determining methods of cathodic protection, design, and engineering for corrosion prevention;

(3) use certified coating application specialists and cathodic protection technicians and engineers;

(4) use best practices in environmental protection to prevent environmental degradation and to ensure careful handling of all hazardous materials;

(5) demonstrate a history of employing industry-certified inspectors to ensure adherence to best practices and standards; and

(6) demonstrate a history of compliance with applicable requirements of the Occupational Safety and Health Administration.

(c) CORROSION PREVENTION ACTIVITIES DEFINED.—In this section, the term “corrosion prevention activities” means—

(1) the application and inspection of protective coatings for complex work involving steel and cementitious structures, including structures that will be exposed in immersion;

(2) the installation, testing, and inspection of cathodic protection systems; and

(3) any other activities related to corrosion prevention the Secretary determines appropriate.

SEC. 1034. ADVANCED MODELING TECHNOLOGIES.

(a) **IN GENERAL.**—To the greatest extent practicable, the Secretary shall encourage and incorporate advanced modeling technologies, including 3-dimensional digital modeling, that can expedite project delivery or improve the evaluation of water resources development projects that receive Federal funding by—

- (1) accelerating and improving the environmental review process;
- (2) increasing effective public participation;
- (3) enhancing the detail and accuracy of project designs;
- (4) increasing safety;
- (5) accelerating construction and reducing construction costs; or
- (6) otherwise achieving the purposes described in paragraphs (1) through (5).

(b) **ACTIVITIES.**—In carrying out subsection (a), the Secretary, to the greatest extent practicable, shall—

- (1) compile information related to advanced modeling technologies, including industry best practices with respect to the use of the technologies;
- (2) disseminate to non-Federal interests the information described in paragraph (1); and
- (3) promote the use of advanced modeling technologies.

SEC. 1035. RECREATIONAL ACCESS.

(a) **DEFINITION OF FLOATING CABIN.**—In this section, the term “floating cabin” means a vessel (as defined in section 3 of title 1, United States Code) that has overnight accommodations.

(b) **RECREATIONAL ACCESS.**—The Secretary shall allow the use of a floating cabin on waters under the jurisdiction of the Secretary in the Cumberland River basin if—

- (1) the floating cabin—
 - (A) is in compliance with regulations for recreational vessels issued under chapter 43 of title 46, United States Code, and section 312 of the Federal Water Pollution Control Act (33 U.S.C. 1322);
 - (B) is located at a marina leased by the Corps of Engineers; and
 - (C) is maintained by the owner to required health and safety standards; and
- (2) the Secretary has authorized the use of recreational vessels on such waters.

SEC. 1036. NON-FEDERAL PLANS TO PROVIDE ADDITIONAL FLOOD RISK REDUCTION.

(a) **IN GENERAL.**—If requested by a non-Federal interest, the Secretary shall carry out a locally preferred plan that provides a higher level of protection than a flood risk management project authorized under this Act if the Secretary determines that—

- (1) the plan is technically feasible and environmentally acceptable; and
- (2) the benefits of the plan exceed the costs of the plan.

(b) **NON-FEDERAL COST SHARE.**—If the Secretary carries out a locally preferred plan under subsection (a), the Federal share of the cost of the project shall be not greater than the share as provided by law for elements of the national economic development plan.

SEC. 1037. HURRICANE AND STORM DAMAGE REDUCTION.

(a) **IN GENERAL.**—Section 156 of the Water Resources Development Act of 1976 (42 U.S.C. 1962d–5f) is amended—

(1) by striking “The Secretary” and inserting the following:

“(a) **IN GENERAL.**—The Secretary”; and

(2) by adding at the end the following:

“(b) **REVIEW.**—Notwithstanding subsection (a), the Secretary shall, at the request of the non-Federal interest, carry out a study to determine the feasibility of extending the period of nourishment described in subsection (a) for a period not to exceed 15 additional years beyond the maximum period described in subsection (a).

“(c) **PLAN FOR REDUCING RISK TO PEOPLE AND PROPERTY.**—

“(1) **IN GENERAL.**—As part of the review described in subsection (b), the non-Federal interest shall submit to the Secretary a plan for reducing risk to people and property during the life of the project.

“(2) **INCLUSION OF PLAN IN RECOMMENDATION TO CONGRESS.**—The Secretary shall include the plan described in subsection (a) in the recommendations to Congress described in subsection (d).

“(d) **REPORT TO CONGRESS.**—Upon completion of the review described in subsection (b), the Secretary shall—

“(1) submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives any recommendations of the Secretary related to the review; and

“(2) include in the subsequent annual report to Congress required under section 7001 of the Water Resources Reform and Development Act of 2014, any recommendations that require specific congressional authorization.

“(e) **SPECIAL RULE.**—Notwithstanding any other provision of this section, for any existing authorized water resources development project for which the maximum period for nourishment described in subsection (a) will expire within the 5 year-period beginning on the date of enactment of the Water Resources Reform and Development Act of 2014, that project shall remain eligible for nourishment for an additional 3 years after the expiration of such period.”.

(b) **REVIEW OF AUTHORIZED PERIODIC NOURISHMENT AUTHORITY.**—

(1) **IN GENERAL.**—Not later than 90 days after the date of enactment of this Act, the Secretary shall initiate a review of all authorized water resources development projects for which the Secretary is authorized to provide periodic nourishment under section 156 of the Water Resources Development Act of 1976 (42 U.S.C. 1962d–5f).

(2) **SCOPE OF REVIEW.**—In carrying out the review under paragraph (1), the Secretary shall assess the Federal costs associated with that nourishment authority and the projected benefits of each project.

(3) **REPORT TO CONGRESS.**—Upon completion of the review under paragraph (1), the Secretary shall issue to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report on the results of that review, including any proposed changes the Secretary may recommend to the nourishment authority.

SEC. 1038. REDUCTION OF FEDERAL COSTS FOR HURRICANE AND STORM DAMAGE REDUCTION PROJECTS.

Section 204 of the Water Resources Development Act of 1992 (33 U.S.C. 2326) (as amended by section 1030(d)(1)) is amended—

(1) in subsection (a)—

(A) in paragraph (1), by inserting “or used in” after “obtained through”;

(B) in paragraph (3)(C), by inserting “for the purposes of improving environmental conditions in marsh and littoral systems, stabilizing stream channels, enhancing shorelines, and supporting State and local risk management adaptation strategies” before the period at the end; and

(C) by adding at the end the following:

“(4) REDUCING COSTS.—To reduce or avoid Federal costs, the Secretary shall consider the beneficial use of dredged material in a manner that contributes to the maintenance of sediment resources in the nearby coastal system.”;

(2) in subsection (d)—

(A) by striking the subsection designation and heading and inserting the following:

“(d) SELECTION OF DREDGED MATERIAL DISPOSAL METHOD FOR PURPOSES RELATED TO ENVIRONMENTAL RESTORATION OR STORM DAMAGE AND FLOOD REDUCTION.—”; and

(B) in paragraph (1), by striking “in relation to” and all that follows through the period at the end and inserting “in relation to—

“(A) the environmental benefits, including the benefits to the aquatic environment to be derived from the creation of wetlands and control of shoreline erosion; or

“(B) the flood and storm damage and flood reduction benefits, including shoreline protection, protection against loss of life, and damage to improved property.”; and

(3) in subsection (e), by striking paragraph (1) and inserting the following:

“(1) cooperate with any State or group of States in the preparation of a comprehensive State or regional sediment management plan within the boundaries of the State or among States;”.

SEC. 1039. INVASIVE SPECIES.

(a) AQUATIC SPECIES REVIEW.—

(1) REVIEW OF AUTHORITIES.—The Secretary, in consultation with the Director of the United States Fish and Wildlife Service, the Chairman of the Tennessee Valley Authority, and other applicable heads of Federal agencies, shall—

(A) carry out a review of existing Federal authorities relating to responding to invasive species, including aquatic weeds, aquatic snails, and other aquatic invasive species, that have an impact on water resources; and

(B) based on the review under subparagraph (A), make any recommendations to Congress and applicable State agencies for improving Federal and State laws to more effectively respond to the threats posed by those invasive species.

(2) FEDERAL INVESTMENT.—

(A) ASSESSMENT.—The Comptroller General of the United States shall conduct an assessment of the Federal costs of, and spending on, aquatic invasive species.

(B) CONTENTS.—The assessment conducted under subparagraph (A) shall include—

(i) identification of current Federal spending on, and projected future Federal costs of, operation and maintenance related to mitigating the impacts of aquatic invasive species on federally owned or operated facilities;

(ii) identification of current Federal spending on aquatic invasive species prevention;

(iii) analysis of whether spending identified in clause (ii) is adequate for the maintenance and protection of services provided by federally owned or operated facilities, based on the current spending and projected future costs identified in clause (i); and

(iv) review of any other aspect of aquatic invasive species prevention or mitigation determined appropriate by the Comptroller General.

(C) FINDINGS.—Not later than 1 year after the date of enactment of this Act, the Comptroller General shall submit to the Committee on Environment and Public Works and the Committee on Energy and Natural Resources of the Senate and the Committee on Transportation and Infrastructure and the Committee on Natural Resources of the House of Representatives a report containing the findings of the assessment conducted under subparagraph (A).

(b) AQUATIC INVASIVE SPECIES PREVENTION.—

(1) MULTIAGENCY EFFORT TO SLOW THE SPREAD OF ASIAN CARP IN THE UPPER MISSISSIPPI AND OHIO RIVER BASINS AND TRIBUTARIES.—

(A) IN GENERAL.—The Director of the United States Fish and Wildlife Service, in coordination with the Secretary, the Director of the National Park Service, and the Director of the United States Geological Survey, shall lead a multiagency effort to slow the spread of Asian carp in the Upper Mississippi and Ohio River basins and tributaries by providing technical assistance, coordination, best practices, and support to State and local governments in carrying out activities designed to slow, and eventually eliminate, the threat posed by Asian carp.

(B) BEST PRACTICES.—To the maximum extent practicable, the multiagency effort shall apply lessons learned and best practices such as those described in the document prepared by the Asian Carp Working Group entitled “Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States” and dated November 2007, and the document prepared by the Asian Carp Regional Coordinating Committee entitled “FY 2012 Asian Carp Control Strategy Framework” and dated February 2012.

(2) REPORT TO CONGRESS.—

(A) IN GENERAL.—Not later than December 31 of each year, the Director of the United States Fish and Wildlife Service, in coordination with the Secretary, shall submit to the Committee on Appropriations and the Committee

on Environment and Public Works of the Senate and the Committee on Appropriations, the Committee on Natural Resources, and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report describing the coordinated strategies established and progress made toward the goals of controlling and eliminating Asian carp in the Upper Mississippi and Ohio River basins and tributaries.

(B) CONTENTS.—Each report submitted under subparagraph (A) shall include—

(i) any observed changes in the range of Asian carp in the Upper Mississippi and Ohio River basins and tributaries during the 2-year period preceding submission of the report;

(ii) a summary of Federal agency efforts, including cooperative efforts with non-Federal partners, to control the spread of Asian carp in the Upper Mississippi and Ohio River basins and tributaries;

(iii) any research that the Director determines could improve the ability to control the spread of Asian carp;

(iv) any quantitative measures that the Director intends to use to document progress in controlling the spread of Asian carp; and

(v) a cross-cut accounting of Federal and non-Federal expenditures to control the spread of Asian carp.

(c) PREVENTION, GREAT LAKES AND MISSISSIPPI RIVER BASIN.—

(1) IN GENERAL.—The Secretary is authorized to implement measures recommended in the efficacy study authorized under section 3061 of the Water Resources Development Act of 2007 (121 Stat. 1121) or in interim reports, with any modifications or any emergency measures that the Secretary determines to be appropriate to prevent aquatic nuisance species from dispersing into the Great Lakes by way of any hydrologic connection between the Great Lakes and the Mississippi River Basin.

(2) NOTIFICATIONS.—The Secretary shall notify the Committees on Environment and Public Works and Appropriations of the Senate and the Committees on Transportation and Infrastructure and Appropriations of the House of Representatives any emergency actions taken pursuant to this subsection.

(d) PREVENTION AND MANAGEMENT.—Section 104 of the River and Harbor Act of 1958 (33 U.S.C. 610) is amended—

(1) in subsection (a)—

(A) in the first sentence, by striking “There is” and inserting the following:

“(1) IN GENERAL.—There is”;

(B) in the second sentence, by striking “Local” and inserting the following:

“(2) LOCAL INTERESTS.—Local”;

(C) in the third sentence, by striking “Costs” and inserting the following:

“(3) FEDERAL COSTS.—Costs”; and

(D) in paragraph (1) (as designated by subparagraph (A))—

(i) by striking “control and progressive,” and inserting “prevention, control, and progressive”; and

- (ii) by inserting “and aquatic invasive species” after “noxious aquatic plant growths”;
- (2) in subsection (b), in the first sentence, by striking “\$15,000,000 annually” and inserting “\$40,000,000, of which \$20,000,000 shall be made available to implement subsection (d), annually”; and
- (3) by inserting after subsection (c) the following:
 - “(d) WATERCRAFT INSPECTION STATIONS.—
 - “(1) IN GENERAL.—In carrying out this section, the Secretary may establish watercraft inspection stations in the Columbia River Basin to be located in the States of Idaho, Montana, Oregon, and Washington at locations, as determined by the Secretary, with the highest likelihood of preventing the spread of aquatic invasive species at reservoirs operated and maintained by the Secretary.
 - “(2) COST SHARE.—The non-Federal share of the cost of constructing, operating, and maintaining watercraft inspection stations described in paragraph (1) (including personnel costs) shall be—
 - “(A) 50 percent; and
 - “(B) provided by the State or local governmental entity in which such inspection station is located.
 - “(3) COORDINATION.—In carrying out this subsection, the Secretary shall consult and coordinate with—
 - “(A) the States described in paragraph (1);
 - “(B) Indian tribes; and
 - “(C) other Federal agencies, including—
 - “(i) the Department of Agriculture;
 - “(ii) the Department of Energy;
 - “(iii) the Department of Homeland Security;
 - “(iv) the Department of Commerce; and
 - “(v) the Department of the Interior.
 - “(e) MONITORING AND CONTINGENCY PLANNING.—In carrying out this section, the Secretary may—
 - “(1) carry out risk assessments of water resources facilities;
 - “(2) monitor for aquatic invasive species;
 - “(3) establish watershed-wide plans for expedited response to an infestation of aquatic invasive species; and
 - “(4) monitor water quality, including sediment cores and fish tissue samples.”.

SEC. 1040. FISH AND WILDLIFE MITIGATION.

- (a) IN GENERAL.—Section 906 of the Water Resources Development Act of 1986 (33 U.S.C. 2283) is amended—
 - (1) in subsection (d)—
 - (A) in paragraph (1)—
 - (i) in the first sentence—
 - (I) by inserting “for damages to ecological resources, including terrestrial and aquatic resources, and” after “mitigate”;
 - (II) by inserting “ecological resources and” after “impact on”; and
 - (III) by inserting “without the implementation of mitigation measures” before the period; and
 - (ii) by inserting before the last sentence the following: “If the Secretary determines that mitigation to in-kind conditions is not possible, the Secretary shall

identify in the report the basis for that determination and the mitigation measures that will be implemented to meet the requirements of this section and the goals of section 307(a)(1) of the Water Resources Development Act of 1990 (33 U.S.C. 2317(a)(1)).”;

(B) in paragraph (2)—

(i) in the heading, by striking “DESIGN” and inserting “SELECTION AND DESIGN”;

(ii) by inserting “select and” after “shall”; and

(iii) by inserting “using a watershed approach” after “projects”; and

(C) in paragraph (3)—

(i) in subparagraph (A), by inserting “, at a minimum,” after “complies with”; and

(ii) in subparagraph (B)—

(I) by striking clause (iii);

(II) by redesignating clauses (iv) and (v) as clauses (v) and (vi), respectively; and

(III) by inserting after clause (ii) the following:

“(iii) for projects where mitigation will be carried out by the Secretary—

“(I) a description of the land and interest in land to be acquired for the mitigation plan;

“(II) the basis for a determination that the land and interests are available for acquisition; and

“(III) a determination that the proposed interest sought does not exceed the minimum interest in land necessary to meet the mitigation requirements for the project;

“(iv) for projects where mitigation will be carried out through a third party mitigation arrangement in accordance with subsection (i)—

“(I) a description of the third party mitigation instrument to be used; and

“(II) the basis for a determination that the mitigation instrument can meet the mitigation requirements for the project;”;

(2) by adding at the end the following:

“(h) PROGRAMMATIC MITIGATION PLANS.—

“(1) IN GENERAL.—The Secretary may develop programmatic mitigation plans to address the potential impacts to ecological resources, fish, and wildlife associated with existing or future Federal water resources development projects.

“(2) USE OF MITIGATION PLANS.—The Secretary shall, to the maximum extent practicable, use programmatic mitigation plans developed in accordance with this subsection to guide the development of a mitigation plan under subsection (d).

“(3) NON-FEDERAL PLANS.—The Secretary shall, to the maximum extent practicable and subject to all conditions of this subsection, use programmatic environmental plans developed by a State, a body politic of the State, which derives its powers from a State constitution, a government entity created by State legislation, or a local government, that meet the requirements of this subsection to address the potential environmental impacts of existing or future water resources development projects.

“(4) SCOPE.—A programmatic mitigation plan developed by the Secretary or an entity described in paragraph (3) to address potential impacts of existing or future water resources development projects shall, to the maximum extent practicable—

“(A) be developed on a regional, ecosystem, watershed, or statewide scale;

“(B) include specific goals for aquatic resource and fish and wildlife habitat restoration, establishment, enhancement, or preservation;

“(C) identify priority areas for aquatic resource and fish and wildlife habitat protection or restoration;

“(D) encompass multiple environmental resources within a defined geographical area or focus on a specific resource, such as aquatic resources or wildlife habitat; and

“(E) address impacts from all projects in a defined geographical area or focus on a specific type of project.

“(5) CONSULTATION.—The scope of the plan shall be determined by the Secretary or an entity described in paragraph (3), as appropriate, in consultation with the agency with jurisdiction over the resources being addressed in the environmental mitigation plan.

“(6) CONTENTS.—A programmatic environmental mitigation plan may include—

“(A) an assessment of the condition of environmental resources in the geographical area covered by the plan, including an assessment of recent trends and any potential threats to those resources;

“(B) an assessment of potential opportunities to improve the overall quality of environmental resources in the geographical area covered by the plan through strategic mitigation for impacts of water resources development projects;

“(C) standard measures for mitigating certain types of impacts;

“(D) parameters for determining appropriate mitigation for certain types of impacts, such as mitigation ratios or criteria for determining appropriate mitigation sites;

“(E) adaptive management procedures, such as protocols that involve monitoring predicted impacts over time and adjusting mitigation measures in response to information gathered through the monitoring;

“(F) acknowledgment of specific statutory or regulatory requirements that must be satisfied when determining appropriate mitigation for certain types of resources; and

“(G) any offsetting benefits of self-mitigating projects, such as ecosystem or resource restoration and protection.

“(7) PROCESS.—Before adopting a programmatic environmental mitigation plan for use under this subsection, the Secretary shall—

“(A) for a plan developed by the Secretary—

“(i) make a draft of the plan available for review and comment by applicable environmental resource agencies and the public; and

“(ii) consider any comments received from those agencies and the public on the draft plan; and

“(B) for a plan developed under paragraph (3), determine, not later than 180 days after receiving the plan, whether the plan meets the requirements of paragraphs (4) through (6) and was made available for public comment.

“(8) INTEGRATION WITH OTHER PLANS.—A programmatic environmental mitigation plan may be integrated with other plans, including watershed plans, ecosystem plans, species recovery plans, growth management plans, and land use plans.

“(9) CONSIDERATION IN PROJECT DEVELOPMENT AND PERMITTING.—If a programmatic environmental mitigation plan has been developed under this subsection, any Federal agency responsible for environmental reviews, permits, or approvals for a water resources development project may use the recommendations in that programmatic environmental mitigation plan when carrying out the responsibilities of the agency under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

“(10) PRESERVATION OF EXISTING AUTHORITIES.—Nothing in this subsection limits the use of programmatic approaches to reviews under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.).

“(11) MITIGATION FOR EXISTING PROJECTS.—Nothing in this subsection requires the Secretary to undertake additional mitigation for existing projects for which mitigation has already been initiated.

“(i) THIRD-PARTY MITIGATION ARRANGEMENTS.—

“(1) ELIGIBLE ACTIVITIES.—In accordance with all applicable Federal laws (including regulations), mitigation efforts carried out under this section may include—

“(A) participation in mitigation banking or other third-party mitigation arrangements, such as—

“(i) the purchase of credits from commercial or State, regional, or local agency-sponsored mitigation banks; and

“(ii) the purchase of credits from in-lieu fee mitigation programs; and

“(B) contributions to statewide and regional efforts to conserve, restore, enhance, and create natural habitats and wetlands if the Secretary determines that the contributions will ensure that the mitigation requirements of this section and the goals of section 307(a)(1) of the Water Resources Development Act of 1990 (33 U.S.C. 2317(a)(1)) will be met.

“(2) INCLUSION OF OTHER ACTIVITIES.—The banks, programs, and efforts described in paragraph (1) include any banks, programs, and efforts developed in accordance with applicable law (including regulations).

“(3) TERMS AND CONDITIONS.—In carrying out natural habitat and wetlands mitigation efforts under this section, contributions to the mitigation effort may—

“(A) take place concurrent with, or in advance of, the commitment of funding to a project; and

“(B) occur in advance of project construction only if the efforts are consistent with all applicable requirements of Federal law (including regulations) and water resources development planning processes.

“(4) PREFERENCE.—At the request of the non-Federal project sponsor, preference may be given, to the maximum extent practicable, to mitigating an environmental impact through the use of a mitigation bank, in-lieu fee, or other third-party mitigation arrangement, if the use of credits from the mitigation bank or in-lieu fee, or the other third-party mitigation arrangement for the project has been approved by the applicable Federal agency.”.

(b) APPLICATION.—The amendments made by subsection (a) shall not apply to a project for which a mitigation plan has been completed as of the date of enactment of this Act.

(c) TECHNICAL ASSISTANCE.—

(1) IN GENERAL.—The Secretary may provide technical assistance to States and local governments to establish third-party mitigation instruments, including mitigation banks and in-lieu fee programs, that will help to target mitigation payments to high-priority ecosystem restoration actions.

(2) REQUIREMENTS.—In providing technical assistance under this subsection, the Secretary shall give priority to States and local governments that have developed State, regional, or watershed-based plans identifying priority restoration actions.

(3) MITIGATION INSTRUMENTS.—The Secretary shall seek to ensure any technical assistance provided under this subsection will support the establishment of mitigation instruments that will result in restoration of high-priority areas identified in the plans under paragraph (2).

SEC. 1041. MITIGATION STATUS REPORT.

Section 2036(b) of the Water Resources Development Act of 2007 (33 U.S.C. 2283a) is amended—

(1) by redesignating paragraph (3) as paragraph (4); and

(2) by inserting after paragraph (2) the following:

“(3) INFORMATION INCLUDED.—In reporting the status of all projects included in the report, the Secretary shall—

“(A) use a uniform methodology for determining the status of all projects included in the report;

“(B) use a methodology that describes both a qualitative and quantitative status for all projects in the report; and

“(C) provide specific dates for participation in the consultations required under section 906(d)(4)(B) of the Water Resources Development Act of 1986 (33 U.S.C. 2283(d)(4)(B)).”.

SEC. 1042. REPORTS TO CONGRESS.

(a) IN GENERAL.—Subject to the availability of appropriations, the Secretary shall complete and submit to Congress by the applicable date required the reports that address public safety and enhanced local participation in project delivery described in subsection (b).

(b) REPORTS.—The reports referred to in subsection (a) are the reports required under—

(1) subparagraphs (A) and (B) of section 1043(a)(5);

(2) section 1046(a)(2)(B);

(3) section 210(e)(3) of the Water Resources Development Act of 1986 (33 U.S.C. 2238(e)(3)) (as amended by section 2102(a)); and

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(4) section 7001.

(c) FAILURE TO PROVIDE A COMPLETED REPORT.—

(1) IN GENERAL.—Subject to subsection (d), if the Secretary fails to provide a report listed under subsection (b) by the date that is 180 days after the applicable date required for that report, \$5,000 shall be reprogrammed from the General Expenses account of the civil works program of the Army Corps of Engineers into the account of the division of the Army Corps of Engineers with responsibility for completing that report.

(2) SUBSEQUENT REPROGRAMMING.—Subject to subsection (d), for each additional week after the date described in paragraph (1) in which a report described in that paragraph remains uncompleted and unsubmitted to Congress, \$5,000 shall be reprogrammed from the General Expenses account of the civil works program of the Army Corps of Engineers into the account of the division of the Secretary of the Army with responsibility for completing that report.

(d) LIMITATIONS.—

(1) IN GENERAL.—For each report, the total amounts reprogrammed under subsection (c) shall not exceed, in any fiscal year, \$50,000.

(2) AGGREGATE LIMITATION.—The total amount reprogrammed under subsection (c) in a fiscal year shall not exceed \$200,000.

(e) NO FAULT OF THE SECRETARY.—Amounts shall not be reprogrammed under subsection (c) if the Secretary certifies in a letter to the applicable committees of Congress that—

(1) a major modification has been made to the content of the report that requires additional analysis for the Secretary to make a final decision on the report;

(2) amounts have not been appropriated to the agency under this Act or any other Act to carry out the report; or

(3) additional information is required from an entity other than the Corps of Engineers and is not available in a timely manner to complete the report by the deadline.

(f) LIMITATION.—The Secretary shall not reprogram funds to the General Expenses account of the civil works program of the Corps of Engineers for the loss of the funds.

SEC. 1043. NON-FEDERAL IMPLEMENTATION PILOT PROGRAM.

(a) NON-FEDERAL IMPLEMENTATION OF FEASIBILITY STUDIES.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary shall establish and implement a pilot program to evaluate the cost-effectiveness and project delivery efficiency of allowing non-Federal interests to carry out feasibility studies for flood risk management, hurricane and storm damage reduction, aquatic ecosystem restoration, and coastal harbor and channel and inland navigation.

(2) PURPOSES.—The purposes of the pilot program are—

(A) to identify project delivery and cost-saving alternatives to the existing feasibility study process;

(B) to evaluate the technical, financial, and organizational efficiencies of a non-Federal interest carrying out a feasibility study of 1 or more projects; and

(C) to evaluate alternatives for the decentralization of the project planning, management, and operational decisionmaking process of the Corps of Engineers.

(3) ADMINISTRATION.—

(A) IN GENERAL.—On the request of a non-Federal interest, the Secretary may enter into an agreement with the non-Federal interest for the non-Federal interest to provide full project management control of a feasibility study for a project for—

- (i) flood risk management;
- (ii) hurricane and storm damage reduction, including levees, floodwalls, flood control channels, and water control structures;
- (iii) coastal harbor and channel and inland navigation; and
- (iv) aquatic ecosystem restoration.

(B) USE OF NON-FEDERAL FUNDS.—

(i) IN GENERAL.—A non-Federal interest that has entered into an agreement with the Secretary pursuant to subparagraph (A) may use non-Federal funds to carry out the feasibility study.

(ii) CREDIT.—The Secretary shall credit towards the non-Federal share of the cost of construction of a project for which a feasibility study is carried out under this subsection an amount equal to the portion of the cost of developing the study that would have been the responsibility of the Secretary, if the study were carried out by the Secretary, subject to the conditions that—

- (I) non-Federal funds were used to carry out the activities that would have been the responsibility of the Secretary;
- (II) the Secretary determines that the feasibility study complies with all applicable Federal laws and regulations; and
- (III) the project is authorized by any provision of Federal law enacted after the date on which an agreement is entered into under subparagraph (A).

(C) TRANSFER OF FUNDS.—

(i) IN GENERAL.—After the date on which an agreement is executed pursuant to subparagraph (A), the Secretary may transfer to the non-Federal interest to carry out the feasibility study—

(I) if applicable, the balance of any unobligated amounts appropriated for the study, except that the Secretary shall retain sufficient amounts for the Corps of Engineers to carry out any responsibilities of the Corps of Engineers relating to the project and pilot program; and

(II) additional amounts, as determined by the Secretary, from amounts made available under paragraph (8), except that the total amount transferred to the non-Federal interest shall not exceed the updated estimate of the Federal share of the cost of the feasibility study.

(ii) ADMINISTRATION.—The Secretary shall include such provisions as the Secretary determines to be necessary in an agreement under subparagraph (A) to ensure that a non-Federal interest receiving Federal funds under this paragraph—

(I) has the necessary qualifications to administer those funds; and

(II) will comply with all applicable Federal laws (including regulations) relating to the use of those funds.

(D) NOTIFICATION.—The Secretary shall notify the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives on the initiation of each feasibility study under the pilot program.

(E) AUDITING.—The Secretary shall regularly monitor and audit each feasibility study carried out by a non-Federal interest under this section to ensure that the use of any funds transferred under subparagraph (C) are used in compliance with the agreement signed under subparagraph (A).

(F) TECHNICAL ASSISTANCE.—On the request of a non-Federal interest, the Secretary may provide technical assistance to the non-Federal interest relating to any aspect of the feasibility study, if the non-Federal interest contracts with the Secretary for the technical assistance and compensates the Secretary for the technical assistance.

(G) DETAILED PROJECT SCHEDULE.—Not later than 180 days after entering into an agreement under subparagraph (A), each non-Federal interest, to the maximum extent practicable, shall submit to the Secretary a detailed project schedule, based on full funding capability, that lists all deadlines for milestones relating to the feasibility study.

(4) COST SHARE.—Nothing in this subsection affects the cost-sharing requirement applicable on the day before the date of enactment of this Act to a feasibility study carried out under this subsection.

(5) REPORT.—

(A) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report detailing the results of the pilot program carried out under this section, including—

(i) a description of the progress of the non-Federal interests in meeting milestones in detailed project schedules developed pursuant to paragraph (3)(G); and

(ii) any recommendations of the Secretary concerning whether the program or any component of the program should be implemented on a national basis.

(B) UPDATE.—Not later than 5 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the

Senate and the Committee on Transportation and Infrastructure of the House of Representatives an update of the report described in subparagraph (A).

(C) FAILURE TO MEET DEADLINE.—If the Secretary fails to submit a report by the required deadline under this paragraph, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a detailed explanation of why the deadline was missed and a projected date for submission of the report.

(6) ADMINISTRATION.—All laws and regulations that would apply to the Secretary if the Secretary were carrying out the feasibility study shall apply to a non-Federal interest carrying out a feasibility study under this subsection.

(7) TERMINATION OF AUTHORITY.—The authority to commence a feasibility study under this subsection terminates on the date that is 5 years after the date of enactment of this Act.

(8) AUTHORIZATION OF APPROPRIATIONS.—In addition to any amounts appropriated for a specific project, there is authorized to be appropriated to the Secretary to carry out the pilot program under this subsection, including the costs of administration of the Secretary, \$25,000,000 for each of fiscal years 2015 through 2019.

(b) NON-FEDERAL PROJECT IMPLEMENTATION PILOT PROGRAM.—

(1) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary shall establish and implement a pilot program to evaluate the cost-effectiveness and project delivery efficiency of allowing non-Federal interests to carry out flood risk management, hurricane and storm damage reduction, coastal harbor and channel inland navigation, and aquatic ecosystem restoration projects.

(2) PURPOSES.—The purposes of the pilot program are—

(A) to identify project delivery and cost-saving alternatives that reduce the backlog of authorized Corps of Engineers projects;

(B) to evaluate the technical, financial, and organizational efficiencies of a non-Federal interest carrying out the design, execution, management, and construction of 1 or more projects; and

(C) to evaluate alternatives for the decentralization of the project management, design, and construction for authorized Corps of Engineers water resources projects.

(3) ADMINISTRATION.—

(A) IN GENERAL.—In carrying out the pilot program, the Secretary shall—

(i) identify a total of not more than 15 projects for flood risk management, hurricane and storm damage reduction (including levees, floodwalls, flood control channels, and water control structures), coastal harbor and channels, inland navigation, and aquatic ecosystem restoration that have been authorized for construction prior to the date of enactment of this Act, including—

(I) not more than 12 projects that—

(aa)(AA) have received Federal funds prior to the date of enactment of this Act; or

(BB) for more than 2 consecutive fiscal years, have an unobligated funding balance for that project in the Corps of Engineers construction account; and

(bb) to the maximum extent practicable, are located in each of the divisions of the Corps of Engineers; and

(II) not more than 3 projects that have not received Federal funds in the period beginning on the date on which the project was authorized and ending on the date of enactment of this Act;

(ii) notify the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives on the identification of each project under the pilot program;

(iii) in collaboration with the non-Federal interest, develop a detailed project management plan for each identified project that outlines the scope, budget, design, and construction resource requirements necessary for the non-Federal interest to execute the project, or a separable element of the project;

(iv) on the request of the non-Federal interest, enter into a project partnership agreement with the non-Federal interest for the non-Federal interest to provide full project management control for construction of the project, or a separable element of the project, in accordance with plans approved by the Secretary;

(v) following execution of the project partnership agreement, transfer to the non-Federal interest to carry out construction of the project, or a separable element of the project—

(I) if applicable, the balance of the unobligated amounts appropriated for the project, except that the Secretary shall retain sufficient amounts for the Corps of Engineers to carry out any responsibilities of the Corps of Engineers relating to the project and pilot program; and

(II) additional amounts, as determined by the Secretary, from amounts made available under paragraph (8), except that the total amount transferred to the non-Federal interest shall not exceed the updated estimate of the Federal share of the cost of construction, including any required design; and

(vi) regularly monitor and audit each project being constructed by a non-Federal interest under this section to ensure that the construction activities are carried out in compliance with the plans approved by the Secretary and that the construction costs are reasonable.

(B) DETAILED PROJECT SCHEDULE.—Not later than 180 days after entering into an agreement under subparagraph (A)(iv), each non-Federal interest, to the maximum extent practicable, shall submit to the Secretary a detailed project

schedule, based on estimated funding levels, that lists all deadlines for each milestone in the construction of the project.

(C) TECHNICAL ASSISTANCE.—On the request of a non-Federal interest, the Secretary may provide technical assistance to the non-Federal interest, if the non-Federal interest contracts with and compensates the Secretary for the technical assistance relating to—

(i) any study, engineering activity, and design activity for construction carried out by the non-Federal interest under this subsection; and

(ii) expeditiously obtaining any permits necessary for the project.

(4) COST SHARE.—Nothing in this subsection affects the cost-sharing requirement applicable on the day before the date of enactment of this Act to a project carried out under this subsection.

(5) REPORT.—

(A) IN GENERAL.—Not later than 3 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report detailing the results of the pilot program carried out under this subsection, including—

(i) a description of the progress of non-Federal interests in meeting milestones in detailed project schedules developed pursuant to paragraph (2)(B); and

(ii) any recommendations of the Secretary concerning whether the program or any component of the program should be implemented on a national basis.

(B) UPDATE.—Not later than 5 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives an update of the report described in subparagraph (A).

(C) FAILURE TO MEET DEADLINE.—If the Secretary fails to submit a report by the required deadline under this paragraph, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a detailed explanation of why the deadline was missed and a projected date for submission of the report.

(6) ADMINISTRATION.—All laws and regulations that would apply to the Secretary if the Secretary were carrying out the project shall apply to a non-Federal interest carrying out a project under this subsection.

(7) TERMINATION OF AUTHORITY.—The authority to commence a project under this subsection terminates on the date that is 5 years after the date of enactment of this Act.

(8) AUTHORIZATION OF APPROPRIATIONS.—In addition to any amounts appropriated for a specific project, there is authorized

to be appropriated to the Secretary to carry out the pilot program under this subsection, including the costs of administration of the Secretary, \$25,000,000 for each of fiscal years 2015 through 2019.

SEC. 1044. INDEPENDENT PEER REVIEW.

(a) **MANDATORY PROJECT STUDIES SUBJECT TO PEER REVIEW.**—Section 2034(a)(3)(A)(i) of the Water Resources Development Act of 2007 (33 U.S.C. 2343(a)(3)(A)(i)) is amended by striking “\$45,000,000” and inserting “\$200,000,000”.

(b) **TIMING OF PEER REVIEW.**—Section 2034(b) of the Water Resources Development Act of 2007 (33 U.S.C. 2343(b)) is amended—

- (1) by redesignating paragraph (3) as paragraph (4); and
- (2) by inserting after paragraph (2) the following:

“(3) **REASONS FOR TIMING.**—If the Chief of Engineers does not initiate a peer review for a project study at a time described in paragraph (2), the Chief shall—

“(A) not later than 7 days after the date on which the Chief of Engineers determines not to initiate a peer review—

“(i) notify the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives of that decision; and

“(ii) make publicly available, including on the Internet, the reasons for not conducting the review; and

“(B) include the reasons for not conducting the review in the decision document for the project study.”.

(c) **ESTABLISHMENT OF PANELS.**—Section 2034(c) of the Water Resources Development Act of 2007 (33 U.S.C. 2343(c)) is amended by striking paragraph (4) and inserting the following:

“(4) **CONGRESSIONAL AND PUBLIC NOTIFICATION.**—Following the identification of a project study for peer review under this section, but prior to initiation of the review by the panel of experts, the Chief of Engineers shall, not later than 7 days after the date on which the Chief of Engineers determines to conduct a review—

“(A) notify the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives of the review conducted under this section; and

“(B) make publicly available, including on the Internet, information on—

“(i) the dates scheduled for beginning and ending the review;

“(ii) the entity that has the contract for the review; and

“(iii) the names and qualifications of the panel of experts.”.

(d) **RECOMMENDATIONS OF PANEL.**—Section 2034(f) of the Water Resources Development Act of 2007 (33 U.S.C. 2343(f)) is amended by striking paragraph (2) and inserting the following:

“(2) **PUBLIC AVAILABILITY AND SUBMISSION TO CONGRESS.**—After receiving a report on a project study from a panel of experts under this section, the Chief of Engineers shall make

available to the public, including on the Internet, and submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives—

“(A) a copy of the report not later than 7 days after the date on which the report is delivered to the Chief of Engineers; and

“(B) a copy of any written response of the Chief of Engineers on recommendations contained in the report not later than 3 days after the date on which the response is delivered to the Chief of Engineers.

“(3) INCLUSION IN PROJECT STUDY.—A report on a project study from a panel of experts under this section and the written response of the Chief of Engineers shall be included in the final decision document for the project study.”.

(e) APPLICABILITY.—Section 2034(h)(2) of the Water Resources Development Act of 2007 (33 U.S.C. 2343(h)(2)) is amended by striking “7 years” and inserting “12 years”.

SEC. 1045. REPORT ON SURFACE ELEVATIONS AT DROUGHT AFFECTED LAKES.

(a) IN GENERAL.—Not later than 180 days after the date of enactment of this Act, the Secretary, in coordination with the Federal Energy Regulatory Commission (referred to in this section as “FERC”), shall initiate an assessment of the effects of drought conditions on lakes managed by the Secretary that are affected by FERC-licensed reservoirs, which shall include an assessment of—

(1) lake levels and rule curves in areas of previous, current, and prolonged drought; and

(2) the effect the long-term FERC licenses have on the ability of the Secretary to manage lakes for hydropower generation, navigation, flood protection, water supply, fish and wildlife, and recreation.

(b) REPORT.—The Secretary, in coordination with the FERC, shall submit to Congress and make publicly available a report on the assessment carried out under subsection (a).

SEC. 1046. RESERVOIR OPERATIONS AND WATER SUPPLY.

(a) DAM OPTIMIZATION.—

(1) DEFINITION OF PROJECT.—In this subsection, the term “project” means a water resources development project that is operated and maintained by the Secretary.

(2) REPORTS.—

(A) ASSESSMENT OF WATER SUPPLY IN ARID REGIONS.—

(i) IN GENERAL.—The Secretary shall conduct an assessment of the management practices, priorities, and authorized purposes at Corps of Engineers reservoirs in arid regions to determine the effects of such practices, priorities, and purposes on water supply during periods of drought.

(ii) INCLUSIONS.—The assessment under clause (i) shall identify actions that can be carried out within the scope of existing authorities of the Secretary to increase project flexibility for the purpose of mitigating drought impacts.

(iii) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit

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to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report on the results of the assessment.

(B) UPDATED REPORT.—

(i) IN GENERAL.—Not later than 2 years after the date of enactment of this Act, the Secretary shall update and make publicly available the report entitled “Authorized and Operating Purposes of Corps of Engineers Reservoirs” and dated July 1992, which was produced pursuant to section 311 of the Water Resources Development Act of 1990 (104 Stat. 4639).

(ii) INCLUSIONS.—The updated report described in clause (i) shall—

(I) include—

(aa) the date on which the most recent review of project operations was conducted and any recommendations of the Secretary relating to that review the Secretary determines to be significant;

(bb) the activities carried out pursuant to each such review to improve the efficiency of operations and maintenance and to improve project benefits consistent with authorized purposes;

(cc) the degree to which reviews of project operations and subsequent activities pursuant to completed reviews complied with the policies and requirements of applicable law and regulations; and

(dd) a plan for reviewing the operations of individual projects, including a detailed schedule for future reviews of project operations, that—

(AA) complies with the policies and requirements of applicable law and regulations;

(BB) gives priority to reviews and activities carried out pursuant to such plan where the Secretary determines that there is support for carrying out those reviews and activities; and

(CC) ensures that reviews and activities are carried out pursuant to such plan;

(II) be coordinated with appropriate Federal, State, and local agencies and those public and private entities that the Secretary determines may be affected by those reviews or activities;

(III) not supersede or modify any written agreement between the Federal Government and a non-Federal interest that is in effect on the date of enactment of this Act;

(IV) not supersede or authorize any amendment to a multistate water control plan, including the Missouri River Master Water Control Manual (as in effect on the date of enactment of this Act);

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(V) not affect any water right in existence on the date of enactment of this Act;

(VI) not preempt or affect any State water law or interstate compact governing water;

(VII) not affect any authority of a State, as in effect on the date of enactment of this Act, to manage water resources within that State; and

(VIII) comply with section 301 of the Water Supply Act of 1958 (43 U.S.C. 390b).

(3) GENERAL ACCOUNTABILITY OFFICE REPORT TO CONGRESS.—The Comptroller General shall—

(A) conduct an audit to determine—

(i) whether reviews of project operations carried out by the Secretary prior to the date of enactment of this Act complied with the policies and requirements of applicable law and regulations; and

(ii) whether the plan developed by the Secretary pursuant to paragraph (2)(B)(ii)(I)(dd) complies with this subsection and with the policies and requirements of applicable law and regulation; and

(B) not later than 2 years after the date of enactment of this Act, submit to Congress a report that—

(i) summarizes the results of the audit required by subparagraph (A);

(ii) includes an assessment of whether existing practices for managing and reviewing project operations could result in greater efficiencies that would enable the Corps of Engineers to better prepare for, contain, and respond to flood, storm, and drought conditions; and

(iii) includes recommendations for improving the review of project operations to improve the efficiency and effectiveness of such operations and to better achieve authorized purposes while enhancing overall project benefits.

(4) INTERAGENCY AND COOPERATIVE AGREEMENTS.—The Secretary may enter into interagency agreements with other Federal agencies and cooperative agreements with non-Federal entities to carry out this subsection and reviews of project operations or activities resulting from those reviews.

(5) FUNDING.—

(A) IN GENERAL.—The Secretary may use to carry out this subsection, including any reviews of project operations identified in the plan developed under paragraph (2)(B)(ii)(I)(dd), amounts made available to the Secretary.

(B) FUNDING FROM OTHER SOURCES.—The Secretary may accept and expend amounts from non-Federal entities and other Federal agencies to carry out this subsection and reviews of project operations or activities resulting from those reviews.

(6) EFFECT OF SUBSECTION.—

(A) IN GENERAL.—Nothing in this subsection changes the authorized purpose of any Corps of Engineers dam or reservoir.

(B) ADMINISTRATION.—The Secretary may carry out any recommendations and activities under this subsection pursuant to existing law.

(b) IMPROVING PLANNING AND ADMINISTRATION OF WATER SUPPLY STORAGE.—

(1) IN GENERAL.—For each water supply feature of a reservoir managed by the Secretary, the Secretary shall notify the applicable non-Federal interests before each fiscal year of the anticipated operation and maintenance activities for that fiscal year and each of the subsequent 4 fiscal years (including the cost of those activities) for which the non-Federal interests are required to contribute amounts.

(2) CLARIFICATION.—The information provided to a non-Federal interest under paragraph (1) shall—

(A) be an estimate which the non-Federal interest may use for planning purposes; and

(B) not be construed as or relied upon by the non-Federal interest as the actual amounts that the non-Federal interest will be required to contribute.

(c) SURPLUS WATER STORAGE.—

(1) IN GENERAL.—The Secretary shall not charge a fee for surplus water under a contract entered into pursuant to section 6 of the Act of December 22, 1944 (commonly known as the “Flood Control Act of 1944”) (33 U.S.C. 708) if the contract is for surplus water stored in the Upper Missouri Mainstem Reservoirs.

(2) OFFSET.—

(A) IN GENERAL.—Subject to subparagraph (B), of any amounts made available to the Secretary to carry out activities under the heading “OPERATION AND MAINTENANCE” under the heading “CORPS OF ENGINEERS—CIVIL” that remain unobligated as of the date of enactment of this Act, \$5,000,000 is rescinded.

(B) RESTRICTION.—No amounts that have been designated by Congress as being for emergency requirements pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985 (2 U.S.C. 901(b)(2)(A)(i)) shall be rescinded under subparagraph (A).

(3) LIMITATION.—The limitation provided under paragraph (1) shall expire on the date that is 10 years after the date of enactment of this Act.

(4) APPLICABILITY.—Nothing in this subsection—

(A) affects the authority of the Secretary under section 2695 of title 10, United States Code, to accept funds or to cover the administrative expenses relating to certain real property transactions; or

(B) affects the application of section 6 of the Act of December 22, 1944 (commonly known as the “Flood Control Act of 1944”) (33 U.S.C. 708) to surplus water stored outside of the Upper Missouri Mainstem Reservoirs.

(d) FUTURE WATER SUPPLY.—Section 301 of the Water Supply Act of 1958 (43 U.S.C. 390b) is amended—

(1) by redesignating subsections (c) and (d) as subsections (d) and (e), respectively; and

(2) by inserting after subsection (b) the following:

“(c) RELEASE OF FUTURE WATER STORAGE.—

“(1) ESTABLISHMENT OF 10-YEAR PLANS FOR THE UTILIZATION OF FUTURE STORAGE.—

“(A) IN GENERAL.—For the period beginning 180 days after the date of enactment of this paragraph and ending

on January 1, 2016, the Secretary may accept from a State or local interest a plan for the utilization of allocated water storage for future use under this Act.

“(B) CONTENTS.—A plan submitted under subparagraph (A) shall include—

“(i) a 10-year timetable for the conversion of future use storage to present use; and

“(ii) a schedule of actions that the State or local interest agrees to carry out over a 10-year period, in cooperation with the Secretary, to seek new and alternative users of future water storage that is contracted to the State or local interest on the date of enactment of this paragraph.

“(2) FUTURE WATER STORAGE.—For water resource development projects managed by the Secretary, a State or local interest that the Secretary determines has complied with paragraph (1) may request from the Secretary a release to the United States of any right of the State or local interest to future water storage under this Act that was allocated for future use water supply prior to November 17, 1986.

“(3) ADMINISTRATION.—

“(A) IN GENERAL.—Not later than 180 days after receiving a request under paragraph (2), the Secretary shall provide to the applicable State or local interest a written decision on whether the Secretary recommends releasing future water storage rights.

“(B) RECOMMENDATION.—If the Secretary recommends releasing future water storage rights, the Secretary shall include that recommendation in the annual plan submitted under section 7001 of the Water Resources Reform and Development Act of 2014.

“(4) SAVINGS CLAUSE.—Nothing in this subsection authorizes the Secretary to release a State or local interest from a contractual obligation unless specifically authorized by Congress.”.

SEC. 1047. SPECIAL USE PERMITS.

(a) SPECIAL USE PERMITS.—

(1) IN GENERAL.—The Secretary may issue special permits for uses such as group activities, recreation events, motorized recreation vehicles, and such other specialized recreation uses as the Secretary determines to be appropriate, subject to such terms and conditions as the Secretary determines to be in the best interest of the Federal Government.

(2) FEES.—

(A) IN GENERAL.—In carrying out this subsection, the Secretary may—

(i) establish and collect fees associated with the issuance of the permits described in paragraph (1);

or

(ii) accept in-kind services in lieu of those fees.

(B) OUTDOOR RECREATION EQUIPMENT.—The Secretary may establish and collect fees for the provision of outdoor recreation equipment and services for activities described in paragraph (1) at public recreation areas located at lakes and reservoirs operated by the Corps of Engineers.

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(C) USE OF FEES.—Any fees generated pursuant to this subsection shall be—

- (i) retained at the site collected; and
- (ii) available for use, without further appropriation, solely for administering the special permits under this subsection and carrying out related operation and maintenance activities at the site at which the fees are collected.

(b) COOPERATIVE MANAGEMENT.—

(1) PROGRAM.—

(A) IN GENERAL.—Subject to subparagraph (B), the Secretary may enter into an agreement with a State or local government to provide for the cooperative management of a public recreation area if—

- (i) the public recreation area is located—
 - (I) at a lake or reservoir operated by the Corps of Engineers; and
 - (II) adjacent to or near a State or local park or recreation area; and
- (ii) the Secretary determines that cooperative management between the Corps of Engineers and a State or local government agency of a portion of the Corps of Engineers recreation area or State or local park or recreation area will allow for more effective and efficient management of those areas.

(B) RESTRICTION.—The Secretary may not transfer administration responsibilities for any public recreation area operated by the Corps of Engineers.

(2) ACQUISITION OF GOODS AND SERVICES.—The Secretary may acquire from or provide to a State or local government with which the Secretary has entered into a cooperative agreement under paragraph (1) goods and services to be used by the Secretary and the State or local government in the cooperative management of the areas covered by the agreement.

(3) ADMINISTRATION.—The Secretary may enter into 1 or more cooperative management agreements or such other arrangements as the Secretary determines to be appropriate, including leases or licenses, with non-Federal interests to share the costs of operation, maintenance, and management of recreation facilities and natural resources at recreation areas that are jointly managed and funded under this subsection.

(c) USE OF FUNDS.—

(1) IN GENERAL.—If the Secretary determines that it is in the public interest for purposes of enhancing recreation opportunities at Corps of Engineers water resources development projects, the Secretary may use funds made available to the Secretary to support activities carried out by State, local, and tribal governments and such other public or private nonprofit entities as the Secretary determines to be appropriate.

(2) COOPERATIVE AGREEMENTS.—Any use of funds pursuant to this subsection shall be carried out through the execution of a cooperative agreement, which shall contain such terms and conditions as the Secretary determines to be necessary in the public interest.

(d) SERVICES OF VOLUNTEERS.—Chapter IV of title I of Public Law 98–63 (33 U.S.C. 569c) is amended in the first sentence by inserting “, including expenses relating to uniforms, transportation,

lodging, and the subsistence of those volunteers,” after “incidental expenses”.

(e) TRAINING AND EDUCATIONAL ACTIVITIES.—Section 213(a) of the Water Resources Development Act of 2000 (33 U.S.C. 2339) is amended by striking “at” and inserting “about”.

SEC. 1048. AMERICA THE BEAUTIFUL NATIONAL PARKS AND FEDERAL RECREATIONAL LANDS PASS PROGRAM.

The Secretary may participate in the America the Beautiful National Parks and Federal Recreational Lands Pass program in the same manner as the National Park Service, the Bureau of Land Management, the United States Fish and Wildlife Service, the Forest Service, and the Bureau of Reclamation, including the provision of free annual passes to active duty military personnel and dependents.

SEC. 1049. APPLICABILITY OF SPILL PREVENTION, CONTROL, AND COUNTERMEASURE RULE.

(a) DEFINITIONS.—In this section:

(1) ADMINISTRATOR.—The term “Administrator” means the Administrator of the Environmental Protection Agency.

(2) FARM.—The term “farm” has the meaning given the term in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

(3) GALLON.—The term “gallon” means a United States gallon.

(4) OIL.—The term “oil” has the meaning given the term in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

(5) OIL DISCHARGE.—The term “oil discharge” has the meaning given the term “discharge” in section 112.2 of title 40, Code of Federal Regulations (or successor regulations).

(6) REPORTABLE OIL DISCHARGE HISTORY.—

(A) IN GENERAL.—Subject to subparagraph (B), the term “reportable oil discharge history” means a single oil discharge, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that exceeds 1,000 gallons or 2 oil discharges, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that each exceed 42 gallons within any 12-month period—

(i) in the 3 years prior to the certification date of the Spill Prevention, Control, and Countermeasure plan (as described in section 112.3 of title 40, Code of Federal Regulations (including successor regulations)); or

(ii) since becoming subject to part 112 of title 40, Code of Federal Regulations, if the facility has been in operation for less than 3 years.

(B) EXCLUSIONS.—The term “reportable oil discharge history” does not include an oil discharge, as described in section 112.1(b) of title 40, Code of Federal Regulations (including successor regulations), that is the result of a natural disaster, an act of war, or terrorism.

(7) SPILL PREVENTION, CONTROL, AND COUNTERMEASURE RULE.—The term “Spill Prevention, Control, and Countermeasure rule” means the regulation, including amendments,

promulgated by the Administrator under part 112 of title 40, Code of Federal Regulations (or successor regulations).

(b) CERTIFICATION.—In implementing the Spill Prevention, Control, and Countermeasure rule with respect to any farm, the Administrator shall—

(1) require certification by a professional engineer for a farm with—

(A) an individual tank with an aboveground storage capacity greater than 10,000 gallons;

(B) an aggregate aboveground storage capacity greater than or equal to 20,000 gallons; or

(C) a reportable oil discharge history; or

(2) allow certification by the owner or operator of the farm (via self-certification) for a farm with—

(A) an aggregate aboveground storage capacity less than 20,000 gallons and greater than the lesser of—

(i) 6,000 gallons; and

(ii) the adjustment quantity established under subsection (d)(2); and

(B) no reportable oil discharge history; and

(3) not require compliance with the rule by any farm—

(A) with an aggregate aboveground storage capacity greater than 2,500 gallons and less than the lesser of—

(i) 6,000 gallons; and

(ii) the adjustment quantity established under subsection (d)(2); and

(B) no reportable oil discharge history; and

(4) not require compliance with the rule by any farm with an aggregate aboveground storage capacity of less than 2,500 gallons.

(c) CALCULATION OF AGGREGATE ABOVEGROUND STORAGE CAPACITY.—For purposes of subsection (b), the aggregate aboveground storage capacity of a farm excludes—

(1) all containers on separate parcels that have a capacity that is 1,000 gallons or less; and

(2) all containers holding animal feed ingredients approved for use in livestock feed by the Commissioner of Food and Drugs.

(d) STUDY.—

(1) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Administrator, in consultation with the Secretary of Agriculture, shall conduct a study to determine the appropriate exemption under paragraphs (2) and (3) of subsection (b), which shall be not more than 6,000 gallons and not less than 2,500 gallons, based on a significant risk of discharge to water.

(2) ADJUSTMENT.—Not later than 18 months after the date on which the study described in paragraph (1) is complete, the Administrator, in consultation with the Secretary of Agriculture, shall promulgate a rule to adjust the exemption levels described in paragraphs (2) and (3) of subsection (b) in accordance with the study.

SEC. 1050. NAMINGS.

(a) DONALD G. WALDON LOCK AND DAM.—It is the sense of Congress that, at an appropriate time and in accordance with

the rules of the Senate and the House of Representatives, to recognize the contributions of Donald G. Waldon, whose selfless determination and tireless work, while serving as administrator of the Tennessee-Tombigbee Waterway for 21 years, contributed greatly to the realization and success of the Tennessee-Tombigbee Waterway Development Compact, that the lock and dam located at mile 357.5 on the Tennessee-Tombigbee Waterway should be known and designated as the “Donald G. Waldon Lock and Dam”.

(b) REDESIGNATION OF LOWER MISSISSIPPI RIVER MUSEUM AND RIVERFRONT INTERPRETIVE SITE.—

(1) IN GENERAL.—Section 103(c)(1) of the Water Resources Development Act of 1992 (106 Stat. 4811) is amended by striking “Lower Mississippi River Museum and Riverfront Interpretive Site” and inserting “Jesse Brent Lower Mississippi River Museum and Riverfront Interpretive Site”.

(2) REFERENCES.—Any reference in a law, map, regulation, document, paper, or other record of the United States to the museum and interpretive site referred to in paragraph (1) shall be deemed to be a reference to the “Jesse Brent Lower Mississippi River Museum and Riverfront Interpretive Site”.

(c) JERRY F. COSTELLO LOCK AND DAM.—

(1) REDESIGNATION.—The lock and dam located in Modoc, Illinois, authorized by the Act of July 3, 1930 (46 Stat. 927), and commonly known as the Kaskaskia Lock and Dam, is redesignated as the “Jerry F. Costello Lock and Dam”.

(2) REFERENCES.—Any reference in a law, map, regulation, document, paper, or other record of the United States to the lock and dam referred to in section 1 shall be deemed to be a reference to the “Jerry F. Costello Lock and Dam”.

SEC. 1051. INTERSTATE WATER AGREEMENTS AND COMPACTS.

(a) WATER SUPPLY.—Section 301 of the Water Supply Act of 1958 (43 U.S.C. 390b) (as amended by section 1046(d)) is amended by adding at the end the following:

“(f) The Committees of jurisdiction are very concerned about the operation of projects in the Apalachicola-Chattahoochee-Flint River System and the Alabama-Coosa-Tallapoosa River System, and further, the Committees of jurisdiction recognize that this ongoing water resources dispute raises serious concerns related to the authority of the Secretary of the Army to allocate substantial storage at projects to provide local water supply pursuant to the Water Supply Act of 1958 absent congressional approval. Interstate water disputes of this nature are more properly addressed through interstate water agreements that take into consideration the concerns of all affected States including impacts to other authorized uses of the projects, water supply for communities and major cities in the region, water quality, freshwater flows to communities, rivers, lakes, estuaries, and bays located downstream of projects, agricultural uses, economic development, and other appropriate concerns. To that end, the Committees of jurisdiction strongly urge the Governors of the affected States to reach agreement on an interstate water compact as soon as possible, and we pledge our commitment to work with the affected States to ensure prompt consideration and approval of any such agreement. Absent such action, the Committees of jurisdiction should consider appropriate legislation to address these matters including any necessary clarifications to

the Water Supply Act of 1958 or other law. This subsection does not alter existing rights or obligations under law.”.

(b) SENSE OF CONGRESS REGARDING INTERSTATE WATER AGREEMENTS AND COMPACTS.—

(1) FINDINGS.—Congress finds the following:

(A) States and local interests have primary responsibility for developing water supplies for domestic, municipal, industrial, and other purposes.

(B) The Federal Government cooperates with States and local interests in developing water supplies through the construction, maintenance, and operation of Federal water resources development projects.

(C) Interstate water disputes are most properly addressed through interstate water agreements or compacts that take into consideration the concerns of all affected States.

(2) SENSE OF CONGRESS.—It is the sense of Congress that—

(A) Congress and the Secretary should urge States to reach agreement on interstate water agreements and compacts;

(B) at the request of the Governor of a State, the Secretary should facilitate and assist in the development of an interstate water agreement or compact;

(C) Congress should provide prompt consideration of interstate water agreements and compacts; and

(D) the Secretary should adopt policies and implement procedures for the operation of reservoirs of the Corps of Engineers that are consistent with interstate water agreements and compacts.

SEC. 1052. SENSE OF CONGRESS REGARDING WATER RESOURCES DEVELOPMENT BILLS.

It is the sense of Congress that, because the missions of the Corps of Engineers are unique and benefit all individuals in the United States and because water resources development projects are critical to maintaining economic prosperity, national security, and environmental protection, Congress should consider a water resources development bill not less than once every Congress.

TITLE II—NAVIGATION

Subtitle A—Inland Waterways

SEC. 2001. DEFINITIONS.

In this title:

(1) INLAND WATERWAYS TRUST FUND.—The term “Inland Waterways Trust Fund” means the Inland Waterways Trust Fund established by section 9506(a) of the Internal Revenue Code of 1986.

(2) QUALIFYING PROJECT.—The term “qualifying project” means any construction or major rehabilitation project for navigation infrastructure of the inland and intracoastal waterways that is—

(A) authorized before, on, or after the date of enactment of this Act;

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(B) not completed on the date of enactment of this Act; and

(C) funded at least in part from the Inland Waterways Trust Fund.

SEC. 2002. PROJECT DELIVERY PROCESS REFORMS.

(a) **REQUIREMENTS FOR QUALIFYING PROJECTS.**—With respect to each qualifying project, the Secretary shall require—

(1) for each project manager, that—

(A) the project manager have formal project management training and certification; and

(B) the project manager be assigned from among personnel certified by the Chief of Engineers; and

(2) for an applicable cost estimation, that—

(A) the Secretary utilize a risk-based cost estimate with a confidence level of at least 80 percent; and

(B) the cost estimate be developed—

(i) for a qualifying project that requires an increase in the authorized amount in accordance with section 902 of the Water Resources Development Act of 1986 (33 U.S.C. 2280), during the preparation of a post-authorization change report or other similar decision document;

(ii) for a qualifying project for which the first construction contract has not been awarded, prior to the award of the first construction contract;

(iii) for a qualifying project without a completed feasibility report in accordance with section 905 of the Water Resources Development Act of 1986 (33 U.S.C. 2282), prior to the completion of such a report; and

(iv) for a qualifying project with a completed feasibility report in accordance with section 905 of the Water Resources Development Act of 1986 (33 U.S.C. 2282) that has not yet been authorized, during design for the qualifying project.

(b) **ADDITIONAL PROJECT DELIVERY PROCESS REFORMS.**—Not later than 18 months after the date of enactment of this Act, the Secretary shall—

(1) establish a system to identify and apply on a continuing basis best management practices from prior or ongoing qualifying projects to improve the likelihood of on-time and on-budget completion of qualifying projects;

(2) evaluate early contractor involvement acquisition procedures to improve on-time and on-budget project delivery performance; and

(3) implement any additional measures that the Secretary determines will achieve the purposes of this subtitle, including—

(A) the implementation of applicable practices and procedures developed pursuant to management by the Secretary of an applicable military construction program;

(B) the development and use of a portfolio of standard designs for inland navigation locks, incorporating the use of a center of expertise for the design and review of qualifying projects;

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(C) the use of full-funding contracts or formulation of a revised continuing contracts clause; and

(D) the establishment of procedures for recommending new project construction starts using a capital projects business model.

(c) PILOT PROJECTS.—

(1) IN GENERAL.—Subject to paragraph (2), the Secretary may carry out pilot projects to evaluate processes and procedures for the study, design, and construction of qualifying projects.

(2) INCLUSIONS.—At a minimum, the Secretary shall carry out pilot projects under this subsection to evaluate—

(A) early contractor involvement in the development of features and components;

(B) an appropriate use of continuing contracts for the construction of features and components; and

(C) applicable principles, procedures, and processes used for military construction projects.

(d) INLAND WATERWAYS USERS BOARD.—Section 302 of the Water Resources Development Act of 1986 (33 U.S.C. 2251) is amended—

(1) by striking subsection (b) and inserting the following:

“(b) DUTIES OF USERS BOARD.—

“(1) IN GENERAL.—The Users Board shall meet not less frequently than semiannually to develop and make recommendations to the Secretary and Congress regarding the inland waterways and inland harbors of the United States.

“(2) ADVICE AND RECOMMENDATIONS.—For commercial navigation features and components of the inland waterways and inland harbors of the United States, the Users Board shall provide—

“(A) prior to the development of the budget proposal of the President for a given fiscal year, advice and recommendations to the Secretary regarding construction and rehabilitation priorities and spending levels;

“(B) advice and recommendations to Congress regarding any feasibility report for a project on the inland waterway system that has been submitted to Congress pursuant to section 7001 of the Water Resources Reform and Development Act of 2014;

“(C) advice and recommendations to Congress regarding an increase in the authorized cost of those features and components;

“(D) not later than 60 days after the date of the submission of the budget proposal of the President to Congress, advice and recommendations to Congress regarding construction and rehabilitation priorities and spending levels; and

“(E) advice and recommendations on the development of a long-term capital investment program in accordance with subsection (d).

“(3) PROJECT DEVELOPMENT TEAMS.—The chairperson of the Users Board shall appoint a representative of the Users Board to serve as an advisor to the project development team for a qualifying project or the study or design of a commercial navigation feature or component of the inland waterways and inland harbors of the United States.

“(4) INDEPENDENT JUDGMENT.—Any advice or recommendation made by the Users Board to the Secretary shall reflect the independent judgment of the Users Board.”;

(2) by striking subsection (c) and inserting the following:

“(c) DUTIES OF SECRETARY.—The Secretary shall—

“(1) communicate not less frequently than once each quarter to the Users Board the status of the study, design, or construction of all commercial navigation features or components of the inland waterways or inland harbors of the United States; and

“(2) submit to the Users Board a courtesy copy of all completed feasibility reports relating to a commercial navigation feature or component of the inland waterways or inland harbors of the United States.

“(d) CAPITAL INVESTMENT PROGRAM.—

“(1) IN GENERAL.—Not later than 1 year after the date of enactment of this subsection, the Secretary, in coordination with the Users Board, shall develop and submit to Congress a report describing a 20-year program for making capital investments on the inland and intracoastal waterways based on the application of objective, national project selection prioritization criteria.

“(2) CONSIDERATION.—In developing the program under paragraph (1), the Secretary shall take into consideration the 20-year capital investment strategy contained in the Inland Marine Transportation System (IMTS) Capital Projects Business Model, Final Report published on April 13, 2010, as approved by the Users Board.

“(3) CRITERIA.—In developing the plan and prioritization criteria under paragraph (1), the Secretary shall ensure, to the maximum extent practicable, that investments made under the 20-year program described in paragraph (1)—

“(A) are made in all geographical areas of the inland waterways system; and

“(B) ensure efficient funding of inland waterways projects.

“(4) STRATEGIC REVIEW AND UPDATE.—Not later than 5 years after the date of enactment of this subsection, and not less frequently than once every 5 years thereafter, the Secretary, in coordination with the Users Board, shall—

“(A) submit to Congress and make publicly available a strategic review of the 20-year program in effect under this subsection, which shall identify and explain any changes to the project-specific recommendations contained in the previous 20-year program (including any changes to the prioritization criteria used to develop the updated recommendations); and

“(B) make revisions to the program, as appropriate.

“(e) PROJECT MANAGEMENT PLANS.—The chairperson of the Users Board and the project development team member appointed by the chairperson under subsection (b)(3) may sign the project management plan for the qualifying project or the study or design of a commercial navigation feature or component of the inland waterways and inland harbors of the United States.

“(f) ADMINISTRATION.—

“(1) IN GENERAL.—The Users Board shall be subject to the Federal Advisory Committee Act (5 U.S.C. App.), other

than section 14, and, with the consent of the appropriate agency head, the Users Board may use the facilities and services of any Federal agency.

“(2) MEMBERS NOT CONSIDERED SPECIAL GOVERNMENT EMPLOYEES.—For the purposes of complying with the Federal Advisory Committee Act (5 U.S.C. App.), the members of the Users Board shall not be considered special Government employees (as defined in section 202 of title 18, United States Code).

“(3) TRAVEL EXPENSES.—Non-Federal members of the Users Board while engaged in the performance of their duties away from their homes or regular places of business, may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703 of title 5, United States Code.”.

SEC. 2003. EFFICIENCY OF REVENUE COLLECTION.

Not later than 2 years after the date of enactment of this Act, the Comptroller General of the United States shall prepare a report on the efficiency of collecting the fuel tax for the Inland Waterways Trust Fund, which shall include—

- (1) an evaluation of whether current methods of collection of the fuel tax result in full compliance with requirements of the law;
- (2) whether alternative methods of collection would result in increased revenues into the Inland Waterways Trust Fund; and
- (3) an evaluation of alternative collection options.

SEC. 2004. INLAND WATERWAYS REVENUE STUDIES.

(a) INLAND WATERWAYS CONSTRUCTION BONDS STUDY.—

(1) STUDY.—The Secretary, in coordination with the heads of appropriate Federal agencies, shall conduct a study on the potential benefits and implications of authorizing the issuance of federally tax-exempt bonds secured against the available proceeds, including projected annual receipts, in the Inland Waterways Trust Fund established by section 9506(a) of the Internal Revenue Code of 1986.

(2) CONTENTS.—In carrying out the study, the Secretary shall examine the implications of issuing such bonds, including the potential revenues that could be generated and the projected net cost to the Treasury, including loss of potential revenue.

(3) CONSULTATION.—In carrying out the study, the Secretary, at a minimum, shall consult with—

(A) representatives of the Inland Waterway Users Board established by section 302 of the Water Resources Development Act of 1986 (33 U.S.C. 2251);

(B) representatives of the commodities and bulk cargos that are currently shipped for commercial purposes on the segments of the inland and intracoastal waterways listed in section 206 of the Inland Waterways Revenue Act of 1978 (33 U.S.C. 1804);

(C) representatives of other users of locks and dams on the inland and intracoastal waterways, including persons owning, operating, using, or otherwise benefitting from—

- (i) hydropower generation facilities;
- (ii) electric utilities that rely on the waterways for cooling of existing electricity generation facilities;

- (iii) municipal and industrial water supply;
- (iv) recreation;
- (v) irrigation water supply; or
- (vi) flood damage reduction; and

(D) other stakeholders associated with the inland and intracoastal waterways, as identified by the Secretary.

(4) REPORT TO CONGRESS.—

(A) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works, the Committee on Finance, and the Committee on the Budget of the Senate and the Committee on Transportation and Infrastructure, the Committee on Ways and Means, and the Committee on the Budget of the House of Representatives, and make publicly available, a report on the results of the study.

(B) IDENTIFICATION OF ISSUES.—As part of the report, the Secretary shall identify any potential benefits or other implications of the issuance of bonds described in subsection (a)(1), including any potential changes in Federal or State law that may be necessary to provide such benefits or to address such implications.

(b) POTENTIAL REVENUE SOURCES FOR INLAND AND INTRACOASTAL WATERWAYS INFRASTRUCTURE.—

(1) IN GENERAL.—The Secretary shall conduct a study and submit to Congress a report on potential revenue sources from which funds could be collected to generate additional revenues for the Inland Waterways Trust Fund established by section 9506(a) of the Internal Revenue Code of 1986.

(2) SCOPE OF STUDY.—

(A) IN GENERAL.—In carrying out the study, the Secretary shall evaluate an array of potential revenue sources from which funds could be collected in amounts that, when combined with funds generated by section 4042 of the Internal Revenue Code of 1986, are sufficient to support one-half of annual construction expenditure levels of \$380,000,000 for the authorized purposes of the Inland Waterways Trust Fund.

(B) POTENTIAL REVENUE SOURCES FOR STUDY.—In carrying out the study, the Secretary, at a minimum, shall—

- (i) evaluate potential revenue sources identified in and documented by known authorities of the Inland Waterways System; and
- (ii) review appropriate reports and associated literature related to revenue sources.

(3) CONDUCT OF STUDY.—In carrying out the study, the Secretary shall—

(A) take into consideration whether the potential revenues from other sources—

- (i) are equitably associated with the construction, operation, and maintenance of inland and intracoastal waterway infrastructure, including locks, dams, and navigation channels; and
- (ii) can be efficiently collected;

(B) consult with, at a minimum—

- (i) representatives of the Inland Waterways Users Board; and

(ii) representatives of other nonnavigation beneficiaries of inland and intracoastal waterway infrastructure, including persons benefitting from—

- (I) municipal water supply;
- (II) hydropower;
- (III) recreation;
- (IV) industrial water supply;
- (V) flood damage reduction;
- (VI) agricultural water supply;
- (VII) environmental restoration;
- (VIII) local and regional economic development; or
- (IX) local real estate interests; and

(iii) representatives of other interests, as identified by the Secretary; and

(C) provide the opportunity for public hearings in each of the geographic regions that contain segments of the inland and intracoastal waterways listed in section 206 of the Inland Waterways Revenue Act of 1978 (33 U.S.C. 1804).

(4) REPORT TO CONGRESS.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works, the Committee on Finance, and the Committee on the Budget of the Senate and the Committee on Transportation and Infrastructure, the Committee on Ways and Means, and the Committee on the Budget of the House of Representatives, and make publicly available, a report on the results of the study.

SEC. 2005. INLAND WATERWAYS STAKEHOLDER ROUNDTABLE.

(a) IN GENERAL.—The Secretary shall conduct an inland waterways stakeholder roundtable to provide for a review and evaluation of issues related to financial management of the inland and intracoastal waterways.

(b) SELECTION OF PARTICIPANTS.—

(1) IN GENERAL.—Not later than 45 days after the date on which the Secretary submits to Congress the report required by section 2004(b), the Secretary, in consultation with the Inland Waterways Users Board, shall select individuals to be invited to participate in the stakeholder roundtable.

(2) COMPOSITION.—The individuals selected under paragraph (1) shall include—

(A) representatives of the primary users, shippers, and suppliers utilizing the inland and intracoastal waterways for commercial purposes;

(B) representatives of State and Federal agencies having a direct and substantial interest in the commercial use of the inland and intracoastal waterways;

(C) representatives of other nonnavigation beneficiaries of the inland and intracoastal waterways infrastructure, including individuals benefitting from—

- (i) municipal water supply;
- (ii) hydropower;
- (iii) recreation;
- (iv) industrial water supply;
- (v) flood damage reduction;
- (vi) agricultural water supply;

- (vii) environmental restoration;
 - (viii) local and regional economic development; or
 - (ix) local real estate interests; and
 - (D) other interested individuals with significant financial and engineering expertise and direct knowledge of the inland and coastal waterways.
- (c) **FRAMEWORK AND AGENDA.**—The Secretary shall work with a group of the individuals selected under subsection (b) to develop the framework and agenda for the stakeholder roundtable.
- (d) **CONDUCT OF STAKEHOLDER ROUNDTABLE.**—
- (1) **IN GENERAL.**—Not later than 120 days after the date on which the Secretary submits to Congress the report required by section 2004(b), the Secretary shall conduct the stakeholder roundtable.
 - (2) **ISSUES TO BE DISCUSSED.**—The stakeholder roundtable shall provide for the review and evaluation described in subsection (a) and shall include the following:
 - (A) An evaluation of any recommendations that have been developed to address funding options for the inland and coastal waterways, including any recommendations in the report required under section 2004(b).
 - (B) An evaluation of the funding status of the inland and coastal waterways.
 - (C) Identification and evaluation of the ongoing and projected water infrastructure needs of the inland and coastal waterways.
 - (D) Identification of a process for meeting such needs, with timeline for addressing the funding challenges for the Inland Waterways Trust Fund.
- (e) **REPORT TO CONGRESS.**—Not later than 180 days after the date on which the Secretary submits to Congress the report required by section 2004(b), the Secretary shall submit to Congress and make publicly available a report that contains—
- (1) a summary of the stakeholder roundtable, including areas of concurrence on funding approaches and areas of disagreement in meeting funding needs; and
 - (2) recommendations developed by the Secretary for next steps to address the issues discussed at the stakeholder roundtable.

SEC. 2006. PRESERVING THE INLAND WATERWAY TRUST FUND.

- (a) **OLMSTED PROJECT REFORM.**—
- (1) **DEFINITION OF OLMSTED PROJECT.**—In this subsection, the term “Olmsted Project” means the project for navigation, Lower Ohio River, Locks and Dams 52 and 53, Illinois and Kentucky, authorized by section 3(a)(6) of the Water Resources Development Act of 1988 (102 Stat. 4013).
 - (2) **OLMSTED PROJECT REFORM.**—Notwithstanding section 3(a)(6) of the Water Resources Development Act of 1988 (102 Stat. 4013), for each fiscal year beginning after September 30, 2014, 15 percent of the cost of construction for the Olmsted Project shall be paid from amounts appropriated from the Inland Waterways Trust Fund.
 - (3) **SENSE OF CONGRESS.**—It is the sense of Congress that the appropriation for the Olmsted Project should be not less than \$150,000,000 for each fiscal year until construction of the project is completed.

(4) REHABILITATION OF PROJECTS.—Section 205(1)(E)(ii) of the Water Resources Development Act of 1992 (33 U.S.C. 2327(1)(E)(ii)) is amended by striking “\$8,000,000” and inserting “\$20,000,000”.

SEC. 2007. INLAND WATERWAYS OVERSIGHT.

(a) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report regarding the lessons learned from the experience of planning and constructing the Olmsted Project and how such lessons might apply to future inland waterway studies and projects.

(b) ANNUAL FINANCIAL REVIEW.—For any inland waterways project that the Secretary carries out that has an estimated total cost of \$500,000,000 or more, the Secretary shall submit to the congressional committees referred to in subsection (a) an annual financial plan for the project. The plan shall be based on detailed annual estimates of the cost to complete the remaining elements of the project and on reasonable assumptions, as determined by the Secretary, of any future increases of the cost to complete the project.

(c) GOVERNMENT ACCOUNTABILITY OFFICE REPORT.—As soon as practicable after the date of enactment of this Act, the Comptroller General of the United States shall conduct, and submit to Congress a report describing the results of, a study to determine why, and to what extent, the project for navigation, Lower Ohio River, Locks and Dams 52 and 53, Illinois and Kentucky (commonly known as the “Olmsted Locks and Dam project”), authorized by section 3(a)(6) of the Water Resources Development Act of 1988 (102 Stat. 4013), has exceeded the budget for the project and the reasons why the project failed to be completed as scheduled, including an assessment of—

- (1) engineering methods used for the project;
- (2) the management of the project;
- (3) contracting for the project;
- (4) the cost to the United States of benefits foregone due to project delays; and
- (5) such other contributory factors as the Comptroller General determines to be appropriate.

SEC. 2008. ASSESSMENT OF OPERATION AND MAINTENANCE NEEDS OF THE ATLANTIC INTRACOASTAL WATERWAY AND THE GULF INTRACOASTAL WATERWAY.

(a) IN GENERAL.—Not later than 90 days after the date of enactment of this Act, the Secretary shall assess the operation and maintenance needs of the Atlantic Intracoastal Waterway and the Gulf Intracoastal Waterway.

(b) TYPES OF ACTIVITIES.—In carrying out subsection (a), the Secretary shall assess the operation and maintenance needs of the Atlantic Intracoastal Waterway and the Gulf Intracoastal Waterway as used for the following purposes:

- (1) Commercial navigation.
- (2) Commercial fishing.

(3) Subsistence, including utilization by Indian tribes (as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b)) for subsistence and ceremonial purposes.

(4) Use as ingress and egress to harbors of refuge.

(5) Transportation of persons.

(6) Purposes relating to domestic energy production, including fabrication, servicing, and supply of domestic offshore energy production facilities.

(7) Activities of the Secretary of the department in which the Coast Guard is operating.

(8) Public health and safety related equipment for responding to coastal and inland emergencies.

(9) Recreation purposes.

(10) Any other authorized purpose.

(c) **REPORT TO CONGRESS.**—For fiscal year 2015, and biennially thereafter, in conjunction with the annual budget submission by the President to Congress under section 1105(a) of title 31, United States Code, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report that, with respect to the Atlantic Intracoastal Waterway and the Gulf Intracoastal Waterway—

(1) identifies the operation and maintenance costs required to achieve the authorized length, width, and depth;

(2) identifies the amount of funding requested in the President's budget for operation and maintenance costs; and

(3) identifies the unmet operation and maintenance needs of the Atlantic Intracoastal Waterway and the Gulf Intracoastal Waterway.

SEC. 2009. INLAND WATERWAYS RIVERBANK STABILIZATION.

(a) **IN GENERAL.**—Not later than 1 year after the date of enactment of this Act, and biennially thereafter, the Secretary shall conduct a study to determine the feasibility of—

(1) carrying out projects for the inland and intracoastal waterways for purposes of—

(A) flood damage reduction;

(B) emergency streambank and shoreline protection;

and

(C) prevention and mitigation of shore damages attributable to navigation improvements; and

(2) modifying projects for the inland and intracoastal waterways for the purpose of improving the quality of the environment.

(b) **RECOMMENDATIONS.**—In conducting the study, the Secretary shall develop specific project recommendations and prioritize those recommendations based on—

(1) the extent of damage and land loss resulting from riverbank erosion;

(2) the rate of erosion;

(3) the significant threat of future flood risk to public property, public infrastructure, or public safety;

(4) the destruction of natural resources or habitats; and

(5) the potential cost savings for maintenance of the channel.

(c) DISPOSITION.—The Secretary may carry out any project identified in the study conducted pursuant to subsection (a) in accordance with the criteria for projects carried out under one of the following authorities:

(1) Section 14 of the Flood Control Act of 1946 (33 U.S.C. 701r).

(2) Section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s).

(3) Section 111 of the River and Harbor Act of 1968 (33 U.S.C. 426i).

(4) Section 1135 of the Water Resources Development Act of 1986 (33 U.S.C. 2309a).

(d) ANNUAL REPORT.—For a project recommended pursuant to the study that cannot be carried out under any of the authorities specified in subsection (c), upon a determination by the Secretary of the feasibility of the project, the Secretary may include a recommendation concerning the project in the annual report submitted to Congress under section 7001.

SEC. 2010. UPPER MISSISSIPPI RIVER PROTECTION.

(a) DEFINITION OF UPPER ST. ANTHONY FALLS LOCK AND DAM.—In this section, the term “Upper St. Anthony Falls Lock and Dam” means the lock and dam located on Mississippi River Mile 853.9 in Minneapolis, Minnesota.

(b) MANDATORY CLOSURE.—Not later than 1 year after the date of enactment of this Act, the Secretary shall close the Upper St. Anthony Falls Lock and Dam.

(c) EMERGENCY OPERATIONS.—Nothing in this section prevents the Secretary from carrying out emergency lock operations necessary to mitigate flood damage.

SEC. 2011. CORPS OF ENGINEERS LOCK AND DAM ENERGY DEVELOPMENT.

Section 1117 of the Water Resources Development Act of 1986 (100 Stat. 4236) is amended to read as follows:

“SEC. 1117. W.D. MAYO LOCK AND DAM.

“(a) IN GENERAL.—The Cherokee Nation of Oklahoma may—

“(1) design and construct one or more hydroelectric generating facilities at the W.D. Mayo Lock and Dam on the Arkansas River, Oklahoma; and

“(2) market the electricity generated from any such facility.

“(b) PRECONSTRUCTION REQUIREMENTS.—

“(1) PERMITS.—Before the date on which construction of a hydroelectric generating facility begins under subsection (a), the Cherokee Nation shall obtain any permit required under Federal or State law, except that the Cherokee Nation shall be exempt from licensing requirements that may otherwise apply to construction, operation, or maintenance of the facility under the Federal Power Act (16 U.S.C. 791a et seq.).

“(2) REVIEW OF PLANS AND SPECIFICATIONS.—The Cherokee Nation may initiate the design or construction of a hydroelectric generating facility under subsection (a) only after the Secretary reviews and approves the plans and specifications for the design and construction.

“(c) PAYMENT OF DESIGN AND CONSTRUCTION COSTS.—

“(1) IN GENERAL.—The Secretary may accept funds offered by the Cherokee Nation and use such funds to carry out the

design and construction of a hydroelectric generating facility under subsection (a).

“(2) ALLOCATION OF COSTS.—The Cherokee Nation shall—

“(A) bear all costs associated with the design and construction of a hydroelectric generating facility under subsection (a); and

“(B) provide any funds necessary for the design and construction to the Secretary prior to the Secretary initiating any activities related to the design and construction.

“(d) ASSUMPTION OF LIABILITY.—The Cherokee Nation shall—

“(1) hold all title to a hydroelectric generating facility constructed under subsection (a) and may, subject to the approval of the Secretary, assign such title to a third party;

“(2) be solely responsible for—

“(A) the operation, maintenance, repair, replacement, and rehabilitation of the facility; and

“(B) the marketing of the electricity generated by the facility; and

“(3) release and indemnify the United States from any claims, causes of action, or liabilities that may arise out of any activity undertaken to carry out this section.

“(e) ASSISTANCE AVAILABLE.—The Secretary may provide technical and construction management assistance requested by the Cherokee Nation relating to the design and construction of a hydroelectric generating facility under subsection (a).

“(f) THIRD PARTY AGREEMENTS.—The Cherokee Nation may enter into agreements with the Secretary or a third party that the Cherokee Nation or the Secretary determines are necessary to carry out this section.”.

SEC. 2012. RESTRICTED AREAS AT CORPS OF ENGINEERS DAMS.

Section 2 of the Freedom to Fish Act (127 Stat. 449) is amended—

(1) in subsection (b)(1) by striking “2 years after the date of enactment of this Act” and inserting “4 years after the date of enactment of the Water Resources Reform and Development Act of 2014”;

(2) in the heading of subsection (c) by inserting “OR MODIFIED” after “NEW”; and

(3) in subsection (c)—

(A) in matter preceding paragraph (1) by inserting “new or modified” after “establishes any”; and

(B) in paragraph (3) by striking “2 years after the date of enactment of this Act” and inserting “4 years after the date of enactment of the Water Resources Reform and Development Act of 2014”.

SEC. 2013. OPERATION AND MAINTENANCE OF FUEL TAXED INLAND WATERWAYS.

Section 102 of the Water Resources Development Act of 1986 (33 U.S.C. 2212) is amended—

(1) by redesignating subsection (c) as subsection (d); and

(2) by inserting after subsection (b) the following:

“(c) FLOODGATES ON THE INLAND WATERWAYS.—

“(1) OPERATION AND MAINTENANCE CARRIED OUT BY THE SECRETARY.—Notwithstanding any other provision of law, the Secretary shall be responsible for the operation and maintenance, including repair, of any flood gate, as well as any

pumping station constructed within the channel as a single unit with that flood gate, that—

“(A) was constructed as of the date of enactment of the Water Resources Reform and Development Act of 2014 as a feature of an authorized hurricane and storm damage reduction project; and

“(B) crosses an inland or intracoastal waterway described in section 206 of the Inland Waterways Revenue Act of 1978 (33 U.S.C. 1804).

“(2) NON-FEDERAL COST SHARE.—The non-Federal share of the cost of operation, maintenance, repair, rehabilitation, and replacement of any structure under this subsection shall be 35 percent.”.

Subtitle B—Port and Harbor Maintenance

SEC. 2101. FUNDING FOR HARBOR MAINTENANCE PROGRAMS.

(a) DEFINITIONS.—In this section:

(1) TOTAL AMOUNT OF HARBOR MAINTENANCE TAXES RECEIVED.—The term “total amount of harbor maintenance taxes received” means, with respect to a fiscal year, the aggregate of amounts appropriated, transferred, or credited to the Harbor Maintenance Trust Fund under section 9505(a) of the Internal Revenue Code of 1986 for that fiscal year as set forth in the current year estimate provided in the President’s budget request for the subsequent fiscal year, submitted pursuant to section 1105 of title 31, United States Code.

(2) TOTAL BUDGET RESOURCES.—The term “total budget resources” means the total amount made available by appropriations Acts from the Harbor Maintenance Trust Fund for a fiscal year for making expenditures under section 9505(c) of the Internal Revenue Code of 1986.

(b) TARGET APPROPRIATIONS.—

(1) IN GENERAL.—The target total budget resources made available to the Secretary from the Harbor Maintenance Trust Fund for a fiscal year shall be not less than the following:

(A) For fiscal year 2015, 67 percent of the total amount of harbor maintenance taxes received in fiscal year 2014.

(B) For fiscal year 2016, 69 percent of the total amount of harbor maintenance taxes received in fiscal year 2015.

(C) For fiscal year 2017, 71 percent of the total amount of harbor maintenance taxes received in fiscal year 2016.

(D) For fiscal year 2018, 74 percent of the total amount of harbor maintenance taxes received in fiscal year 2017.

(E) For fiscal year 2019, 77 percent of the total amount of harbor maintenance taxes received in fiscal year 2018.

(F) For fiscal year 2020, 80 percent of the total amount of harbor maintenance taxes received in fiscal year 2019.

(G) For fiscal year 2021, 83 percent of the total amount of harbor maintenance taxes received in fiscal year 2020.

(H) For fiscal year 2022, 87 percent of the total amount of harbor maintenance taxes received in fiscal year 2021.

(I) For fiscal year 2023, 91 percent of the total amount of harbor maintenance taxes received in fiscal year 2022.

(J) For fiscal year 2024, 95 percent of the total amount of harbor maintenance taxes received in fiscal year 2023.

(K) For fiscal year 2025, and each fiscal year thereafter, 100 percent of the total amount of harbor maintenance taxes received in the previous fiscal year.

(2) USE OF AMOUNTS.—The total budget resources described in paragraph (1) may be used only for making expenditures under section 9505(c) of the Internal Revenue Code of 1986.

(c) IMPACT ON OTHER FUNDS.—

(1) SENSE OF CONGRESS.—It is the sense of Congress that any increase in funding for harbor maintenance programs under this section shall result from an overall increase in appropriations for the civil works program of the Corps of Engineers and not from reductions in the appropriations for other programs, projects, and activities carried out by the Corps of Engineers for other authorized purposes.

(2) APPLICATION.—The target total budget resources for a fiscal year specified in subsection (b)(1) shall only apply in a fiscal year for which the level of appropriations provided for the civil works program of the Corps of Engineers in that fiscal year is increased, as compared to the previous fiscal year, by a dollar amount that is at least equivalent to the dollar amount necessary to address such target total budget resources in that fiscal year.

SEC. 2102. OPERATION AND MAINTENANCE OF HARBOR PROJECTS.

(a) IN GENERAL.—Section 210 of the Water Resources Development Act of 1986 (33 U.S.C. 2238) is amended by adding at the end the following:

“(c) OPERATION AND MAINTENANCE OF HARBOR PROJECTS.—

“(1) IN GENERAL.—To the maximum extent practicable, the Secretary shall make expenditures to pay for operation and maintenance costs of the harbors and inland harbors referred to in subsection (a)(2), including expenditures of funds appropriated from the Harbor Maintenance Trust Fund, based on an equitable allocation of funds among all such harbors and inland harbors.

“(2) CRITERIA.—

“(A) IN GENERAL.—In determining an equitable allocation of funds under paragraph (1), the Secretary shall—

“(i) consider the information obtained in the assessment conducted under subsection (e);

“(ii) consider the national and regional significance of harbor operations and maintenance; and

“(iii) as appropriate, consider national security and military readiness needs.

“(B) LIMITATION.—The Secretary shall not allocate funds under paragraph (1) based solely on the tonnage transiting through a harbor.

“(3) EMERGING HARBOR PROJECTS.—Notwithstanding any other provision of this subsection, in making expenditures under paragraph (1) for each of fiscal years 2015 through 2022, the Secretary shall allocate for operation and maintenance costs of emerging harbor projects an amount that is not less than 10 percent of the funds made available under this section for fiscal year 2012 to pay the costs described in subsection (a)(2).

“(4) MANAGEMENT OF GREAT LAKES NAVIGATION SYSTEM.—To sustain effective and efficient operation and maintenance

of the Great Lakes Navigation System, including any navigation feature in the Great Lakes that is a Federal responsibility with respect to operation and maintenance, the Secretary shall manage all of the individually authorized projects in the Great Lakes Navigation System as components of a single, comprehensive system, recognizing the interdependence of the projects.

“(d) PRIORITIZATION.—

“(1) PRIORITY.—

“(A) IN GENERAL.—For each of fiscal years 2015 through 2024, if priority funds are available, the Secretary shall use the priority funds as follows:

“(i) 90 percent of the priority funds shall be used for high- and moderate-use harbor projects.

“(ii) 10 percent of the priority funds shall be used for emerging harbor projects.

“(B) ADDITIONAL CONSIDERATIONS.—For each of fiscal years 2015 through 2024, of the priority funds available, the Secretary shall use—

“(i) not less than 5 percent of such funds for underserved harbor projects; and

“(ii) not less than 10 percent of such funds for projects that are located within the Great Lakes Navigation System.

“(C) UNDERSERVED HARBORS.—In determining which underserved harbor projects shall receive funds under this paragraph, the Secretary shall consider—

“(i) the total quantity of commerce supported by the water body on which the project is located; and

“(ii) the minimum width and depth that—

“(I) would be necessary at the underserved harbor project to provide sufficient clearance for fully loaded commercial vessels using the underserved harbor project to maneuver safely; and

“(II) does not exceed the constructed width and depth of the authorized navigation project.

“(2) EXPANDED USES.—

“(A) DEFINITION OF ELIGIBLE HARBOR OR INLAND HARBOR DEFINED.—In this paragraph, the term ‘eligible harbor or inland harbor’ means a harbor or inland harbor at which the total amount of harbor maintenance taxes collected in the immediately preceding 3 fiscal years exceeds the value of the work carried out for the harbor or inland harbor using amounts from the Harbor Maintenance Trust Fund during those 3 fiscal years.

“(B) USE OF EXPANDED USES FUNDS.—

“(i) FISCAL YEARS 2015 THROUGH 2024.—For each of fiscal years 2015 through 2024, of the priority funds available, the Secretary shall use not less than 10 percent of such funds for expanded uses carried out at an eligible harbor or inland harbor.

“(ii) SUBSEQUENT FISCAL YEARS.—For fiscal year 2025 and each fiscal year thereafter, the Secretary shall use not less than 10 percent of the priority funds available for expanded uses carried out at an eligible harbor or inland harbor.

“(C) PRIORITIZATION.—In allocating funds under this paragraph, the Secretary shall give priority to projects at eligible harbors or inland harbors for which the difference, calculated in dollars, is greatest between—

“(i) the total amount of funding made available for projects at that eligible harbor or inland harbor from the Harbor Maintenance Trust Fund in the immediately preceding 3 fiscal years; and

“(ii) the total amount of harbor maintenance taxes collected at that harbor or inland harbor in the immediately preceding 3 fiscal years.

“(3) REMAINING FUNDS.—

“(A) IN GENERAL.—For each of fiscal years 2015 through 2024, if after fully funding all projects eligible for funding under paragraphs (1)(B) and (2)(B)(i), priority funds made available under those paragraphs remain unobligated, the Secretary shall use those remaining funds to pay for operation and maintenance costs of any harbor or inland harbor referred to in subsection (a)(2) based on an equitable allocation of those funds among the harbors and inland harbors.

“(B) CRITERIA.—In determining an equitable allocation of funds under subparagraph (A), the Secretary shall—

“(i) use the criteria specified in subsection (c)(2)(A); and

“(ii) make amounts available in accordance with the requirements of paragraph (1)(A).

“(4) EMERGENCY EXPENDITURES.—Nothing in this subsection prohibits the Secretary from making an expenditure to pay for the operation and maintenance costs of a specific harbor or inland harbor, including the transfer of funding from the operation and maintenance of a separate project, if—

“(A) the Secretary determines that the action is necessary to address the navigation needs of a harbor or inland harbor where safe navigation has been severely restricted due to an unforeseen event; and

“(B) the Secretary provides within 90 days of the action notice and information on the need for the action to the Committee on Environment and Public Works and the Committee on Appropriations of the Senate and the Committee on Transportation and Infrastructure and the Committee on Appropriations of the House of Representatives.

“(e) ASSESSMENT OF HARBORS AND INLAND HARBORS.—

“(1) IN GENERAL.—Not later than 270 days after the date of enactment of this subsection, and biennially thereafter, the Secretary shall assess the operation and maintenance needs and uses of the harbors and inland harbors referred to in subsection (a)(2).

“(2) ASSESSMENT OF HARBOR NEEDS AND ACTIVITIES.—

“(A) TOTAL OPERATION AND MAINTENANCE NEEDS OF HARBORS.—In carrying out paragraph (1), the Secretary shall identify—

“(i) the total future costs required to achieve and maintain the constructed width and depth for the harbors and inland harbors referred to in subsection (a)(2); and

“(ii) the total expected costs for expanded uses at eligible harbors or inland harbors referred to in subsection (d)(2).

“(B) USES OF HARBORS AND INLAND HARBORS.—In carrying out paragraph (1), the Secretary shall identify current uses (and, to the extent practicable, assess the national, regional, and local benefits of such uses) of harbors and inland harbors referred to in subsection (a)(2), including the use of those harbors for—

“(i) commercial navigation, including the movement of goods;

“(ii) domestic trade;

“(iii) international trade;

“(iv) commercial fishing;

“(v) subsistence, including use by Indian tribes (as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b)) for subsistence and ceremonial purposes;

“(vi) use as a harbor of refuge;

“(vii) transportation of persons;

“(viii) purposes relating to domestic energy production, including the fabrication, servicing, or supply of domestic offshore energy production facilities;

“(ix) activities of the Secretary of the department in which the Coast Guard is operating;

“(x) activities of the Secretary of the Navy;

“(xi) public health and safety related equipment for responding to coastal and inland emergencies;

“(xii) recreation purposes; and

“(xiii) other authorized purposes.

“(3) REPORT TO CONGRESS.—

“(A) IN GENERAL.—For fiscal year 2016, and biennially thereafter, in conjunction with the President’s annual budget submission to Congress under section 1105(a) of title 31, United States Code, the Secretary shall submit to the Committee on Environment and Public Works and the Committee on Appropriations of the Senate and the Committee on Transportation and Infrastructure and the Committee on Appropriations of the House of Representatives a report that, with respect to harbors and inland harbors referred to in subsection (a)(2)—

“(i) identifies the operation and maintenance costs associated with the harbors and inland harbors, including those costs required to achieve and maintain the constructed width and depth for the harbors and inland harbors and the costs for expanded uses at eligible harbors and inland harbors, on a project-by-project basis;

“(ii) identifies the amount of funding requested in the President’s budget for the operation and maintenance costs associated with the harbors and inland harbors, on a project-by-project basis;

“(iii) identifies the unmet operation and maintenance needs associated with the harbors and inland harbors, on a project-by-project basis; and

“(iv) identifies the harbors and inland harbors for which the President will allocate funding over the subsequent 5 fiscal years for operation and maintenance activities, on a project-by-project basis, including the amounts to be allocated for such purposes.

“(B) PUBLIC AVAILABILITY.—The Secretary shall make the report submitted under subparagraph (A) available to the public, including on the Internet.

“(f) DEFINITIONS.—In this section:

“(1) CONSTRUCTED WIDTH AND DEPTH.—The term ‘constructed width and depth’ means the width and depth to which a project has been constructed, which may not exceed the authorized width and depth of the project.

“(2) EMERGING HARBOR PROJECT.—The term ‘emerging harbor project’ means a project that is assigned to a harbor or inland harbor referred to in subsection (a)(2) that transits less than 1,000,000 tons of cargo annually.

“(3) EXPANDED USES.—The term ‘expanded uses’ means the following activities:

“(A) The maintenance dredging of a berth in a harbor that is accessible to a Federal navigation project and that benefits commercial navigation at the harbor.

“(B) The maintenance dredging and disposal of legacy-contaminated sediment, and sediment unsuitable for open water disposal, if—

“(i) such dredging and disposal benefits commercial navigation at the harbor; and

“(ii) such sediment is located in and affects the maintenance of a Federal navigation project or is located in a berth that is accessible to a Federal navigation project.

“(4) GREAT LAKES NAVIGATION SYSTEM.—The term ‘Great Lakes Navigation System’ includes—

“(A)(i) Lake Superior;

“(ii) Lake Huron;

“(iii) Lake Michigan;

“(iv) Lake Erie; and

“(v) Lake Ontario;

“(B) all connecting waters between the lakes referred to in subparagraph (A) used for commercial navigation;

“(C) any navigation features in the lakes referred to in subparagraph (A) or waters described in subparagraph (B) that are a Federal operation or maintenance responsibility; and

“(D) areas of the Saint Lawrence River that are operated or maintained by the Federal Government for commercial navigation.

“(5) HARBOR MAINTENANCE TAX.—The term ‘harbor maintenance tax’ means the amounts collected under section 4461 of the Internal Revenue Code of 1986.

“(6) HIGH-USE HARBOR PROJECT.—The term ‘high-use harbor project’ means a project that is assigned to a harbor or inland harbor referred to in subsection (a)(2) that transits not less than 10,000,000 tons of cargo annually.

“(7) MODERATE-USE HARBOR PROJECT.—The term ‘moderate-use harbor project’ means a project that is assigned to a harbor

or inland harbor referred to in subsection (a)(2) that transits annually—

“(A) more than 1,000,000 tons of cargo; but

“(B) less than 10,000,000 tons of cargo.

“(8) PRIORITY FUNDS.—The term ‘priority funds’ means the difference between—

“(A) the total funds that are made available under this section to pay the costs described in subsection (a)(2) for a fiscal year; and

“(B) the total funds made available under this section to pay the costs described in subsection (a)(2) in fiscal year 2012.

“(9) UNDERSERVED HARBOR PROJECT.—

“(A) IN GENERAL.—The term ‘underserved harbor project’ means a project that is assigned to a harbor or inland harbor referred to in subsection (a)(2)—

“(i) that is a moderate-use harbor project or an emerging harbor project;

“(ii) that has been maintained at less than the constructed width and depth of the project during each of the preceding 6 fiscal years; and

“(iii) for which State and local investments in infrastructure have been made at those projects during the preceding 6 fiscal years.

“(B) ADMINISTRATION.—For purposes of this paragraph, State and local investments in infrastructure shall include infrastructure investments made using amounts made available for activities under section 105(a)(9) of the Housing and Community Development Act of 1974 (42 U.S.C. 5305(a)(9)).”

(b) OPERATION AND MAINTENANCE.—Section 101(b)(1) of the Water Resources Development Act of 1986 (33 U.S.C. 2211(b)(1)) is amended by striking “45 feet” and inserting “50 feet”.

(c) CONFORMING AMENDMENT.—Section 9505(c)(1) of the Internal Revenue Code of 1986 is amended by striking “(as in effect on the date of the enactment of the Water Resources Development Act of 1996)”.

SEC. 2103. CONSOLIDATION OF DEEP DRAFT NAVIGATION EXPERTISE.

Section 2033(e) of the Water Resources Development Act of 2007 (33 U.S.C. 2282a(e)) is amended by adding at the end the following:

“(3) DEEP DRAFT NAVIGATION PLANNING CENTER OF EXPERTISE.—

“(A) IN GENERAL.—The Secretary shall consolidate deep draft navigation expertise within the Corps of Engineers into a deep draft navigation planning center of expertise.

“(B) LIST.—Not later than 60 days after the date of the consolidation required under subparagraph (A), the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a list of the grade levels and expertise of each of the personnel assigned to the center described in subparagraph (A).”

SEC. 2104. REMOTE AND SUBSISTENCE HARBORS.

Section 2006 of the Water Resources Development Act of 2007 (33 U.S.C. 2242) is amended—

(1) in subsection (a)—

(A) in paragraph (1)(B) by inserting “or Alaska” after “Hawaii”; and

(B) in paragraph (2)—

(i) by striking “community” and inserting “region”; and

(ii) by inserting “, as determined by the Secretary, including consideration of information provided by the non-Federal interest” after “improvement”; and

(2) by adding at the end the following:

“(c) **PRIORITIZATION.**—Projects recommended by the Secretary under subsection (a) shall be given equivalent budget consideration and priority as projects recommended solely by national economic development benefits.

“(d) **DISPOSITION.**—

“(1) **IN GENERAL.**—The Secretary may carry out any project identified in the study carried out pursuant to subsection (a) in accordance with the criteria for projects carried out under the authority of the Secretary under section 107 of the River and Harbor Act of 1960 (33 U.S.C. 577).

“(2) **NON-FEDERAL INTERESTS.**—In evaluating and implementing a project under this section, the Secretary shall allow a non-Federal interest to participate in the financing of a project in accordance with the criteria established for flood control projects under section 903(c) of the Water Resources Development Act of 1986 (Public Law 99–662; 100 Stat. 4184).

“(e) **ANNUAL REPORT.**—For a project that cannot be carried out under the authority specified in subsection (d), on a determination by the Secretary of the feasibility of the project under subsection (a), the Secretary may include a recommendation concerning the project in the annual report submitted to Congress under section 7001.”.

SEC. 2105. ARCTIC DEEP DRAFT PORT DEVELOPMENT PARTNERSHIPS.

(a) **IN GENERAL.**—The Secretary may provide technical assistance to non-Federal public entities, including Indian tribes (as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b)), for the development, construction, operation, and maintenance of channels, harbors, and related infrastructure associated with deep draft ports for purposes of dealing with Arctic development and security needs.

(b) **ACCEPTANCE OF FUNDS.**—The Secretary is authorized to accept and expend funds provided by non-Federal public entities, including Indian tribes (as defined in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b)), to carry out the technical assistance activities described in subsection (a).

(c) **LIMITATION.**—No assistance may be provided under this section until after the date on which the entity to which that assistance is to be provided enters into a written agreement with the Secretary that includes such terms and conditions as the Secretary determines to be appropriate and in the public interest.

(d) **PRIORITIZATION.**—The Secretary shall prioritize technical assistance provided under this section for Arctic deep draft ports

identified by the Secretary, the Secretary of Homeland Security, and the Secretary of Defense as important for Arctic development and security.

SEC. 2106. ADDITIONAL MEASURES AT DONOR PORTS AND ENERGY TRANSFER PORTS.

(a) **DEFINITIONS.**—In this section:

(1) **CARGO CONTAINER.**—The term “cargo container” means a cargo container that is 1 Twenty-foot Equivalent Unit.

(2) **DONOR PORT.**—The term “donor port” means a port—

(A) that is subject to the harbor maintenance fee under section 24.24 of title 19, Code of Federal Regulations (or a successor regulation);

(B) at which the total amount of harbor maintenance taxes collected comprise not less than \$15,000,000 annually of the total funding of the Harbor Maintenance Trust Fund established under section 9505 of the Internal Revenue Code of 1986;

(C) that received less than 25 percent of the total amount of harbor maintenance taxes collected at that port in the previous 5 fiscal years; and

(D) that is located in a State in which more than 2,000,000 cargo containers were unloaded from or loaded on to vessels in fiscal year 2012.

(3) **ENERGY COMMODITY.**—The term “energy commodity” includes—

(A) petroleum products;

(B) natural gas;

(C) coal;

(D) wind and solar energy components; and

(E) biofuels.

(4) **ENERGY TRANSFER PORT.**—The term “energy transfer port” means a port—

(A) that is subject to the harbor maintenance fee under section 24.24 of title 19, Code of Federal Regulation (or any successor regulation); and

(B)(i) at which energy commodities comprised greater than 25 percent of all commercial activity by tonnage in fiscal year 2012; and

(ii) through which more than 40,000,000 tons of cargo were transported in fiscal year 2012.

(5) **EXPANDED USES.**—The term “expanded uses” has the meaning given the term in section 210(f) of the Water Resources Development Act of 1986 (33 U.S.C. 2238(f)).

(6) **HARBOR MAINTENANCE TAX.**—The term “harbor maintenance tax” has the meaning given the term in section 210(f) of the Water Resources Development Act of 1986 (33 U.S.C. 2238(f)).

(b) **AUTHORITY.**—

(1) **IN GENERAL.**—Subject to the availability of appropriations, the Secretary may provide to donor ports and energy transfer ports amounts in accordance with this section.

(2) **LIMITATIONS.**—Amounts provided under this section—

(A) for energy transfer ports shall be divided equally among all States with an energy transfer port; and

(B) shall be made available to a port as either a donor port or an energy transfer port and no port may receive

amounts as both a donor port and an energy transfer port.

(c) **USE OF FUNDS.**—Amounts provided under this section may be used by a donor port or an energy transfer port—

(1) to provide payments to importers entering cargo or shippers transporting cargo through that port, as calculated by U.S. Customs and Border Protection according to the amount of harbor maintenance taxes collected;

(2) for expanded uses; or

(3) for environmental remediation related to dredging berths and Federal navigation channels.

(d) **ADMINISTRATION OF PAYMENTS.**—If a donor port or an energy transfer port elects to provide payments to importers or shippers under subsection (c), the Secretary shall transfer the amount that would otherwise be provided to the port under this section that is equal to those payments to the Commissioner of U.S. Customs and Border Protection to provide the payments to the importers or shippers.

(e) **REPORT TO CONGRESS.**—

(1) **IN GENERAL.**—Not later than 18 months after the date of enactment of this section, the Secretary shall assess the impact of the authority provided by this section and submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report on the results of that assessment, including any recommendations for amending or reauthorizing the authority.

(2) **FACTORS.**—In carrying out the assessment under paragraph (1), the Secretary shall assess—

(A) the impact of the amounts provided and used under this section on those ports that received funds under this section; and

(B) any impact on domestic harbors and ports that did not receive funds under this section.

(f) **AUTHORIZATION OF APPROPRIATIONS.**—

(1) **IN GENERAL.**—There is authorized to be appropriated to carry out this section \$50,000,000 for each of fiscal years 2015 through 2018.

(2) **DIVISION BETWEEN DONOR PORTS AND ENERGY TRANSFER PORTS.**—For each fiscal year, amounts made available to carry out this section shall be provided in equal amounts to donor ports and energy transfer ports.

(3) **ADDITIONAL APPROPRIATIONS.**—If the target total budget resources under subparagraphs (A) through (D) of section 2101(b)(1) are met for each of fiscal years 2015 through 2018, there is authorized to be appropriated to carry out this section \$50,000,000 for each of fiscal years 2019 through 2022.

SEC. 2107. PRESERVING UNITED STATES HARBORS.

(a) **IN GENERAL.**—Upon a request from a non-Federal interest, the Secretary shall review a report developed by the non-Federal interest that provides an economic justification for Federal investment in the operation and maintenance of a federally authorized harbor or inland harbor (referred to in this section as a “federally authorized harbor”).

(b) **JUSTIFICATION OF INVESTMENT.**—A report submitted under subsection (a) may provide for an economic justification of Federal

investment in the operation and maintenance of a federally authorized harbor based on—

(1) the projected economic benefits, including transportation savings and job creation; and

(2) other factors, including navigation safety, national security, and sustainability of subsistence harbors.

(c) WRITTEN RESPONSE.—Not later than 180 days after the date on which the Secretary receives a report under subsection (a), the Secretary shall provide to the non-Federal interest a written response to the report, including an assessment of the information provided by the non-Federal interest.

(d) PRIORITIZATION.—As the Secretary determines to be appropriate, the Secretary may use the information provided in the report under subsection (a) to justify additional operation and maintenance funding for a federally authorized harbor in accordance with section 101(b) of the Water Resources Development Act of 1986 (33 U.S.C. 2211(b)).

(e) LIMITATION ON STATUTORY CONSTRUCTION.—Nothing in this section may be construed to preclude the operation and maintenance of a federally authorized harbor under section 101(b) of the Water Resources Development Act of 1986 (33 U.S.C. 2211(b)).

TITLE III—SAFETY IMPROVEMENTS AND ADDRESSING EXTREME WEATHER EVENTS

Subtitle A—Dam Safety

SEC. 3001. DAM SAFETY.

(a) ADMINISTRATOR.—

(1) IN GENERAL.—The National Dam Safety Program Act (33 U.S.C. 467 et seq.) is amended by striking “Director” each place it appears and inserting “Administrator”.

(2) CONFORMING AMENDMENT.—Section 2 of the National Dam Safety Program Act (33 U.S.C. 467) is amended—

(A) by striking paragraph (3);

(B) by redesignating paragraphs (1) and (2) as paragraphs (2) and (3), respectively; and

(C) by inserting before paragraph (2) (as redesignated by subparagraph (B)) the following:

“(1) ADMINISTRATOR.—The term ‘Administrator’ means the Administrator of the Federal Emergency Management Agency.”.

(b) INSPECTION OF DAMS.—Section 3(b)(1) of the National Dam Safety Program Act (33 U.S.C. 467a(b)(1)) is amended by striking “or maintenance” and inserting “maintenance, condition, or provisions for emergency operations”.

(c) NATIONAL DAM SAFETY PROGRAM.—

(1) OBJECTIVES.—Section 8(c) of the National Dam Safety Program Act (33 U.S.C. 467f(c)) is amended by striking paragraph (4) and inserting the following:

“(4) develop and implement a comprehensive dam safety hazard education and public awareness initiative to assist the public in preparing for, mitigating, responding to, and recovering from dam incidents;”.

(2) BOARD.—Section 8(f)(4) of the National Dam Safety Program Act (33 U.S.C. 467f(4)) is amended by inserting “, representatives from nongovernmental organizations,” after “State agencies”.

(d) PUBLIC AWARENESS AND OUTREACH FOR DAM SAFETY.—The National Dam Safety Program Act (33 U.S.C. 467 et seq.) is amended—

(1) by redesignating sections 11, 12, and 13 as sections 12, 13, and 14, respectively; and

(2) by inserting after section 10 (33 U.S.C. 467g–1) the following:

“SEC. 11. PUBLIC AWARENESS AND OUTREACH FOR DAM SAFETY.

“The Administrator, in consultation with other Federal agencies, State and local governments, dam owners, the emergency management community, the private sector, nongovernmental organizations and associations, institutions of higher education, and any other appropriate entities shall, subject to the availability of appropriations, carry out a nationwide public awareness and outreach initiative to assist the public in preparing for, mitigating, responding to, and recovering from dam incidents.”.

(e) AUTHORIZATION OF APPROPRIATIONS.—

(1) NATIONAL DAM SAFETY PROGRAM.—

(A) ANNUAL AMOUNTS.—Section 14(a)(1) of the National Dam Safety Program Act (33 U.S.C. 467j(a)(1)) (as so redesignated) is amended by striking “\$6,500,000” and all that follows through “2011” and inserting “\$9,200,000 for each of fiscal years 2015 through 2019”.

(B) MAXIMUM AMOUNT OF ALLOCATION.—Section 14(a)(2)(B) of the National Dam Safety Program Act (33 U.S.C. 467j(a)(2)(B)) (as so redesignated) is amended—

(i) by striking “The amount” and inserting the following:

“(i) IN GENERAL.—The amount”; and

(ii) by adding at the end the following:

“(ii) FISCAL YEAR 2015 AND SUBSEQUENT FISCAL YEARS.—For fiscal year 2015 and each subsequent fiscal year, the amount of funds allocated to a State under this paragraph may not exceed the amount of funds committed by the State to implement dam safety activities.”.

(2) NATIONAL DAM INVENTORY.—Section 14(b) of the National Dam Safety Program Act (33 U.S.C. 467j(b)) (as so redesignated) is amended by striking “\$650,000” and all that follows through “2011” and inserting “\$500,000 for each of fiscal years 2015 through 2019”.

(3) PUBLIC AWARENESS.—Section 14 of the National Dam Safety Program Act (33 U.S.C. 467j) (as so redesignated) is amended—

(A) by redesignating subsections (c) through (f) as subsections (d) through (g), respectively; and

(B) by inserting after subsection (b) the following:

“(c) PUBLIC AWARENESS.—There is authorized to be appropriated to carry out section 11 \$1,000,000 for each of fiscal years 2015 through 2019.”.

(4) RESEARCH.—Section 14(d) of the National Dam Safety Program Act (as so redesignated) is amended by striking

“\$1,600,000” and all that follows through “2011” and inserting “\$1,450,000 for each of fiscal years 2015 through 2019”.

(5) DAM SAFETY TRAINING.—Section 14(e) of the National Dam Safety Program Act (as so redesignated) is amended by striking “\$550,000” and all that follows through “2011” and inserting “\$750,000 for each of fiscal years 2015 through 2019”.

(6) STAFF.—Section 14(f) of the National Dam Safety Program Act (as so redesignated) is amended by striking “\$700,000” and all that follows through “2011” and inserting “\$1,000,000 for each of fiscal years 2015 through 2019”.

(f) TECHNICAL AMENDMENT.—Section 14(a)(1) of the National Dam Safety Program Act (33 U.S.C. 467j(a)(1)) (as so redesignated) is amended by striking “sections 7, 8, and 11” and inserting “sections 7, 8, and 12”.

Subtitle B—Levee Safety

SEC. 3011. SYSTEMWIDE IMPROVEMENT FRAMEWORK.

A levee system shall remain eligible for rehabilitation assistance under the authority provided by section 5 of the Act of August 18, 1941 (33 U.S.C. 701n) as long as the levee system sponsor continues to make satisfactory progress, as determined by the Secretary, on an approved systemwide improvement framework or letter of intent.

SEC. 3012. MANAGEMENT OF FLOOD RISK REDUCTION PROJECTS.

(a) IN GENERAL.—If 2 or more flood control projects are located within the same geographic area, the Secretary shall, at the request of the non-Federal interests for the affected projects, consider those projects as a single program for budgetary or project management purposes, if the Secretary determines that doing so would not be incompatible with the authorized project purposes.

(b) COST SHARE.—

(1) IN GENERAL.—If any work on a project to which subsection (a) applies is required solely because of impacts to that project from a navigation project, the cost of carrying out that work shall be shared in accordance with the cost-sharing requirements for the navigation project.

(2) USE OF AMOUNTS.—Work described in paragraph (1) may be carried out using amounts made available under subsection (a).

SEC. 3013. VEGETATION MANAGEMENT POLICY.

(a) DEFINITION OF GUIDELINES.—In this section, the term “guidelines” means the Corps of Engineers policy guidelines for management of vegetation on levees, including—

(1) Engineering Technical Letter 1110–2–571 entitled “Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures” and adopted April 10, 2009; and

(2) the draft policy guidance letter entitled “Process for Requesting a Variance from Vegetation Standards for Levees and Floodwalls” (77 Fed. Reg. 9637 (Feb. 17, 2012)).

(b) REVIEW.—The Secretary shall carry out a comprehensive review of the guidelines in order to determine whether current Federal policy relating to levee vegetation is appropriate for all regions of the United States.

(c) FACTORS.—

(1) IN GENERAL.—In carrying out the review, the Secretary shall consider—

(A) the varied interests and responsibilities in managing flood risks, including the need—

(i) to provide the greatest benefits for public safety with limited resources; and

(ii) to ensure that levee safety investments minimize environmental impacts and provide corresponding public safety benefits;

(B) the levee safety benefits that can be provided by woody vegetation;

(C) the preservation, protection, and enhancement of natural resources, including—

(i) the benefit of vegetation on levees in providing habitat for species of concern, including endangered, threatened, and candidate species; and

(ii) the impact of removing levee vegetation on compliance with other regulatory requirements;

(D) protecting the rights of Indian tribes pursuant to treaties and statutes;

(E) determining how vegetation impacts the performance of a levee or levee system during a storm or flood event;

(F) the available science and the historical record regarding the link between vegetation on levees and flood risk;

(G) the avoidance of actions requiring significant economic costs and environmental impacts; and

(H) other factors relating to the factors described in subparagraphs (A) through (F) identified in public comments that the Secretary determines to be appropriate.

(2) VARIANCE CONSIDERATIONS.—

(A) IN GENERAL.—In carrying out the review, the Secretary shall specifically consider factors that promote and allow for consideration of variances from guidelines on a Statewide, tribal, regional, or watershed basis, including variances based on—

(i) regional or watershed soil conditions;

(ii) hydrologic factors;

(iii) vegetation patterns and characteristics;

(iv) environmental resources, including endangered, threatened, or candidate species and related regulatory requirements;

(v) levee performance history, including historical information on original construction and subsequent operation and maintenance activities;

(vi) any effects on water supply;

(vii) any scientific evidence on the link between levee vegetation and levee safety;

(viii) institutional considerations, including implementation challenges and conflicts with or violations of Federal or State environmental laws;

(ix) the availability of limited funds for levee construction and rehabilitation;

(x) the economic and environmental costs of removing woody vegetation on levees; and

(xi) other relevant factors identified in public comments that the Secretary determines to be appropriate.

(B) SCOPE.—The scope of a variance approved by the Secretary may include a complete exemption to guidelines, if appropriate.

(d) COOPERATION AND CONSULTATION; RECOMMENDATIONS.—

(1) IN GENERAL.—The Secretary shall carry out the review under this section in consultation with other applicable Federal agencies, representatives of State, regional, local, and tribal governments, appropriate nongovernmental organizations, and the public.

(2) RECOMMENDATIONS.—

(A) REGIONAL INTEGRATION TEAMS.—Corps of Engineers Regional Integration Teams, representing districts, divisions, and headquarters, in consultation with State and Federal resource agencies, and with participation by local agencies, shall submit to the Secretary any recommendations for vegetation management policies for levees that conform with Federal and State laws and other applicable requirements, including recommendations relating to the review of guidelines under subsection (b) and the consideration of variances under subsection (c)(2).

(B) STATE, TRIBAL, REGIONAL, AND LOCAL ENTITIES.—The Secretary shall consider and accept recommendations from any State, tribal, regional, or local entity for vegetation management policies for levees that conform with Federal and State laws and other applicable requirements, including recommendations relating to the review of guidelines under subsection (b) and the consideration of variances under subsection (c)(2).

(e) INDEPENDENT CONSULTATION.—

(1) IN GENERAL.—As part of the review, the Secretary shall solicit and consider the views of independent experts on the engineering, environmental, and institutional considerations underlying the guidelines, including the factors described in subsection (c) and any information obtained by the Secretary under subsection (d).

(2) AVAILABILITY OF VIEWS.—The views of the independent experts obtained under paragraph (1) shall be—

(A) made available to the public; and

(B) included in supporting materials issued in connection with the revised guidelines required under subsection (f).

(f) REVISION OF GUIDELINES.—

(1) IN GENERAL.—Not later than 18 months after the date of enactment of this Act, the Secretary shall—

(A) revise the guidelines based on the results of the review, including—

(i) recommendations received as part of the consultation described in subsection (d)(1); and

(ii) the views received under subsection (e);

(B) provide the public not less than 30 days to review and comment on draft guidelines before issuing final guidelines; and

(C) submit to Congress and make publicly available a report that contains a summary of the activities of the

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Secretary and a description of the findings of the Secretary under this section.

(2) **CONTENT; INCORPORATION INTO MANUAL.**—The revised guidelines shall—

(A) provide a practical, flexible process for approving Statewide, tribal, regional, or watershed variances from the guidelines that—

(i) reflect due consideration of the factors described in subsection (c); and

(ii) incorporate State, tribal, and regional vegetation management guidelines for specific areas that—

(I) are consistent with the guidelines; and

(II) have been adopted through a formal public process; and

(B) be incorporated into the manual proposed under section 5(c) of the Act of August 18, 1941 (33 U.S.C. 701n(c)).

(3) **FAILURE TO MEET DEADLINES.**—If the Secretary fails to submit a report by the required deadline under this subsection, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a detailed explanation of—

(A) why the deadline was missed;

(B) solutions needed to meet the deadline; and

(C) a projected date for submission of the report.

(g) **INTERIM ACTIONS.**—

(1) **IN GENERAL.**—Until the date on which revisions to the guidelines are adopted in accordance with subsection (f), the Secretary shall not require the removal of existing vegetation as a condition or requirement for any approval or funding of a project, or any other action, unless the specific vegetation has been demonstrated to present an unacceptable safety risk.

(2) **REVISIONS.**—Beginning on the date on which the revisions to the guidelines are adopted in accordance with subsection (f), the Secretary shall reconsider, on request of an affected entity, any previous action of the Corps of Engineers in which the outcome was affected by the former guidelines.

SEC. 3014. LEVEE CERTIFICATIONS.

(a) **IMPLEMENTATION OF FLOOD PROTECTION STRUCTURE ACCREDITATION TASK FORCE.**—In carrying out section 100226 of Public Law 112–141 (42 U.S.C. 4101 note; 126 Stat. 942), the Secretary shall—

(1) ensure that at least 1 program activity carried out under the inspection of completed works program of the Corps of Engineers provides adequate information to the Secretary to reach a levee accreditation decision under section 65.10 of title 44, Code of Federal Regulations (or successor regulation); and

(2) to the maximum extent practicable, carry out activities under the inspection of completed works program of the Corps of Engineers in alignment with the schedule established for the national flood insurance program established under chapter 1 of the National Flood Insurance Act of 1968 (42 U.S.C. 4011 et seq.).

(b) **ACCELERATED LEVEE SYSTEM EVALUATIONS.**—

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(1) **IN GENERAL.**—On receipt of a request from a non-Federal interest, the Secretary may carry out a levee system evaluation of a federally authorized levee for purposes of the national flood insurance program established under chapter 1 of the National Flood Insurance Act of 1968 (42 U.S.C. 4011 et seq.) if the evaluation will be carried out earlier than such an evaluation would be carried out under subsection (a).

(2) **REQUIREMENTS.**—A levee system evaluation under paragraph (1) shall—

(A) at a minimum, comply with section 65.10 of title 44, Code of Federal Regulations (as in effect on the date of enactment of this Act); and

(B) be carried out in accordance with such procedures as the Secretary, in consultation with the Administrator of the Federal Emergency Management Agency, may establish.

(3) **FUNDING.**—

(A) **IN GENERAL.**—The Secretary may use amounts made available under section 22 of the Water Resources Development Act of 1974 (42 U.S.C. 1962d–16) to carry out this subsection.

(B) **COST SHARE.**—The Secretary shall apply the cost share under section 22(b) of the Water Resources Development Act of 1974 (42 U.S.C. 1962d–16(b)) to any activities carried out under this subsection.

SEC. 3015. PLANNING ASSISTANCE TO STATES.

Section 22 of the Water Resources Development Act of 1974 (42 U.S.C. 1962d–16) is amended—

(1) in subsection (a)—

(A) in paragraph (1)—

(i) by inserting “or other non-Federal interest working with a State” after “cooperate with any State”; and

(ii) by inserting “, including plans to comprehensively address water resources challenges,” after “of such State”; and

(B) in paragraph (2)(A), by striking “, at Federal expense,”;

(2) in subsection (b)—

(A) in paragraph (1), by striking “subsection (a)(1)” each place it appears and inserting “subsection (a)”;

(B) by redesignating paragraphs (2) and (3) as paragraphs (3) and (4), respectively; and

(C) by inserting after paragraph (1) the following:

“(2) **CONTRIBUTED FUNDS.**—The Secretary may accept and expend funds in excess of the fees established under paragraph (1) that are provided by a State or other non-Federal interest for assistance under this section.”; and

(3) in subsection (c)—

(A) in paragraph (1)—

(i) by striking “\$10,000,000” and inserting “\$30,000,000”; and

(ii) by striking “\$2,000,000” and inserting “\$5,000,000 in Federal funds”; and

(B) in paragraph (2), by striking “\$5,000,000” and inserting “\$15,000,000”.

SEC. 3016. LEVEE SAFETY.

(a) **PURPOSES.**—Section 9001 of the Water Resources Development Act of 2007 (33 U.S.C. 3301 note) is amended—

(1) in the section heading, by inserting “; **PURPOSES**” after “**TITLE**”;

(2) by striking “This title” and inserting the following:

“(a) **SHORT TITLE.**—This title”; and

(3) by adding at the end the following:

“(b) **PURPOSES.**—The purposes of this title are—

“(1) to ensure that human lives and property that are protected by new and existing levees are safe;

“(2) to encourage the use of appropriate engineering policies, procedures, and technical practices for levee site investigation, design, construction, operation and maintenance, inspection, assessment, and emergency preparedness;

“(3) to develop and support public education and awareness projects to increase public acceptance and support of levee safety programs and provide information;

“(4) to build public awareness of the residual risks associated with living in levee protected areas;

“(5) to develop technical assistance materials, seminars, and guidelines to improve the security of levees of the United States; and

“(6) to encourage the establishment of effective State and tribal levee safety programs.”

(b) **DEFINITIONS.**—Section 9002 of the Water Resources Development Act of 2007 (33 U.S.C. 3301) is amended—

(1) by redesignating paragraphs (1), (2), (3), (4), (5), and (6), as paragraphs (3), (6), (7), (14), (15), and (16), respectively;

(2) by inserting before paragraph (3) (as redesignated by paragraph (1)) the following:

“(1) **ADMINISTRATOR.**—The term ‘Administrator’ means the Administrator of the Federal Emergency Management Agency.

“(2) **CANAL STRUCTURE.**—

“(A) **IN GENERAL.**—The term ‘canal structure’ means an embankment, wall, or structure along a canal or man-made watercourse that—

“(i) constrains water flows;

“(ii) is subject to frequent water loading; and

“(iii) is an integral part of a flood risk reduction system that protects the leveed area from flood waters associated with hurricanes, precipitation events, seasonal high water, and other weather-related events.

“(B) **EXCLUSION.**—The term ‘canal structure’ does not include a barrier across a watercourse.”;

(3) by inserting after paragraph (3) (as redesignated by paragraph (1)) the following:

“(4) **FLOODPLAIN MANAGEMENT.**—The term ‘floodplain management’ means the operation of a community program of corrective and preventative measures for reducing flood damage.

“(5) **INDIAN TRIBE.**—The term ‘Indian tribe’ has the meaning given the term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b).”; and

(4) by striking paragraph (7) (as redesignated by paragraph (1)) and inserting the following:

“(7) **LEVEE.**—

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“(A) IN GENERAL.—The term ‘levee’ means a manmade barrier (such as an embankment, floodwall, or other structure)—

“(i) the primary purpose of which is to provide hurricane, storm, or flood protection relating to seasonal high water, storm surges, precipitation, or other weather events; and

“(ii) that is normally subject to water loading for only a few days or weeks during a calendar year.

“(B) INCLUSIONS.—The term ‘levee’ includes a levee system, including—

“(i) levees and canal structures that—

“(I) constrain water flows;

“(II) are subject to more frequent water loading; and

“(III) do not constitute a barrier across a watercourse; and

“(ii) roadway and railroad embankments, but only to the extent that the embankments are integral to the performance of a flood damage reduction system.

“(C) EXCLUSIONS.—The term ‘levee’ does not include—

“(i) a roadway or railroad embankment that is not integral to the performance of a flood damage reduction system;

“(ii) a canal constructed completely within natural ground without any manmade structure (such as an embankment or retaining wall to retain water or a case in which water is retained only by natural ground);

“(iii) a canal regulated by a Federal or State agency in a manner that ensures that applicable Federal safety criteria are met;

“(iv) a levee or canal structure—

“(I) that is not a part of a Federal flood damage reduction system;

“(II) that is not recognized under the National Flood Insurance Program as providing protection from the 1-percent-annual-chance or greater flood;

“(III) that is not greater than 3 feet high;

“(IV) the population in the leveed area of which is less than 50 individuals; and

“(V) the leveed area of which is less than 1,000 acres; or

“(v) any shoreline protection or river bank protection system (such as revetments or barrier islands).

“(8) LEVEE FEATURE.—The term ‘levee feature’ means a structure that is critical to the functioning of a levee, including—

“(A) an embankment section;

“(B) a floodwall section;

“(C) a closure structure;

“(D) a pumping station;

“(E) an interior drainage work; and

“(F) a flood damage reduction channel.

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“(9) LEVEE SYSTEM.—The term ‘levee system’ means 1 or more levee segments, including all levee features that are interconnected and necessary to ensure protection of the associated leveed areas—

“(A) that collectively provide flood damage reduction to a defined area; and

“(B) the failure of 1 of which may result in the failure of the entire system.

“(10) NATIONAL LEVEE DATABASE.—The term ‘national levee database’ means the levee database established under section 9004.

“(11) PARTICIPATING PROGRAM.—The term ‘participating program’ means a levee safety program developed by a State or Indian tribe that includes the minimum components necessary for recognition by the Secretary.

“(12) REHABILITATION.—The term ‘rehabilitation’ means the repair, replacement, reconstruction, removal of a levee, or reconfiguration of a levee system, including a setback levee, that is carried out to reduce flood risk or meet national levee safety guidelines.

“(13) RISK.—The term ‘risk’ means a measure of the probability and severity of undesirable consequences.”.

(c) COMMITTEE ON LEVEE SAFETY.—Section 9003 of the Water Resources Development Act of 2007 (33 U.S.C. 3302) is amended—

(1) in subsection (b)—

(A) by striking paragraphs (1) and (2) and inserting the following:

“(1) NONVOTING MEMBERS.—The following 2 nonvoting members:

“(A) The Secretary (or a designee of the Secretary).

“(B) The Administrator (or a designee of the Administrator).”;

(B) by redesignating paragraph (3) as paragraph (2);

and

(C) in paragraph (2) (as redesignated by subparagraph (B)) by inserting “voting” after “14”;

(2) by redesignating subsection (g) as subsection (h); and

(3) by striking subsections (c) through (f) and inserting the following:

“(c) ADMINISTRATION.—

“(1) TERMS OF VOTING MEMBERS.—

“(A) IN GENERAL.—A voting member of the committee shall be appointed for a term of 3 years, except that, of the members first appointed—

“(i) 5 shall be appointed for a term of 1 year;

“(ii) 5 shall be appointed for a term of 2 years;

and

“(iii) 4 shall be appointed for a term of 3 years.

“(B) REAPPOINTMENT.—A voting member of the committee may be reappointed to the committee, as the Secretary determines to be appropriate.

“(C) VACANCIES.—A vacancy on the committee shall be filled in the same manner as the original appointment was made.

“(2) CHAIRPERSON.—

“(A) IN GENERAL.—The voting members of the committee shall appoint a chairperson from among the voting members of the committee.

“(B) TERM.—The chairperson shall serve a term of not more than 2 years.

“(d) STANDING COMMITTEES.—

“(1) IN GENERAL.—The committee may establish standing committees comprised of volunteers from all levels of government and the private sector, to advise the committee regarding specific levee safety issues, including participating programs, technical issues, public education and awareness, and safety and the environment.

“(2) MEMBERSHIP.—The committee shall recommend to the Secretary for approval individuals for membership on the standing committees.

“(e) DUTIES AND POWERS.—The committee—

“(1) shall submit to the Secretary and Congress an annual report regarding the effectiveness of the levee safety initiative in accordance with section 9006; and

“(2) may secure from other Federal agencies such services, and enter into such contracts, as the committee determines to be necessary to carry out this subsection.

“(f) TASK FORCE COORDINATION.—The committee shall, to the maximum extent practicable, coordinate the activities of the committee with the Federal Interagency Floodplain Management Task Force.

“(g) COMPENSATION.—

“(1) FEDERAL EMPLOYEES.—Each member of the committee who is an officer or employee of the United States—

“(A) shall serve without compensation in addition to compensation received for the services of the member as an officer or employee of the United States; but

“(B) shall be allowed a per diem allowance for travel expenses, at rates authorized for an employee of an agency under subchapter I of chapter 57 of title 5, United States Code, while away from the home or regular place of business of the member in the performance of the duties of the committee.

“(2) NON-FEDERAL EMPLOYEES.—To the extent amounts are made available to carry out this section in appropriations Acts, the Secretary shall provide to each member of the committee who is not an officer or employee of the United States a stipend and a per diem allowance for travel expenses, at rates authorized for an employee of an agency under subchapter I of chapter 57 of title 5, United States Code, while away from the home or regular place of business of the member in performance of services for the committee.

“(3) STANDING COMMITTEE MEMBERS.—Each member of a standing committee shall serve in a voluntary capacity.”

(d) INVENTORY OF LEVEES.—Section 9004 of the Water Resources Development Act of 2007 (33 U.S.C. 3303) is amended—

(1) in subsection (a)(2)(A) by striking “and, for non-Federal levees, such information on levee location as is provided to the Secretary by State and local governmental agencies” and inserting “and updated levee information provided by States, Indian tribes, Federal agencies, and other entities”; and

(2) by adding at the end the following:

“(c) LEVEE REVIEW.—

“(1) IN GENERAL.—The Secretary shall carry out a one-time inventory and review of all levees identified in the national levee database.

“(2) NO FEDERAL INTEREST.—The inventory and inspection under paragraph (1) does not create a Federal interest in the construction, operation, or maintenance of any levee that is included in the inventory or inspected under this subsection.

“(3) REVIEW CRITERIA.—In carrying out the inventory and review, the Secretary shall use the levee safety action classification criteria to determine whether a levee should be classified in the inventory as requiring a more comprehensive inspection.

“(4) STATE AND TRIBAL PARTICIPATION.—At the request of a State or Indian tribe with respect to any levee subject to review under this subsection, the Secretary shall—

“(A) allow an official of the State or Indian tribe to participate in the review of the levee; and

“(B) provide information to the State or Indian tribe relating to the location, construction, operation, or maintenance of the levee.

“(5) EXCEPTIONS.—In carrying out the inventory and review under this subsection, the Secretary shall not be required to review any levee that has been inspected by a State or Indian tribe using the same methodology described in paragraph (3) during the 1-year period immediately preceding the date of enactment of this subsection if the Governor of the State or chief executive of the tribal government, as applicable, requests an exemption from the review.”

(e) LEVEE SAFETY INITIATIVE.—

(1) IN GENERAL.—Sections 9005 and 9006 of the Water Resources Development Act of 2007 (33 U.S.C. 3304, 3305) are redesignated as sections 9007 and 9008, respectively.

(2) LEVEE SAFETY INITIATIVE.—Title IX of the Water Resources Development Act of 2007 (33 U.S.C. 3301 et seq.) is amended by inserting after section 9004 the following:

“SEC. 9005. LEVEE SAFETY INITIATIVE.

“(a) ESTABLISHMENT.—The Secretary, in consultation with the Administrator, shall carry out a levee safety initiative.

“(b) MANAGEMENT.—The Secretary shall appoint—

“(1) an administrator of the levee safety initiative; and

“(2) such staff as are necessary to implement the initiative.

“(c) LEVEE SAFETY GUIDELINES.—

“(1) ESTABLISHMENT.—Not later than 1 year after the date of enactment of this subsection, the Secretary, in consultation with the Administrator and in coordination with State, local, and tribal governments and organizations with expertise in levee safety, shall establish a set of voluntary, comprehensive, national levee safety guidelines that—

“(A) are available for common, uniform use by all Federal, State, tribal, and local agencies;

“(B) incorporate policies, procedures, standards, and criteria for a range of levee types, canal structures, and related facilities and features; and

“(C) provide for adaptation to local, regional, or watershed conditions.

“(2) REQUIREMENT.—The policies, procedures, standards, and criteria under paragraph (1)(B) shall be developed taking into consideration the levee hazard potential classification system established under subsection (d).

“(3) INCORPORATION.—The guidelines shall address, to the maximum extent practicable—

“(A) the activities and practices carried out by State, local, and tribal governments, and the private sector to safely build, regulate, operate, and maintain levees; and

“(B) Federal activities that facilitate State efforts to develop and implement effective State programs for the safety of levees, including levee inspection, levee rehabilitation, locally developed floodplain management, and public education and training programs.

“(4) CONSIDERATION BY FEDERAL AGENCIES.—To the maximum extent practicable, all Federal agencies shall consider the levee safety guidelines in carrying out activities relating to the management of levees.

“(5) PUBLIC COMMENT.—Prior to finalizing the guidelines under this subsection, the Secretary shall—

“(A) issue draft guidelines for public comment, including comment by States, non-Federal interests, and other appropriate stakeholders; and

“(B) consider any comments received in the development of final guidelines.

“(d) HAZARD POTENTIAL CLASSIFICATION SYSTEM.—

“(1) ESTABLISHMENT.—The Secretary shall establish a hazard potential classification system for use under the levee safety initiative and participating programs.

“(2) REVISION.—The Secretary shall review and, as necessary, revise the hazard potential classification system not less frequently than once every 5 years.

“(3) CONSISTENCY.—The hazard potential classification system established pursuant to this subsection shall be consistent with and incorporated into the levee safety action classification tool developed by the Corps of Engineers.

“(e) TECHNICAL ASSISTANCE AND MATERIALS.—

“(1) ESTABLISHMENT.—The Secretary, in consultation with the Administrator, shall provide technical assistance and training to promote levee safety and assist States, communities, and levee owners in—

“(A) developing levee safety programs;

“(B) identifying and reducing flood risks associated with levees;

“(C) identifying local actions that may be carried out to reduce flood risks in leveed areas; and

“(D) rehabilitating, improving, replacing, reconfiguring, modifying, and removing levees and levee systems.

“(2) ELIGIBILITY.—To be eligible to receive technical assistance under this subsection, a State shall—

“(A) be in the process of establishing or have in effect a State levee safety program under which a State levee safety agency, in accordance with State law, carries out the guidelines established under subsection (c)(1); and

“(B) allocate sufficient funds in the budget of that State to carry out that State levee safety program.

“(3) WORK PLANS.—The Secretary shall enter into an agreement with each State receiving technical assistance under this subsection to develop a work plan necessary for the State levee safety program of that State to reach a level of program performance that meets the guidelines established under subsection (c)(1).

“(f) PUBLIC EDUCATION AND AWARENESS.—

“(1) IN GENERAL.—The Secretary, in coordination with the Administrator, shall carry out public education and awareness efforts relating to the levee safety initiative.

“(2) CONTENTS.—In carrying out the efforts under paragraph (1), the Secretary and the Administrator shall—

“(A) educate individuals living in leveed areas regarding the risks of living in those areas; and

“(B) promote consistency in the transmission of information regarding levees among Federal agencies and regarding risk communication at the State and local levels.

“(g) STATE AND TRIBAL LEEVE SAFETY PROGRAM.—

“(1) GUIDELINES.—

“(A) IN GENERAL.—Not later than 1 year after the date of enactment of this subsection, in consultation with the Administrator, the Secretary shall issue guidelines that establish the minimum components necessary for recognition of a State or tribal levee safety program as a participating program.

“(B) GUIDELINE CONTENTS.—The guidelines under subparagraph (A) shall include provisions and procedures requiring each participating State and Indian tribe to certify to the Secretary that the State or Indian tribe, as applicable—

“(i) has the authority to participate in the levee safety initiative;

“(ii) can receive funds under this title;

“(iii) has adopted any levee safety guidelines developed under this title;

“(iv) will carry out levee inspections;

“(v) will carry out, consistent with applicable requirements, flood risk management and any emergency action planning procedures the Secretary determines to be necessary relating to levees;

“(vi) will carry out public education and awareness activities consistent with the efforts carried out under subsection (f); and

“(vii) will collect and share information regarding the location and condition of levees, including for inclusion in the national levee database.

“(C) PUBLIC COMMENT.—Prior to finalizing the guidelines under this paragraph, the Secretary shall—

“(i) issue draft guidelines for public comment; and

“(ii) consider any comments received in the development of final guidelines.

“(2) ASSISTANCE TO STATES.—

“(A) ESTABLISHMENT.—The Administrator may provide assistance, subject to the availability of funding specified in appropriations Acts for Federal Emergency Management Agency activities pursuant to this title and subject to amounts available under subparagraph (E), to States and

Indian tribes in establishing participating programs, conducting levee inventories, and improving levee safety programs in accordance with subparagraph (B).

“(B) REQUIREMENTS.—To be eligible to receive assistance under this section, a State or Indian tribe shall—

“(i) meet the requirements of a participating program established by the guidelines issued under paragraph (1);

“(ii) use not less than 25 percent of any amounts received to identify and assess non-Federal levees within the State or on land of the Indian tribe;

“(iii) submit to the Secretary and Administrator any information collected by the State or Indian tribe in carrying out this subsection for inclusion in the national levee safety database; and

“(iv) identify actions to address hazard mitigation activities associated with levees and leveed areas identified in the hazard mitigation plan of the State approved by the Administrator of the Federal Emergency Management Agency under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.).

“(C) MEASURES TO ASSESS EFFECTIVENESS.—

“(i) IN GENERAL.—Not later than 1 year after the date of enactment of this subsection, the Administrator shall implement quantifiable performance measures and metrics to assess the effectiveness of the assistance provided in accordance with subparagraph (A).

“(ii) CONSIDERATIONS.—In assessing the effectiveness of assistance under clause (i), the Administrator shall consider the degree to which the State or tribal program—

“(I) ensures that human lives and property that are protected by new and existing levees are safe;

“(II) encourages the use of appropriate engineering policies, procedures, and technical practices for levee site investigation, design, construction, operation and maintenance, inspection, assessment, and emergency preparedness;

“(III) develops and supports public education and awareness projects to increase public acceptance and support of levee safety programs and provide information;

“(IV) builds public awareness of the residual risks associated with living in levee protected areas; and

“(V) develops technical assistance materials, seminars, and guidelines to improve the security of levees of the United States.

“(D) MAINTENANCE OF EFFORT.—Technical assistance or grants may not be provided to a State under this subsection during a fiscal year unless the State enters into an agreement with the Administrator to ensure that the State will maintain during that fiscal year aggregate expenditures for programs to ensure levee safety that equal or exceed the average annual level of such expenditures

for the State for the 2 fiscal years preceding that fiscal year.

“(E) AUTHORIZATION OF APPROPRIATIONS.—

“(i) IN GENERAL.—There is authorized to be appropriated to the Administrator to carry out this subsection \$25,000,000 for each of fiscal years 2015 through 2019.

“(ii) ALLOCATION.—For each fiscal year, amounts made available under this subparagraph shall be allocated among the States and Indian tribes as follows:

“(I) $\frac{1}{3}$ among States and Indian tribes that qualify for assistance under this subsection.

“(II) $\frac{2}{3}$ among States and Indian tribes that qualify for assistance under this subsection, to each such State or Indian tribe in the proportion that—

“(aa) the miles of levees in the State or on the land of the Indian tribe that are listed on the inventory of levees; bears to

“(bb) the miles of levees in all States and on the land of all Indian tribes that are in the national levee database.

“(iii) MAXIMUM AMOUNT OF ALLOCATION.—The amounts allocated to a State or Indian tribe under this subparagraph shall not exceed 50 percent of the reasonable cost of implementing the State or tribal levee safety program.

“(F) PROHIBITION.—No amounts made available to the Administrator under this title shall be used for levee construction, rehabilitation, repair, operations, or maintenance.

“(h) LEVEE REHABILITATION ASSISTANCE PROGRAM.—

“(1) ESTABLISHMENT.—The Secretary shall provide assistance to States, Indian tribes, and local governments relating to addressing flood mitigation activities that result in an overall reduction in flood risk.

“(2) REQUIREMENTS.—To be eligible to receive assistance under this subsection, a State, Indian tribe, or local government shall—

“(A) participate in, and comply with, all applicable Federal floodplain management and flood insurance programs;

“(B) have in place a hazard mitigation plan that—

“(i) includes all levee risks; and

“(ii) complies with the Disaster Mitigation Act of 2000 (Public Law 106–390; 114 Stat. 1552);

“(C) submit to the Secretary an application at such time, in such manner, and containing such information as the Secretary may require;

“(D) commit to provide normal operation and maintenance of the project for the 50 year-period following completion of rehabilitation; and

“(E) comply with such minimum eligibility requirements as the Secretary, in consultation with the committee, may establish to ensure that each owner and operator of a levee under a participating State or tribal levee safety program—

“(i) acts in accordance with the guidelines developed under subsection (c); and

“(ii) carries out activities relating to the public in the leveed area in accordance with the hazard mitigation plan described in subparagraph (B).

“(3) FLOODPLAIN MANAGEMENT PLANS.—

“(A) IN GENERAL.—Not later than 1 year after the date of execution of a project agreement for assistance under this subsection, a State, Indian tribe, or local government shall prepare a floodplain management plan in accordance with the guidelines under subparagraph (D) to reduce the impacts of future flood events in each applicable leveed area.

“(B) INCLUSIONS.—A plan under subparagraph (A) shall address—

“(i) potential measures, practices, and policies to reduce loss of life, injuries, damage to property and facilities, public expenditures, and other adverse impacts of flooding in each applicable leveed area;

“(ii) plans for flood fighting and evacuation; and

“(iii) public education and awareness of flood risks.

“(C) IMPLEMENTATION.—Not later than 1 year after the date of completion of construction of the applicable project, a floodplain management plan prepared under subparagraph (A) shall be implemented.

“(D) GUIDELINES.—Not later than 180 days after the date of enactment of this subsection, the Secretary, in consultation with the Administrator, shall develop such guidelines for the preparation of floodplain management plans prepared under this paragraph as the Secretary determines to be appropriate.

“(E) TECHNICAL SUPPORT.—The Secretary may provide technical support for the development and implementation of floodplain management plans prepared under this paragraph.

“(4) USE OF FUNDS.—

“(A) IN GENERAL.—Assistance provided under this subsection may be used—

“(i) for any rehabilitation activity to maximize overall risk reduction associated with a levee under a participating State or tribal levee safety program; and

“(ii) only for a levee that is not federally operated and maintained.

“(B) PROHIBITION.—Assistance provided under this subsection shall not be used—

“(i) to perform routine operation or maintenance for a levee; or

“(ii) to make any modification to a levee that does not result in an improvement to public safety.

“(5) NO PROPRIETARY INTEREST.—A contract for assistance provided under this subsection shall not be considered to confer any proprietary interest on the United States.

“(6) COST SHARE.—The maximum Federal share of the cost of any assistance provided under this subsection shall be 65 percent.

“(7) PROJECT LIMIT.—The maximum amount of Federal assistance for a project under this subsection shall be \$10,000,000.

“(8) LIMITATION.—A project shall not receive Federal assistance under this subsection more than 1 time.

“(9) FEDERAL INTEREST.—For a project that is not a project eligible for rehabilitation assistance under section 5 of the Act of August 18, 1941 (33 U.S.C. 701n), the Secretary shall determine that the proposed rehabilitation is in the Federal interest prior to providing assistance for such rehabilitation.

“(10) OTHER LAWS.—Assistance provided under this subsection shall be subject to all applicable laws (including regulations) that apply to the construction of a civil works project of the Corps of Engineers.

“(i) EFFECT OF SECTION.—Nothing in this section—

“(1) affects the requirement under section 100226(b)(2) of Public Law 112–141 (42 U.S.C. 4101 note; 126 Stat. 942); or

“(2) confers any regulatory authority on—

“(A) the Secretary; or

“(B) the Administrator, including for the purpose of setting premium rates under the national flood insurance program established under chapter 1 of the National Flood Insurance Act of 1968 (42 U.S.C. 4011 et seq.).

“SEC. 9006. REPORTS.

“(a) STATE OF LEVEES.—

“(1) IN GENERAL.—Not later than 1 year after the date of enactment of this subsection, and biennially thereafter, the Secretary in coordination with the committee, shall submit to Congress and make publicly available a report describing the state of levees in the United States and the effectiveness of the levee safety initiative, including—

“(A) progress achieved in implementing the levee safety initiative;

“(B) State and tribal participation in the levee safety initiative;

“(C) recommendations to improve coordination of levee safety, floodplain management, and environmental protection concerns, including—

“(i) identifying and evaluating opportunities to coordinate public safety, floodplain management, and environmental protection activities relating to levees; and

“(ii) evaluating opportunities to coordinate environmental permitting processes for operation and maintenance activities at existing levee projects in compliance with all applicable laws; and

“(D) any recommendations for legislation and other congressional actions necessary to ensure national levee safety.

“(2) INCLUSION.—Each report under paragraph (1) shall include a report of the committee that describes the independent recommendations of the committee for the implementation of the levee safety initiative.

“(b) NATIONAL DAM AND LEVEE SAFETY PROGRAM.—Not later than 3 years after the date of enactment of this subsection, to

the maximum extent practicable, the Secretary and the Administrator, in coordination with the committee, shall submit to Congress and make publicly available a report that includes recommendations regarding the advisability and feasibility of, and potential approaches for, establishing a joint national dam and levee safety program.

“(c) ALIGNMENT OF FEDERAL PROGRAMS RELATING TO LEVEES.—Not later than 2 years after the date of enactment of this subsection, the Comptroller General of the United States shall submit to Congress a report on opportunities for alignment of Federal programs to provide incentives to State, tribal, and local governments and individuals and entities—

“(1) to promote shared responsibility for levee safety;

“(2) to encourage the development of strong State and tribal levee safety programs;

“(3) to better align the levee safety initiative with other Federal flood risk management programs; and

“(4) to promote increased levee safety through other Federal programs providing assistance to State and local governments.

“(d) LIABILITY FOR CERTAIN LEVEE ENGINEERING PROJECTS.—Not later than 1 year after the date of enactment of this subsection, the Secretary shall submit to Congress and make publicly available a report that includes recommendations that identify and address any legal liability associated with levee engineering projects that prevent—

“(1) levee owners from obtaining needed levee engineering services; or

“(2) development and implementation of a State or tribal levee safety program.”.

(f) AUTHORIZATION OF APPROPRIATIONS.—Section 9008 of the Water Resources Development Act of 2007 (as redesignated by subsection (e)(1)) is amended—

(1) by striking “are” and inserting “is”; and

(2) by striking “Secretary” and all that follows through the period at the end and inserting the following:

“Secretary—

“(1) to carry out sections 9003, 9005(c), 9005(d), 9005(e), and 9005(f), \$4,000,000 for each of fiscal years 2015 through 2019;

“(2) to carry out section 9004, \$20,000,000 for each of fiscal years 2015 through 2019; and

“(3) to carry out section 9005(h), \$30,000,000 for each of fiscal years 2015 through 2019.”.

SEC. 3017. REHABILITATION OF EXISTING LEVEES.

(a) IN GENERAL.—The Secretary shall carry out measures that address consolidation, settlement, subsidence, sea level rise, and new datum to restore federally authorized hurricane and storm damage reduction projects that were constructed as of the date of enactment of this Act to the authorized levels of protection of the projects if the Secretary determines the necessary work is technically feasible, environmentally acceptable, and economically justified.

(b) LIMITATION.—This section shall only apply to those projects for which the executed project partnership agreement provides that the non-Federal interest is not required to perform future measures to restore the project to the authorized level of protection of the

project to account for subsidence and sea-level rise as part of the operation, maintenance, repair, replacement, and rehabilitation responsibilities.

(c) **COST SHARE.**—

(1) **IN GENERAL.**—The non-Federal share of the cost of construction of a project carried out under this section shall be determined as provided in subsections (a) through (d) of section 103 of the Water Resources Development Act of 1986 (33 U.S.C. 2213).

(2) **CERTAIN ACTIVITIES.**—The non-Federal share of the cost of operations, maintenance, repair, replacement, and rehabilitation for a project carried out under this section shall be 100 percent.

(d) **REPORT TO CONGRESS.**—Not later than 5 years after the date of enactment of this Act, the Secretary shall include in the annual report developed under section 7001—

(1) any recommendations relating to the continued need for the authority provided under this section;

(2) a description of the measures carried out under this section;

(3) any lessons learned relating to the measures implemented under this section; and

(4) best practices for carrying out measures to restore hurricane and storm damage reduction projects.

(e) **TERMINATION OF AUTHORITY.**—The authority of the Secretary under this subsection terminates on the date that is 10 years after the date of enactment of this Act.

Subtitle C—Additional Safety Improvements and Risk Reduction Measures

SEC. 3021. USE OF INNOVATIVE MATERIALS.

Section 8(d) of the Water Resources Development Act of 1988 (33 U.S.C. 2314) is amended by striking “materials” and all that follows through the period at the end and inserting “methods, or materials, including roller compacted concrete, geosynthetic materials, and advanced composites, that the Secretary determines are appropriate to carry out this section.”.

SEC. 3022. DURABILITY, SUSTAINABILITY, AND RESILIENCE.

In carrying out the activities of the Corps of Engineers, the Secretary, to the maximum extent practicable, shall encourage the use of durable and sustainable materials and resilient construction techniques that—

(1) allow a water resources infrastructure project—

(A) to resist hazards due to a major disaster; and

(B) to continue to serve the primary function of the water resources infrastructure project following a major disaster;

(2) reduce the magnitude or duration of a disruptive event to a water resources infrastructure project; and

(3) have the absorptive capacity, adaptive capacity, and recoverability to withstand a potentially disruptive event.

SEC. 3023. STUDY ON RISK REDUCTION.

(a) **IN GENERAL.**—Not later than 18 months after the date of enactment of this Act, the Secretary, in coordination with the Secretary of the Interior and the Secretary of Commerce, shall enter into an arrangement with the National Academy of Sciences to carry out a study and make recommendations relating to infrastructure and coastal restoration options for reducing risk to human life and property from extreme weather events, such as hurricanes, coastal storms, and inland flooding.

(b) **CONSIDERATIONS.**—The study under subsection (a) shall include—

(1) an analysis of strategies and water resources projects, including authorized water resources projects that have not yet been constructed, and other projects implemented in the United States and worldwide to respond to risk associated with extreme weather events;

(2) an analysis of—

(A) historical extreme weather events;

(B) the ability of existing infrastructure to mitigate risks associated with extreme weather events; and

(C) the reduction in long-term costs and vulnerability to infrastructure through the use of resilient construction techniques;

(3) identification of proven, science-based approaches and mechanisms for ecosystem protection and identification of natural resources likely to have the greatest need for protection, restoration, and conservation so that the infrastructure and restoration projects can continue safeguarding the communities in, and sustaining the economy of, the United States;

(4) an estimation of the funding necessary to improve infrastructure in the United States to reduce risk associated with extreme weather events;

(5) an analysis of the adequacy of current funding sources and the identification of potential new funding sources to finance the necessary infrastructure improvements referred to in paragraph (3); and

(6) an analysis of the Federal, State, and local costs of natural disasters and the potential cost-savings associated with implementing mitigation measures.

(c) **COORDINATION.**—The National Academy of Sciences may cooperate with the National Academy of Public Administration to carry out 1 or more aspects of the study under subsection (a).

(d) **PUBLICATION.**—Not later than 30 days after completion of the study under subsection (a), the National Academy of Sciences shall—

(1) submit a copy of the study to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives; and

(2) make a copy of the study available on a publicly accessible Internet site.

SEC. 3024. MANAGEMENT OF FLOOD, DROUGHT, AND STORM DAMAGE.

(a) **IN GENERAL.**—Not later than 1 year after the date of enactment of this Act, the Comptroller General shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House

of Representatives a study of the strategies used by the Corps of Engineers for the comprehensive management of water resources in response to floods, storms, and droughts, including an historical review of the ability of the Corps of Engineers to manage and respond to historical drought, storm, and flood events.

(b) CONSIDERATIONS.—The study under subsection (a) shall address—

(1) the extent to which existing water management activities of the Corps of Engineers can better meet the goal of addressing future flooding, drought, and storm damage risks, which shall include analysis of all historical extreme weather events that have been recorded during the previous 5 centuries as well as in the geological record;

(2) whether existing water resources projects built or maintained by the Corps of Engineers, including dams, levees, floodwalls, flood gates, and other appurtenant infrastructure were designed to adequately address flood, storm, and drought impacts and the extent to which the water resources projects have been successful at addressing those impacts;

(3) any recommendations for approaches for repairing, rebuilding, or restoring infrastructure, land, and natural resources that consider the risks and vulnerabilities associated with past and future extreme weather events;

(4) whether a reevaluation of existing management approaches of the Corps of Engineers could result in greater efficiencies in water management and project delivery that would enable the Corps of Engineers to better prepare for, contain, and respond to flood, storm, and drought conditions;

(5) any recommendations for improving the planning processes of the Corps of Engineers to provide opportunities for comprehensive management of water resources that increases efficiency and improves response to flood, storm, and drought conditions;

(6) any recommendations on the use of resilient construction techniques to reduce future vulnerability from flood, storm, and drought conditions; and

(7) any recommendations for improving approaches to rebuilding or restoring infrastructure and natural resources that contribute to risk reduction, such as coastal wetlands, to prepare for flood and drought.

SEC. 3025. POST-DISASTER WATERSHED ASSESSMENTS.

(a) WATERSHED ASSESSMENTS.—

(1) IN GENERAL.—In an area that the President has declared a major disaster in accordance with section 401 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5170), the Secretary may carry out a watershed assessment to identify, to the maximum extent practicable, specific flood risk reduction, hurricane and storm damage reduction, ecosystem restoration, or navigation project recommendations that will help to rehabilitate and improve the resiliency of damaged infrastructure and natural resources to reduce risks to human life and property from future natural disasters.

(2) EXISTING PROJECTS.—A watershed assessment carried out paragraph (1) may identify existing projects being carried

out under 1 or more of the authorities referred to in subsection (b)(1).

(3) **Duplicate Watershed Assessments.**—In carrying out a watershed assessment under paragraph (1), the Secretary shall use all existing watershed assessments and related information developed by the Secretary or other Federal, State, or local entities.

(b) **PROJECTS.**—

(1) **IN GENERAL.**—The Secretary may carry out projects identified under a watershed assessment under subsection (a) in accordance with the criteria for projects carried out under one of the following authorities:

(A) Section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s).

(B) Section 111 of the River and Harbor Act of 1968 (33 U.S.C. 426i).

(C) Section 206 of the Water Resources Development Act of 1996 (33 U.S.C. 2330).

(D) Section 1135 of the Water Resources Development Act of 1986 (33 U.S.C. 2309a).

(E) Section 107 of the River and Harbor Act of 1960 (33 U.S.C. 577).

(F) Section 3 of the Act of August 13, 1946 (33 U.S.C. 426g).

(2) **ANNUAL PLAN.**—For each project that does not meet the criteria under paragraph (1), the Secretary shall include a recommendation relating to the project in the annual report submitted to Congress by the Secretary in accordance with section 7001.

(3) **EXISTING PROJECTS.**—In carrying out a project under paragraph (1), the Secretary shall—

(A) to the maximum extent practicable, use all existing information and studies available for the project; and

(B) not require any element of a study completed for the project prior to the disaster to be repeated.

(c) **REQUIREMENTS.**—All requirements applicable to a project under the Acts described in subsection (b) shall apply to the project.

(d) **LIMITATIONS ON ASSESSMENTS.**—A watershed assessment under subsection (a) shall be initiated not later than 2 years after the date on which the major disaster declaration is issued.

SEC. 3026. HURRICANE AND STORM DAMAGE REDUCTION STUDY.

(a) **IN GENERAL.**—As part of the study for flood and storm damage reduction related to natural disasters to be carried out by the Secretary under title II of division A of the Disaster Relief Appropriations Act, 2013, under the heading “Department of the Army—Corps of Engineers—Civil—Investigations” (127 Stat. 5), the Secretary shall make specific project recommendations.

(b) **CONSULTATION.**—In making recommendations pursuant to this section, the Secretary may consult with key stakeholders, including State, county, and city governments, and, as applicable, State and local water districts, and in the case of recommendations concerning projects that substantially affect communities served by historically Black colleges and universities, Tribal Colleges and Universities, and other minority-serving institutions, the Secretary shall consult with those colleges, universities, and institutions.

(c) REPORT.—The Secretary shall include any recommendations of the Secretary under this section in the annual report submitted to Congress by the Secretary in accordance with section 7001.

SEC. 3027. EMERGENCY COMMUNICATION OF RISK.

(a) DEFINITIONS.—In this section:

(1) AFFECTED GOVERNMENT.—The term “affected government” means a State, local, or tribal government with jurisdiction over an area that will be affected by a flood.

(2) ANNUAL OPERATING PLAN.—The term “annual operating plan” means a plan prepared by the Secretary that describes potential water condition scenarios for a river basin for a year.

(b) COMMUNICATION.—In any river basin where the Secretary carries out flood risk management activities subject to an annual operating plan, the Secretary shall establish procedures for providing the public and affected governments, including Indian tribes, in the river basin with—

- (1) timely information regarding expected water levels;
- (2) advice regarding appropriate preparedness actions;
- (3) technical assistance; and
- (4) any other information or assistance determined appropriate by the Secretary.

(c) PUBLIC AVAILABILITY OF INFORMATION.—To the maximum extent practicable, the Secretary, in coordination with the Administrator of the Federal Emergency Management Agency, shall make the information required under subsection (b) available to the public through widely used and readily available means, including on the Internet.

(d) PROCEDURES.—The Secretary shall use the procedures established under subsection (b) only when precipitation or runoff exceeds those calculations considered as the lowest risk to life and property contemplated by the annual operating plan.

SEC. 3028. SAFETY ASSURANCE REVIEW.

Section 2035 of the Water Resources Development Act of 2007 (33 U.S.C. 2344) is amended by adding at the end the following:

“(g) NONAPPLICABILITY OF FACCA.—The Federal Advisory Committee Act (5 U.S.C. App.) shall not apply to a safety assurance review conducted under this section.”.

SEC. 3029. EMERGENCY RESPONSE TO NATURAL DISASTERS.

(a) EMERGENCY RESPONSE TO NATURAL DISASTERS.—Section 5(a)(1) of the Act of August 18, 1941 (33 U.S.C. 701n(a)(1)), is amended in the first sentence—

(1) by inserting “and subject to the condition that the Chief of Engineers may include modifications to the structure or project” after “work for flood control”; and

(2) by striking “structure damaged or destroyed by wind, wave, or water action of other than an ordinary nature when in the discretion of the Chief of Engineers such repair and restoration is warranted for the adequate functioning of the structure for hurricane or shore protection” and inserting “structure or project damaged or destroyed by wind, wave, or water action of other than an ordinary nature to the design level of protection when, in the discretion of the Chief of Engineers, such repair and restoration is warranted for the adequate functioning of the structure or project for hurricane or shore protection, subject to the condition that the Chief of Engineers

may include modifications to the structure or project to address major deficiencies or implement nonstructural alternatives to the repair or restoration of the structure if requested by the non-Federal sponsor”.

(b) REVIEW OF EMERGENCY RESPONSE AUTHORITIES.—

(1) IN GENERAL.—The Secretary shall undertake a review of implementation of section 5 of the Act of August 18, 1941 (33 U.S.C. 701n), to evaluate the alternatives available to the Secretary to ensure—

(A) the safety of affected communities to future flooding and storm events;

(B) the resiliency of water resources development projects to future flooding and storm events;

(C) the long-term cost-effectiveness of water resources development projects that provide flood control and hurricane and storm damage reduction benefits; and

(D) the policy goals and objectives that have been outlined by the President as a response to recent extreme weather events, including Hurricane Sandy, that relate to preparing for future floods are met.

(2) SCOPE OF REVIEW.—In carrying out the review, the Secretary shall—

(A) review the historical precedents and implementation of section 5 of that Act, including those actions undertaken by the Secretary, over time, under that section—

(i) to repair or restore a project; and

(ii) to increase the level of protection for a damaged project to address future conditions;

(B) evaluate the difference between adopting, as an appropriate standard under section 5 of that Act, the repair or restoration of a project to pre-flood or pre-storm levels and the repair or restoration of a project to a design level of protection, including an assessment for each standard of—

(i) the implications on populations at risk of flooding or damage;

(ii) the implications on probability of loss of life;

(iii) the implications on property values at risk of flooding or damage;

(iv) the implications on probability of increased property damage and associated costs;

(v) the implications on local and regional economies; and

(vi) the estimated total cost and estimated cost savings;

(C) review and evaluate the historic and potential uses, and economic feasibility for the life of the project, of nonstructural alternatives, including natural features such as dunes, coastal wetlands, floodplains, marshes, and mangroves, to reduce the damage caused by floods, storm surges, winds, and other aspects of extreme weather events, and to increase the resiliency and long-term cost-effectiveness of water resources development projects;

(D) incorporate the science on expected rates of sea-level rise and extreme weather events;

(E) incorporate the work completed by the Hurricane Sandy Rebuilding Task Force, established by Executive Order No. 13632 (77 Fed. Reg. 74341); and

(F) review the information obtained from the report developed under subsection (c)(1).

(c) REPORTS.—

(1) BIENNIAL REPORT TO CONGRESS.—

(A) IN GENERAL.—Not later than 2 years after the date of enactment of this Act and every 2 years thereafter, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report detailing the amounts expended in the previous 5 fiscal years to carry out Corps of Engineers projects under section 5 of the Act of August 18, 1941 (33 U.S.C. 701n).

(B) INCLUSIONS.—A report under subparagraph (A) shall, at a minimum, include a description of—

(i) each structure, feature, or project for which amounts are expended, including the type of structure, feature, or project and cost of the work; and

(ii) how the Secretary has repaired, restored, replaced, or modified each structure, feature, or project or intends to restore the structure, feature, or project to the design level of protection for the structure, feature, or project.

(2) REPORT ON REVIEW OF EMERGENCY RESPONSE AUTHORITIES.—Not later than 18 months after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report on the results of the review under subsection (b).

TITLE IV—RIVER BASINS AND COASTAL AREAS

SEC. 4001. RIVER BASIN COMMISSIONS.

Section 5019 of the Water Resources Development Act of 2007 (121 Stat. 1201) is amended by striking subsection (b) and inserting the following:

“(b) AUTHORIZATION TO ALLOCATE.—

“(1) IN GENERAL.—The Secretary shall allocate funds to the Susquehanna River Basin Commission, the Delaware River Basin Commission, and the Interstate Commission on the Potomac River Basin to fulfill the equitable funding requirements of the respective interstate compacts.

“(2) AMOUNTS.—For each fiscal year, the Secretary shall allocate to each Commission described in paragraph (1) an amount equal to the amount determined by the Commission in accordance with the respective interstate compact approved by Congress.

“(3) NOTIFICATION.—If the Secretary does not allocate funds for a given fiscal year in accordance with paragraph (2), the Secretary, in conjunction with the subsequent submission by the President of the budget to Congress under section 1105(a)

of title 31, United States Code, shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a notice that describes—

“(A) the reasons why the Secretary did not allocate funds in accordance with paragraph (2) for that fiscal year; and

“(B) the impact of that decision not to allocate funds on each area of jurisdiction of each Commission described in paragraph (1), including with respect to—

“(i) water supply allocation;

“(ii) water quality protection;

“(iii) regulatory review and permitting;

“(iv) water conservation;

“(v) watershed planning;

“(vi) drought management;

“(vii) flood loss reduction;

“(viii) recreation; and

“(ix) energy development.”.

SEC. 4002. MISSISSIPPI RIVER.

(a) MISSISSIPPI RIVER FORECASTING IMPROVEMENTS.—

(1) IN GENERAL.—The Secretary, in consultation with the Secretary of the department in which the Coast Guard is operating, the Director of the United States Geological Survey, the Administrator of the National Oceanic and Atmospheric Administration, and the Director of the National Weather Service, as applicable, shall improve forecasting on the Mississippi River by—

(A) updating forecasting technology deployed on the Mississippi River and its tributaries through—

(i) the construction of additional automated river gages;

(ii) the rehabilitation of existing automated and manual river gages; and

(iii) the replacement of manual river gages with automated gages, as the Secretary determines to be necessary;

(B) constructing additional sedimentation ranges on the Mississippi River and its tributaries; and

(C) deploying additional automatic identification system base stations at river gage sites.

(2) PRIORITIZATION.—In carrying out this subsection, the Secretary shall prioritize the sections of the Mississippi River on which additional and more reliable information would have the greatest impact on maintaining navigation on the Mississippi River.

(3) REPORT.—Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to Congress and make publicly available a report on the activities carried out by the Secretary under this subsection.

(b) MIDDLE MISSISSIPPI RIVER PILOT PROGRAM.—

(1) IN GENERAL.—In accordance with the project for navigation, Mississippi River between the Ohio and Missouri Rivers (Regulating Works), Missouri and Illinois, authorized by the Act of June 25, 1910 (36 Stat. 631, chapter 382) (commonly known as the “River and Harbor Act of 1910”), the Act of

January 1, 1927 (44 Stat. 1010, chapter 47) (commonly known as the “River and Harbor Act of 1927”), and the Act of July 3, 1930 (46 Stat. 918, chapter 847), the Secretary may study improvements to navigation and aquatic ecosystem restoration in the middle Mississippi River.

(2) DISPOSITION.—

(A) IN GENERAL.—The Secretary may carry out any project identified pursuant to paragraph (1) in accordance with the criteria for projects carried out under one of the following authorities:

(i) Section 206 of the Water Resources Development Act of 1996 (33 U.S.C. 2330).

(ii) Section 1135 of the Water Resources Development Act of 1986 (33 U.S.C. 2309a).

(iii) Section 107 of the River and Harbor Act of 1960 (33 U.S.C. 577).

(iv) Section 104(a) of the River and Harbor Act of 1958 (33 U.S.C. 610(a)).

(B) REPORT.—For each project that does not meet the criteria under subparagraph (A), the Secretary shall include a recommendation relating to the project in the annual report submitted to Congress by the Secretary in accordance with section 7001.

(c) GREATER MISSISSIPPI RIVER BASIN SEVERE FLOODING AND DROUGHT MANAGEMENT STUDY.—

(1) DEFINITION OF GREATER MISSISSIPPI RIVER BASIN.—In this subsection, the term “greater Mississippi River Basin” means the area covered by hydrologic units 5, 6, 7, 8, 10, and 11, as identified by the United States Geological Survey as of the date of enactment of this Act.

(2) IN GENERAL.—The Secretary shall carry out a study of the greater Mississippi River Basin—

(A) to improve the coordinated and comprehensive management of water resource projects in the greater Mississippi River Basin relating to severe flooding and drought conditions; and

(B) to identify and evaluate—

(i) modifications to those water resource projects, consistent with the authorized purposes of those projects; and

(ii) the development of new water resource projects to improve the reliability of navigation and more effectively reduce flood risk.

(3) REPORT.—Not later than 3 years after the date of enactment of this Act, the Secretary shall submit to Congress and make publicly available a report on the study carried out under this subsection.

(4) SAVINGS CLAUSE.—Nothing in this subsection impacts the operations and maintenance of the Missouri River Mainstem System, as authorized by the Act of December 22, 1944 (commonly known as the “Flood Control Act of 1944”) (58 Stat. 897, chapter 665).

(d) FLEXIBILITY IN MAINTAINING NAVIGATION.—

(1) EXTREME LOW WATER EVENT DEFINED.—In this subsection, the term “extreme low water event” means an extended period of time during which low water threatens the safe

commercial use of the Mississippi River for navigation, including the use and availability of fleeting areas.

(2) REPORT ON AREAS FOR ACTION.—

(A) IN GENERAL.—Not later than 1 year after the date of enactment of this Act, the Secretary, in consultation with the Secretary of the department in which the Coast Guard is operating, shall complete and make publicly available a report identifying areas that are unsafe and unreliable for commercial navigation during extreme low water events along the authorized Federal navigation channel on the Mississippi River and measures to address those restrictions.

(B) INCLUSIONS.—The report under subparagraph (A) shall—

(i) consider data from the most recent extreme low water events that impacted navigation along the authorized Federal navigation channel on the Mississippi River;

(ii) identify locations for potential modifications, including improvements outside the authorized navigation channel, that will alleviate hazards at areas that constrain navigation during extreme low water events along the authorized Federal navigation channel on the Mississippi River; and

(iii) include recommendations for possible actions to address constrained navigation during extreme low water events.

(3) AUTHORIZED ACTIVITIES.—If the Secretary, in consultation with the Secretary of the department in which the Coast Guard is operating, determines it to be critical to maintaining safe and reliable navigation within the authorized Federal navigation channel on the Mississippi River, the Secretary may carry out activities outside the authorized Federal navigation channel along the Mississippi River, including the construction and operation of maintenance of fleeting areas, that—

(A) are necessary for safe and reliable navigation in the Federal channel; and

(B) have been identified in the report under paragraph (2).

(4) RESTRICTION.—The Secretary shall only carry out activities authorized under paragraph (3) for such period of time as is necessary to maintain reliable navigation during the extreme low water event.

(5) NOTIFICATION.—Not later than 60 days after initiating an activity under this subsection, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a notice that includes—

(A) a description of the activities undertaken, including the costs associated with the activities; and

(B) a comprehensive description of how the activities are necessary for maintaining safe and reliable navigation of the Federal channel.

SEC. 4003. MISSOURI RIVER.

(a) UPPER MISSOURI BASIN FLOOD AND DROUGHT MONITORING.—

(1) IN GENERAL.—The Secretary, in coordination with the Administrator of the National Oceanic and Atmospheric Administration, the Chief of the Natural Resources Conservation Service, the Director of the United States Geological Survey, and the Commissioner of the Bureau of Reclamation, shall carry out activities to improve and support management of Corps of Engineers water resources development projects, including—

(A) soil moisture and snowpack monitoring in the Upper Missouri River Basin to reduce flood risk and improve river and water resource management in the Upper Missouri River Basin, as outlined in the February 2013 report entitled “Upper Missouri Basin Monitoring Committee—Snow Sampling and Instrumentation Recommendations”;

(B) restoring and maintaining existing mid- and high-elevation snowpack monitoring sites operated under the SNOTEL program of the Natural Resources Conservation Service; and

(C) operating streamflow gages and related interpretive studies in the Upper Missouri River Basin under the cooperative water program and the national streamflow information program of the United States Geological Service.

(2) USE OF FUNDS.—Amounts made available to the Secretary to carry out activities under this subsection shall be used to supplement but not supplant other related activities of Federal agencies that are carried out within the Missouri River Basin.

(3) COOPERATIVE AGREEMENTS.—

(A) IN GENERAL.—The Secretary may enter into cooperative agreements with other Federal agencies to carry out this subsection.

(B) MAINTENANCE OF EFFORT.—The Secretary may only enter into a cooperative agreement with another Federal agency under this paragraph if such agreement specifies that the agency will maintain aggregate expenditures in the Missouri River Basin for existing programs that implement activities described in paragraph (1) at a level that is equal to or exceeds the aggregate expenditures for the fiscal year immediately preceding the fiscal year in which such agreement is signed.

(4) REPORT.—Not later than 1 year after the date of enactment of this Act, the Comptroller General of the United States, in consultation with the Secretary, shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report that—

(A) identifies progress made by the Secretary and other Federal agencies in implementing the recommendations contained in the report described in paragraph (1)(A) with respect to enhancing soil moisture and snowpack monitoring in the Upper Missouri Basin;

(B) includes recommendations—

(i) to enhance soil moisture and snowpack monitoring in the Upper Missouri Basin that would enhance

water resources management, including managing flood risk, in that basin; and

(ii) on the most efficient manner of collecting and sharing data to assist Federal agencies with water resources management responsibilities;

(C) identifies the expected costs and timeline for implementing the recommendations described in subparagraph (B)(i); and

(D) identifies the role of States and other Federal agencies in gathering necessary soil moisture and snowpack monitoring data.

(b) MISSOURI RIVER BETWEEN FORT PECK DAM, MONTANA AND GAVINS POINT DAM, SOUTH DAKOTA AND NEBRASKA.—Section 9(f) of the Act of December 22, 1944 (commonly known as the “Flood Control Act of 1944”) (58 Stat. 891, chapter 665; 102 Stat. 4031) is amended in the second sentence by striking “\$3,000,000” and inserting “\$5,000,000”.

(c) MISSOURI RIVER RECOVERY IMPLEMENTATION COMMITTEE EXPENSES REIMBURSEMENT.—Section 5018(b)(5) of the Water Resources Development Act of 2007 (121 Stat. 1200) is amended by striking subparagraph (B) and inserting the following:

“(B) TRAVEL EXPENSES.—Subject to the availability of funds, the Secretary may reimburse a member of the Committee for travel expenses, including per diem in lieu of subsistence, at rates authorized for an employee of a Federal agency under subchapter I of chapter 57 of title 5, United States Code, while away from the home or regular place of business of the member in performance of services for the Committee.”.

(d) UPPER MISSOURI SHORELINE STABILIZATION.—

(1) IN GENERAL.—The Secretary shall conduct a study to determine the feasibility of carrying out projects to address shoreline erosion in the Upper Missouri River Basin (including the States of South Dakota, North Dakota, and Montana) resulting from the operation of a reservoir constructed under the Pick-Sloan Missouri River Basin Program (authorized by section 9 of the Act of December 22, 1944 (commonly known as the “Flood Control Act of 1944”) (58 Stat. 891, chapter 665)).

(2) CONTENTS.—The study carried out under paragraph (1) shall, to the maximum extent practicable—

(A) use previous assessments completed by the Corps of Engineers or other Federal agencies; and

(B) assess the infrastructure needed to—

(i) reduce shoreline erosion;

(ii) mitigate additional loss of land;

(iii) contribute to environmental and ecosystem improvement; and

(iv) protect existing community infrastructure, including roads and water and waste-water related infrastructure.

(3) DISPOSITION.—The Secretary may carry out projects identified in the study under paragraph (1) in accordance with the criteria for projects carried out under section 14 of the Flood Control Act of 1946 (33 U.S.C. 701r).

(4) ANNUAL REPORT.—For each project identified in the study under paragraph (1) that cannot be carried out under

any of the authorities specified in paragraph (3), upon determination by the Secretary of the feasibility of the project, the Secretary may include a recommendation relating to the project in the annual report submitted to Congress under section 7001.

(5) COORDINATION.—In carrying out this subsection, the Secretary shall consult and coordinate with the appropriate State or tribal agency for the area in which the project is located.

(6) PAYMENT OPTIONS.—The Secretary shall allow the full non-Federal contribution for a project under this subsection to be paid in accordance with section 103(k) of the Water Resources Development Act of 1986 (33 U.S.C. 2213(k)).

(e) MISSOURI RIVER FISH AND WILDLIFE MITIGATION.—The Secretary shall include in the first budget of the United States Government submitted by the President under section 1105 of title 31, United States Code, after the date of enactment of this Act, and biennially thereafter, a report that describes activities carried out by the Secretary relating to the project for mitigation of fish and wildlife losses, Missouri River Bank Stabilization and Navigation Project, Missouri, Kansas, Iowa, and Nebraska, authorized by section 601(a) of the Water Resources Development Act of 1986 (100 Stat. 4143), including—

(1) an inventory of all actions taken by the Secretary in furtherance of the project, including an inventory of land owned or acquired by the Secretary;

(2) a description, including a prioritization, of the specific actions proposed to be undertaken by the Secretary for the subsequent fiscal year in furtherance of the project;

(3) an assessment of the progress made in furtherance of the project, including—

(A) a description of how each of the actions identified under paragraph (1) have impacted the progress; and

(B) the status of implementation of any applicable requirements of the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), including any applicable biological opinions; and

(4) an assessment of additional actions or authority necessary to achieve the results of the project.

(f) LOWER YELLOWSTONE.—Section 3109 of the Water Resources Development Act of 2007 (121 Stat. 1135) is amended—

(1) by striking “The Secretary may” and inserting the following:

“(a) IN GENERAL.—The Secretary may”; and

(2) by adding at the end the following:

“(b) LOCAL PARTICIPATION.—In carrying out subsection (a), the Secretary shall consult with, and consider the activities being carried out by—

“(1) other Federal agencies;

“(2) conservation districts;

“(3) the Yellowstone River Conservation District Council;

and

“(4) the State of Montana.”.

SEC. 4004. ARKANSAS RIVER.

(a) PROJECT GOAL.—The goal for operation of the McClellan-Kerr Arkansas River navigation system, Arkansas and Oklahoma,

shall be to maximize the use of the system in a balanced approach that incorporates advice from representatives from all project purposes to ensure that the full value of the system is realized by the United States.

(b) **MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM ADVISORY COMMITTEE.**—

(1) **IN GENERAL.**—In accordance with the Federal Advisory Committee Act (5 U.S.C. App.), the Secretary shall establish an advisory committee for the McClellan-Kerr Arkansas River navigation system, Arkansas and Oklahoma project authorized by the first section of the Act of July 24, 1946 (60 Stat. 635, chapter 595).

(2) **DUTIES.**—The advisory committee shall—

(A) serve in an advisory capacity only; and

(B) provide information and recommendations to the Corps of Engineers relating to the efficiency, reliability, and availability of the operations of the McClellan-Kerr Arkansas River navigation system.

(3) **SELECTION AND COMPOSITION.**—The advisory committee shall be—

(A) selected jointly by the Little Rock district engineer and the Tulsa district engineer; and

(B) composed of members that equally represent the McClellan-Kerr Arkansas River navigation system project purposes.

(4) **AGENCY RESOURCES.**—The Little Rock district and the Tulsa district of the Corps of Engineers, under the supervision of the southwestern division, shall jointly provide the advisory committee with adequate staff assistance, facilities, and resources.

(5) **TERMINATION.**—

(A) **IN GENERAL.**—Subject to subparagraph (B), the advisory committee shall terminate on the date on which the Secretary submits a report to Congress demonstrating increases in the efficiency, reliability, and availability of the McClellan-Kerr Arkansas River navigation system.

(B) **RESTRICTION.**—The advisory committee shall terminate not less than 2 calendar years after the date on which the advisory committee is established.

SEC. 4005. COLUMBIA BASIN.

Section 536(g) of the Water Resources Development Act of 2000 (114 Stat. 2661) is amended by striking “\$30,000,000” and inserting “\$50,000,000”.

SEC. 4006. RIO GRANDE.

Section 5056 of the Water Resources Development Act of 2007 (121 Stat. 1213) is amended—

(1) in subsection (b)(2)—

(A) in the matter preceding subparagraph (A), by striking “2008” and inserting “2014”; and

(B) in subparagraph (C), by inserting “and an assessment of needs for other related purposes in the Rio Grande Basin, including flood damage reduction” after “assessment”;

(2) in subsection (c)(2)—

(A) by striking “an interagency agreement with” and inserting “1 or more interagency agreements with the Secretary of State and”; and

(B) by inserting “or the U.S. Section of the International Boundary and Water Commission” after “the Department of the Interior”; and

(3) in subsection (f), by striking “2011” and inserting “2019”.

SEC. 4007. NORTHERN ROCKIES HEADWATERS.

(a) **IN GENERAL.**—The Secretary shall conduct a study to determine the feasibility of carrying out projects for aquatic ecosystem restoration and flood risk reduction that will mitigate the impacts of extreme weather events, including floods and droughts, on communities, water users, and fish and wildlife located in and along the headwaters of the Columbia, Missouri, and Yellowstone Rivers (including the tributaries of those rivers) in the States of Idaho and Montana.

(b) **INCLUSIONS.**—The study under subsection (a) shall, to the maximum extent practicable—

(1) emphasize the protection and enhancement of natural riverine processes; and

(2) assess the individual and cumulative needs associated with—

- (A) floodplain restoration and reconnection;
- (B) floodplain and riparian area protection through the use of conservation easements;
- (C) instream flow restoration projects;
- (D) fish passage improvements;
- (E) channel migration zone mapping; and
- (F) invasive weed management.

(c) **DISPOSITION.**—

(1) **IN GENERAL.**—The Secretary may carry out any project identified in the study pursuant to subsection (a) in accordance with the criteria for projects carried out under one of the following authorities:

(A) Section 206 of the Water Resources Development Act of 1996 (33 U.S.C. 2330).

(B) Section 1135 of the Water Resources Development Act of 1986 (33 U.S.C. 2309a).

(C) Section 104(a) of the River and Harbor Act of 1958 (33 U.S.C. 610(a)).

(D) Section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s).

(2) **REPORT.**—For each project that does not meet the criteria under paragraph (1), the Secretary shall include a recommendation relating to the project in the annual report submitted to Congress by the Secretary in accordance with section 7001.

(d) **COORDINATION.**—In carrying out this section, the Secretary—

(1) shall consult and coordinate with the appropriate agency for each State and Indian tribe; and

(2) may enter into cooperative agreements with those State or tribal agencies described in paragraph (1).

(e) **LIMITATIONS.**—Nothing in this section invalidates, preempts, or creates any exception to State water law, State water rights, or Federal or State permitted activities or agreements in the States

of Idaho and Montana or any State containing tributaries to rivers in those States.

SEC. 4008. RURAL WESTERN WATER.

Section 595 of the Water Resources Development Act of 1999 (113 Stat. 383) is amended—

(1) by striking subsection (c) and inserting the following:

“(c) FORM OF ASSISTANCE.—Assistance under this section may be in the form of—

“(1) design and construction assistance for water-related environmental infrastructure and resource protection and development in Idaho, Montana, rural Nevada, New Mexico, rural Utah, and Wyoming, including projects for—

“(A) wastewater treatment and related facilities;

“(B) water supply and related facilities;

“(C) environmental restoration; and

“(D) surface water resource protection and development; and

“(2) technical assistance to small and rural communities for water planning and issues relating to access to water resources.”; and

(2) by striking subsection (h) and inserting the following:

“(h) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section for the period beginning with fiscal year 2001, \$435,000,000, which shall—

“(1) be made available to the States and locales described in subsection (b) consistent with program priorities determined by the Secretary in accordance with criteria developed by the Secretary to establish the program priorities; and

“(2) remain available until expended.”.

SEC. 4009. NORTH ATLANTIC COASTAL REGION.

(a) IN GENERAL.—The Secretary shall conduct a study to determine the feasibility of carrying out projects to restore aquatic ecosystems within the coastal waters of the Northeastern United States from the State of Virginia to the State of Maine, including associated bays, estuaries, and critical riverine areas.

(b) STUDY.—In carrying out the study under subsection (a), the Secretary shall—

(1) as appropriate, coordinate with the heads of other appropriate Federal agencies, the Governors of the coastal States from Virginia to Maine, nonprofit organizations, and other interested parties;

(2) identify projects for aquatic ecosystem restoration based on an assessment of the need and opportunities for aquatic ecosystem restoration within the coastal waters of the Northeastern States described in subsection (a); and

(3) use, to the maximum extent practicable, any existing plans and data.

(c) DISPOSITION.—

(1) IN GENERAL.—The Secretary may carry out any project identified in the study pursuant to subsection (a) in accordance with the criteria for projects carried out under one of the following authorities:

(A) Section 206 of the Water Resources Development Act of 1996 (33 U.S.C. 2330).

(B) Section 1135 of the Water Resources Development Act of 1986 (33 U.S.C. 2309a).

(C) Section 3 of the Act of August 13, 1946 (33 U.S.C. 426g).

(D) Section 204 of the Water Resources Development Act of 1992 (33 U.S.C. 2326).

(2) REPORT.—For each project that does not meet the criteria under paragraph (1), the Secretary shall include a recommendation relating to the project in the annual report submitted to Congress by the Secretary in accordance with section 7001.

SEC. 4010. CHESAPEAKE BAY.

(a) IN GENERAL.—Section 510 of the Water Resources Development Act of 1996 (Public Law 104–303; 110 Stat. 3759; 121 Stat. 1202) is amended—

(1) in subsection (a)—

(A) in paragraph (1)—

(i) by striking “pilot program” and inserting “program”; and

(ii) by inserting “in the basin States described in subsection (f) and the District of Columbia” after “interests”; and

(B) by striking paragraph (2) and inserting the following:

“(2) FORM.—The assistance under paragraph (1) shall be in the form of design and construction assistance for water-related resource protection and restoration projects affecting the Chesapeake Bay estuary, based on the comprehensive plan under subsection (b), including projects for—

“(A) sediment and erosion control;

“(B) protection of eroding shorelines;

“(C) ecosystem restoration, including restoration of submerged aquatic vegetation;

“(D) protection of essential public works;

“(E) beneficial uses of dredged material; and

“(F) other related projects that may enhance the living resources of the estuary.”;

(2) by striking subsection (b) and inserting the following:
“(b) COMPREHENSIVE PLAN.—

“(1) IN GENERAL.—Not later than 2 years after the date of enactment of the Water Resources Reform and Development Act of 2014, the Secretary, in cooperation with State and local governmental officials and affected stakeholders, shall develop a comprehensive Chesapeake Bay restoration plan to guide the implementation of projects under subsection (a)(2).

“(2) COORDINATION.—The restoration plan described in paragraph (1) shall, to the maximum extent practicable, consider and avoid duplication of any ongoing or planned actions of other Federal, State, and local agencies and nongovernmental organizations.

“(3) PRIORITIZATION.—The restoration plan described in paragraph (1) shall give priority to projects eligible under subsection (a)(2) that will also improve water quality or quantity or use natural hydrological features and systems.”;

(3) in subsection (c)—

(A) in paragraph (1), by striking “to provide” and all that follows through the period at the end and inserting “for the design and construction of a project carried out

pursuant to the comprehensive Chesapeake Bay restoration plan described in subsection (b).”;

(B) in paragraph (2)(A), by striking “facilities or resource protection and development plan” and inserting “resource protection and restoration plan”; and

(C) by adding at the end the following:

“(3) PROJECTS ON FEDERAL LAND.—A project carried out pursuant to the comprehensive Chesapeake Bay restoration plan described in subsection (b) that is located on Federal land shall be carried out at the expense of the Federal agency that owns the land on which the project will be carried out.

“(4) NON-FEDERAL CONTRIBUTIONS.—A Federal agency carrying out a project described in paragraph (3) may accept contributions of funds from non-Federal entities to carry out that project.”;

(4) by striking subsection (e) and inserting the following:

“(e) COOPERATION.—In carrying out this section, the Secretary shall cooperate with—

“(1) the heads of appropriate Federal agencies, including—

“(A) the Administrator of the Environmental Protection Agency;

“(B) the Secretary of Commerce, acting through the Administrator of the National Oceanographic and Atmospheric Administration;

“(C) the Secretary of the Interior, acting through the Director of the United States Fish and Wildlife Service; and

“(D) the heads of such other Federal agencies as the Secretary determines to be appropriate; and

“(2) agencies of a State or political subdivision of a State, including the Chesapeake Bay Commission.”;

(5) by striking subsection (f) and inserting the following:

“(f) PROJECTS.—The Secretary shall establish, to the maximum extent practicable, at least 1 project under this section in—

“(1) regions within the Chesapeake Bay watershed of each of the basin States of Delaware, Maryland, New York, Pennsylvania, Virginia, and West Virginia; and

“(2) the District of Columbia.”;

(6) by striking subsection (h); and

(7) by redesignating subsection (i) as subsection (h).

(b) CHESAPEAKE BAY OYSTER RESTORATION.—Section 704(b) of Water Resources Development Act of 1986 (33 U.S.C. 2263(b)) is amended—

(1) in paragraph (1), by striking “\$50,000,000” and inserting “\$60,000,000”; and

(2) in paragraph (4), by striking subparagraph (B) and inserting the following:

“(B) FORM.—The non-Federal share may be provided through in-kind services, including—

“(i) the provision by the non-Federal interest of shell stock material that is determined by the Secretary to be suitable for use in carrying out the project; and

“(ii) in the case of a project carried out under paragraph (2)(D) after the date of enactment of this

clause, land conservation or restoration efforts undertaken by the non-Federal interest that the Secretary determines provide water quality benefits that—

“(I) enhance the viability of oyster restoration efforts;

“(II) are integral to the project; and

“(III) are cost effective.”.

SEC. 4011. LOUISIANA COASTAL AREA.

(a) **REVIEW OF COASTAL MASTER PLAN.**—Section 7002(c) of the Water Resources Development Act of 2007 (121 Stat. 1271) is amended by inserting “, or the plan entitled ‘Louisiana Comprehensive Master Plan for a Sustainable Coast’ prepared by the State of Louisiana and accepted by the Louisiana Coastal Protection and Restoration Authority (including any subsequent amendments or revisions)” before the period at the end.

(b) **INTERIM USE OF PLAN.**—

(1) **DEFINITIONS.**—In this subsection:

(A) **ANNUAL REPORT.**—The term “annual report” has the meaning given the term in section 7001(f).

(B) **FEASIBILITY REPORT; FEASIBILITY STUDY.**—The terms “feasibility report” and “feasibility study” have the meanings given those terms in section 7001(f).

(2) **REVIEW.**—The Secretary shall—

(A) review the plan entitled ‘Louisiana’s Comprehensive Master Plan for a Sustainable Coast’ prepared by the State of Louisiana and accepted by the Louisiana Coastal Protection and Restoration Authority Board (including any subsequent amendments or revisions); and

(B) in consultation with the State of Louisiana, identify and conduct feasibility studies for up to 10 projects included in the plan described in subparagraph (A).

(3) **RECOMMENDATIONS.**—The Secretary shall include in the subsequent annual report, in accordance with section 7001—

(A) any proposed feasibility study initiated under paragraph (2)(B); and

(B) any feasibility report for a project identified under paragraph (2)(B).

(4) **ADMINISTRATION.**—Section 7008 of the Water Resources Development Act of 2007 (121 Stat. 1278) shall not apply to any feasibility study carried out under this subsection.

(c) **SCIENCE AND TECHNOLOGY.**—Section 7006(a)(2) of the Water Resources Development Act of 2007 (121 Stat. 1274) is amended—

(1) by redesignating subparagraphs (C) and (D) as subparagraphs (D) and (E), respectively; and

(2) by inserting after subparagraph (B) the following:

“(C) to examine a systemwide approach to coastal sustainability;”.

SEC. 4012. RED RIVER BASIN.

(a) **IN GENERAL.**—In the case of a reservoir located within the Red River Basin for which the Department of the Army is authorized to provide for municipal and industrial water supply storage and irrigation storage, the Secretary may reassign unused irrigation storage to storage for municipal and industrial water supply for use by a State or local interest that has entered into an agreement with the Secretary for water supply storage at that reservoir prior to the date of enactment of this Act.

(b) ADMINISTRATION.—Any assignment under subsection (a) shall be subject to such terms and conditions as the Secretary determines to be appropriate and necessary in the public interest.

SEC. 4013. TECHNICAL CORRECTIONS.

(a) RARITAN RIVER.—Section 102 of the Energy and Water Development Appropriations Act, 1998 (Public Law 105–62; 111 Stat. 1327), is repealed.

(b) DES MOINES, BOONE, AND RACCOON RIVERS.—The boundaries for the project referred to as the Des Moines Recreational River and Greenbelt, Iowa, under the heading “CORPS OF ENGINEERS—CIVIL” under the heading “DEPARTMENT OF THE ARMY” under the heading “DEPARTMENT OF DEFENSE—CIVIL” in chapter IV of title I of the Supplemental Appropriations Act, 1985 (99 Stat. 313), are revised to include the entirety of sections 19 and 29, situated in T. 89 N., R. 28 W.

(c) SOUTH FLORIDA COASTAL AREA.—Section 109 of title I of division B of the Miscellaneous Appropriations Act, 2001 (114 Stat. 2763A–221; 121 Stat. 1217) is amended—

(1) in subsection (a), by inserting “and unincorporated communities” after “municipalities”;

(2) by redesignating subsection (f) as subsection (g); and

(3) by inserting after subsection (e) the following:

“(f) PRIORITY.—In providing assistance under this section, the Secretary shall give priority to projects sponsored by current non-Federal interests, incorporated communities in Monroe County, Monroe County, and the State of Florida.”

(d) TRINITY RIVER AND TRIBUTARIES.—Section 5141(a)(2) of the Water Resources Development Act of 2007 (121 Stat. 1253) is amended by inserting “and the Interior Levee Drainage Study Phase–II report, Dallas, Texas, dated January 2009,” after “September 2006,”

(e) CENTRAL AND SOUTHERN FLORIDA CANAL.—

(1) IN GENERAL.—The Secretary shall consider any amounts and associated program income provided prior to the date of enactment of this Act by the Secretary of the Interior to the non-Federal interest for the acquisition of areas identified in section 316(b)(2) of the Water Resources Development Act of 1996 (110 Stat. 3715)—

(A) as satisfying the requirements of that paragraph;

and

(B) as part of the Federal share of the cost of implementing the plan under that subsection.

(2) NON-FEDERAL COST SHARE.—The non-Federal interest shall receive credit for land, easements, rights-of-way, and relocations provided for the project as part of the non-Federal share of the cost of implementing the plan under section 316(b)(2) of the Water Resources Development Act of 1996 (110 Stat. 3715).

(3) CONFORMING AMENDMENT.—Section 316(b)(2) of the Water Resources Development Act of 1996 (110 Stat. 3715) is amended in the first sentence by striking “shall pay” and inserting “may pay up to”.

(f) SOUTH PLATTE RIVER WATERSHED.—Section 116 of the Energy and Water Development and Related Agencies Appropriations Act, 2009 (123 Stat. 608) is amended in the matter preceding

the proviso by inserting “(or a designee of the Department)” after “Colorado Department of Natural Resources”.

(g) POTOMAC RIVER.—Section 84(a) of the Water Resources Development Act of 1974 (88 Stat. 35) is amended by striking paragraph (1) and inserting the following:

“(1) A channel capacity sufficient to pass the 100-year flood event, as identified in the document entitled ‘Four Mile Run Watershed Feasibility Report’ and dated January 2014.”.

SEC. 4014. OCEAN AND COASTAL RESILIENCY.

(a) IN GENERAL.—The Secretary shall conduct studies to determine the feasibility of carrying out Corps of Engineers projects in coastal zones to enhance ocean and coastal ecosystem resiliency.

(b) STUDY.—In carrying out the study under subsection (a), the Secretary shall—

(1) as appropriate, coordinate with the heads of other appropriate Federal agencies, the Governors and other chief executive officers of the coastal states, nonprofit organizations, and other interested parties;

(2) identify Corps of Engineers projects in coastal zones for enhancing ocean and coastal ecosystem resiliency based on an assessment of the need and opportunities for, and feasibility of, the projects;

(3) to the maximum extent practicable, use any existing Corps of Engineers plans and data; and

(4) not later than 365 days after initial appropriations for this section, and every five years thereafter subject to the availability of appropriations, complete a study authorized under subsection (a).

(c) DISPOSITION.—

(1) IN GENERAL.—The Secretary may carry out a project identified in the study pursuant to subsection (a) in accordance with the criteria for projects carried out under one of the following authorities:

(A) Section 206(a)–(d) of the Water Resources Development Act of 1996 (33 U.S.C. 2330(a)–(d)).

(B) Section 1135(a)–(g) and (i) of the Water Resources Development Act of 1986 (33 U.S.C. 2309a(a)–(g) and (i)).

(C) Section 3(a)–(b), and (c)(1) of the Act of August, 13 1946 (33 U.S.C. 426g(a)–(b), and (c)(1)).

(D) Section 204(a)–(f) of the Water Resources Development Act of 1992 (33 U.S.C. 2326(a)–(f)).

(2) REPORT.—For each project that does not meet the criteria under paragraph (1), the Secretary shall include a recommendation relating to the project in the annual report submitted to Congress by the Secretary in accordance with section 7001.

(d) REQUESTS FOR PROJECTS.—The Secretary may carry out a project for a coastal state under this section only at the request of the Governor or chief executive officer of the coastal state, as appropriate.

(e) DEFINITION.—In this section, the terms “coastal zone” and “coastal state” have the meanings given such terms in section 304 of the Coastal Zone Management Act of 1972 (16 U.S.C. 1453), as in effect on the date of enactment of this Act.

TITLE V—WATER INFRASTRUCTURE FINANCING

Subtitle A—State Water Pollution Control Revolving Funds

SEC. 5001. GENERAL AUTHORITY FOR CAPITALIZATION GRANTS.

Section 601(a) of the Federal Water Pollution Control Act (33 U.S.C. 1381(a)) is amended by striking “for providing assistance” and all that follows through the period at the end and inserting the following: “to accomplish the objectives, goals, and policies of this Act by providing assistance for projects and activities identified in section 603(c).”.

SEC. 5002. CAPITALIZATION GRANT AGREEMENTS.

Section 602(b) of the Federal Water Pollution Control Act (33 U.S.C. 1382(b)) is amended—

(1) in paragraph (6)—

(A) by striking “section 603(c)(1) of”;

(B) by striking “before fiscal” and all that follows through “grants under this title and” and inserting “with assistance made available by a State water pollution control revolving fund authorized under this title, or”;

(C) by inserting “, or both,” after “205(m) of this Act”;

and

(D) by striking “201(b)” and all that follows through “511(c)(1),” and inserting “511(c)(1)”;

(2) in paragraph (9), by striking “standards; and” and inserting “standards, including standards relating to the reporting of infrastructure assets;”;

(3) in paragraph (10), by striking the period at the end and inserting a semicolon; and

(4) by adding at the end the following:

“(11) the State will establish, maintain, invest, and credit the fund with repayments, such that the fund balance will be available in perpetuity for activities under this Act;

“(12) any fees charged by the State to recipients of assistance that are considered program income will be used for the purpose of financing the cost of administering the fund or financing projects or activities eligible for assistance from the fund;

“(13) beginning in fiscal year 2016, the State will require as a condition of providing assistance to a municipality or intermunicipal, interstate, or State agency that the recipient of such assistance certify, in a manner determined by the Governor of the State, that the recipient—

“(A) has studied and evaluated the cost and effectiveness of the processes, materials, techniques, and technologies for carrying out the proposed project or activity for which assistance is sought under this title; and

“(B) has selected, to the maximum extent practicable, a project or activity that maximizes the potential for efficient water use, reuse, recapture, and conservation, and energy conservation, taking into account—

“(i) the cost of constructing the project or activity;

“(ii) the cost of operating and maintaining the project or activity over the life of the project or activity; and
“(iii) the cost of replacing the project or activity; and

“(14) a contract to be carried out using funds directly made available by a capitalization grant under this title for program management, construction management, feasibility studies, preliminary engineering, design, engineering, surveying, mapping, or architectural related services shall be negotiated in the same manner as a contract for architectural and engineering services is negotiated under chapter 11 of title 40, United States Code, or an equivalent State qualifications-based requirement (as determined by the Governor of the State).”.

SEC. 5003. WATER POLLUTION CONTROL REVOLVING LOAN FUNDS.

Section 603 of the Federal Water Pollution Control Act (33 U.S.C. 1383) is amended—

(1) by striking subsection (c) and inserting the following:

“(c) **PROJECTS AND ACTIVITIES ELIGIBLE FOR ASSISTANCE.**—The amounts of funds available to each State water pollution control revolving fund shall be used only for providing financial assistance—

“(1) to any municipality or intermunicipal, interstate, or State agency for construction of publicly owned treatment works (as defined in section 212);

“(2) for the implementation of a management program established under section 319;

“(3) for development and implementation of a conservation and management plan under section 320;

“(4) for the construction, repair, or replacement of decentralized wastewater treatment systems that treat municipal wastewater or domestic sewage;

“(5) for measures to manage, reduce, treat, or recapture stormwater or subsurface drainage water;

“(6) to any municipality or intermunicipal, interstate, or State agency for measures to reduce the demand for publicly owned treatment works capacity through water conservation, efficiency, or reuse;

“(7) for the development and implementation of watershed projects meeting the criteria set forth in section 122;

“(8) to any municipality or intermunicipal, interstate, or State agency for measures to reduce the energy consumption needs for publicly owned treatment works;

“(9) for reusing or recycling wastewater, stormwater, or subsurface drainage water;

“(10) for measures to increase the security of publicly owned treatment works; and

“(11) to any qualified nonprofit entity, as determined by the Administrator, to provide assistance to owners and operators of small and medium publicly owned treatment works—

“(A) to plan, develop, and obtain financing for eligible projects under this subsection, including planning, design, and associated preconstruction activities; and

“(B) to assist such treatment works in achieving compliance with this Act.”;

(2) in subsection (d)—

(A) in paragraph (1)—

(i) in subparagraph (A), by striking “20 years” and inserting “the lesser of 30 years and the projected useful life (as determined by the State) of the project to be financed with the proceeds of the loan”;

(ii) in subparagraph (B), by striking “not later than 20 years after project completion” and inserting “upon the expiration of the term of the loan”;

(iii) in subparagraph (C), by striking “and” at the end;

(iv) in subparagraph (D), by inserting “and” after the semicolon at the end; and

(v) by adding at the end the following:

“(E) for a treatment works proposed for repair, replacement, or expansion, and eligible for assistance under subsection (c)(1), the recipient of a loan shall—

“(i) develop and implement a fiscal sustainability plan that includes—

“(I) an inventory of critical assets that are a part of the treatment works;

“(II) an evaluation of the condition and performance of inventoried assets or asset groupings;

“(III) a certification that the recipient has evaluated and will be implementing water and energy conservation efforts as part of the plan; and

“(IV) a plan for maintaining, repairing, and, as necessary, replacing the treatment works and a plan for funding such activities; or

“(ii) certify that the recipient has developed and implemented a plan that meets the requirements under clause (i);”;

(B) in paragraph (7), by inserting “, \$400,000 per year, or 1/5 percent per year of the current valuation of the fund, whichever amount is greatest, plus the amount of any fees collected by the State for such purpose regardless of the source” before the period at the end; and

(3) by adding at the end the following:

“(i) ADDITIONAL SUBSIDIZATION.—

“(1) IN GENERAL.—In any case in which a State provides assistance to a municipality or intermunicipal, interstate, or State agency under subsection (d), the State may provide additional subsidization, including forgiveness of principal and negative interest loans—

“(A) to benefit a municipality that—

“(i) meets the affordability criteria of the State established under paragraph (2); or

“(ii) does not meet the affordability criteria of the State if the recipient—

“(I) seeks additional subsidization to benefit individual ratepayers in the residential user rate class;

“(II) demonstrates to the State that such ratepayers will experience a significant hardship from the increase in rates necessary to finance the

project or activity for which assistance is sought; and

“(III) ensures, as part of an assistance agreement between the State and the recipient, that the additional subsidization provided under this paragraph is directed through a user charge rate system (or other appropriate method) to such rate-payers; or

“(B) to implement a process, material, technique, or technology—

“(i) to address water-efficiency goals;

“(ii) to address energy-efficiency goals;

“(iii) to mitigate stormwater runoff; or

“(iv) to encourage sustainable project planning, design, and construction.

“(2) AFFORDABILITY CRITERIA.—

“(A) ESTABLISHMENT.—

“(i) IN GENERAL.—Not later than September 30, 2015, and after providing notice and an opportunity for public comment, a State shall establish affordability criteria to assist in identifying municipalities that would experience a significant hardship raising the revenue necessary to finance a project or activity eligible for assistance under subsection (c)(1) if additional subsidization is not provided.

“(ii) CONTENTS.—The criteria under clause (i) shall be based on income and unemployment data, population trends, and other data determined relevant by the State, including whether the project or activity is to be carried out in an economically distressed area, as described in section 301 of the Public Works and Economic Development Act of 1965 (42 U.S.C. 3161).

“(B) EXISTING CRITERIA.—If a State has previously established, after providing notice and an opportunity for public comment, affordability criteria that meet the requirements of subparagraph (A)—

“(i) the State may use the criteria for the purposes of this subsection; and

“(ii) those criteria shall be treated as affordability criteria established under this paragraph.

“(C) INFORMATION TO ASSIST STATES.—The Administrator may publish information to assist States in establishing affordability criteria under subparagraph (A).

“(3) LIMITATIONS.—

“(A) IN GENERAL.—A State may provide additional subsidization in a fiscal year under this subsection only if the total amount appropriated for making capitalization grants to all States under this title for the fiscal year exceeds \$1,000,000,000.

“(B) ADDITIONAL LIMITATION.—

“(i) GENERAL RULE.—Subject to clause (ii), a State may use not more than 30 percent of the total amount received by the State in capitalization grants under this title for a fiscal year for providing additional subsidization under this subsection.

“(ii) EXCEPTION.—If, in a fiscal year, the amount appropriated for making capitalization grants to all

States under this title exceeds \$1,000,000,000 by a percentage that is less than 30 percent, clause (i) shall be applied by substituting that percentage for 30 percent.

“(C) APPLICABILITY.—The authority of a State to provide additional subsidization under this subsection shall apply to amounts received by the State in capitalization grants under this title for fiscal years beginning after September 30, 2014.

“(D) CONSIDERATION.—If the State provides additional subsidization to a municipality or intermunicipal, interstate, or State agency under this subsection that meets the criteria under paragraph (1)(A), the State shall take the criteria set forth in section 602(b)(5) into consideration.”.

SEC. 5004. REQUIREMENTS.

Title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) is amended by adding at the end the following:

“SEC. 608. REQUIREMENTS.

“(a) IN GENERAL.—Funds made available from a State water pollution control revolving fund established under this title may not be used for a project for the construction, alteration, maintenance, or repair of treatment works unless all of the iron and steel products used in the project are produced in the United States.

“(b) DEFINITION OF IRON AND STEEL PRODUCTS.—In this section, the term ‘iron and steel products’ means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, construction materials.

“(c) APPLICATION.—Subsection (a) shall not apply in any case or category of cases in which the Administrator finds that—

“(1) applying subsection (a) would be inconsistent with the public interest;

“(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

“(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

“(d) WAIVER.—If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public, on an informal basis, a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet site of the Environmental Protection Agency.

“(e) INTERNATIONAL AGREEMENTS.—This section shall be applied in a manner consistent with United States obligations under international agreements.

“(f) MANAGEMENT AND OVERSIGHT.—The Administrator may retain up to 0.25 percent of the funds appropriated for this title for management and oversight of the requirements of this section.

“(g) EFFECTIVE DATE.—This section does not apply with respect to a project if a State agency approves the engineering plans and specifications for the project, in that agency’s capacity to approve such plans and specifications prior to a project requesting bids, prior to the date of enactment of the Water Resources Reform and Development Act of 2014.”.

SEC. 5005. REPORT ON THE ALLOTMENT OF FUNDS.

(a) REVIEW.—The Administrator of the Environmental Protection Agency shall conduct a review of the allotment formula in effect on the date of enactment of this Act for allocation of funds authorized under title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et seq.) to determine whether that formula adequately addresses the water quality needs of eligible States, territories, and Indian tribes, based on—

(1) the most recent survey of needs developed by the Administrator under section 516(b) of that Act (33 U.S.C. 1375(b)); and

(2) any other information the Administrator considers appropriate.

(b) REPORT.—Not later than 18 months after the date of enactment of this Act, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report on the results of the review under subsection (a), including any recommendations for changing the allotment formula.

SEC. 5006. EFFECTIVE DATE.

This subtitle, including any amendments made by the subtitle, shall take effect on October 1, 2014.

Subtitle B—General Provisions

SEC. 5011. WATERSHED PILOT PROJECTS.

Section 122 of the Federal Water Pollution Control Act (33 U.S.C. 1274) is amended—

(1) in the section heading, by striking “WET WEATHER”;

(2) in subsection (a)—

(A) in the matter preceding paragraph (1)—

(i) by striking “for treatment works” and inserting “to a municipality or municipal entity”; and

(ii) by striking “of wet weather discharge control”;

(B) in paragraph (2), by striking “in reducing such pollutants” and all that follows before the period at the end and inserting “to manage, reduce, treat, recapture, or reuse municipal stormwater, including techniques that utilize infiltration, evapotranspiration, and reuse of stormwater onsite”; and

(C) by adding at the end the following:

“(3) WATERSHED PARTNERSHIPS.—Efforts of municipalities and property owners to demonstrate cooperative ways to address nonpoint sources of pollution to reduce adverse impacts on water quality.

“(4) INTEGRATED WATER RESOURCE PLAN.—The development of an integrated water resource plan for the coordinated management and protection of surface water, ground water,

and stormwater resources on a watershed or subwatershed basis to meet the objectives, goals, and policies of this Act.

“(5) MUNICIPALITY-WIDE STORMWATER MANAGEMENT PLANNING.—The development of a municipality-wide plan that identifies the most effective placement of stormwater technologies and management approaches, to reduce water quality impairments from stormwater on a municipality-wide basis.

“(6) INCREASED RESILIENCE OF TREATMENT WORKS.—Efforts to assess future risks and vulnerabilities of publicly owned treatment works to manmade or natural disasters, including extreme weather events and sea-level rise, and to carry out measures, on a systemwide or area-wide basis, to increase the resiliency of publicly owned treatment works.”;

(3) by striking subsection (c);

(4) by redesignating subsection (d) as subsection (c); and

(5) in subsection (c) (as so redesignated) by striking “5 years after the date of enactment of this section,” and inserting “October 1, 2015,”.

SEC. 5012. DEFINITION OF TREATMENT WORKS.

(a) GRANTS FOR CONSTRUCTION OF TREATMENT WORKS.—Section 212(2)(A) of the Federal Water Pollution Control Act (33 U.S.C. 1292(2)(A)) is amended—

(1) by striking “any works, including site”;

(2) by striking “is used for ultimate” and inserting “will be used for ultimate”; and

(3) by inserting before the period at the end the following: “and acquisition of other land, and interests in land, that are necessary for construction”.

(b) DEFINITIONS.—Section 502 of the Federal Water Pollution Control Act (33 U.S.C. 1362) is amended by adding at the end the following:

“(26) TREATMENT WORKS.—The term ‘treatment works’ has the meaning given the term in section 212.”.

(c) EFFECTIVE DATE.—The amendments made by this section shall take effect on October 1, 2014.

SEC. 5013. FUNDING FOR INDIAN PROGRAMS.

Section 518(c) of the Federal Water Pollution Control Act (33 U.S.C. 1377(c)) is amended—

(1) by striking “The Administrator” and inserting the following:

“(1) FISCAL YEARS 1987–2014.—The Administrator”;

(2) in paragraph (1) (as so designated)—

(A) by striking “each fiscal year beginning after September 30, 1986,” and inserting “each of fiscal years 1987 through 2014.”; and

(B) by striking the second sentence; and

(3) by adding at the end the following:

“(2) FISCAL YEAR 2015 AND THEREAFTER.—For fiscal year 2015 and each fiscal year thereafter, the Administrator shall reserve, before allotments to the States under section 604(a), not less than 0.5 percent and not more than 2.0 percent of the funds made available to carry out title VI.

“(3) USE OF FUNDS.—Funds reserved under this subsection shall be available only for grants for projects and activities eligible for assistance under section 603(c) to serve—

“(A) Indian tribes (as defined in subsection (h));

“(B) former Indian reservations in Oklahoma (as determined by the Secretary of the Interior); and

“(C) Native villages (as defined in section 3 of the Alaska Native Claims Settlement Act (43 U.S.C. 1602)).”.

SEC. 5014. WATER INFRASTRUCTURE PUBLIC-PRIVATE PARTNERSHIP PILOT PROGRAM.

(a) **IN GENERAL.**—The Secretary shall establish a pilot program to evaluate the cost effectiveness and project delivery efficiency of allowing non-Federal pilot applicants to carry out authorized water resources development projects for coastal harbor improvement, channel improvement, inland navigation, flood damage reduction, aquatic ecosystem restoration, and hurricane and storm damage reduction.

(b) **PURPOSES.**—The purposes of the pilot program established under subsection (a) are—

(1) to identify cost-saving project delivery alternatives that reduce the backlog of authorized Corps of Engineers projects; and

(2) to evaluate the technical, financial, and organizational benefits of allowing a non-Federal pilot applicant to carry out and manage the design or construction (or both) of 1 or more of such projects.

(c) **SUBSEQUENT APPROPRIATIONS.**—Any activity undertaken under this section is authorized only to the extent specifically provided for in subsequent appropriations Acts.

(d) **ADMINISTRATION.**—In carrying out the pilot program established under subsection (a), the Secretary shall—

(1) identify for inclusion in the program at least 15 projects that are authorized for construction for coastal harbor improvement, channel improvement, inland navigation, flood damage reduction, or hurricane and storm damage reduction;

(2) notify in writing the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives of each project identified under paragraph (1);

(3) in consultation with the non-Federal pilot applicant associated with each project identified under paragraph (1), develop a detailed project management plan for the project that outlines the scope, financing, budget, design, and construction resource requirements necessary for the non-Federal pilot applicant to execute the project, or a separable element of the project;

(4) at the request of the non-Federal pilot applicant associated with each project identified under paragraph (1), enter into a project partnership agreement with the non-Federal pilot applicant under which the non-Federal pilot applicant is provided full project management control for the financing, design, or construction (or any combination thereof) of the project, or a separable element of the project, in accordance with plans approved by the Secretary;

(5) following execution of a project partnership agreement under paragraph (4) and completion of all work under the agreement, issue payment, in accordance with subsection (g), to the relevant non-Federal pilot applicant for that work; and

(6) regularly monitor and audit each project carried out under the program to ensure that all activities related to the

project are carried out in compliance with plans approved by the Secretary and that construction costs are reasonable.

(e) SELECTION CRITERIA.—In identifying projects under subsection (d)(1), the Secretary shall consider the extent to which the project—

- (1) is significant to the economy of the United States;
- (2) leverages Federal investment by encouraging non-Federal contributions to the project;
- (3) employs innovative project delivery and cost-saving methods;
- (4) received Federal funds in the past and experienced delays or missed scheduled deadlines;
- (5) has unobligated Corps of Engineers funding balances; and
- (6) has not received Federal funding for recapitalization and modernization since the project was authorized.

(f) DETAILED PROJECT SCHEDULE.—Not later than 180 days after entering into a project partnership agreement under subsection (d)(4), a non-Federal pilot applicant, to the maximum extent practicable, shall submit to the Secretary a detailed project schedule for the relevant project, based on estimated funding levels, that specifies deadlines for each milestone with respect to the project.

(g) PAYMENT.—Payment to the non-Federal pilot applicant for work completed pursuant to a project partnership agreement under subsection (d)(4) may be made from—

- (1) if applicable, the balance of the unobligated amounts appropriated for the project; and
- (2) other amounts appropriated to the Corps of Engineers, subject to the condition that the total amount transferred to the non-Federal pilot applicant may not exceed the estimate of the Federal share of the cost of construction, including any required design.

(h) TECHNICAL ASSISTANCE.—At the request of a non-Federal pilot applicant participating in the pilot program established under subsection (a), the Secretary may provide to the non-Federal pilot applicant, if the non-Federal pilot applicant contracts with and compensates the Secretary, technical assistance with respect to—

- (1) a study, engineering activity, or design activity related to a project carried out by the non-Federal pilot applicant under the program; and
- (2) obtaining permits necessary for such a project.

(i) IDENTIFICATION OF IMPEDIMENTS.—

(1) IN GENERAL.—The Secretary shall—

(A) except as provided in paragraph (2), identify any procedural requirements under the authority of the Secretary that impede greater use of public-private partnerships and private investment in water resources development projects;

(B) develop and implement, on a project-by-project basis, procedures and approaches that—

- (i) address such impediments; and
- (ii) protect the public interest and any public investment in water resources development projects that involve public-private partnerships or private investment in water resources development projects; and

(C) not later than 1 year after the date of enactment of this section, issue rules to carry out the procedures and approaches developed under subparagraph (B).

(2) RULE OF CONSTRUCTION.—Nothing in this section allows the Secretary to waive any requirement under—

(A) sections 3141 through 3148 and sections 3701 through 3708 of title 40, United States Code;

(B) the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.); or

(C) any other provision of Federal law.

(j) PUBLIC BENEFIT STUDIES.—

(1) IN GENERAL.—Before entering into a project partnership agreement under subsection (d)(4), the Secretary shall conduct an assessment of whether, and provide justification in writing to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives that, the proposed agreement provides better public and financial benefits than a similar transaction using public funding or financing.

(2) REQUIREMENTS.—An assessment under paragraph (1) shall—

(A) be completed in a period of not more than 90 days;

(B) take into consideration any supporting materials and data submitted by the relevant non-Federal pilot applicant and other stakeholders; and

(C) determine whether the proposed project partnership agreement is in the public interest by determining whether the agreement will provide public and financial benefits, including expedited project delivery and savings for taxpayers.

(k) NON-FEDERAL FUNDING.—The non-Federal pilot applicant may finance the non-Federal share of a project carried out under the pilot program established under subsection (a).

(l) APPLICABILITY OF FEDERAL LAW.—Any provision of Federal law that would apply to the Secretary if the Secretary were carrying out a project shall apply to a non-Federal pilot applicant carrying out a project under this section.

(m) COST SHARE.—Nothing in this section affects a cost-sharing requirement under Federal law that is applicable to a project carried out under the pilot program established under subsection (a).

(n) REPORT.—Not later than 3 years after the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report describing the results of the pilot program established under subsection (a), including any recommendations of the Secretary concerning whether the program or any component of the program should be implemented on a national basis.

(o) NON-FEDERAL PILOT APPLICANT DEFINED.—In this section, the term “non-Federal pilot applicant” means—

(1) the non-Federal sponsor of the water resources development project;

(2) a non-Federal interest, as defined in section 221 of the Flood Control Act of 1970 (42 U.S.C. 1982d–5b); or

(3) a private entity with the consent of the local government in which the project is located or that is otherwise affected by the project.

Subtitle C—Innovative Financing Pilot Projects

SEC. 5021. SHORT TITLE.

This subtitle may be cited as the “Water Infrastructure Finance and Innovation Act of 2014”.

SEC. 5022. DEFINITIONS.

In this subtitle:

(1) **ADMINISTRATOR.**—The term “Administrator” means the Administrator of the Environmental Protection Agency.

(2) **COMMUNITY WATER SYSTEM.**—The term “community water system” has the meaning given the term in section 1401 of the Safe Drinking Water Act (42 U.S.C. 300f).

(3) **FEDERAL CREDIT INSTRUMENT.**—The term “Federal credit instrument” means a secured loan or loan guarantee authorized to be made available under this subtitle with respect to a project.

(4) **INVESTMENT-GRADE RATING.**—The term “investment-grade rating” means a rating of BBB minus, Baa3, bbb minus, BBB (low), or higher assigned by a rating agency to project obligations.

(5) **LENDER.**—

(A) **IN GENERAL.**—The term “lender” means any non-Federal qualified institutional buyer (as defined in section 230.144A(a) of title 17, Code of Federal Regulations (or a successor regulation), known as Rule 144A(a) of the Securities and Exchange Commission and issued under the Securities Act of 1933 (15 U.S.C. 77a et seq.)).

(B) **INCLUSIONS.**—The term “lender” includes—

(i) a qualified retirement plan (as defined in section 4974(c) of the Internal Revenue Code of 1986) that is a qualified institutional buyer; and

(ii) a governmental plan (as defined in section 414(d) of the Internal Revenue Code of 1986) that is a qualified institutional buyer.

(6) **LOAN GUARANTEE.**—The term “loan guarantee” means any guarantee or other pledge by the Secretary or the Administrator to pay all or part of the principal of, and interest on, a loan or other debt obligation issued by an obligor and funded by a lender.

(7) **OBLIGOR.**—The term “obligor” means an eligible entity that is primarily liable for payment of the principal of, or interest on, a Federal credit instrument.

(8) **PROJECT OBLIGATION.**—

(A) **IN GENERAL.**—The term “project obligation” means any note, bond, debenture, or other debt obligation issued by an obligor in connection with the financing of a project.

(B) **EXCLUSION.**—The term “project obligation” does not include a Federal credit instrument.

(9) **RATING AGENCY.**—The term “rating agency” means a credit rating agency registered with the Securities and

Exchange Commission as a nationally recognized statistical rating organization (as defined in section 3(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78c(a))).

(10) SECURED LOAN.—The term “secured loan” means a direct loan or other debt obligation issued by an obligor and funded by the Secretary or Administrator, as applicable, in connection with the financing of a project under section 5029.

(11) STATE.—The term “State” means—

(A) a State;

(B) the District of Columbia;

(C) the Commonwealth of Puerto Rico; and

(D) any other territory or possession of the United States.

(12) STATE INFRASTRUCTURE FINANCING AUTHORITY.—The term “State infrastructure financing authority” means the State entity established or designated by the Governor of a State to receive a capitalization grant provided by, or otherwise carry out the requirements of, title VI of the Federal Water Pollution Control Act (33 U.S.C. 1381 et. seq.) or section 1452 of the Safe Drinking Water Act (42 U.S.C. 300j–12).

(13) SUBSIDY AMOUNT.—The term “subsidy amount” means the amount of budget authority sufficient to cover the estimated long-term cost to the Federal Government of a Federal credit instrument, as calculated on a net present value basis, excluding administrative costs and any incidental effects on governmental receipts or outlays in accordance with the Federal Credit Reform Act of 1990 (2 U.S.C. 661 et seq.).

(14) SUBSTANTIAL COMPLETION.—The term “substantial completion”, with respect to a project, means the earliest date on which a project is considered to perform the functions for which the project is designed.

(15) TREATMENT WORKS.—The term “treatment works” has the meaning given the term in section 212 of the Federal Water Pollution Control Act (33 U.S.C. 1292).

SEC. 5023. AUTHORITY TO PROVIDE ASSISTANCE.

(a) IN GENERAL.—The Secretary and the Administrator may provide financial assistance under this subtitle to carry out pilot projects, which shall be selected to ensure a diversity of project types and geographical locations.

(b) RESPONSIBILITY.—

(1) SECRETARY.—The Secretary shall carry out all pilot projects under this subtitle that are eligible projects under section 5026(1).

(2) ADMINISTRATOR.—The Administrator shall carry out all pilot projects under this subtitle that are eligible projects under paragraphs (2), (3), (4), (5), (6), and (8) of section 5026.

(3) OTHER PROJECTS.—The Secretary or the Administrator, as applicable, may carry out eligible projects under paragraph (7) or (9) of section 5026.

SEC. 5024. APPLICATIONS.

(a) IN GENERAL.—To receive assistance under this subtitle, an eligible entity shall submit to the Secretary or the Administrator, as applicable, an application at such time, in such manner, and containing such information as the Secretary or the Administrator may require.

(b) **COMBINED PROJECTS.**—In the case of an eligible project described in paragraph (8) or (9) of section 5026, the Secretary or the Administrator, as applicable, shall require the eligible entity to submit a single application for the combined group of projects.

SEC. 5025. ELIGIBLE ENTITIES.

The following entities are eligible to receive assistance under this subtitle:

- (1) A corporation.
- (2) A partnership.
- (3) A joint venture.
- (4) A trust.
- (5) A Federal, State, or local governmental entity, agency, or instrumentality.
- (6) A tribal government or consortium of tribal governments.
- (7) A State infrastructure financing authority.

SEC. 5026. PROJECTS ELIGIBLE FOR ASSISTANCE.

The following projects may be carried out with amounts made available under this subtitle:

(1) Any project for flood damage reduction, hurricane and storm damage reduction, environmental restoration, coastal or inland harbor navigation improvement, or inland and intra-coastal waterways navigation improvement that the Secretary determines is technically sound, economically justified, and environmentally acceptable, including—

- (A) a project to reduce flood damage;
- (B) a project to restore aquatic ecosystems;
- (C) a project to improve the inland and intracoastal waterways navigation system of the United States; and
- (D) a project to improve navigation of a coastal or inland harbor of the United States, including channel deepening and construction of associated general navigation features.

(2) 1 or more activities that are eligible for assistance under section 603(c) of the Federal Water Pollution Control Act (33 U.S.C. 1383(c)), notwithstanding the public ownership requirement under paragraph (1) of that subsection.

(3) 1 or more activities described in section 1452(a)(2) of the Safe Drinking Water Act (42 U.S.C. 300j-12(a)(2)).

(4) A project for enhanced energy efficiency in the operation of a public water system or a publicly owned treatment works.

(5) A project for repair, rehabilitation, or replacement of a treatment works, community water system, or aging water distribution or waste collection facility (including a facility that serves a population or community of an Indian reservation).

(6) A brackish or sea water desalination project, a managed aquifer recharge project, or a water recycling project.

(7) Acquisition of real property or an interest in real property—

(A) if the acquisition is integral to a project described in paragraphs (1) through (6); or

(B) pursuant to an existing plan that, in the judgment of the Administrator or the Secretary, as applicable, would mitigate the environmental impacts of water resources infrastructure projects otherwise eligible for assistance under this section.

(8) A combination of projects, each of which is eligible under paragraph (2) or (3), for which a State infrastructure financing authority submits to the Administrator a single application.

(9) A combination of projects secured by a common security pledge, each of which is eligible under paragraph (1), (2), (3), (4), (5), (6), or (7), for which an eligible entity, or a combination of eligible entities, submits a single application.

SEC. 5027. ACTIVITIES ELIGIBLE FOR ASSISTANCE.

For purposes of this subtitle, an eligible activity with respect to an eligible project includes the cost of—

(1) development-phase activities, including planning, feasibility analysis (including any related analysis necessary to carry out an eligible project), revenue forecasting, environmental review, permitting, preliminary engineering and design work, and other preconstruction activities;

(2) construction, reconstruction, rehabilitation, and replacement activities;

(3) the acquisition of real property or an interest in real property (including water rights, land relating to the project, and improvements to land), environmental mitigation (including acquisitions pursuant to section 5026(7)), construction contingencies, and acquisition of equipment; and

(4) capitalized interest necessary to meet market requirements, reasonably required reserve funds, capital issuance expenses, and other carrying costs during construction.

SEC. 5028. DETERMINATION OF ELIGIBILITY AND PROJECT SELECTION.

(a) **ELIGIBILITY REQUIREMENTS.**—To be eligible to receive financial assistance under this subtitle, a project shall meet the following criteria, as determined by the Secretary or Administrator, as applicable:

(1) **CREDITWORTHINESS.**—

(A) **IN GENERAL.**—The project and obligor shall be creditworthy, which shall be determined by the Secretary or the Administrator, as applicable.

(B) **CONSIDERATIONS.**—In determining the creditworthiness of a project and obligor, the Secretary or the Administrator, as applicable, shall take into consideration relevant factors, including—

(i) the terms, conditions, financial structure, and security features of the proposed financing;

(ii) the dedicated revenue sources that will secure or fund the project obligations;

(iii) the financial assumptions upon which the project is based; and

(iv) the financial soundness and credit history of the obligor.

(C) **SECURITY FEATURES.**—The Secretary or the Administrator, as applicable, shall ensure that any financing for the project has appropriate security features, such as a rate covenant, supporting the project obligations to ensure repayment.

(D) **RATING OPINION LETTERS.**—

(i) **PRELIMINARY RATING OPINION LETTER.**—The Secretary or the Administrator, as applicable, shall

require each project applicant to provide, at the time of application, a preliminary rating opinion letter from at least 1 rating agency indicating that the senior obligations of the project (which may be the Federal credit instrument) have the potential to achieve an investment-grade rating.

(ii) FINAL RATING OPINION LETTERS.—The Secretary or the Administrator, as applicable, shall require each project applicant to provide, prior to final acceptance and financing of the project, final rating opinion letters from at least 2 rating agencies indicating that the senior obligations of the project have an investment-grade rating.

(E) SPECIAL RULE FOR CERTAIN COMBINED PROJECTS.—The Administrator shall develop a credit evaluation process for a Federal credit instrument provided to a State infrastructure financing authority for a project under section 5026(8) or an entity for a project under section 5026(9), which may include requiring the provision of a final rating opinion letter from at least 2 rating agencies.

(2) ELIGIBLE PROJECT COSTS.—

(A) IN GENERAL.—Subject to subparagraph (B), the eligible project costs of a project shall be reasonably anticipated to be not less than \$20,000,000.

(B) SMALL COMMUNITY WATER INFRASTRUCTURE PROJECTS.—For a project described in paragraph (2) or (3) of section 5026 that serves a community of not more than 25,000 individuals, the eligible project costs of a project shall be reasonably anticipated to be not less than \$5,000,000.

(3) DEDICATED REVENUE SOURCES.—The Federal credit instrument for the project shall be repayable, in whole or in part, from dedicated revenue sources that also secure the project obligations.

(4) PUBLIC SPONSORSHIP OF PRIVATE ENTITIES.—

(A) IN GENERAL.—If an eligible project is carried out by an entity that is not a State or local government or an agency or instrumentality of a State or local government or a tribal government or consortium of tribal governments, the project shall be publicly sponsored.

(B) PUBLIC SPONSORSHIP.—For purposes of this subtitle, a project shall be considered to be publicly sponsored if the obligor can demonstrate, to the satisfaction of the Secretary or the Administrator, as appropriate, that the project applicant has consulted with the affected State, local, or tribal government in which the project is located, or is otherwise affected by the project, and that such government supports the proposed project.

(5) LIMITATION.—No project receiving Federal credit assistance under this subtitle may be financed (directly or indirectly), in whole or in part, with proceeds of any obligation—

(A) the interest on which is exempt from the tax imposed under chapter 1 of the Internal Revenue Code of 1986; or

(B) with respect to which credit is allowable under subpart I or J of part IV of subchapter A of chapter 1 of such Code.

(6) USE OF EXISTING FINANCING MECHANISMS.—

(A) NOTIFICATION.—For each eligible project for which the Administrator has authority under paragraph (2) or (3) of section 5023(b) and for which the Administrator has received an application for financial assistance under this subtitle, the Administrator shall notify, not later than 30 days after the date on which the Administrator receives a complete application, the applicable State infrastructure financing authority of the State in which the project is located that such application has been submitted.

(B) DETERMINATION.—If, not later than 60 days after the date of receipt of a notification under subparagraph (A), a State infrastructure financing authority notifies the Administrator that the State infrastructure financing authority intends to commit funds to the project in an amount that is equal to or greater than the amount requested under the application, the Administrator may not provide any financial assistance for that project under this subtitle unless—

(i) by the date that is 180 days after the date of receipt of a notification under subparagraph (A), the State infrastructure financing authority fails to enter into an assistance agreement to provide funds for the project; or

(ii) the financial assistance to be provided by the State infrastructure financing authority will be at rates and terms that are less favorable than the rates and terms for financial assistance provided under this subtitle.

(7) OPERATION AND MAINTENANCE PLAN.—

(A) IN GENERAL.—The Secretary or the Administrator, as applicable, shall determine whether an applicant for assistance under this subtitle has developed, and identified adequate revenues to implement, a plan for operating, maintaining, and repairing the project over the useful life of the project.

(B) SPECIAL RULE.—An eligible project described in section 5026(1) that has not been specifically authorized by Congress shall not be eligible for Federal assistance for operations and maintenance.

(b) SELECTION CRITERIA.—

(1) ESTABLISHMENT.—The Secretary or the Administrator, as applicable, shall establish criteria for the selection of projects that meet the eligibility requirements of subsection (a), in accordance with paragraph (2).

(2) CRITERIA.—The selection criteria shall include the following:

(A) The extent to which the project is nationally or regionally significant, with respect to the generation of economic and public benefits, such as—

(i) the reduction of flood risk;

(ii) the improvement of water quality and quantity, including aquifer recharge;

(iii) the protection of drinking water, including source water protection; and

(iv) the support of international commerce.

(B) The extent to which the project financing plan includes public or private financing in addition to assistance under this subtitle.

(C) The likelihood that assistance under this subtitle would enable the project to proceed at an earlier date than the project would otherwise be able to proceed.

(D) The extent to which the project uses new or innovative approaches.

(E) The amount of budget authority required to fund the Federal credit instrument made available under this subtitle.

(F) The extent to which the project—

(i) protects against extreme weather events, such as floods or hurricanes; or

(ii) helps maintain or protect the environment.

(G) The extent to which a project serves regions with significant energy exploration, development, or production areas.

(H) The extent to which a project serves regions with significant water resource challenges, including the need to address—

(i) water quality concerns in areas of regional, national, or international significance;

(ii) water quantity concerns related to groundwater, surface water, or other water sources;

(iii) significant flood risk;

(iv) water resource challenges identified in existing regional, State, or multistate agreements; or

(v) water resources with exceptional recreational value or ecological importance.

(I) The extent to which the project addresses identified municipal, State, or regional priorities.

(J) The readiness of the project to proceed toward development, including a demonstration by the obligor that there is a reasonable expectation that the contracting process for construction of the project can commence by not later than 90 days after the date on which a Federal credit instrument is obligated for the project under this subtitle.

(K) The extent to which assistance under this subtitle reduces the contribution of Federal assistance to the project.

(3) SPECIAL RULE FOR CERTAIN COMBINED PROJECTS.—For a project described in section 5026(8), the Administrator shall only consider the criteria described in subparagraphs (B) through (K) of paragraph (2).

(c) FEDERAL REQUIREMENTS.—Nothing in this section supersedes the applicability of other requirements of Federal law (including regulations).

SEC. 5029. SECURED LOANS.

(a) AGREEMENTS.—

(1) IN GENERAL.—Subject to paragraphs (2) and (3), the Secretary or the Administrator, as applicable, may enter into agreements with 1 or more obligors to make secured loans, the proceeds of which shall be used to finance eligible project costs of any project selected under section 5028.

(2) FINANCIAL RISK ASSESSMENT.—Before entering into an agreement under this subsection for a secured loan, the Secretary or the Administrator, as applicable, in consultation with the Director of the Office of Management and Budget and each rating agency providing a rating opinion letter under section 5028(a)(1)(D), shall determine an appropriate capital reserve subsidy amount for the secured loan, taking into account each such rating opinion letter.

(3) INVESTMENT-GRADE RATING REQUIREMENT.—The execution of a secured loan under this section shall be contingent on receipt by the senior obligations of the project of an investment-grade rating.

(b) TERMS AND LIMITATIONS.—

(1) IN GENERAL.—A secured loan provided for a project under this section shall be subject to such terms and conditions, and contain such covenants, representations, warranties, and requirements (including requirements for audits), as the Secretary or the Administrator, as applicable, determines to be appropriate.

(2) MAXIMUM AMOUNT.—The amount of a secured loan under this section shall not exceed the lesser of—

(A) an amount equal to 49 percent of the reasonably anticipated eligible project costs; and

(B) if the secured loan does not receive an investment-grade rating, the amount of the senior project obligations of the project.

(3) PAYMENT.—A secured loan under this section—

(A) shall be payable, in whole or in part, from State or local taxes, user fees, or other dedicated revenue sources that also secure the senior project obligations of the relevant project;

(B) shall include a rate covenant, coverage requirement, or similar security feature supporting the project obligations; and

(C) may have a lien on revenues described in subparagraph (A), subject to any lien securing project obligations.

(4) INTEREST RATE.—The interest rate on a secured loan under this section shall be not less than the yield on United States Treasury securities of a similar maturity to the maturity of the secured loan on the date of execution of the loan agreement.

(5) MATURITY DATE.—

(A) IN GENERAL.—The final maturity date of a secured loan under this section shall be the earlier of—

(i) the date that is 35 years after the date of substantial completion of the relevant project (as determined by the Secretary or the Administrator, as applicable); and

(ii) if the useful life of the project (as determined by the Secretary or Administrator, as applicable) is less than 35 years, the useful life the project.

(B) SPECIAL RULE FOR STATE INFRASTRUCTURE FINANCING AUTHORITIES.—The final maturity date of a secured loan to a State infrastructure financing authority under this section shall be not later than 35 years after the date on which amounts are first disbursed.

(6) NONSUBORDINATION.—A secured loan under this section shall not be subordinated to the claims of any holder of project obligations in the event of bankruptcy, insolvency, or liquidation of the obligor of the project.

(7) FEES.—The Secretary or the Administrator, as applicable, may establish fees at a level sufficient to cover all or a portion of the costs to the Federal Government of making a secured loan under this section.

(8) NON-FEDERAL SHARE.—The proceeds of a secured loan under this section may be used to pay any non-Federal share of project costs required if the loan is repayable from non-Federal funds.

(9) MAXIMUM FEDERAL INVOLVEMENT.—

(A) IN GENERAL.—Except as provided in subparagraph (B), for each project for which assistance is provided under this subtitle, the total amount of Federal assistance shall not exceed 80 percent of the total project cost.

(B) EXCEPTIONS.—Subparagraph (A) shall not apply to any rural water project—

(i) that is authorized to be carried out by the Secretary of the Interior;

(ii) that includes among its beneficiaries a federally recognized Indian tribe; and

(iii) for which the authorized Federal share of the total project costs is greater than the amount described in subparagraph (A).

(c) REPAYMENT.—

(1) SCHEDULE.—The Secretary or the Administrator, as applicable, shall establish a repayment schedule for each secured loan provided under this section, based on the projected cash flow from project revenues and other repayment sources.

(2) COMMENCEMENT.—

(A) IN GENERAL.—Scheduled loan repayments of principal or interest on a secured loan under this section shall commence not later than 5 years after the date of substantial completion of the project (as determined by the Secretary or Administrator, as applicable).

(B) SPECIAL RULE FOR STATE INFRASTRUCTURE FINANCING AUTHORITIES.—Scheduled loan repayments of principal or interest on a secured loan to a State infrastructure financing authority under this subtitle shall commence not later than 5 years after the date on which amounts are first disbursed.

(3) DEFERRED PAYMENTS.—

(A) AUTHORIZATION.—If, at any time after the date of substantial completion of a project for which a secured loan is provided under this section, the project is unable to generate sufficient revenues to pay the scheduled loan repayments of principal and interest on the secured loan, the Secretary or the Administrator, as applicable, subject to subparagraph (C), may allow the obligor to add unpaid principal and interest to the outstanding balance of the secured loan.

(B) INTEREST.—Any payment deferred under subparagraph (A) shall—

(i) continue to accrue interest in accordance with subsection (b)(4) until fully repaid; and

(ii) be scheduled to be amortized over the remaining term of the secured loan.

(C) CRITERIA.—

(i) IN GENERAL.—Any payment deferral under subparagraph (A) shall be contingent on the project meeting such criteria as the Secretary or the Administrator, as applicable, may establish.

(ii) REPAYMENT STANDARDS.—The criteria established under clause (i) shall include standards for reasonable assurance of repayment.

(4) PREPAYMENT.—

(A) USE OF EXCESS REVENUES.—Any excess revenues that remain after satisfying scheduled debt service requirements on the project obligations and secured loan and all deposit requirements under the terms of any trust agreement, bond resolution, or similar agreement securing project obligations may be applied annually to prepay a secured loan under this section without penalty.

(B) USE OF PROCEEDS OF REFINANCING.—A secured loan under this section may be prepaid at any time without penalty from the proceeds of refinancing from non-Federal funding sources.

(d) SALE OF SECURED LOANS.—

(1) IN GENERAL.—Subject to paragraph (2), as soon as practicable after the date of substantial completion of a project and after providing a notice to the obligor, the Secretary or the Administrator, as applicable, may sell to another entity or reoffer into the capital markets a secured loan for a project under this section, if the Secretary or the Administrator, as applicable, determines that the sale or reoffering can be made on favorable terms.

(2) CONSENT OF OBLIGOR.—In making a sale or reoffering under paragraph (1), the Secretary or the Administrator, as applicable, may not change the original terms and conditions of the secured loan without the written consent of the obligor.

(e) LOAN GUARANTEES.—

(1) IN GENERAL.—The Secretary or the Administrator, as applicable, may provide a loan guarantee to a lender in lieu of making a secured loan under this section, if the Secretary or the Administrator, as applicable, determines that the budgetary cost of the loan guarantee is substantially the same as that of a secured loan.

(2) TERMS.—The terms of a loan guarantee provided under this subsection shall be consistent with the terms established in this section for a secured loan, except that the rate on the guaranteed loan and any prepayment features shall be negotiated between the obligor and the lender, with the consent of the Secretary or the Administrator, as applicable.

SEC. 5030. PROGRAM ADMINISTRATION.

(a) REQUIREMENT.—The Secretary or the Administrator, as applicable, shall establish a uniform system to service the Federal credit instruments made available under this subtitle.

(b) FEES.—

(1) IN GENERAL.—The Secretary or the Administrator, as applicable, may collect and spend fees, contingent on authority

being provided in appropriations Acts, at a level that is sufficient to cover—

(A) the costs of services of expert firms retained pursuant to subsection (d); and

(B) all or a portion of the costs to the Federal Government of servicing the Federal credit instruments provided under this subtitle.

(c) **SERVICER.**—

(1) **IN GENERAL.**—The Secretary or the Administrator, as applicable, may appoint a financial entity to assist the Secretary or the Administrator in servicing the Federal credit instruments provided under this subtitle.

(2) **DUTIES.**—A servicer appointed under paragraph (1) shall act as the agent for the Secretary or the Administrator, as applicable.

(3) **FEE.**—A servicer appointed under paragraph (1) shall receive a servicing fee, subject to approval by the Secretary or the Administrator, as applicable.

(d) **ASSISTANCE FROM EXPERTS.**—The Secretary or the Administrator, as applicable, may retain the services, including counsel, of organizations and entities with expertise in the field of municipal and project finance to assist in the underwriting and servicing of Federal credit instruments provided under this subtitle.

(e) **APPLICABILITY OF OTHER LAWS.**—Section 513 of the Federal Water Pollution Control Act (33 U.S.C. 1372) applies to the construction of a project carried out, in whole or in part, with assistance made available through a Federal credit instrument under this subtitle in the same manner that section applies to a treatment works for which a grant is made available under that Act.

SEC. 5031. STATE, TRIBAL, AND LOCAL PERMITS.

The provision of financial assistance for a project under this subtitle shall not—

(1) relieve any recipient of the assistance of any obligation to obtain any required State, local, or tribal permit or approval with respect to the project;

(2) limit the right of any unit of State, local, or tribal government to approve or regulate any rate of return on private equity invested in the project; or

(3) otherwise supersede any State, local, or tribal law (including any regulation) applicable to the construction or operation of the project.

SEC. 5032. REGULATIONS.

The Secretary or the Administrator, as applicable, may promulgate such regulations as the Secretary or Administrator determines to be appropriate to carry out this subtitle.

SEC. 5033. FUNDING.

(a) **IN GENERAL.**—There is authorized to be appropriated to each of the Secretary and the Administrator to carry out this subtitle, to remain available until expended—

(1) \$20,000,000 for fiscal year 2015;

(2) \$25,000,000 for fiscal year 2016;

(3) \$35,000,000 for fiscal year 2017;

(4) \$45,000,000 for fiscal year 2018; and

(5) \$50,000,000 for fiscal year 2019.

(b) ADMINISTRATIVE COSTS.—Of the funds made available to carry out this subtitle, the Secretary or the Administrator, as applicable, may use for the administration of this subtitle, including for the provision of technical assistance to aid project sponsors in obtaining the necessary approvals for the project, not more than \$2,200,000 for each of fiscal years 2015 through 2019.

(c) SMALL COMMUNITY WATER INFRASTRUCTURE PROJECTS.—

(1) IN GENERAL.—For each fiscal year, the Secretary or the Administrator, as applicable, shall set aside not less than 15 percent of the amounts made available for that fiscal year under this section for small community water infrastructure projects described in section 5028(a)(2)(B).

(2) ADMINISTRATION.—Any amounts set aside under paragraph (1) that remain unobligated on June 1 of the fiscal year for which the amounts are set aside shall be available for obligation by the Secretary or the Administrator, as applicable, for projects other than small community water infrastructure projects.

(d) ADDITIONAL FUNDING.—Notwithstanding section 5029(b)(2), the Secretary or the Administrator, as applicable, may make available up to 25 percent of the amounts made available for each fiscal year under this section for loans in excess of 49 percent of the total project costs.

SEC. 5034. REPORTS ON PILOT PROGRAM IMPLEMENTATION.

(a) AGENCY REPORTING.—As soon as practicable after each fiscal year for which amounts are made available to carry out this subtitle, the Secretary and the Administrator shall publish on a dedicated, publicly accessible Internet site—

(1) each application received for assistance under this subtitle; and

(2) a list of the projects selected for assistance under this subtitle, including—

(A) a description of each project;

(B) the amount of financial assistance provided for each project; and

(C) the basis for the selection of each project with respect to the requirements of this subtitle.

(b) REPORTS TO CONGRESS.—

(1) IN GENERAL.—Not later than 4 years after the date of enactment of this Act, the Comptroller General of the United States shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives a report summarizing for the projects that are receiving, or have received, assistance under this subtitle—

(A) the applications received for assistance under this subtitle;

(B) the projects selected for assistance under this subtitle, including a description of the projects and the basis for the selection of those projects with respect to the requirements of this subtitle;

(C) the type and amount of financial assistance provided for each project selected for assistance under this subtitle;

(D) the financial performance of each project selected for assistance under this subtitle, including an evaluation of whether the objectives of this subtitle are being met;

(E) the benefits and impacts of implementation of this subtitle, including the public benefit provided by the projects selected for assistance under this subtitle, including, as applicable, water quality and water quantity improvement, the protection of drinking water, and the reduction of flood risk; and

(F) an evaluation of the feasibility of attracting non-Federal public or private financing for water infrastructure projects as a result of the implementation of this subtitle.

(2) RECOMMENDATIONS.—The report under paragraph (1) shall include—

(A) an evaluation of the impacts (if any) of the limitation under section 5028(a)(5) on the ability of eligible entities to finance water infrastructure projects under this subtitle;

(B) a recommendation as to whether the objectives of this subtitle would be best served—

(i) by continuing the authority of the Secretary or the Administrator, as applicable, to provide assistance under this subtitle;

(ii) by establishing a Government corporation or Government-sponsored enterprise to provide assistance in accordance with this subtitle; or

(iii) by terminating the authority of the Secretary and the Administrator under this subtitle and relying on the capital markets to fund the types of infrastructure investments assisted by this subtitle without Federal participation; and

(C) any proposed changes to improve the efficiency and effectiveness of this subtitle in providing financing for water infrastructure projects, taking into consideration the recommendations made under subparagraphs (A) and (B).

SEC. 5035. REQUIREMENTS.

(a) IN GENERAL.—Except as provided in subsection (c), none of the amounts made available under this subtitle may be used for the construction, alteration, maintenance, or repair of a project eligible for assistance under this subtitle unless all of the iron and steel products used in the project are produced in the United States.

(b) DEFINITION OF IRON AND STEEL PRODUCTS.—In this section, the term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and construction materials.

(c) APPLICATION.—Subsection (a) shall not apply in any case or category of cases in which the Administrator finds that—

(1) applying subsection (a) would be inconsistent with the public interest;

(2) iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(3) inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

(d) WAIVER.—If the Administrator receives a request for a waiver under this section, the Administrator shall make available to the public, on an informal basis, a copy of the request and information available to the Administrator concerning the request, and shall allow for informal public input on the request for at least 15 days prior to making a finding based on the request. The Administrator shall make the request and accompanying information available by electronic means, including on the official public Internet Web site of the Environmental Protection Agency.

(e) INTERNATIONAL AGREEMENTS.—This section shall be applied in a manner consistent with United States obligations under international agreements.

TITLE VI—DEAUTHORIZATION AND BACKLOG PREVENTION

SEC. 6001. DEAUTHORIZATION OF INACTIVE PROJECTS.

(a) PURPOSES.—The purposes of this section are—

(1) to identify \$18,000,000,000 in water resources development projects authorized by Congress that are no longer viable for construction due to—

(A) a lack of local support;

(B) a lack of available Federal or non-Federal resources; or

(C) an authorizing purpose that is no longer relevant or feasible;

(2) to create an expedited and definitive process to deauthorize water resources development projects that are no longer viable for construction; and

(3) to allow the continued authorization of water resources development projects that are viable for construction.

(b) COMPREHENSIVE STATUS REPORTS.—Section 1001(b) of the Water Resources Development Act of 1986 (33 U.S.C. 579a(b)) is amended by adding at the end the following:

“(3) MINIMUM FUNDING LIST.—At the end of each fiscal year, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives, and make available on a publicly accessible Internet site in a manner that is downloadable, searchable, and sortable, a list of—

“(A) projects or separable elements of projects authorized for construction for which funding has been obligated during the current fiscal year or any of the 6 preceding fiscal years;

“(B) the amount of funding obligated for each such project or separable element per fiscal year;

“(C) the current phase of each such project or separable element of a project; and

“(D) the amount required to complete the current phase of each such project or separable element.

“(4) COMPREHENSIVE BACKLOG REPORT.—

“(A) IN GENERAL.—The Secretary shall compile and publish a complete list of all projects and separable elements of projects of the Corps of Engineers that are authorized for construction but have not been completed.

“(B) REQUIRED INFORMATION.—The Secretary shall include on the list developed under subparagraph (A) for each project and separable element on that list—

“(i) the date of authorization of the project or separable element, including any subsequent modifications to the original authorization;

“(ii) the original budget authority for the project or separable element;

“(iii) a brief description of the project or separable element;

“(iv) the estimated date of completion of the project or separable element;

“(v) the estimated cost of completion of the project or separable element; and

“(vi) any amounts appropriated for the project or separable element that remain unobligated.

“(C) PUBLICATION.—

“(i) IN GENERAL.—Not later than 1 year after the date of enactment of this paragraph, the Secretary shall submit a copy of the list developed under subparagraph (A) to—

“(I) the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives; and

“(II) the Director of the Office of Management and Budget.

“(ii) PUBLIC AVAILABILITY.—Beginning on the date the Secretary submits the report to Congress under clause (i), the Secretary shall make a copy of the list available on a publicly accessible Internet site in a manner that is downloadable, searchable, and sortable.”.

(c) INTERIM DEAUTHORIZATION LIST.—

(1) IN GENERAL.—The Secretary shall develop an interim deauthorization list that identifies each water resources development project, or separable element of a project, authorized for construction before November 8, 2007, for which—

(A) construction was not initiated before the date of enactment of this Act; or

(B) construction was initiated before the date of enactment of this Act, but for which no funds, Federal or non-Federal, were obligated for construction of the project or separable element of the project during the current fiscal year or any of the 6 preceding fiscal years.

(2) SPECIAL RULE FOR PROJECTS RECEIVING FUNDS FOR POST-AUTHORIZATION STUDY.—A project or separable element of a project may not be identified on the interim deauthorization list, or the final deauthorization list developed under subsection (d), if the project or separable element received funding for a post-authorization study during the current fiscal year or any of the 6 preceding fiscal years.

(3) PUBLIC COMMENT AND CONSULTATION.—

(A) IN GENERAL.—The Secretary shall solicit comments from the public and the Governors of each applicable State on the interim deauthorization list developed under paragraph (1).

(B) COMMENT PERIOD.—The public comment period shall be 90 days.

(4) SUBMISSION TO CONGRESS; PUBLICATION.—Not later than 90 days after the date of submission of the list required by section 1001(b)(4)(A) of the Water Resources Development Act of 1986 (as added by subsection (b)), the Secretary shall—

(A) submit the interim deauthorization list to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives; and

(B) publish the interim deauthorization list in the Federal Register.

(d) FINAL DEAUTHORIZATION LIST.—

(1) IN GENERAL.—The Secretary shall develop a final deauthorization list of each water resources development project, or separable element of a project, described in subsection (c)(1) that is identified pursuant to this subsection.

(2) DEAUTHORIZATION AMOUNT.—

(A) IN GENERAL.—The Secretary shall include on the final deauthorization list projects and separable elements of projects that have, in the aggregate, an estimated Federal cost to complete that is at least \$18,000,000,000.

(B) DETERMINATION OF FEDERAL COST TO COMPLETE.—For purposes of subparagraph (A), the Federal cost to complete shall take into account any allowances authorized by section 902 of the Water Resources Development Act of 1986 (33 U.S.C. 2280), as applied to the most recent project schedule and cost estimate.

(3) IDENTIFICATION OF PROJECTS.—

(A) SEQUENCING OF PROJECTS.—

(i) IN GENERAL.—The Secretary shall identify projects and separable elements of projects for inclusion on the final deauthorization list according to the order in which the projects and separable elements of the projects were authorized, beginning with the earliest authorized projects and separable elements of projects and ending once the last project or separable element of a project necessary to meet the aggregate amount under paragraph (2) is identified.

(ii) FACTORS TO CONSIDER.—The Secretary may identify projects and separable elements of projects in an order other than that established by clause (i) if the Secretary determines, on a case-by-case basis, that a project or separable element of a project is critical for interests of the United States, based on the possible impact of the project or separable element of the project on public health and safety, the national economy, or the environment.

(iii) CONSIDERATION OF PUBLIC COMMENTS.—In making determinations under clause (ii), the Secretary shall consider any comments received under subsection (c)(3).

(B) APPENDIX.—The Secretary shall include as part of the final deauthorization list an appendix that—

(i) identifies each project or separable element of a project on the interim deauthorization list developed under subsection (c) that is not included on the final deauthorization list; and

(ii) describes the reasons why the project or separable element is not included.

(4) SUBMISSION TO CONGRESS; PUBLICATION.—Not later than 120 days after the date on which the public comment period under subsection (c)(3) expires, the Secretary shall—

(A) submit the final deauthorization list and the appendix to the final deauthorization list to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives; and

(B) publish the final deauthorization list and the appendix to the final deauthorization list in the Federal Register.

(e) DEAUTHORIZATION; CONGRESSIONAL REVIEW.—

(1) IN GENERAL.—After the expiration of the 180-day period beginning on the date of submission of the final deauthorization report under subsection (d), a project or separable element of a project identified in the report is hereby deauthorized, unless Congress passes a joint resolution disapproving the final deauthorization report prior to the end of such period.

(2) NON-FEDERAL CONTRIBUTIONS.—

(A) IN GENERAL.—A project or separable element of a project identified in the final deauthorization report under subsection (d) shall not be deauthorized under this subsection if, before the expiration of the 180-day period referred to in paragraph (1), the non-Federal interest for the project or separable element of the project provides sufficient funds to complete the project or separable element of the project.

(B) TREATMENT OF PROJECTS.—Notwithstanding subparagraph (A), each project and separable element of a project identified in the final deauthorization report shall be treated as deauthorized for purposes of the aggregate deauthorization amount specified in subsection (d)(2).

(f) GENERAL PROVISIONS.—

(1) DEFINITIONS.—In this section:

(A) POST-AUTHORIZATION STUDY.—The term “post-authorization study” means—

(i) a feasibility report developed under section 905 of the Water Resources Development Act of 1986 (33 U.S.C. 2282);

(ii) a feasibility study, as defined in section 105(d) of the Water Resources Development Act of 1986 (33 U.S.C. 2215(d)); or

(iii) a review conducted under section 216 of the Flood Control Act of 1970 (33 U.S.C. 549a), including an initial appraisal that—

(I) demonstrates a Federal interest; and

(II) requires additional analysis for the project or separable element.

(B) WATER RESOURCES DEVELOPMENT PROJECT.—The term “water resources development project” includes an environmental infrastructure assistance project or program of the Corps of Engineers.

(2) TREATMENT OF PROJECT MODIFICATIONS.—For purposes of this section, if an authorized water resources development project or separable element of the project has been modified by an Act of Congress, the date of the authorization of the project or separable element shall be deemed to be the date of the most recent such modification.

SEC. 6002. REVIEW OF CORPS OF ENGINEERS ASSETS.

(a) ASSESSMENT AND INVENTORY.—Not later than 1 year after the date of enactment of this Act, the Secretary shall conduct an assessment of all properties under the control of the Corps of Engineers and develop an inventory of the properties that are not needed for the missions of the Corps of Engineers.

(b) CRITERIA.—In conducting the assessment and developing the inventory under subsection (a), the Secretary shall use the following criteria:

(1) The extent to which the property aligns with the current missions of the Corps of Engineers.

(2) The economic impact of the property on existing communities in the vicinity of the property.

(3) The extent to which the utilization rate for the property is being maximized and is consistent with nongovernmental industry standards for the given function or operation.

(4) The extent to which the reduction or elimination of the property could reduce operation and maintenance costs of the Corps of Engineers.

(5) The extent to which the reduction or elimination of the property could reduce energy consumption by the Corps of Engineers.

(c) NOTIFICATION.—As soon as practicable following completion of the inventory of properties under subsection (a), the Secretary shall provide the inventory to the Administrator of General Services.

(d) REPORT TO CONGRESS.—Not later than 30 days after the date of the notification under subsection (c), the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives and make publicly available a report containing the findings of the Secretary with respect to the assessment and inventory required under subsection (a).

SEC. 6003. BACKLOG PREVENTION.

(a) PROJECT DEAUTHORIZATION.—

(1) IN GENERAL.—A water resources development project, or separable element of such a project, authorized for construction by this Act shall not be authorized after the last day of the 7-year period beginning on the date of enactment of this Act unless funds have been obligated for construction of such project during that period.

(2) IDENTIFICATION OF PROJECTS.—Not later than 60 days after the expiration of the 7-year period referred to in paragraph (1), the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee

on Transportation and Infrastructure of the House of Representatives a report that identifies the projects deauthorized under paragraph (1).

(b) REPORT TO CONGRESS.—Not later than 60 days after the expiration of the 12-year period beginning on the date of enactment of this Act, the Secretary shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives, and make available to the public, a report that contains—

(1) a list of any water resources development projects authorized by this Act for which construction has not been completed during that period;

(2) a description of the reasons the projects were not completed;

(3) a schedule for the completion of the projects based on expected levels of appropriations; and

(4) a 5-year and 10-year projection of construction backlog and any recommendations to Congress regarding how to mitigate current problems and the backlog.

SEC. 6004. DEAUTHORIZATIONS.

(a) IN GENERAL.—

(1) WALNUT CREEK (PACHECO CREEK), CALIFORNIA.—The portions of the project for flood protection on Walnut Creek, California, constructed under section 203 of the Flood Control Act of 1960 (Public Law 86–645; 74 Stat. 488), consisting of the Walnut Creek project from Sta 0+00 to Sta 142+00 and the upstream extent of the Walnut Creek project along Pacheco Creek from Sta 0+00 to Sta 73+50 are no longer authorized beginning on the date of enactment of this Act.

(2) WALNUT CREEK (SAN RAMON CREEK), CALIFORNIA.—The portion of the project for flood protection on Walnut Creek, California, constructed under section 203 of the Flood Control Act of 1960 (Public Law 86–645; 74 Stat. 488), consisting of the culvert constructed by the Department of the Army on San Ramon Creek from Sta 4+27 to Sta 14+27 is no longer authorized beginning on the date of enactment of this Act.

(3) EIGHTMILE RIVER, CONNECTICUT.—

(A) The portion of the project for navigation, Eightmile River, Connecticut, authorized by the first section of the Act of June 25, 1910 (36 Stat. 633, chapter 382) (commonly known as the “River and Harbor Act of 1910”), that begins at a point of the existing 8-foot channel limit with coordinates N701002.39, E1109247.73, thence running north 2 degrees 19 minutes 57.1 seconds east 265.09 feet to a point N701267.26, E1109258.52, thence running north 7 degrees 47 minutes 19.3 seconds east 322.32 feet to a point N701586.60, E1109302.20, thence running north 90 degrees 0 minutes 0 seconds east 65.61 feet to a point N701586.60, E1109367.80, thence running south 7 degrees 47 minutes 19.3 seconds west 328.11 feet to a point N701261.52, E1109323.34, thence running south 2 degrees 19 minutes 57.1 seconds west 305.49 feet to an end at a point N700956.28, E1109310.91 on the existing 8-foot channel limit, shall be reduced to a width of 65 feet and the channel realigned to follow the deepest available water.

(B) The project referred to in subparagraph (A) beginning at a point N701296.72, E1109262.55 and running north 45 degrees 4 minutes 2.8 seconds west 78.09 feet to a point N701341.18, E1109217.98, thence running north 5 degrees 8 minutes 34.6 seconds east 180.14 feet to a point N701520.59, E1109234.13, thence running north 54 degrees 5 minutes 50.1 seconds east 112.57 feet to a point N701568.04, E1109299.66, thence running south 7 degrees 47 minutes 18.4 seconds west 292.58 feet to the point of origin; and the remaining area north of the channel realignment beginning at a point N700956.28, E1109310.91 thence running north 2 degrees 19 minutes 57.1 seconds east 305.49 feet west to a point N701261.52, E1109323.34 north 7 degrees 47 minutes 18.4 seconds east 328.11 feet to a point N701586.60, E1109367.81 thence running north 90 degrees 0 minutes 0 seconds east 7.81 feet to a point N701586.60, E1109375.62 thence running south 5 degrees 8 minutes 34.6 seconds west 626.29 feet to a point N700962.83, E1109319.47 thence south 52 degrees 35 minutes 36.5 seconds 10.79 feet to the point of origin is no longer authorized beginning on the date of enactment of this Act.

(4) HILLSBOROUGH (HILLSBORO) BAY AND RIVER, FLORIDA.—The portions of the project for navigation, Hillsborough (Hillsboro) Bay and River, Florida, authorized by the Act of March 3, 1899 (30 Stat. 1126; chapter 425), that extend on either side of the Hillsborough River from the Kennedy Boulevard bridge to the mouth of the river that cause the existing channel to exceed 100 feet in width are no longer authorized beginning on the date of enactment of this Act.

(5) KAHULUI WASTEWATER RECLAMATION FACILITY, MAUI, HAWAII.—The project authorized pursuant to section 14 of the Flood Control Act of 1946 (33 U.S.C. 701r) to provide shoreline protection for the Kahului Wastewater Reclamation Facility, located on the Island of Maui in the State of Hawaii is no longer authorized beginning on the date of enactment of this Act.

(6) LUCAS-BERG PIT, ILLINOIS WATERWAY AND GRANT CALUMET RIVER, ILLINOIS.—The portion of the project for navigation, Illinois Waterway and Grand Calumet River, Illinois, authorized by the first section of the Act of July 24, 1946 (60 Stat. 636; chapter 595), that consists of the Lucas-Berg Pit confined disposal facility, Illinois is no longer authorized beginning on the date of enactment of this Act.

(7) PORT OF IBERIA, LOUISIANA.—Section 1001(25) of the Water Resources Development Act of 2007 (121 Stat. 1053) is amended by striking “; except that” and all that follows before the period at the end.

(8) ROCKLAND HARBOR, MAINE.—The project for navigation, Rockland Harbor, Maine, authorized by the Act of June 3, 1896 (29 Stat. 202; chapter 314), and described as follows is no longer authorized beginning on the date of enactment of this Act:

(A) Beginning at the point in the 14-foot turning basin limit with coordinates N162,927.61, E826,210.16.

(B) Thence running north 45 degrees 45 minutes 15.6 seconds east 287.45 feet to a point N163,128.18, E826,416.08.

(C) Thence running south 13 degrees 17 minutes 53.3 seconds east 129.11 feet to a point N163,002.53, E826,445.77.

(D) Thence running south 45 degrees 45 minutes 18.4 seconds west 221.05 feet to a point N162,848.30, E826,287.42.

(E) Thence running north 44 degrees 14 minutes 59.5 seconds west 110.73 feet to the point of origin.

(9) THOMASTON HARBOR, GEORGES RIVER, MAINE.—The portion of the project for navigation, Georges River, Maine (Thomaston Harbor), authorized by the first section of the Act of June 3, 1896 (29 Stat. 215, chapter 314), and modified by section 317 of the Water Resources Development Act of 2000 (Public Law 106-541; 114 Stat. 2604), that lies northwesterly of a line commencing at point N87,220.51, E321,065.80 thence running northeasterly about 125 feet to a point N87,338.71, E321,106.46 is no longer authorized beginning on the date of enactment of this Act.

(10) CORSICA RIVER, QUEEN ANNE'S COUNTY, MARYLAND.—The portion of the project for improving the Corsica River, Maryland, authorized by the first section of the Act of July 25, 1912 (37 Stat. 205; chapter 253), and described as follows is no longer authorized beginning on the date of enactment of this Act: Approximately 2,000 feet of the eastern section of the project channel extending from—

(A) centerline station 0+000 (coordinates N506350.60, E1575013.60); to

(B) station 2+000 (coordinates N508012.39, E1574720.18).

(11) GOOSE CREEK, SOMERSET COUNTY, MARYLAND.—The project for navigation, Goose Creek, Somerset County, Maryland, carried out pursuant to section 107 of the Rivers and Harbor Act of 1960 (33 U.S.C. 577), is realigned as follows: Beginning at Goose Creek Channel Geometry Centerline of the 60-foot-wide main navigational ship channel, Centerline Station No. 0+00, coordinates North 157851.80, East 1636954.70, as stated and depicted on the Condition Survey Goose Creek, Sheet 1 of 1, prepared by the United States Army Corps of Engineers, Baltimore District, July 2003; thence departing the aforementioned centerline traveling the following courses and distances: S. 64 degrees 49 minutes 06 seconds E., 1583.82 feet to a point, on the outline of said 60-foot-wide channel thence binding on said out-line the following four courses and distances: S. 63 degrees 26 minutes 06 seconds E., 1460.05 feet to a point, thence; N. 50 degrees 38 minutes 26 seconds E., 973.28 feet to a point, thence; N. 26 degrees 13 minutes 09 seconds W., 240.39 feet to a point on the Left Toe of the 60-foot-wide main navigational channel at computed Centerline Station No. 42+57.54, coordinates North 157357.84, East 1640340.23. Geometry Left Toe of the 60-foot-wide main navigational ship channel, Left Toe Station No. 0+00, coordinates North 157879.00, East 1636967.40, as stated and depicted on the Condition Survey Goose Creek, Sheet 1 of 1, prepared

by the United States Army Corps of Engineers, Baltimore District, August 2010; thence departing the aforementioned centerline traveling the following courses and distances: S. 64 degrees 49 minutes 12 seconds E., 1583.91 feet to a point, on the outline of said 60-foot-wide channel thence binding on said out-line the following eight courses and distances: S. 63 degrees 25 minutes 38 seconds E., 1366.25 feet to a point, thence; N. 83 degrees 36 minutes 24 seconds E., 125.85 feet to a point, thence; N. 50 degrees 38 minutes 26 seconds E., 805.19 feet to a point, thence; N. 12 degrees 12 minutes 29 seconds E., 78.33 feet to a point thence; N. 26 degrees 13 minutes 28 seconds W., 46.66 feet to a point thence; S. 63 degrees 45 minutes 41 seconds W., 54.96 feet to a point thence; N. 26 degrees 13 minutes 24 seconds W., 119.94 feet to a point on the Left Toe of the 60-foot-wide main navigational channel at computed Centerline Station No. 41+81.10, coordinates North 157320.30, East 1640264.00. Geometry Right Toe of the 60-foot-wide main navigational ship channel, Right Toe Station No. 0+00, coordinates North 157824.70, East 1636941.90, as stated and depicted on the Condition Survey Goose Creek, Sheet 1 of 1, prepared by the United States Army Corps of Engineers, Baltimore District, August 2010; thence departing the aforementioned centerline traveling the following courses and distances: S. 64 degrees 49 minutes 06 seconds E., 1583.82 feet to a point, on the outline of said 60-foot-wide channel thence binding on said out-line the following six courses and distances: S. 63 degrees 25 minutes 47 seconds E., 1478.79 feet to a point, thence; N. 50 degrees 38 minutes 26 seconds E., 1016.69 feet to a point, thence; N. 26 degrees 14 minutes 49 seconds W., 144.26 feet to a point, thence; N. 63 degrees 54 minutes 03 seconds E., 55.01 feet to a point thence; N. 26 degrees 12 minutes 08 seconds W., 120.03 feet to a point a point on the Right Toe of the 60-foot-wide main navigational channel at computed Centerline Station No. 43+98.61, coordinates North 157395.40, East 1640416.50.

(12) LOWER THOROUGHFARE, DEAL ISLAND, MARYLAND.—The portion of the project for navigation, Lower Thoroughfare, Maryland, authorized by the Act of June 25, 1910 (36 Stat. 639, chapter 382) (commonly known as the “River and Harbor Act of 1910”), that begins at Lower Thoroughfare Channel Geometry Centerline of the 60-foot-wide main navigational ship channel, Centerline Station No. 44+88, coordinates North 170435.62, East 1614588.93, as stated and depicted on the Condition Survey Lower Thoroughfare, Deal Island, Sheet 1 of 3, prepared by the United States Army Corps of Engineers, Baltimore District, August 2010; thence departing the aforementioned centerline traveling the following courses and distances: S. 42 degrees 20 minutes 44 seconds W., 30.00 feet to a point, on the outline of said 60-foot-wide channel thence binding on said out-line the following four courses and distances: N. 64 degrees 08 minutes 55 seconds W., 53.85 feet to a point, thence; N. 42 degrees 20 minutes 43 seconds W., 250.08 feet to a point, thence; N. 47 degrees 39 minutes 03 seconds E., 20.00 feet to a point, thence; S. 42 degrees 20 minutes 44 seconds E., 300.07 feet to a point binding on the Left Toe of the 60-foot-wide main navigational channel at computed Centerline Station No. 43+92.67, coordinates North 170415.41, 1614566.76;

thence; continuing with the aforementioned centerline the following courses and distances: S. 42 degrees 20 minutes 42 seconds W., 30.00 feet to a point, on the outline of said 60-foot-wide channel thence binding on said out-line the following four courses and distances: N. 20 degrees 32 minutes 06 seconds W., 53.85 feet to a point, thence; N. 42 degrees 20 minutes 49 seconds W., 250.08 feet to a point, thence; S. 47 degrees 39 minutes 03 seconds W., 20.00 feet to a point, thence; S. 42 degrees 20 minutes 46 seconds E., 300.08 feet to a point binding on the Left Toe of the 60-foot-wide main navigational channel at computed Centerline Station No. 43+92.67, coordinates North 170415.41, 1614566.76 is no longer authorized beginning on the date of enactment of this Act.

(13) GLOUCESTER HARBOR AND ANNISQUAM RIVER, MASSACHUSETTS.—The portions of the project for navigation, Gloucester Harbor and Annisquam River, Massachusetts, authorized by section 2 of the Act of March 2, 1945 (59 Stat. 12; chapter 19), consisting of an 8-foot anchorage area in Lobster Cove, and described as follows are no longer authorized beginning on the date of enactment of this Act:

(A) Beginning at a bend along the easterly limit of the existing project, N3063230.31, E878283.77, thence running northwesterly about 339 feet to a point, N3063478.86, E878053.83, thence running northwesterly about 281 feet to a bend on the easterly limit of the existing project, N3063731.88, E877932.54, thence running southeasterly about 612 feet along the easterly limit of the existing project to the point of origin.

(B) Beginning at a bend along the easterly limit of the existing project, N3064065.80, E878031.45, thence running northwesterly about 621 feet to a point, N3064687.05, E878031.13, thence running southwesterly about 122 feet to a point, N3064686.98, E877908.85, thence running southeasterly about 624 feet to a point, N3064063.31, E877909.17, thence running southwesterly about 512 feet to a point, N3063684.73, E877564.56, thence running about 741 feet to a point along the westerly limit of the existing project, N3063273.98, E876947.77, thence running northeasterly about 533 feet to a bend along the westerly limit of the existing project, N3063585.62, E877380.63, thence running about 147 feet northeasterly to a bend along the westerly limit of the project, N3063671.29, E877499.63, thence running northeasterly about 233 feet to a bend along the westerly limit of the existing project, N3063840.60, E877660.29, thence running about 339 feet northeasterly to a bend along the westerly limit of the existing project, N3064120.34, E877852.55, thence running about 573 feet to a bend along the westerly limit of the existing project, N3064692.98, E877865.04, thence running about 113 feet to a bend along the northerly limit of the existing project, N3064739.51, E877968.31, thence running 145 feet southeasterly to a bend along the northerly limit of the existing project, N3064711.19, E878110.69, thence running about 650 feet along the easterly limit of the existing project to the point of origin.

(14) CLATSOP COUNTY DIKING DISTRICT NO. 10, KARLSON ISLAND, OREGON.—The Diking District No. 10, Karlson Island

portion of the project for raising and improving existing levees in Clatsop County, Oregon, authorized by section 5 of the Act of June 22, 1936 (49 Stat. 1590) is no longer authorized beginning on the date of enactment of this Act.

(15) NUMBERG DIKE NO. 34 LEVEED AREA, CLATSOP COUNTY DIKING DISTRICT NO. 13, CLATSOP COUNTY, OREGON (WALLUSKI-YOUNGS).—The Numberg Dike No. 34 leveed area, Clatsop County Diking District, No. 13, Walluski River and Youngs River dikes, portion of the project for raising and improving existing levees in Clatsop County, Oregon, authorized by section 5 of the Act of June 22, 1936 (49 Stat. 1590) is no longer authorized beginning on the date of enactment of this Act.

(16) EAST FORK OF TRINITY RIVER, TEXAS.—The portion of the project for flood protection on the East Fork of the Trinity River, Texas, authorized by section 203 of the Flood Control Act of 1962 (76 Stat. 1185), that consists of the 2 levees identified as Kaufman County Levees K5E and K5W is no longer authorized beginning on the date of enactment of this Act.

(17) BURNHAM CANAL, WISCONSIN.—The portion of the project for navigation, Milwaukee Harbor Project, Milwaukee, Wisconsin, known as the Burnham Canal, authorized by the first section of the Act of March 3, 1843 (5 Stat. 619; chapter 85), and described as follows is no longer authorized beginning on the date of enactment of this Act:

(A) Beginning at channel point #415a N381768.648, E2524554.836, a distance of about 170.58 feet.

(B) Thence running south 53 degrees 43 minutes 41 seconds west to channel point #417 N381667.728, E2524417.311, a distance of about 35.01 feet.

(C) Thence running south 34 degrees 10 minutes 40 seconds west to channel point #501 N381638.761, E2524397.639, a distance of about 139.25 feet.

(D) Thence running south 34 degrees 10 minutes 48 seconds west to channel point #503 N381523.557, E2524319.406, a distance of about 235.98 feet.

(E) Thence running south 32 degrees 59 minutes 13 seconds west to channel point #505 N381325.615, E2524190.925, a distance of about 431.29 feet.

(F) Thence running south 32 degrees 36 minutes 05 seconds west to channel point #509 N380962.276, E2523958.547, a distance of about 614.52 feet.

(G) Thence running south 89 degrees 05 minutes 00 seconds west to channel point #511 N380952.445, E2523344.107, a distance of about 74.68 feet.

(H) Thence running north 89 degrees 04 minutes 59 seconds west to channel point #512 N381027.13, E2523342.91, a distance of about 533.84 feet.

(I) Thence running north 89 degrees 05 minutes 00 seconds east to channel point #510 N381035.67, E2523876.69, a distance of about 47.86 feet.

(J) Thence running north 61 degrees 02 minutes 07 seconds east to channel point #508 N381058.84, E2523918.56, a distance of about 308.55 feet.

(K) Thence running north 36 degrees 15 minutes 29 seconds east to channel point #506 N381307.65, E2524101.05, a distance of about 199.98 feet.

(L) Thence running north 32 degrees 59 minutes 12 seconds east to channel point #504 N381475.40, E2524209.93, a distance of about 195.14 feet.

(M) Thence running north 26 degrees 17 minutes 22 seconds east to channel point #502 N381650.36, E2524296.36, a distance of about 81.82 feet.

(N) Thence running north 88 degrees 51 minutes 05 seconds west to channel point #419 N381732.17, E2524294.72, a distance of about 262.65 feet.

(O) Thence running north 82 degrees 01 minutes 02 seconds east to channel point #415a, the point of origin.

(18) MANITOWOC HARBOR, WISCONSIN.—The portion of the project for navigation, Manitowoc River, Manitowoc, Wisconsin, authorized by the Act of August 30, 1852 (10 Stat. 58; chapter 104), and described as follows is no longer authorized beginning on the date of enactment of this Act: The triangular area bound by—

(A) 44.09893383N and 087.66854912W;

(B) 44.09900535N and 087.66864372W; and

(C) 44.09857884N and 087.66913123W.

(b) SEWARD WATERFRONT, SEWARD, ALASKA.—

(1) IN GENERAL.—Subject to paragraph (2), the portion of the project for navigation, Seward Harbor, Alaska, identified as Tract H, Seward Original Townsite, Waterfront Park Replat, Plat No 2012–4, Seward Recording District, shall not be subject to navigation servitude beginning on the date of enactment of this Act.

(2) ENTRY BY FEDERAL GOVERNMENT.—The Federal Government may enter upon the property referred to in paragraph (1) to carry out any required operation and maintenance of the general navigation features of the project referred to in paragraph (1).

(c) PORT OF HOOD RIVER, OREGON.—

(1) EXTINGUISHMENT OF PORTIONS OF EXISTING FLOWAGE EASEMENT.—With respect to the properties described in paragraph (2), beginning on the date of enactment of this Act, the flowage easement identified as Tract 1200E–6 on the Easement Deed recorded as Instrument No. 740320 is extinguished above elevation 79.39 feet (NGVD 29) the Ordinary High Water Line.

(2) AFFECTED PROPERTIES.—The properties referred to in paragraph (1), as recorded in Hood River County, Oregon, are as follows:

(A) Instrument Number 2010–1235.

(B) Instrument Number 2010–02366.

(C) Instrument Number 2010–02367.

(D) Parcel 2 of Partition Plat #2011–12P.

(E) Parcel 1 of Partition Plat 2005–26P.

(3) FEDERAL LIABILITIES; CULTURAL, ENVIRONMENTAL, AND OTHER REGULATORY REVIEWS.—

(A) FEDERAL LIABILITY.—The United States shall not be liable for any injury caused by the extinguishment of the easement under this subsection.

(B) CULTURAL AND ENVIRONMENTAL REGULATORY ACTIONS.—Nothing in this subsection establishes any cultural or environmental regulation relating to the properties described in paragraph (2).

(4) EFFECT ON OTHER RIGHTS.—Nothing in this subsection affects any remaining right or interest of the Corps of Engineers in the properties described in paragraph (2).

SEC. 6005. LAND CONVEYANCES.

(a) OAKLAND INNER HARBOR TIDAL CANAL, CALIFORNIA.—Section 3182(b)(1) of the Water Resources Development Act of 2007 (Public Law 110–114; 121 Stat. 1165) is amended—

(1) in subparagraph (A) by inserting “, or to a multicounty public entity that is eligible to hold title to real property” after “To the city of Oakland”; and

(2) in subparagraphs (B) and (C) by inserting “multicounty public entity or other” before “public entity”.

(b) ST. CHARLES COUNTY, MISSOURI, LAND EXCHANGE.—

(1) DEFINITIONS.—In this subsection:

(A) FEDERAL LAND.—The term “Federal land” means approximately 84 acres of land, as identified by the Secretary, that is a portion of the approximately 227 acres of land leased from the Corps of Engineers by Ameren Corporation for the Portage Des Sioux Power Plant in St. Charles County, Missouri (Lease No. DA-23-065–CIVENG–64–651, Pool 26).

(B) NON-FEDERAL LAND.—The term “non-Federal land” means the approximately 68 acres of land owned by Ameren Corporation in Jersey County, Illinois, contained within the north half of section 23, township 6 north, range 11 west of the third principal meridian.

(2) LAND EXCHANGE.—On conveyance by Ameren Corporation to the United States of all right, title, and interest in and to the non-Federal land, the Secretary shall convey to Ameren Corporation all right, title, and interest of the United States in and to the Federal land.

(3) SPECIFIC CONDITIONS.—

(A) DEEDS.—

(i) DEED TO NON-FEDERAL LAND.—The Secretary may only accept conveyance of the non-Federal land by warranty deed, as determined acceptable by the Secretary.

(ii) DEED TO FEDERAL LAND.—The Secretary shall convey the Federal land to Ameren Corporation by quitclaim deed.

(B) CASH PAYMENT.—If the appraised fair market value of the Federal land, as determined by the Secretary, exceeds the appraised fair market value of the non-Federal land, as determined by the Secretary, Ameren Corporation shall make a cash payment to the United States reflecting the difference in the appraised fair market values.

(c) TULSA PORT OF CATOOSA, ROGERS COUNTY, OKLAHOMA, LAND EXCHANGE.—

(1) DEFINITIONS.—In this subsection:

(A) FEDERAL LAND.—The term “Federal land” means the approximately 87 acres of land situated in Rogers County, Oklahoma, contained within United States Tracts 413 and 427 and acquired for the McClellan-Kerr Arkansas Navigation System.

(B) NON-FEDERAL LAND.—The term “non-Federal land” means the approximately 34 acres of land situated in

Rogers County, Oklahoma, and owned by the Tulsa Port of Catoosa that lie immediately south and east of the Federal land.

(2) LAND EXCHANGE.—On conveyance by the Tulsa Port of Catoosa to the United States of all right, title, and interest in and to the non-Federal land, the Secretary shall convey to the Tulsa Port of Catoosa all right, title, and interest of the United States in and to the Federal land.

(3) SPECIFIC CONDITIONS.—

(A) DEEDS.—

(i) DEED TO NON-FEDERAL LAND.—The Secretary may only accept conveyance of the non-Federal land by warranty deed, as determined acceptable by the Secretary.

(ii) DEED TO FEDERAL LAND.—The Secretary shall convey the Federal land to the Tulsa Port of Catoosa by quitclaim deed and subject to any reservations, terms, and conditions the Secretary determines necessary to allow the United States to operate and maintain the McClellan-Kerr Arkansas River Navigation System.

(iii) CASH PAYMENT.—If the appraised fair market value of the Federal land, as determined by the Secretary, exceeds the appraised fair market value of the non-Federal land, as determined by the Secretary, the Tulsa Port of Catoosa shall make a cash payment to the United States reflecting the difference in the appraised fair market values.

(d) HAMMOND BOAT BASIN, WARRENTON, OREGON.—

(1) DEFINITIONS.—In this subsection:

(A) CITY.—The term “City” means the city of Warrenton, located in Clatsop County, Oregon.

(B) MAP.—The term “map” means the map contained in Exhibit A of Department of the Army Lease No. DACW57-1-88-0033 (or a successor instrument).

(2) CONVEYANCE AUTHORITY.—Subject to the provisions of this subsection, the Secretary shall convey to the City by quitclaim deed, and without consideration, all right, title, and interest of the United States in and to the parcel of land described in paragraph (3).

(3) DESCRIPTION OF LAND.—

(A) IN GENERAL.—Except as provided in subparagraph (B), the land referred to in paragraph (2) is the parcel totaling approximately 59 acres located in the City, together with any improvements thereon, including the Hammond Marina (as described in the map).

(B) EXCLUSION.—The land referred to in paragraph (2) shall not include the site provided for the fisheries research support facility of the National Marine Fisheries Service.

(C) AVAILABILITY OF MAP.—The map shall be on file in the Portland District Office of the Corps of Engineers.

(4) TERMS AND CONDITIONS.—As a condition of the conveyance under this subsection, the Secretary may impose a requirement that the City assume full responsibility for operating and maintaining the channel and the breakwater.

(5) REVERSION.—If the Secretary determines that the land conveyed under this subsection ceases to be owned by the public, all right, title, and interest in and to the land shall revert, at the discretion of the Secretary, to the United States.

(6) DEAUTHORIZATION.—After the land is conveyed under this subsection, the land shall no longer be a portion of the project for navigation, Hammond Small Boat Basin, Oregon, authorized by section 107 of the Rivers and Harbor Act of 1960 (33 U.S.C. 577).

(e) CRANEY ISLAND DREDGED MATERIAL MANAGEMENT AREA, PORTSMOUTH, VIRGINIA.—

(1) IN GENERAL.—Subject to the conditions described in this subsection, the Secretary may convey to the Commonwealth of Virginia, by quitclaim deed and without consideration, all right, title, and interest of the United States in and to 2 parcels of land situated within the project for navigation, Craney Island Eastward Expansion, Norfolk Harbor and Channels, Hampton Roads, Virginia, authorized by section 1001(45) of the Water Resources Development Act of 2007 (Public Law 110–114; 121 Stat. 1057), together with any improvements thereon.

(2) LANDS TO BE CONVEYED.—

(A) IN GENERAL.—The 2 parcels of land to be conveyed under this subsection include a parcel consisting of approximately 307.82 acres of land and a parcel consisting of approximately 13.33 acres of land, both located along the eastern side of the Craney Island Dredged Material Management Area in Portsmouth, Virginia.

(B) USE.—The 2 parcels of land described in subparagraph (A) may be used by the Commonwealth of Virginia exclusively for the purpose of port expansion, including the provision of road and rail access and the construction of a shipping container terminal.

(3) REVERSION.—If the Secretary determines that the land conveyed under this subsection ceases to be owned by the public or is used for any purpose that is inconsistent with paragraph (2), all right, title, and interest in and to the land shall revert, at the discretion of the Secretary, to the United States.

(f) CITY OF ASOTIN, WASHINGTON.—

(1) IN GENERAL.—The Secretary shall convey to the city of Asotin, Asotin County, Washington, without monetary consideration, all right, title, and interest of the United States in and to the land described in paragraph (3).

(2) REVERSION.—If the land transferred under this subsection ceases at any time to be used for a public purpose, the land shall revert to the United States.

(3) DESCRIPTION.—The land to be conveyed to the city of Asotin, Washington, under this subsection are—

(A) the public ball fields designated as Tracts 1503, 1605, 1607, 1609, 1611, 1613, 1615, 1620, 1623, 1624, 1625, 1626, and 1631; and

(B) other leased areas designated as Tracts 1506, 1522, 1523, 1524, 1525, 1526, 1527, 1529, 1530, 1531, and 1563.

(g) GENERALLY APPLICABLE PROVISIONS.—

(1) SURVEY TO OBTAIN LEGAL DESCRIPTION.—The exact acreage and the legal description of any real property to be conveyed

under this section shall be determined by a survey that is satisfactory to the Secretary.

(2) **APPLICABILITY OF PROPERTY SCREENING PROVISIONS.**—Section 2696 of title 10, United States Code, shall not apply to any conveyance under this section.

(3) **ADDITIONAL TERMS AND CONDITIONS.**—The Secretary may require that any conveyance under this section be subject to such additional terms and conditions as the Secretary considers necessary and appropriate to protect the interests of the United States.

(4) **COSTS OF CONVEYANCE.**—An entity to which a conveyance is made under this section shall be responsible for all reasonable and necessary costs, including real estate transaction and environmental documentation costs, associated with the conveyance.

(5) **LIABILITY.**—An entity to which a conveyance is made under this section shall hold the United States harmless from any liability with respect to activities carried out, on or after the date of the conveyance, on the real property conveyed. The United States shall remain responsible for any liability with respect to activities carried out, before such date, on the real property conveyed.

(h) **RELEASE OF USE RESTRICTIONS.**—Notwithstanding any other provision of law, the Tennessee Valley Authority shall, without monetary consideration, grant releases from real estate restrictions established pursuant to section 4(k)(b) of the Tennessee Valley Authority Act of 1933 (16 U.S.C. 831c(k)(b)) with respect to tracts of land identified in section 4(k)(b) of that Act, subject to the condition that such releases shall be granted in a manner consistent with applicable Tennessee Valley Authority policies.

TITLE VII—WATER RESOURCES INFRASTRUCTURE

SEC. 7001. ANNUAL REPORT TO CONGRESS.

(a) **IN GENERAL.**—Not later than February 1 of each year, the Secretary shall develop and submit to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives an annual report, to be entitled “Report to Congress on Future Water Resources Development”, that identifies the following:

(1) **FEASIBILITY REPORTS.**—Each feasibility report that meets the criteria established in subsection (c)(1)(A).

(2) **PROPOSED FEASIBILITY STUDIES.**—Any proposed feasibility study submitted to the Secretary by a non-Federal interest pursuant to subsection (b) that meets the criteria established in subsection (c)(1)(A).

(3) **PROPOSED MODIFICATIONS.**—Any proposed modification to an authorized water resources development project or feasibility study that meets the criteria established in subsection (c)(1)(A) that—

(A) is submitted to the Secretary by a non-Federal interest pursuant to subsection (b); or

(B) is identified by the Secretary for authorization.

(b) **REQUESTS FOR PROPOSALS.**—

(1) PUBLICATION.—Not later than May 1 of each year, the Secretary shall publish in the Federal Register a notice requesting proposals from non-Federal interests for proposed feasibility studies and proposed modifications to authorized water resources development projects and feasibility studies to be included in the annual report.

(2) DEADLINE FOR REQUESTS.—The Secretary shall include in each notice required by this subsection a requirement that non-Federal interests submit to the Secretary any proposals described in paragraph (1) by not later than 120 days after the date of publication of the notice in the Federal Register in order for the proposals to be considered for inclusion in the annual report.

(3) NOTIFICATION.—On the date of publication of each notice required by this subsection, the Secretary shall—

(A) make the notice publicly available, including on the Internet; and

(B) provide written notification of the publication to the Committee on Environment and Public Works of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

(c) CONTENTS.—

(1) FEASIBILITY REPORTS, PROPOSED FEASIBILITY STUDIES, AND PROPOSED MODIFICATIONS.—

(A) CRITERIA FOR INCLUSION IN REPORT.—The Secretary shall include in the annual report only those feasibility reports, proposed feasibility studies, and proposed modifications to authorized water resources development projects and feasibility studies that—

(i) are related to the missions and authorities of the Corps of Engineers;

(ii) require specific congressional authorization, including by an Act of Congress;

(iii) have not been congressionally authorized;

(iv) have not been included in any previous annual report; and

(v) if authorized, could be carried out by the Corps of Engineers.

(B) DESCRIPTION OF BENEFITS.—

(i) DESCRIPTION.—The Secretary shall describe in the annual report, to the extent applicable and practicable, for each proposed feasibility study and proposed modification to an authorized water resources development project or feasibility study included in the annual report, the benefits, as described in clause (ii), of each such study or proposed modification (including the water resources development project that is the subject of the proposed feasibility study or the proposed modification to an authorized feasibility study).

(ii) BENEFITS.—The benefits (or expected benefits, in the case of a proposed feasibility study) described in this clause are benefits to—

(I) the protection of human life and property;

(II) improvement to transportation;

(III) the national economy;

(IV) the environment; or

(V) the national security interests of the United States.

(C) IDENTIFICATION OF OTHER FACTORS.—The Secretary shall identify in the annual report, to the extent practicable—

(i) for each proposed feasibility study included in the annual report, the non-Federal interest that submitted the proposed feasibility study pursuant to subsection (b); and

(ii) for each proposed feasibility study and proposed modification to an authorized water resources development project or feasibility study included in the annual report, whether the non-Federal interest has demonstrated—

(I) that local support exists for the proposed feasibility study or proposed modification to an authorized water resources development project or feasibility study (including the water resources development project that is the subject of the proposed feasibility study or the proposed modification to an authorized feasibility study); and

(II) the financial ability to provide the required non-Federal cost share.

(2) TRANSPARENCY.—The Secretary shall include in the annual report, for each feasibility report, proposed feasibility study, and proposed modification to an authorized water resources development project or feasibility study included under paragraph (1)(A)—

(A) the name of the associated non-Federal interest, including the name of any non-Federal interest that has contributed, or is expected to contribute, a non-Federal share of the cost of—

(i) the feasibility report;

(ii) the proposed feasibility study;

(iii) the authorized feasibility study for which the modification is proposed; or

(iv) construction of—

(I) the water resources development project that is the subject of—

(aa) the feasibility report;

(bb) the proposed feasibility study; or

(cc) the authorized feasibility study for which a modification is proposed; or

(II) the proposed modification to an authorized water resources development project;

(B) a letter or statement of support for the feasibility report, proposed feasibility study, or proposed modification to an authorized water resources development project or feasibility study from each associated non-Federal interest;

(C) the purpose of the feasibility report, proposed feasibility study, or proposed modification to an authorized water resources development project or feasibility study;

(D) an estimate, to the extent practicable, of the Federal, non-Federal, and total costs of—

(i) the proposed modification to an authorized feasibility study; and

(ii) construction of—

- (I) the water resources development project that is the subject of—
 - (aa) the feasibility report; or
 - (bb) the authorized feasibility study for which a modification is proposed, with respect to the change in costs resulting from such modification; or
 - (II) the proposed modification to an authorized water resources development project; and
 - (E) an estimate, to the extent practicable, of the monetary and nonmonetary benefits of—
 - (i) the water resources development project that is the subject of—
 - (I) the feasibility report; or
 - (II) the authorized feasibility study for which a modification is proposed, with respect to the benefits of such modification; or
 - (ii) the proposed modification to an authorized water resources development project.
- (3) CERTIFICATION.—The Secretary shall include in the annual report a certification stating that each feasibility report, proposed feasibility study, and proposed modification to an authorized water resources development project or feasibility study included in the annual report meets the criteria established in paragraph (1)(A).
- (4) APPENDIX.—The Secretary shall include in the annual report an appendix listing the proposals submitted under subsection (b) that were not included in the annual report under paragraph (1)(A) and a description of why the Secretary determined that those proposals did not meet the criteria for inclusion under such paragraph.
- (d) SPECIAL RULE FOR INITIAL ANNUAL REPORT.—Notwithstanding any other deadlines required by this section, the Secretary shall—
- (1) not later than 60 days after the date of enactment of this Act, publish in the Federal Register a notice required by subsection (b)(1); and
 - (2) include in such notice a requirement that non-Federal interests submit to the Secretary any proposals described in subsection (b)(1) by not later than 120 days after the date of publication of such notice in the Federal Register in order for such proposals to be considered for inclusion in the first annual report developed by the Secretary under this section.
- (e) PUBLICATION.—Upon submission of an annual report to Congress, the Secretary shall make the annual report publicly available, including through publication on the Internet.
- (f) DEFINITIONS.—In this section:
- (1) ANNUAL REPORT.—The term “annual report” means a report required by subsection (a).
 - (2) FEASIBILITY REPORT.—
 - (A) IN GENERAL.—The term “feasibility report” means a final feasibility report developed under section 905 of the Water Resources Development Act of 1986 (33 U.S.C. 2282).
 - (B) INCLUSIONS.—The term “feasibility report” includes—

(i) a report described in section 105(d)(2) of the Water Resources Development Act of 1986 (33 U.S.C. 2215(d)(2)); and

(ii) where applicable, any associated report of the Chief of Engineers.

(3) FEASIBILITY STUDY.—The term “feasibility study” has the meaning given that term in section 105 of the Water Resources Development Act of 1986 (33 U.S.C. 2215).

(4) NON-FEDERAL INTEREST.—The term “non-Federal interest” has the meaning given that term in section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b).

SEC. 7002. AUTHORIZATION OF FINAL FEASIBILITY STUDIES.

The following final feasibility studies for water resources development and conservation and other purposes are authorized to be carried out by the Secretary substantially in accordance with the plan, and subject to the conditions, described in the respective reports designated in this section:

(1) NAVIGATION.—

A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
1. TX, LA	Sabine Neches Waterway, Southeast Texas and Southwest Louisiana	July 22, 2011	Federal: \$748,070,000 Non-Federal: \$365,970,000 Total: \$1,114,040,000
2. FL	Jacksonville Harbor- Milepoint	Apr. 30, 2012	Federal: \$27,870,000 Non-Federal: \$9,290,000 Total: \$37,160,000
3. GA	Savannah Har- bor Expansion Project	Aug. 17, 2012	Federal: \$492,000,000 Non-Federal: \$214,000,000 Total: \$706,000,000
4. TX	Freeport Har- bor	Jan. 7, 2013	Federal: \$121,000,000 Non-Federal: \$118,300,000 Total: \$239,300,000

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A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
5. FL	Canaveral Harbor (Sect 203 Sponsor Re- port)	Feb. 25, 2013	Federal: \$29,240,000 Non-Federal: \$11,830,000 Total: \$41,070,000
6. MA	Boston Harbor	Sept. 30, 2013	Federal: \$216,470,000 Non-Federal: \$94,510,000 Total: \$310,980,000
7. FL	Lake Worth Inlet	Apr. 16, 2014	Federal: \$57,556,000 Non-Federal: \$30,975,000 Total: \$88,531,000
8. FL	Jacksonville Harbor	Apr. 16, 2014	Federal: \$362,000,000 Non-Federal: \$238,900,000 Total: \$600,900,000

(2) FLOOD RISK MANAGEMENT.—

A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
1. KS	Topeka	Aug. 24, 2009	Federal: \$17,360,000 Non-Federal: \$9,350,000 Total: \$26,710,000

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A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
2. CA	American River Watershed, Common Features Project, Natomas Basin	Dec. 30, 2010	Federal: \$760,630,000 Non-Federal: \$386,650,000 Total: \$1,147,280,000
3. IA	Cedar River, Cedar Rapids	Jan. 27, 2011	Federal: \$73,130,000 Non-Federal: \$39,380,000 Total: \$112,510,000
4. MN, ND	Fargo-Moorhead Metro	Dec. 19, 2011	Federal: \$846,700,000 Non-Federal: \$1,077,600,000 Total: \$1,924,300,000
5. KY	Ohio River Shoreline, Paducah	May 16, 2012	Federal: \$13,170,000 Non-Federal: \$7,090,000 Total: \$20,260,000
6. MO	Jordan Creek, Springfield	Aug. 26, 2013	Federal: \$13,560,000 Non-Federal: \$7,300,000 Total: \$20,860,000
7. CA	Orestimba Creek, San Joaquin River Basin	Sept. 25, 2013	Federal: \$23,680,000 Non-Federal: \$21,650,000 Total: \$45,330,000
8. CA	Sutter Basin	Mar. 12, 2014	Federal: \$255,270,000 Non-Federal: \$433,660,000 Total: \$688,930,000
9. NV	Truckee Meadows	Apr. 11, 2014	Federal: \$181,652,000 Non-Federal: \$99,168,000 Total: \$280,820,000

(3) HURRICANE AND STORM DAMAGE RISK REDUCTION.—

A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Initial Costs and Estimated Renourishment Costs
1. NC	West Onslow Beach and New River Inlet (Top-sail Beach)	Sept. 28, 2009	Initial Federal: \$29,900,000 Initial Non-Federal: \$16,450,000 Initial Total: \$46,350,000 Renourishment Federal: \$69,410,000 Renourishment Non-Federal: \$69,410,000 Renourishment Total: \$138,820,000
2. NC	Surf City and North Top-sail Beach	Dec. 30, 2010	Initial Federal: \$84,770,000 Initial Non-Federal: \$45,650,000 Initial Total: \$130,420,000 Renourishment Federal: \$122,220,000 Renourishment Non-Federal: \$122,220,000 Renourishment Total: \$244,440,000
3. CA	San Clemente Shoreline	Apr. 15, 2012	Initial Federal: \$7,420,000 Initial Non-Federal: \$3,990,000 Initial Total: \$11,410,000 Renourishment Federal: \$43,835,000 Renourishment Non-Federal: \$43,835,000 Renourishment Total: \$87,670,000

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A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Initial Costs and Estimated Renourishment Costs
4. FL	Walton County	July 16, 2013	Initial Federal: \$17,945,000 Initial Non-Federal: \$46,145,000 Initial Total: \$64,090,000 Renourishment Federal: \$24,740,000 Renourishment Non- Federal: \$82,820,000 Renourishment Total: \$107,560,000
5. LA	Morganza to the Gulf	July 8, 2013	Federal: \$6,695,400,000 Non-Federal: \$3,604,600,000 Total: \$10,300,000,000

(4) HURRICANE AND STORM DAMAGE RISK REDUCTION AND ENVIRONMENTAL RESTORATION.—

A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
1. MS	Mississippi Coastal Im- provement Program (MSCIP) Hancock, Harrison, and Jackson Counties	Sept. 15, 2009	Federal: \$693,300,000 Non-Federal: \$373,320,000 Total: \$1,066,620,000

(5) ENVIRONMENTAL RESTORATION.—

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A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
1. MD	Mid-Chesa- peake Bay Island	Aug. 24, 2009	Federal: \$1,240,750,000 Non-Federal: \$668,100,000 Total: \$1,908,850,000
2. FL	Central and Southern Florida Project, Comprehen- sive Ever- glades Res- toration Plan, Caloosahatc- hee River (C-43) West Basin Stor- age Project, Hendry County	Mar. 11, 2010 and Jan. 6, 2011	Federal: \$313,300,000 Non-Federal: \$313,300,000 Total: \$626,600,000
3. LA	Louisiana Coastal Area	Dec. 30, 2010	Federal: \$1,026,000,000 Non-Federal: \$601,000,000 Total: \$1,627,000,000
4. MN	Marsh Lake	Dec. 30, 2011	Federal: \$6,760,000 Non-Federal: \$3,640,000 Total: \$10,400,000

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A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
5. FL	Central and Southern Florida Project, Comprehensive Everglades Restoration Plan, C-111 Spreader Canal Western Project	Jan. 30, 2012	Federal: \$87,280,000 Non-Federal: \$87,280,000 Total: \$174,560,000
6. FL	CERP Biscayne Bay Coastal Wetland, Florida	May 2, 2012	Federal: \$98,510,000 Non-Federal: \$98,510,000 Total: \$197,020,000
7. FL	Central and Southern Florida Project, Broward County Water Preserve Area	May 21, 2012	Federal: \$448,070,000 Non-Federal: \$448,070,000 Total: \$896,140,000
8. LA	Louisiana Coastal Area-Barataria Basin Barrier	June 22, 2012	Federal: \$321,750,000 Non-Federal: \$173,250,000 Total: \$495,000,000
9. NC	Neuse River Basin	Apr. 23, 2013	Federal: \$23,830,000 Non-Federal: \$12,830,000 Total: \$36,660,000

A. State	B. Name	C. Date of Report of Chief of Engi- neers	D. Estimated Costs
10. VA	Lynnhaven River	Mar. 27, 2014	Federal: \$22,821,500 Non-Federal: \$12,288,500 Total: \$35,110,000
11. OR	Willamette River Flood- plain Res- toration	Jan. 6, 2014	Federal: \$27,401,000 Non-Federal: \$14,754,000 Total: \$42,155,000

SEC. 7003. AUTHORIZATION OF PROJECT MODIFICATIONS RECOMMENDED BY THE SECRETARY.

The following project modifications for water resources development and conservation and other purposes are authorized to be carried out by the Secretary substantially in accordance with the recommendations of the Secretary, as specified in the letters referred to in this section:

A. State	B. Name	C. Date of Sec- retary's Rec- ommen- dation Letter	D. Updated Authoriza- tion Project Costs
1. MN	Roseau River	Jan. 24, 2013	Estimated Federal: \$25,455,000 Estimated non-Federal: \$18,362,000 Total: \$43,817,000
2. IL	Wood River Levee Sys- tem Recon- struction	May 7, 2013	Estimated Federal: \$16,678,000 Estimated non-Federal: \$8,980,000 Total: \$25,658,000

A. State	B. Name	C. Date of Secretary's Rec- ommenda- tion Letter	D. Updated Authoriza- tion Project Costs
3. TX	Corpus Christi Ship Chan- nel	Aug. 8, 2013	Estimated Federal: \$182,582,000 Estimated non-Federal: \$170,649,000 Total: \$353,231,000
4. IA	Des Moines River and Raccoon River Project	Feb. 12, 2014	Estimated Federal: \$14,990,300 Estimated non-Federal: \$8,254,700 Total: \$23,245,000
5. MD	Poplar Island	Feb. 26, 2014	Estimated Federal: \$868,272,000 Estimated non-Federal: \$365,639,000 Total: \$1,233,911,000
6. IL	Lake Michigan (Chicago Shoreline)	Mar. 18, 2014	Estimated Federal: \$185,441,000 Estimated non-Federal: \$355,105,000 Total: \$540,546,000
7. NE	Western Sarpy and Clear Creek	Mar. 20, 2014	Estimated Federal: \$28,128,800 Estimated non-Federal: \$15,146,300 Total: \$43,275,100
8. MO	Cape Girardeau	Apr. 14, 2014	Estimated Federal: \$17,687,000 Estimated non-Federal: \$746,000 Total: \$18,433,000

SEC. 7004. EXPEDITED CONSIDERATION IN THE HOUSE AND SENATE.

(a) CONSIDERATION IN THE HOUSE OF REPRESENTATIVES.—

(1) DEFINITION OF INTERIM AUTHORIZATION BILL.—In this subsection, the term “interim authorization bill” means a bill

of the 113th Congress introduced after the date of enactment of this Act in the House of Representatives by the chair of the Committee on Transportation and Infrastructure which—

(A) has the following title: “A bill to provide for the authorization of certain water resources development or conservation projects outside the regular authorization cycle.”; and

(B) only contains—

(i) authorization for 1 or more water resources development or conservation projects for which a final report of the Chief of Engineers has been completed; or

(ii) deauthorization for 1 or more water resources development or conservation projects.

(2) EXPEDITED CONSIDERATION.—If an interim authorization bill is not reported by a committee to which it is referred within 30 calendar days, the committee shall be discharged from its further consideration and the bill shall be referred to the appropriate calendar.

(b) CONSIDERATION IN THE SENATE.—

(1) POLICY.—The benefits of water resource projects designed and carried out in an economically justifiable, environmentally acceptable, and technically sound manner are important to the economy and environment of the United States and recommendations to Congress regarding those projects should be expedited for approval in a timely manner.

(2) APPLICABILITY.—The procedures under this subsection apply to projects for water resources development, conservation, and other purposes, subject to the conditions that—

(A) each project is carried out—

(i) substantially in accordance with the plan identified in the report of the Chief of Engineers for the project; and

(ii) subject to any conditions described in the report for the project; and

(B)(i) a report of the Chief of Engineers has been completed; and

(ii) after the date of enactment of this Act, the Assistant Secretary of the Army for Civil Works has submitted to Congress a recommendation to authorize construction of the project.

(3) EXPEDITED CONSIDERATION.—

(A) IN GENERAL.—A bill shall be eligible for expedited consideration in accordance with this subsection if the bill—

(i) authorizes a project that meets the requirements described in paragraph (2); and

(ii) is referred to the Committee on Environment and Public Works of the Senate.

(B) COMMITTEE CONSIDERATION.—

(i) IN GENERAL.—Not later than January 31st of the second session of each Congress, the Committee on Environment and Public Works of the Senate shall—

(I) report all bills that meet the requirements of subparagraph (A); or

(II) introduce and report a measure to authorize any project that meets the requirements described in paragraph (2).

(ii) FAILURE TO ACT.—Subject to clause (iii), if the committee fails to act on a bill that meets the requirements of subparagraph (A) by the date specified in clause (i), the bill shall be discharged from the committee and placed on the calendar of the Senate.

(iii) EXCEPTIONS.—Clause (ii) shall not apply if—

(I) in the 180-day period immediately preceding the date specified in clause (i), the full committee holds a legislative hearing on a bill to authorize all projects that meet the requirements described in paragraph (2);

(II)(aa) the committee favorably reports a bill to authorize all projects that meet the requirements described in paragraph (2); and

(bb) the bill described in item (aa) is placed on the calendar of the Senate; or

(III) a bill that meets the requirements of subparagraph (A) is referred to the committee not earlier than 30 days before the date specified in clause (i).

(4) TERMINATION.—The procedures for expedited consideration under this subsection terminate on December 31, 2018.

(c) RULES OF THE SENATE AND HOUSE OF REPRESENTATIVES.—

This section is enacted by Congress—

(1) as an exercise of the rulemaking power of the Senate and House of Representatives, respectively, and as such it is deemed a part of the rules of each House, respectively, but applicable only with respect to the procedure to be followed in that House in the case of a bill addressed by this section, and it supersedes other rules only to the extent that it is inconsistent with such rules; and

(2) with full recognition of the constitutional right of either House to change the rules (so far as relating to the procedure of that House) at any time, in the same manner, and to the same extent as in the case of any other rule of that House.

Speaker of the House of Representatives.

*Vice President of the United States and
President of the Senate.*