U.S. Army Corps of Engineers, Philadelphia District

DELAWARE
MARYLAND
NEW JERSEY
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PENNSYLVANIA

Congressional Briefing Book

BUILDING STRONG

Established in 1866, the Philadelphia District manages water resources of the Delaware River Basin, builds facilities for the Army and Air Force, and provides engineering and environmental services for other Federal agencies. We serve more than nine million people across portions of Delaware, Maryland, New Jersey, New York and Pennsylvania. Our reach extends around the world with our support to Overseas Contingency Operations.

The approximately 500 employees of the Philadelphia District proudly serve our nation and are currently commanded by LTC Chris Becking.

March 2014

Wanamaker Building
100 Penn Square East
Philadelphia, Pennsylvania
19107

US Army Corps of Engineers
Philadelphia District

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PHILDELPHIA DISTRICT

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DISCLAIMER ON USE OF CAPABILITY INFORMATION:

"The capability estimate for each study or project is the Army Corps of Engineers estimate for the most that it could obligate efficiently during the fiscal year for that study or project. However, each capability estimate is made without reference to the availability of manpower, equipment, and other resources across the Army Civil Works program, so the sum of the capability estimates exceeds the amount that the Corps actually could obligate in a single fiscal year. The Budget allocates funding among studies and projects on a performance basis in a manner that will enable the Corps to use that funding effectively. Furthermore, the overall funding level proposed in the Budget for the Army Civil Works program reflects the Administration's assessment of national priorities in view of the range of potential private and public uses of funds. Consequently, while the Corps could obligate additional funds for some studies and projects, off-setting reductions within the Army Civil Works program would be required to maintain overall budgetary objectives."

US Army Corps
of Engineers
Philadelphia District

Philadelphia District
U.S. Army Corps of Engineers

Brief History and Accomplishments

The Philadelphia District was established in 1866, but the Corps' local legacy dates back to Revolutionary times, when Army Engineers planned the encampment and defense of General Washington's colonial Army at Valley Forge. Then in 1829 the Corps embarked on its first civil works project in this region — a 1,300-foot-long stone breakwater near Cape Henlopen, Delaware, that provided refuge from storms to the hundreds of ships entering and leaving the Delaware Bay. In 1919 the federal government purchased the Chesapeake and Delaware Canal to be operated and maintained—and later expanded—by the Philadelphia District. Converted to a free-flowing waterway, the C&D today handles a significant portion of the Port of Baltimore's ship traffic and is one of the district's most important navigation projects. During World War II, the more than 100-mile-long Delaware River federal navigation channel was deepened to its current 40-foot depth between Philadelphia and the sea. Today the District continues to maintain over 550 miles of navigable channels. After the 1955 floods that claimed ninety lives, the Philadelphia District performed the first comprehensive river basin study in the entire United States. This resulted in the construction of the five earth fill dams that the district now operates and maintains in eastern Pennsylvania.

Since its inception in 1866, the Philadelphia District for the Corp of Engineers has been a staple in the development and maintenance of the perseverance of the waterways and the construction of military installations and operations. One of the bigger tasks the district has is that of dredging. Dredging is the process where excavation usually carried out partly underwater, in shallow seas or fresh water areas, with the sole purpose of gathering up bottom materials and disposing of them at a different location. This is often used to keep waterways navigable. It is also used as a way to replenish sand on some public beaches, where sand has been lost because of erosion. As time wore on, the duties of the district began to grow. Along with preserving waterways, with the changing waters, flood controls were added. This included emergency response by the Corp, whether it is constructing dams and levees, and also water recourses development and the increasing responsibility of coastal engineering. In response to growing national concern for environmental issues, the 1970s, 80s and 90s saw a significant shift in the district's responsibilities, to include new jurisdiction over wetlands; remediation of hazardous, radioactive and toxic wastes; and projects to restore ecosystems. The district's

Since the early 1990s, we have constructed major beach-fill projects along the Delaware and New Jersey coasts. The Philadelphia district also helps support federal, state, and local agencies when dealing with these situations. As of the end of the year 2008, the district is charged with operating and maintaining five dams, four canals, and five highway bridges. It is also home to the Hopper Dredge. Within the district, there are nine million people, over 550 miles of federal channels, 150 miles of coast line, and more than 1.1 million acres of wetlands that must be maintained and preserved all year long by the Philadelphia district.

In October of 2012, Hurricane Sandy made landfall near Atlantic City, NJ, causing widespread damage and destruction. In the months following the storm, the Philadelphia District responded to more than 60 mission assignments from FEMA to assist de-watering critical facilities, assisting with emergency power needs and filling a breach at the barrier island community of Mantoloking. The District surveyed existing federal projects in New Jersey and Delaware and worked to restore them from the damages associated with Hurricane Sandy.

The District has a proud history of support of major construction programs including those at Dover Air Force Base; Joint Base McGuire-Dix-Lakehurst; and the C4ISR complex at Aberdeen Proving Ground. The Philadelphia District has more recently expanded its reach overseas with power contracting initiatives and the continued deployment of personnel to Afghanistan and Iraq. Today the Philadelphia District's approximately 500 men and women capably serve the region by applying global engineering expertise to produce neighborhood solutions and beyond. We are privileged and proud to serve the northeast corridor, the people of our entire nation; and the people of the entire world.

OUR MISSION

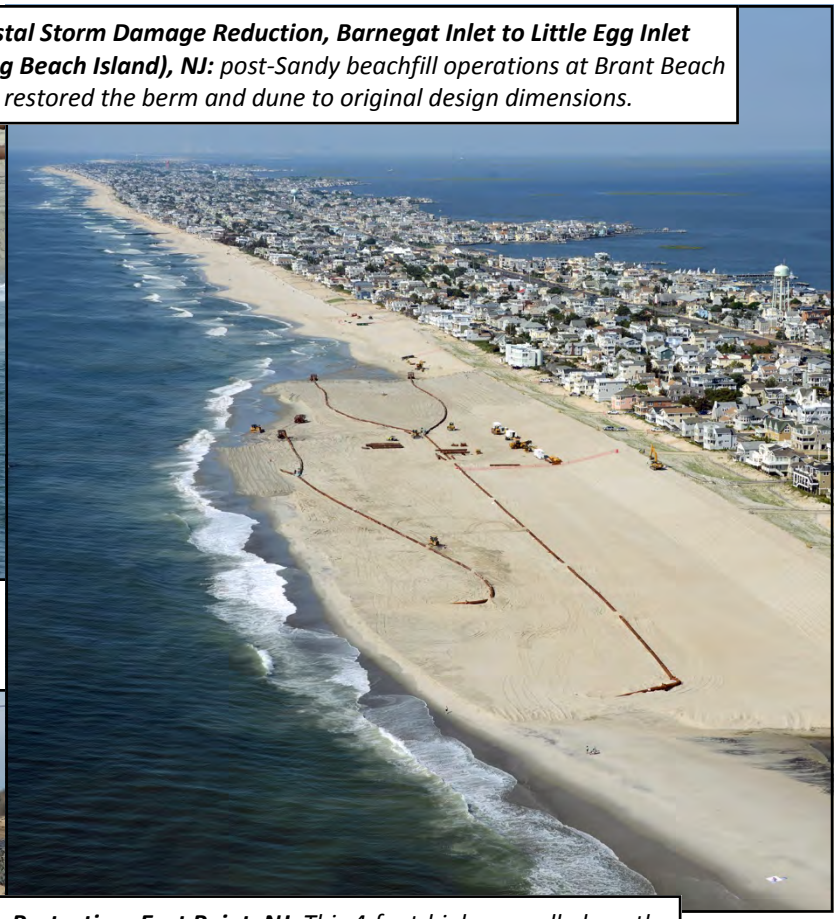
Established in 1866, the Philadelphia District manages water resources of the Delaware River basin; builds facilities for the Army and Air Force; and provides engineering and environmental services for other agencies. We serve more than nine million people across portions of Delaware, Maryland, New Jersey, New York and Pennsylvania. But our reach extends around the world with our support to Overseas Contingency Operations.

Project Gallery

Philadelphia District

Coastal Planning & Engineering

Coastal Storm Damage Reduction, Barnegat Inlet to Little Egg Inlet (Long Beach Island), NJ: *post-Sandy beachfill operations at Brant Beach fully restored the berm and dune to original design dimensions.*

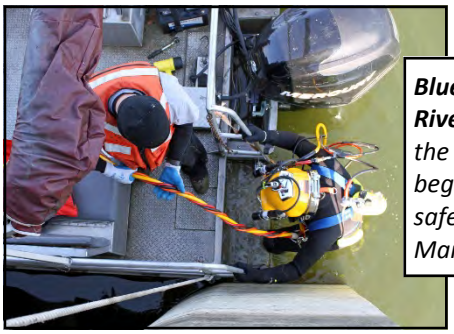


Shoreline Protection, East Point, NJ: *This 4-foot-high seawall along the Delaware Bay consists of gabion baskets (cages filled with rocks) atop stone-filled marine mattresses covered with geotextile material.*

Ecosystem Restoration, Lower Cape May Meadows, NJ: *One continuous berm and dune helps keep saltwater out of this key stopover for migratory birds on the North Atlantic flyway, while also reducing storm damage risk for the adjacent community of Cape May Point.*

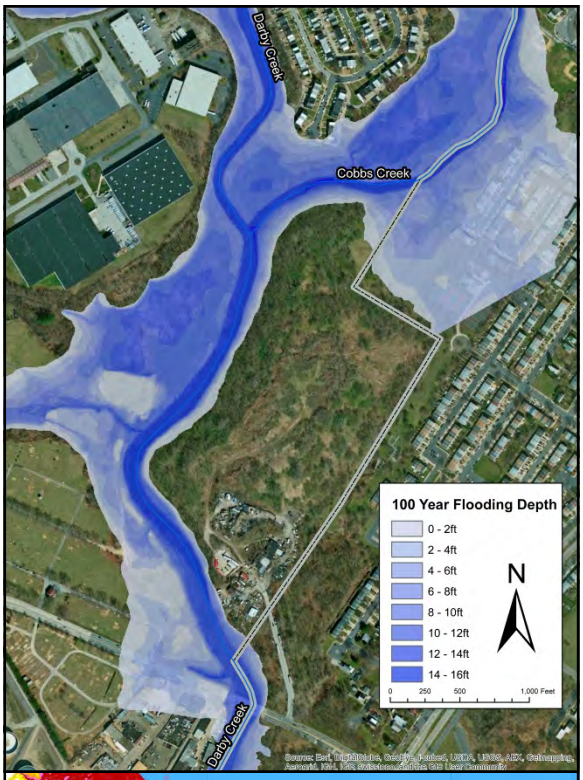
Watersheds/Flood Risk Management

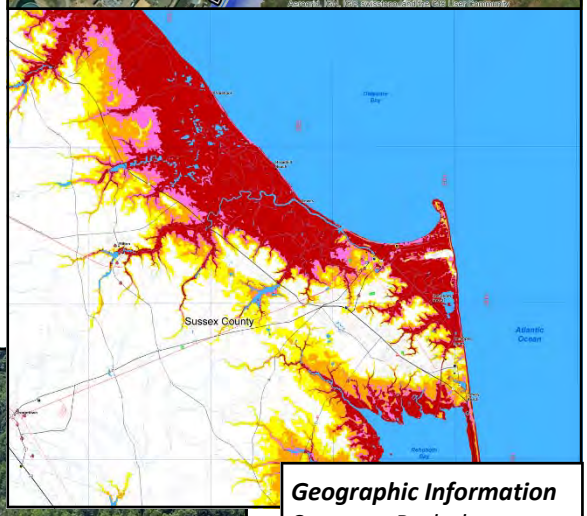
Upper Delaware River Watershed, Livingston Manor, NY: *Severe flooding between 2004 and 2006 led to a feasibility study identifying multiple solutions to mitigate against similar future events.*



Blue Marsh Lake, Schuylkill River Basin, PA: *A member of the District's own Dive Team begins a scheduled underwater safety inspection of the Blue Marsh Dam control tower.*

Prompton Lake, Lackawaxen River Basin, PA: *Recent major modifications included an enlarged spillway, a protective concrete wall along the dam crest, and a new visitor's center.*





Geographic Information Systems: *Both these maps — one for FEMA showing flood zones along Darby and Cobbs Creeks in Chester County, PA and the other for the State of Delaware showing hurricane inundation zones in Sussex County — were produced by the District using GIS.*

Navigation: Waterways & Bridges

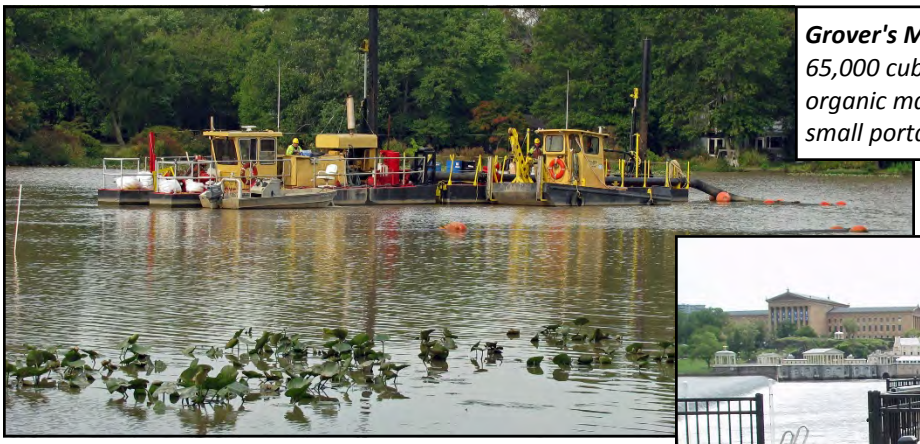
Bridge Keepers: *Not only does the District own and maintain five high-level highway bridges across the Chesapeake & Delaware Canal (such as the Summit Bridge, shown here during recent repainting), but its bridge inspection team is frequently called upon by other USACE districts — as well as other agencies — nationwide.*

Indian River Inlet, DE: *Post-Sandy work to reinforce the north jetty involved placing marine mattresses, filling voids and positioning capstones.*

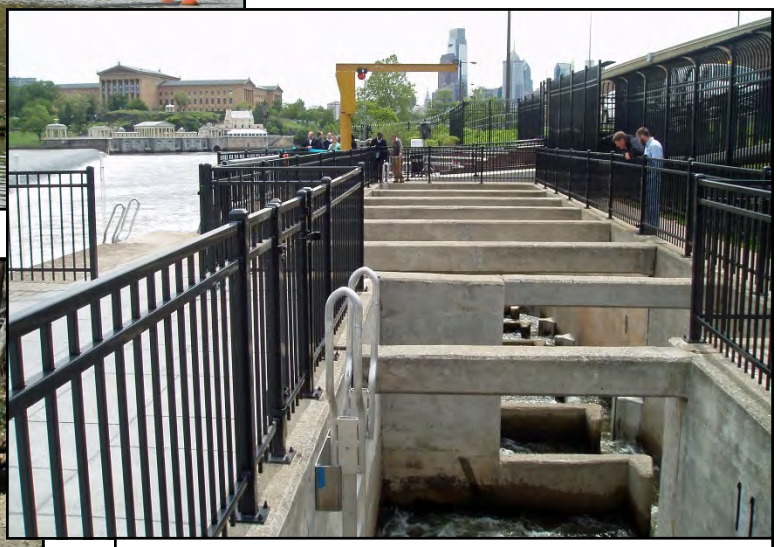
McFARLAND: *East Coast Hopper Dredge, USACE Minimum Fleet.*

Delaware River Main Channel Deepening: *Dredging south of Wilmington, DE for pumpout across the river to Killcohook Island Confined Disposal Facility under the first deepening contract in 2010.*

Aquatic Ecosystem Restoration

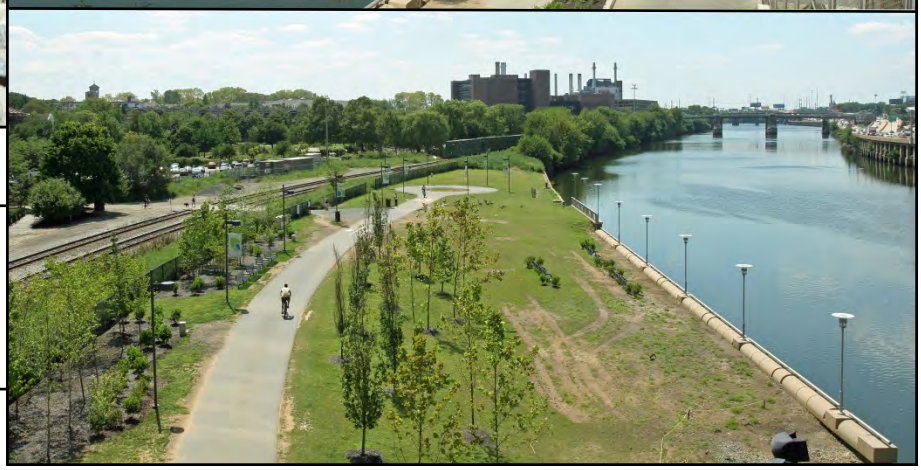


Grover's Mill Pond, West Windsor, NJ: *Approximately 65,000 cubic yards of nutrient laden silt-like sediment and organic matter was removed from Grover's Mill Pond by a small portable hydraulic dredge to improve habitat .*



Fairmount Dam Fish Ladder, Philadelphia, PA: *The District upgraded a 1970s-era structure to allow more shad and other migratory fish to swim upstream the Schuylkill River.*

Cobbs Creek Watershed, Philadelphia, PA: *Creation of a new channel for the Indian Creek tributary helped to reduce combined sewage overflow and improve local habitat.*



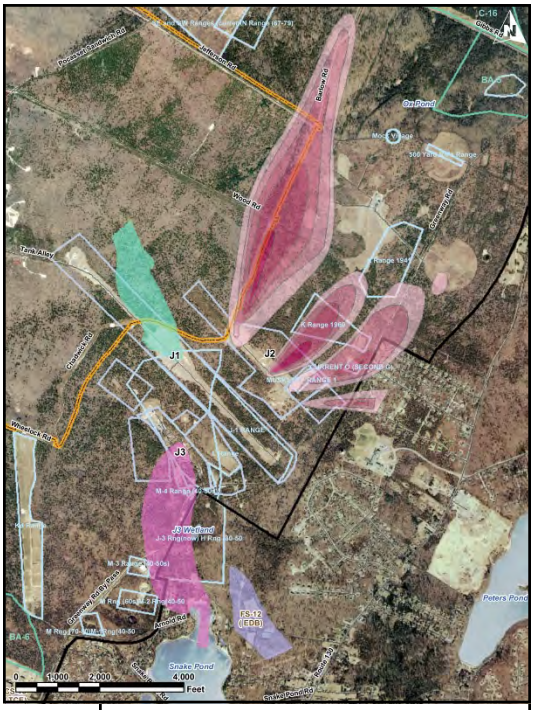
Schuylkill River Park, Philadelphia, PA: *Construction of this multi-use linear park added highly visible and accessible green space in the heart of the city.*

Military & Interagency Support

Joint Personal Effects Depot, Dover AFB: *The only facility of its kind in the Department of Defense, the JPED was constructed and equipped to ensure that the personal effects of American's fallen service members are handled in a presentable and timely manner.*

Global Power Program: *Managing more than $1 billion in contracts to date, the District works with the Army's 249th Engineer Battalion on projects such as this temporary 30-megawatt installation at Bagram AFB, Afghanistan.*

EPA Superfund Program: *For more than 30 years the District has been a USACE leader in site remediation, with multiple projects currently underway for EPA Region 2, such as the multi-phase Vineland Chemical Company cleanup in Vineland, NJ.*



Groundwater Modeling System: *Visualization of contaminant plumes at the former Massachusetts Military Reservation on Cape Cod.*

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Project Factsheets-Funding Levels-Projects in Delaware, New Jersey, New York, Pennsylvania										
Project	**Congressional Districts**	**FY13 Funds ($000)**	***FY14***			***FY15***		**Map Key**	**Page**	**State (s)**
			FY14 Capability ($000)	**President's Budget ($000)**	**FY14 Funds ($000)**	**FY15 Capability ($000)**	**President's Budget ($000)**			
GENERAL INVESTIGATIONS (GI) – FEASIBILITY STUDIES										
Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*	NJ-1, NJ-2, NJ-3, NJ-4, NJ-5, NJ-7, NJ-11, NJ-12	289 (+50 Sandy)	425	375	SANDY	SANDY	SANDY	GI1	23	NJ
Delaware River Basin, Pine Knot, Schuylkill County, PA *[PADEP]*	PA-17	(49 Reprogram)	437	0	50	387	0	GI5	25	PA
Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*	DE-AL, NJ-1, NJ-2, NJ-3, NJ-4, NJ-5, NJ-7, NJ-11, NJ-12, NY-18, NY-19, PA-1, PA-2, PA-6, PA-7, PA-8, PA-10, PA-11, PA-13, PA-15, PA-16, PA-17	0	250	0	0	250	0	GI2	27	DE, NJ, NY, PA
Delaware River Dredged Material Utilization, DE	DE-AL	0	500	300	SANDY	SANDY	SANDY		29	DE
Delaware River Dredged Material Utilization, NJ	NJ-1, NJ-2, NJ-3, NJ-4,	0	500	0	SANDY	SANDY	SANDY		31	NJ
Delaware River Dredged Material Utilization, PA	PA-1, PA-2, PA-6, PA-7, PA-8, PA-10, PA-11, PA-13, PA-15, PA-16, PA-17	0	0	0	0	500	200		X	PA
Delaware River Waterfront, Philadelphia, PA *[City of Philadelphia]*	PA-1, PA-2, PA-8, PA-13	0	200	0	0	200	0	GI8	33	PA
Hereford Inlet to Cape May Inlet, NJ *[NJDEP]*	NJ-2	0	400	0	SANDY	SANDY	SANDY	GI3	35	NJ

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New Jersey Alternative Long-Term Nourishment, RSM Study *[NJDEP]*	NJ-2, NJ-3, NJ-4, NJ-6	0	244	0	SANDY	SANDY	SANDY	GI4	37	NJ
Schuylkill River Basin, Wissahickon Creek Watershed, Philadelphia & Montgomery Counties, PA *[City of Philadelphia-Water Department]*	PA-1, PA-2, PA-13	367	0	0	0	0	0	GI3	39	PA
Upper Delaware River Watershed, Livingston Manor, NY *[NYSDEC]*	NY-19	0	200	0	0	200	0	GI2	41	NY
Upper Delaware River Watershed, NY *[TBD]*	NY-19	0	200	0	0	200	0	GI2	43	NY
GENERAL INVESTIGATIONS (GI) – OTHER										
Section 22 Planning Assistance to States, DE & NJ (Effects of Flow Dynamics, Salinity and Water Quality on Key Biological Populations in the Delaware Estuary) *[SJ Port Corp]*	DE-AL, NJ-1, NJ-2	0	0		0	0		GI4	45	DE, NJ
Planning Assistance to States, Section 22, Assessment of Bridges and Impacts on Flows and Flooding, Delaware County, NY (Section 22) *[Delaware County Soil & Water Conservation District]*	NY-19	75	100		0	100		GI5	47	NY
Planning Assistance to States, Section 22, Daily Flow Modeling (Dwarf Wedgemussel), NY *[DRBC]*	NY-19	0	0		0	0		GI3	49	NY

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Section 22 Planning Assistance to States, PA (Germantown Hydrologic and Hydraulic Modeling) *[Philadelphia Water Department]*	PA-2	119	200		0	0		GI11	51	PA
Section 22 Planning Assistance to States, PA (Lehigh River Model) *[DCNR and PFBC]*	PA-11, PA-15	0	0		0	0		GI6	53	PA
Section 22 Planning Assistance to States, PA (Delaware River Waterfront Pier Analysis) *[DRWC]*	PA-1, PA-2, PA-13	0	0		0	0		GI12	55	PA
Section 22 Planning Assistance to States, PA (Rose Valley Creek Flood Hazard Analysis) *[Whitpain Township]*	PA-13	0	0		0	0		GI4	57	PA
CONTINUING AUTHORITIES PROGRAM (CAP)										
Assunpink Creek, Hamilton Township, Mercer County, NJ (205) *[Hamilton Township]*	NJ-4	50	200		50	100		C17	61	NJ
Assunpink Creek, Trenton, NJ (1135) *[City of Trenton]*	NJ-4, NJ-12	290	3,200		3,200	0		C1	63	NJ
Barnegat Inlet RSM, NJ (204) *[Sponsor Not Required]*	NJ-3	0	100		50	50		C2	65	NJ
Bethany Beach, Pennsylvania Avenue Improvement (205), DE *[Town of Bethany Beach]*	DE-AL	128	200		SANDY	SANDY		C4	67	DE

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East Point Shoreline Protection, Cumberland County, NJ (14) *[NJDEP]*	NJ-2	0	0		0	0		C6	69	NJ
Little Mill Creek, New Castle County, DE (205) *[DNREC, New Castle County]*	DE-AL	200	0		0	0		C3	71	DE
Mordecai Island Coastal Wetlands Restoration, Ocean County, NJ (1135) *[Mordecai Land Trust and NJDEP]*	NJ-2, NJ-3	50	150		50	200		C11	73	NJ
Musconetconng River Dam Removals, Bloomsbury, NJ (206) *[NJDEP-ONRR]*	NJ-5, NJ-7	28	200		200	1,700		C18	75	NJ
NJIWW Dredged Hole 34 Restoration, Atlantic City, NJ (204) *[NJDOT]*	NJ-2	50	200		50	150		C19	77	NJ
Pennsville, Salem County, NJ (205) *[Twp of Pennsville]*	NJ-2	0	200		0	200		C12	X	NJ
Pond Creek Salt Marsh Restoration, Cape May County, NJ (1135) *[NJDEP]*	NJ-2	50	1,531		50	1,300		C14	79	NJ
Restoration of Grassdale, New Castle County, DE (1135) *[DNREC]*	DE-AL	50	1,500		50	1,400		C2	81	DE
Schuylkill River, North Coventry Township Chester County, PA (Section 14) *[North Coventry Township]*	PA-6	50	150		200	1,150		C11	83	PA

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Schuylkill Watershed Restoration, PA (Section 204) *[none required]*	PA-1, PA-2, PA-6, PA-7, PA-8, PA-11, PA-13, PA-15, PA-16, PA-17	0	100		50	50		C2	85	PA
Seaside Park, Ocean City, NJ (103) *[NJDEP]*	NJ-3	308	200		0	SANDY		C16	87	NJ
Southampton Creek Stream Restoration, Bucks County, PA (Section 204) *[Upper Southampton Township]*	PA-8	-103	0		0	0		C5	89	PA
Toad Creek, Borough of Topton, Berks County, PA (Section 14) *[Borough of Topton]*	PA-6	0	58		50	200		C4	91	PA
Tookany Creek, Cheltenham Township, Montgomery County, PA (Section 205) *[Cheltenham Township]*	PA2, PA-13	200	113		113	150		C3	93	PA
Trenton Marine Terminal, Trenton, NJ (14) *[City of Trenton/NJDEP]*	NJ-12	0	26		26	150		C5	95	NJ
CONSTRUCTION GENERAL										
Cape May Inlet to Lower Township, NJ *[NJDEP]*	NJ-2	200	200	200	200	7,200	0	CG4	99	NJ
Delaware Bay Coastline, Broadkill Beach, DE *[DNREC]*	DE-AL	0	0	0	0	0	0	CG8	103	DE

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Delaware Bay Coastline, DE & NJ, Oakwood Beach, NJ *[NJDEP]*	NJ-2	0	0	0	0	0	0	CG9	107	NJ
Delaware Bay Coastline, DE & NJ, Reeds Beach and Pierces Point, NJ *[NJDEP]*	NJ-2	0	5,000	0	0	5,000	0	CG10	111	NJ
Delaware Bay Coastline, DE & NJ, Villas and Vicinity, NJ *[NJDEP]*	NJ-2	0	9,000	0	0	9,000	0	CG12	115	NJ
Delaware Bay Coastline, Port Mahon, DE *[DNREC]*	DE-AL	0	8,200	0	0	8,200	0	CG5	119	DE
Delaware Bay Coastline, Roosevelt Inlet - Lewes Beach, DE *[DNREC]*	DE-AL	0	0	0	0	0	0	CG7	123	DE
Delaware Coast, Cape Henlopen to Fenwick Island: Bethany Beach / South Bethany, DE *[DNREC]*	DE-AL	150	0	0	0	150	0	CG2	127	DE
Delaware Coast, Cape Henlopen to Fenwick Island: Fenwick Island, DE *[DNREC]*	DE-AL	0	150	0	0	150	0	CG4	131	DE
Delaware Coast, Cape Henlopen to Fenwick Island: Rehoboth Beach / Dewey Beach, DE *[DNREC]*	DE-AL	150	0	0	0	150	0	CG6	135	DE
Delaware Coast Protection, Sand Bypass Plant, Indian River Inlet, DE *[DNREC]*	DE-AL	0	690	0	690	390	0	CG3	139	DE

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Delaware River Main Channel Deepening, DE, NJ & PA *[Philadelphia Regional Port Authority]*	DE-AL, NJ-1, NJ-2, PA-1, PA-7, PA-13	41,916	57,500	20,000	20,000	77,000	35,000	CG1	143	DE, NJ, PA
Great Egg Harbor and Peck Beach (Ocean City), NJ *[NJDEP]*	NJ-2	7,500	500	500	500	500	0	CG6	147	NJ
New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Absecon Island, NJ *[NJDEP]*	NJ-2	50	0	0	0	400	0	CG1	151	NJ
New Jersey Shore Protection, Barnegat Inlet to Little Egg Inlet, NJ *[NJDEP]*	NJ-2, NJ-3	0	0	0	0	600	0	CG2	155	NJ
New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Brigantine Island, NJ *[NJDEP]*	NJ-2	80	0	0	0	80	0	CG3	159	NJ
New Jersey Shore Protection, Great Egg Harbor Inlet to Townsends Inlet, NJ *[NJDEP]*	NJ-2	0	3,700	0	0	0	0	CG8	163	NJ
New Jersey Shore Protection, Lower Cape May Meadows - Cape May Point, NJ *[NJDEP]*	NJ-2	399	400	400	400	400	0	CG7	167	NJ
New Jersey Shore Protection, Manasquan Inlet to Barnegat Inlet, NJ *[NJDEP]*	NJ-3, NJ-4	0	0	0	0	0	0	CG13	171	NJ
New Jersey Shore Protection, Townsends Inlet to Cape May Inlet, NJ *[NJDEP]*	NJ-2	0	3,700	0	0	3,700	0	CG11	175	NJ

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Southeastern PA Environmental Improvements Program (Sec. 566)									179	
Chester, Delaware and Montgomery County Streams *[PaDEP]*	PA-7, PA-16	TBD	200	0	0	0	0	CG2	181	PA
Cobbs Creek Fish Passage *[City of Philadelphia-Water Department]*	PA-1, PA-2	TBD	1,500	0	1,500	0	0	CG3	183	PA
Cobbs Creek Watershed Habitat Restoration *[City of Philadelphia-Water Department]*	PA-1, PA-2	TBD	0	0	0	0	0	CG4	185	PA
OPERATIONS & MAINTENANCE										
Absecon Inlet, Atlantic County, NJ	NJ-2	0	610	0	0	710	0	OM1	189	NJ
Barnegat Inlet, Ocean County, NJ	NJ-2, NJ-3	372	1,605	420	766	1,805	420	OM2	191	NJ
Beltzville Lake, Beltzville, PA	PA-11	1,409	2,885	1,250	1,238	5,115	1,835	OM1	193	PA
Blue Marsh Lake, Leesport, PA	PA-17	2,544	6,256	2,841	2,851	4,802	2,670	OM2	195	PA
Cedar Creek, Sussex County, DE	DE-AL	0	0	0	0	0	0	OM2	197	DE

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Cold Spring (Cape May) Inlet, Cape May County, NJ	NJ-2	354	1,285	375	371	1,285	375	OM4	199	NJ
Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*	DE-AL, NJ-1, NJ-2, NJ-3, NJ-4, PA-1, PA-8, PA-13	0	0	0	0	0	0	OM10	201	DE, NJ, PA
Delaware River at Camden, Camden County, NJ	NJ-1	13	15	15	15	15	15	OM5	203	NJ
Delaware River, Philadelphia to the Sea, DE, NJ & PA	DE-AL, NJ-1, NJ-2, PA-1, PA-7, PA-13	21,413	29,085	19,745	19,548	35,960	20,445	OM4	205	DE, NJ, PA
Delaware River, Philadelphia to Trenton, NJ & PA	NJ-3, NJ-4, PA-1, PA-8, PA-13	826	14,515	4,735	4,688	13,845	5,410	OM7	207	NJ, PA
Francis E Walter Dam, White Haven, PA	PA-11	1,040	2,794	954	945	3,696	916	OM3	209	PA
General Edgar Jadwin Dam, Honesdale, PA	PA-10	287	655	320	316	735	300	OM4	211	PA
Harbor of Refuge, Lewes, DE	DE-AL	0	45	0	0	45	0	OM11	213	DE
Indian River Inlet & Bay, Sussex County, DE	DE-AL	0	1,195	0	0	740	0	OM5	215	DE

Project Factsheets-Funding Levels-Projects in Delaware, New Jersey, New York, Pennsylvania										
Project	**Congressional Districts**	**FY13 Funds ($000)**	***FY14***			***FY15***		**Map Key**	**Page**	**State (s)**
			FY14 Capability ($000)	**President's Budget ($000)**	**FY14 Funds ($000)**	**FY15 Capability ($000)**	**President's Budget ($000)**			
Inland Waterway from Rehoboth Bay to Delaware Bay, Sussex County, DE	DE-AL	0	2,965	0	0	3,070	0	OM3	217	DE
Intracoastal Waterway, Delaware River to Chesapeake Bay, DE & MD (C&D Canal)	DE-AL, MD-1	17,430	35,728	18,918	18,729	45,640	22,355	OM1	219	DE, MD
Manasquan River, Ocean County, NJ	NJ-3, NJ-4	269	1,025	315	312	1,245	370	OM8	221	NJ
Mispillion River, Sussex County, DE	DE-AL	0	1,015	0	0	1,905	0	OM6	223	DE
Murderkill River, Sussex County, DE	DE-AL	0	1,060	0	0	1,025	0	OM7	225	DE
New Jersey Intracoastal Waterway, NJ	NJ-2, NJ-3, NJ-4	0	13,595	260	957	9,385	260	OM10	227	NJ
Prompton Lake, Prompton, PA	PA-10	441	880	475	470	1,030	475	OM5	229	PA
Salem River, Salem County, NJ	NJ-2	0	2,900	0	0	3,180	0	OM11	231	NJ
Schuylkill River, Philadelphia, PA	PA-1, PA-2	89	4,600	0	0	9,895	0	OM8	233	PA

Project Factsheets-Funding Levels-Projects in Delaware, New Jersey, New York, Pennsylvania										
Project	**Congressional Districts**	**FY13 Funds ($000)**	***FY14***			***FY15***		**Map Key**	**Page**	**State (s)**
			FY14 Capability ($000)	**President's Budget ($000)**	**FY14 Funds ($000)**	**FY15 Capability ($000)**	**President's Budget ($000)**			
Toms River, Ocean County, NJ	NJ-3, NJ-4	0	750	0	0	750	0	OM13	235	NJ
U.S. Army Corps of Engineers Hopper Dredge McFarland	DE-AL, NJ-1, NJ-2, NJ-3, PA-1, PA-7, PA-8, PA-13	11,376	12,000	11,840	117,221	12,000	11,690	X	237	DE, NJ, PA
Wilmington Harbor, New Castle County, DE	DE-AL	3,866	6,160	5,405	5,351	8,455	3,690	OM8	239	DE

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US Army Corps of Engineers
Philadelphia District

General Investigations

General Investigation Studies

Planning Assistance to States Program

Floodplain Management Services

Investigations are studies to determine the need, engineering feasibility, economic justification, and the environmental and social suitability of a project. Investigations also include preconstruction, engineering, design work, data collection, and interagency coordination and research activities.

Coastal and Deep-Draft Navigation

Environmental Restoration or Compliance

Flood and Storm Damage Reduction

Flood Control

Inland Navigation

Navigation ($2 million)

Other Authorized Purposes (including but not limited to Environmental Restoration or Compliance and Remote, Coastal, or Small Watershed)

Remote, Coastal, or Small Watershed

Shore Protection

Small, Remote, or Subsistence Navigation

Color Code	
State	**Color**
Delaware	Red
New Jersey	Blue
New York	Black
Pennsylvania	Green
Multiple	Purple

Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey

- **Authority:** United States Committee on Environment and Public Works and PL 113-2
- **Congressional Districts:** NJ-1, NJ-5, NJ-7, NJ-12
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Original Feasbility Cost Share Agreement:** 27 July 2006
- **Date of Amended Feasibility Cost Share Agreement:** 15 October 2013
- **Target Completion Date:** September 2015
- **Total Estimated Cost:** $4.7M
- **Federal Funds Appropriated:** $2,097,014

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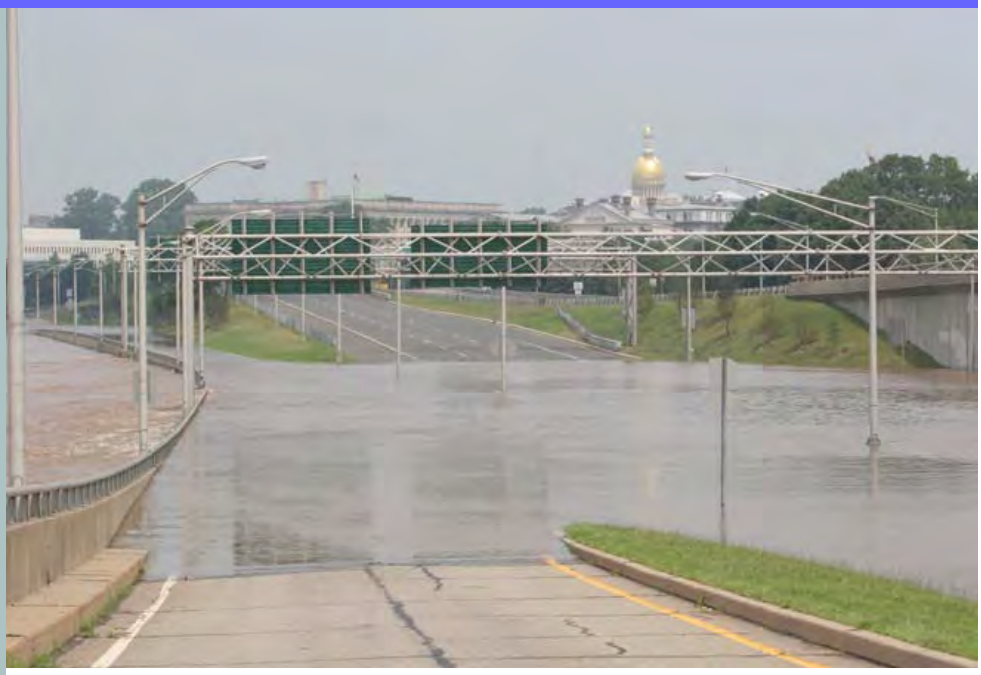


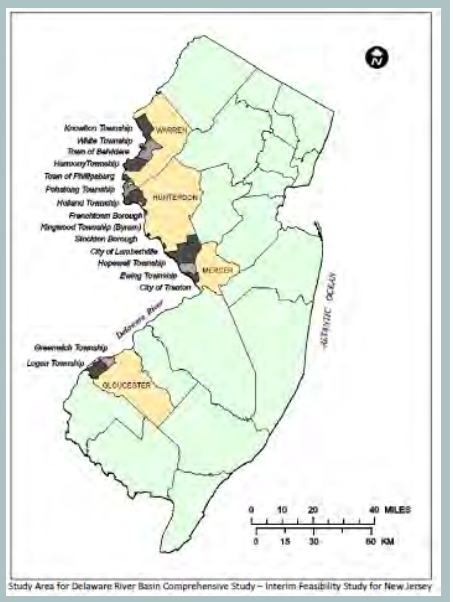
The river came out of its banks in many municipalities in Warren, Hunterdon and Mercer Counties in New Jersey, including in the capital city of Trenton.

On July 20, 2005 the United States Senate Committee on Environment and Public Works requested that the Secretary of the Army review the report of the Chief of Engineers on the Delaware River and its tributaries, Pennsylvania, New Jersey, and New York, published as House Document 179, Seventy Third Congress, Second Session.

The study identifies flooding problems in New Jersey associated with major storm events in September 2004, April 2005 and June 2006, as well as flooding-related issues in Gibbstown, New Jersey; evaluates the technical, economic, environmental, and institutional feasibility of Federal participation in the implementation of flood risk management projects; and determines if there is local support for implementation of the recommended plans. The Corps initiated the reconnaissance study in February 2002, completing the effort in May 2003, with an addendum in 2006. The study assessed the Federal interest in further feasibility studies evaluating problems and opportunities. The Corps and NJ Department of Environmental Protection signed a Feasibility Cost Sharing Agreement in July 2006 and amended the agreement following the passage of PL 113-2 in October 2013.

Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey

- **Project Goals:** The purpose of this project is to evaluate the feasibility of Federal participation in implementing flood risk management solutions along the Delaware River in New Jersey.



Study Area for Delaware River Basin Comprehensive Study – Interim Feasibility Study for New Jersey

Greenwich and Logan Townships: There is potential for a 20,220 LF mixed levee and floodwall (8,900 LF of floodwall and 11,320 LF of levee) to protect 842 structures in a developed area known as Gibbstown, with 21 structures receiving nonstructural treatment outside the levee/floodwall alignment (17 buyout and 4 ringwall). In this area there is an existing federally uncertified and currently non-certifiable landform and associated tide gates along the Delaware River. The landform was built in the 1600's to enable salt hay farming behind it. The area formerly used for salt hay farming lies between the landform and the developed portion of Gibbstown and currently includes a large area of wetlands, as well as two contaminated industrial sites. The larger of the industrial properties is listed as a RCRA site and the smaller industrial property is listed as a CERCLA (Superfund) site. The proposed project area for the levee/floodwall combination is on the opposite side of the wetlands and industrial properties from the existing landform and runs snugly along the edge of development in Gibbstown. Floodgate Road cuts through the wetlands from Gibbstown to the existing landform, running somewhat perpendicular to the landform and proposed levee alignment. Properties along this roadway would be treated with nonstructural flood risk management measures. Depending upon wetland mitigation requirements associated with the proposed alignment, the project area may also include restoration in areas of degraded wetlands between the uncertified landform and the proposed levee.

City of Lambertville: There is potential for a 516 LF levee at Alexauken Creek and 1409 LF floodwall at the D&R Canal. Alexauken Creek lies upstream towards the city's northern border and has a 15 square-mile drainage area. Nearing the confluence with the Delaware River, Alexauken Creek goes under a railroad bridge and then is carried under the D&R Canal aqueduct approximately 300 feet before it meets the Delaware.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Reconnaissance	450	0	450		Allocations thru FY11	2,743	
NJ Feasibility	2,685	2,685	5,370		FY 12 Allocation	327	
					FY 13 Allocation	290	
					FY 14 Allocation	TBD	
					FY 15 Budget	TBD	

Delaware River Basin, Pine Knot, Schuylkill County, PA

- **Authority:** House Committee on Transportation and Infrastructure Resolution
- **Congressional District:** PA-17
- **Non-Federal Sponsor:** Pennsylvania Department of Environmental Protection (PADEP)
- **Date of Feasibility Cost Share Agreement (FCSA):** December 19, 2008
- **Target Completion Date:** Pending Federal Funding
- **Total Estimated Feasibility Cost:** $2,210,000
- **Federal Funds Appropriated:** $664,000
- **Non-Federal Share:** 100% In-Kind Services

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Former stream channel along the West Branch Schuylkill River. The stream now flows into underground mines .

The House Committee on Transportation and Infrastructure authorized this study by House Resolution dated 22 May 2002. The Pine Knot feasibility study is evaluating potential solutions for restoring stream habitat and the riparian corridor along the Schuylkill River's West Branch near Minersville in Schuylkill County, Pennsylvania. The study area has been subject to extensive above and below ground anthracite coal mining for several hundred years. High quality trout streams now fall into and flow through underground mine pools, fragmenting this highly valuable aquatic habitat and riparian corridor.

The study will recommend solutions to restore lost aquatic and riparian habitat upstream of two discharge points on the West Branch Schuylkill River—the Pine Knot Tunnel and Oak Hill Borehole, which will reconnect 36 miles of riparian corridor, improving the connectivity of the Schuylkill River Watershed.

Partners include the Pennsylvania Department of Environmental Protection, the Schuylkill Action Network, an umbrella organization made up of several agencies and non-profits, and the Eastern Pennsylvania Coalition for Abandoned Mine Reclamation, which named this site as one of Pennsylvania's top priorities.

Delaware River Basin, Pine Knot, Schuylkill County, PA

Project Goal: Aquatic ecosystem restoration and floodplain restoration.

Potential Solutions: Potential solutions include rerouting streams away from mines and back to their original channels, reconnecting approximately 36 miles of stream in the upper Schuylkill River, restoring the riparian buffer, and creating wetlands. These measures will provide additional foraging and spawning habitat for local fish populations, including eastern brook trout, a regionally declining native species impacted by habitat fragmentation resulting from mining activities. The surrounding area has a reduced wild brook trout population and this project could revive the local population. Brook Trout are important species featured in the Pennsylvania Wildlife Action Plan.

With funding received to date, the study team:

- Utilized stream gage data to develop a conceptual model based upon information on topography, streams, tunnels, and geologic substrate to identify the sources of stream flow and runoff losses to underlying abandoned mine pools.
- Used input from this conceptual model to create a hydrologic model to test and analyze alternative project conditions. The hydrologic model uses data from hypothetical storms to predict the impacts of alternative projects.

Planned tasks for fiscal year 2014 (pending the availability of Federal funding) include:

- Document existing biological and physical data (reports, studies, research) within the proposed project areas and potential reference reaches.
- Create site and species specific existing conditions and alternative Habitat Suitability Index (HSI) tables/spreadsheets.

[Full study effort cannot proceed until additional funds are received.]

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Reconnaissance	175	0	175		Allocations thru FY11	740	
Feasibility	1,105	1,105	2,210		FY 12 Allocation	50	Reprogram
					FY 13 Allocation	49	Reprogram
					FY 14 Allocation	50	
					FY 15 Budget	TBD	
					Balance to Complete	391	

Delaware River Basin Comprehensive DE, NJ, NY & PA (Watershed Flood Management Plan)

- **Authority:** United States Senate Committee on Environmental and Public Works, Delaware River and its Tributaries, New Jersey, New York and Pennsylvania
- **Congressional Districts:** DE-AL, NJ-1, NJ-2, NJ-3, NJ-4, NJ-5, NJ-7, NJ-11, NJ-12, NY-18, NY-19, PA-1, PA-2, PA-6, PA-7, PA-8, PA-10, PA-11, PA-13, PA-15, PA-16, PA-17
- **Non-Federal Sponsor:** DRBC
- **Date of Project Agreement:** May 17 2007
- **Target Completion Date:** March 2014
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $912,000 through FY11
- **Non-Federal Share:** 50%

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1st floor flooding of residential structures in New Hope, PA (June 2006).

This study is authorized by the July 20, 2005 resolution by the United States Senate Committee on Environment and Public Works, Delaware River and its Tributaries, New Jersey, New York and Pennsylvania**.**

Historical flooding in the study area has resulted in property damage and loss of life. No one measure will eliminate flooding along the Delaware River; rather a combination of measures is necessary to prepare for and recover from future flood events.

An interim feasibility study under the Delaware River Basin Comprehensive, NY, NJ, DE, & PA (Watershed Flood Management Plan) focused on flood modeling and related areas. Specific tasks included development of flood analysis models for the Delaware River, Schuylkill River, and Brandywine River. The study also included the development of flood inundation maps for selected locations within the Delaware River Basin. This product included a user's guide (Delaware River Flood Warning and Response System), which provides short-term technical advice and assistance to local emergency management officials.

The study also evaluated the impacts of increased flood storage in the Upstate New York reservoirs for a series of known flood events.

Delaware River Basin Comprehensive DE, NJ, NY & PA (Watershed Flood Management Plan)

- **Project Goals:** The purpose of this project is focused on flood modeling and related areas. Specific tasks include development of flood analysis models for the Delaware River, Schuylkill River and Brandywine River. It also includes the development of flood inundation maps for specific area along the Delaware River Basin.

A new interim study began in 2012, which is investigating salinity (saltwater intrusion) in the Delaware Estuary. Specifically, the study is analyzing the relationship between freshwater inflows and salinity in the Delaware Estuary, and implications for flow management. Completion of the development and calibration of the salinity model is expected in March 2014. Additional Federal funding is necessary to evaluate various scenarios using the calibrated model.

If funding permits, the Corps and DRBC have had preliminary discussions on advancing the study to investigate drought management issues in the Delaware River Basin may be undertaken in the future.

Upstate New York Reservoir

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Watershed Flood Management Plan Feasibility Study	912	912	1,824		Allocations thru FY11	912	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Delaware River Dredged Material Utilization Delaware

- **Authority:** Senate Resolution on Beneficial Use of Dredged Material on the Delaware River, Delaware, New Jersey, and Pennsylvania and PL 113-2
- **Congressional District:** DE-ATL
- **Non-Federal Sponsor:** Delaware Department of Natural Resource and Environmental Control
- **Date of Project Agreement:** TBD
- **Target Completion Date:** 2016
- **Total Estimated Cost:** $3M
- **Federal Funds Appropriated:** $50,000

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The U.S. Army Corps of Engineers (USACE) was authorized to conduct the Delaware River, PA, NJ and DE Dredged Material Utilization Study (Utilization Study) reconnaissance phase and any ensuing feasibility phase investigations by a resolution of the Committee on Environment and Public Works of the United States Senate on October 26, 2005. The resolution directs the USACE to conduct an investigation of beneficial uses of dredged material within the Delaware River and Estuary area.

Approximately 3,000,000 cubic yards of sediment are dredged annually from the 'Delaware River, Philadelphia to the Sea' and 'Delaware River, Philadelphia to Trenton' projects. Essentially all of the sediment is removed from the estuary system and placed in upland CDFs. The existing network of Federal disposal areas along the Delaware River is adequate to manage the anticipated quantity of new work and maintenance dredging for the next 50 years. This study will explore innovative methods for management and reuse of dredged material in order to improve flood risk management.

Delaware River Dredged Material Utilization, Delaware

- **Project Opportunities:** The beneficial use opportunities are best facilitated utilizing maintenance dredged material from Federal and non-Federal navigation projects including: the Delaware River, Philadelphia to the Sea NJ, PA & DE project; the Delaware River, Philadelphia to Trenton, NJ & PA project; and the Delaware River Main Channel Deepening, NJ, PA & DE project; and several active Federal navigation projects at major tributaries of the Delaware River.

In response to the study resolution above, the USACE Philadelphia District conducted the Delaware River New Jersey, Delaware, and Pennsylvania Dredged Material Utilization and Beneficial Use Opportunities expedited reconnaissance study. The purpose of this study was to examine beneficial use opportunities using maintenance dredged material from the Delaware River and its tributaries for environmental restoration, protection and related purposes.

The findings of the expedited reconnaissance study indicated that there is Federal interest in further investigations of multiple-purpose beneficial sediment reuse opportunities through a feasibility study within Delaware. The purpose of this feasibility study is to fully evaluate all reasonable solutions to the water resources problems and investigate potential opportunities identified during the reconnaissance within Delaware. Based on the preliminary screening of alternatives in the reconnaissance, there appear to be multiple potential projects within Delaware that would be consistent with Army policies regarding costs, benefits, and environmental impacts

Applying the principles of SMART Planning, the DMU feasibility study will work progressively through the six-step planning process, with five key decision points or milestones:

- Alternatives Milestone
- Tentatively Selected Plan Milestone
- Agency Decision Milestone
- Final Report Milestone
- Chief's Report Milestone

A Planning Charette will be conducted during the study scoping phase to facilitate the development of the focused array of alternatives. In addition, early and ongoing Vertical Team engagement will be applied to the DMU feasibility study to ensure timely and efficient decision-making.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)	
Reconnaissance	250	0	250		Allocations thru FY11	0
Feasibility Study	2,890	0	2,890		FY 12 Allocation	0
					FY 13 Allocation	50
					FY 14 Budget	500
					FY 15 Budget	1,250
					Balance to Complete	1,140

Delaware River Dredged Material Utilization New Jersey

- **Authority:** Senate Resolution on Beneficial Use of Dredged Material on the Delaware River, Delaware, New Jersey, and Pennsylvania and PL 113-2
- **Congressional District:** NJ-1, NJ-2, NJ-3, NJ-4
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Agreement:** TBD
- **Target Completion Date:** 2016
- **Total Estimated Cost:** $3M
- **Federal Funds Appropriated:** $310,000

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The U.S. Army Corps of Engineers (USACE) was authorized to conduct the Delaware River, PA, NJ and DE Dredged Material Utilization Study (Utilization Study) reconnaissance phase and any ensuing feasibility phase investigations by a resolution of the Committee on Environment and Public Works of the United States Senate on October 26, 2005. The resolution directs the USACE to conduct an investigation of beneficial uses of dredged material within the Delaware River and Estuary area.

Approximately 3,000,000 cubic yards of sediment are dredged annually from the 'Delaware River, Philadelphia to the Sea' and 'Delaware River, Philadelphia to Trenton' projects. Essentially all of the sediment is removed from the estuary system and placed in upland CDFs. The existing network of Federal disposal areas along the Delaware River is adequate to manage the anticipated quantity of new work and maintenance dredging for the next 50 years. This study will explore innovative methods for management and reuse of dredged material in order to improve flood risk management.

Delaware River Dredged Material Utilization, New Jersey

- **Project Opportunities:** The beneficial use opportunities are best facilitated utilizing maintenance dredged material from Federal and non-Federal navigation projects including: the Delaware River, Philadelphia to the Sea NJ, PA & DE project; the Delaware River, Philadelphia to Trenton, NJ & PA project; and the Delaware River Main Channel Deepening, NJ, PA & DE project; and several active Federal navigation projects at major tributaries of the Delaware River.

In response to the study resolution above, the USACE Philadelphia District conducted the Delaware River New Jersey, Delaware, and Pennsylvania Dredged Material Utilization and Beneficial Use Opportunities expedited reconnaissance study. The purpose of this study was to examine beneficial use opportunities using maintenance dredged material from the Delaware River and its tributaries for environmental restoration, protection and related purposes.

The findings of the expedited reconnaissance study indicated that there is Federal interest in further investigations of multiple-purpose beneficial sediment reuse opportunities through a feasibility study within New Jersey. The purpose of this feasibility study is to fully evaluate all reasonable solutions to the water resources problems and investigate potential opportunities identified during the reconnaissance within New Jersey. Based on the preliminary screening of alternatives in the reconnaissance, there appear to be multiple potential projects within New Jersey that would be consistent with Army policies regarding costs, benefits, and environmental impacts

Applying the principles of SMART Planning, the DMU feasibility study will work progressively through the six-step planning process, with five key decision points or milestones:

- Alternatives Milestone
- Tentatively Selected Plan Milestone
- Agency Decision Milestone
- Final Report Milestone
- Chief's Report Milestone

A Planning Charette will be conducted during the study scoping phase to facilitate the development of the focused array of alternatives. In addition, early and ongoing Vertical Team engagement will be applied to the DMU feasibility study to ensure timely and efficient decision-making.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)	
Reconnaissance	250	0	250		Allocations thru FY11	210
Feasibility Study	2,890	0	2,890		FY 12 Allocation	50
					FY 13 Allocation	50
					FY 14 Allocation	500
					FY 15 Budget	1,250
					Balance to Complete	1,140

Delaware River Waterfront, Philadelphia, PA

- **Authority:** Delaware River Waterfront, PA/Delaware River and its Tributaries NJ, NY, PA
- **Congressional Districts:** PA-1, PA-2, PA-8, PA-13
- **Non-Federal Sponsor:** Philadelphia Water Department, Delaware River City Corporation, Delaware River Waterfront Corporation
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $186,000
- **Non-Federal Share:** Reconnaissance Phase is 100% Federal.

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The recognizable Ben Franklin Bridge that connects Philadelphia to New Jersey. In this area, there is great potential for increased environmental restoration and recreational enhancements.

Authorized by House Resolution dated March 16, 2000, Delaware River Waterfront, Pennsylvania and Senate Resolution dated July 20, 2005, Delaware River and its Tributaries, New Jersey, New York, and Pennsylvania.

The USACE completed a 905(b), or Reconnaissance Report, for the Delaware River Waterfront area. The purpose of this reconnaissance study is to: (1) examine the tidal Delaware River Waterfront and the contributing watersheds of the Tookany/Tacony-Frankford Creek, Pennypack Creek, and Poquessing Creek of Pennsylvania for the identification of problems, needs, and potential solutions to address or improve environmental restoration and protection, comprehensive watershed and stream corridor management, flood reduction, recreation, water quality control, and other related water resource problems as indicated in the study authorization (2) determine whether Federal interest exists in proceeding to feasibility phase investigations; (3) identify a non-Federal sponsor(s) willing to cost-share the feasibility phase in accordance with an executable Feasibility Cost Share Agreement (FCSA) with the USACE; and (4) develop Feasibility Study assumptions for feasibility phase investigations.

Delaware River Waterfront, Philadelphia, PA

- **Project Goals:** The purpose of this project is to evaluate possible recommendations advisable in the interest of environmental restoration and protection, riparian habitat improvement, flood reduction, water quality control, historic preservation, and other allied purposes.

The report identified impaired areas of the watershed and potential solutions for each, including but not limited to ecosystem restoration, fish and wildlife habitat restoration, and flood damage reduction. Based on the Draft Reconnaissance Report, it was determined that the primary problems are the loss, degradation, and fragmentation of wetlands and riparian corridors, stream bank erosion, dams impeding fish passage, and water quality. Various solutions to address these problems exist, and will be considered in depth during the Feasibility Study. For example, wetland creation or enhancement, riparian buffer creation or enhancement, stream bank restoration and stabilization, dam removal, and construction of fish passages will be considered for specific locations within the watershed.

Additional funding, and a non-Federal sponsor, will be needed to continue into the Feasibility Phase of the Study. The Philadelphia Water Department (PWD), the Delaware River City Corporation and the Delaware River Waterfront Corporation have indicated their intent to be co-sponsors of the Feasibility Study. However, PWD has indicated that they will not enter into a Feasibility Cost Sharing Agreement until completion of their Airport Expansion Project and approval of a proposed mitigation bank along the waterfront. Without additional funding the Philadelphia Waterfront and contributing watersheds will continue to experience ecosystem and riparian habitat degradation and fragmentation, decline in water quality, and recurrent flooding.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Reconnaissance	186	0	186		Allocations thru FY11	186	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Hereford Inlet to Cape May Inlet, NJ

- **Authority:** House Resolution, Committee on Public Works and Transportation and
- PL 113-2
- **Congressional Districts:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Amended Feasibility Cost Share Agreement: October 28, 2013:**
- **Target Completion Date:**
- July 2014
- **Total Estimated Cost:** $21M, initial.
- **Federal Funds Appropriated:** $2,333,805
- **Non-Federal Share:** TBD
- **Civil Works Review Board (CWRB):** 20 May 2014

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The photo to the left shows the extend of the North Wildwood Beach from July 1989. The photo to the right from 2004 of the same area demonstrates the extent of the erosion that has taken place since 1989.

The Hereford Inlet to Cape May General Investigation was undertaken by authority of The New Jersey Shore Protection Study, by resolutions adopted within the Committee on Public Works and Transportation of the U.S. House of Representatives and the Committee on Environment and Public Works of the U.S. Senate in December 1987.

The project area consists of the municipalities of North Wildwood, Wildwood, Wildwood Crest and Lower Township. These municipalities are vulnerable to storm damage all year round from a combination of hurricanes and nor'easters. The project area will be restricted to the beachfront, and tapered at the southern and northern ends at Hereford Inlet and the USFW/Coast Guard properties. The Non-Federal sponsor is the New Jersey Department of Environmental Protection (NJDEP).

Continuation and eventual completion of this project is imperative to reduce the erosion which has affected the beach and dunes in North Wildwood increasing the risk of storm damage, while the excessive accretion of the sand along the central and southern portions of the island has caused health, environmental and storm-water drainage problems. A draft feasibility report was released for public review on December 20, 2013.

Hereford Inlet to Cape May Inlet, NJ

Project Goals: The purpose of this project is to evaluate erosion and storm damage potential for the municipalities on Five Mile Island. It presently includes a constructed berm and dune extending from Hereford Inlet in North Wildwood to existing dunes in Wildwood and Wildwood Crest using backpassing technology.

Backpassing Technology: Provides high quality sand as an alternative to offshore borrow areas.

Sand accretion in Wildwood and Wildwood Crest is causing extensive maintenance problems and health hazards with their storm water management system. The excess sand clogs storm-water outfalls, creates pools of stagnant water, produces unhealthy beach conditions and causes associated interior flooding . During combined periods of heavy rain and high waves the City can not access the outfalls for excavation and rainwater becomes trapped within the pipes. This impounded water causes sections of the interior of Wildwood to flood from lack of drainage. Water levels of two to three feet have been observed in the streets of Wildwood during these events. The subsequent high volume discharge of impounded storm water can also cause spikes in poor water quality.

In contrast to Wildwood and Wildwood Crest, the City of North Wildwood is experiencing significant erosion of its berm and dune. What was the largest beach in the state now suffers from tidal flooding and wave run-up over a formerly protective beach. The municipality of North Wildwood has lost approximately 1,000 feet of beach during the past 5-10 years.

Planning for resiliency, robustness and redundancy as a result of the direction provided from higher authority as a result of the impacts from Hurricane Sandy will require further analysis in the Planning Engineering and Design phase. Management measures that were screened out that can be re-evaluated include; groin compartments to reduce long-shore transport into the areas that have historically accumulated sand, Hereford Inlet channel maintenance to reduce erosive forces at North Wildwood, constructing steel bulkheads around the piers, and the prevention of backbay flooding through green infrastructure and bulkhead raising.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Reconnaissance	15	0	15		Allocations thru FY11	1,798	
NJ Feasibility	TBD	TBD	4,200		FY 12 Allocation	300	
*TBD pending updated cost-share requirements in accordance with PL 113-2					FY 13 Allocation	300	
					FY 14 Allocation	403	
					FY 15 Budget	TBD	

New Jersey Alternative Long-Term Nourishment RSM (Regional Sediment Management) Study

- **Authority:** House Resolution by the Committee on Public Works and Transportation and PL 113-2
- **Congressional District:** NJ-2, NJ-3, NJ-4, NJ-6
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Agreement:** TBD
- **Target Completion Date:** 2014
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $2,017,693
- **Non-Federal Share:** TBD

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The New Jersey Long Term Alternative Nourishment Study is authorized by House Resolution by the Committee on Public Works and Transportation dated December 10, 1987 for the New Jersey Shoreline.

A major aspect of the study is to find new means of providing flood and storm damage reduction that will provide new benefits or enhance the benefits of those projects existing throughout the coastal system. It likely will also result in the identification of new projects, or new features on existing projects, to reduce flood and storm damage reduction.

Existing coastal storm damage reduction projects along the New Jersey coast were studied, designed and constructed on an individual project basis. This includes how damages avoided (benefits) were calculated. A purpose of the New Jersey Alternative Long Term Nourishment project is to improve upon the benefits obtained by managing the coastal protection projects as a system. A focus of the New Jersey Alternative Long Term Nourishment Study is to analyze the interactions between coastal processes and existing landforms and how they shape and alter the shoreline into a constantly changing feature. This includes man-induced changes such as shore protection structures, dredging, and beach nourishment.

New Jersey Alternative Long-Term Nourishment RSM (Regional Sediment Management) Study

- **Project Goals:** The purpose of the New Jersey Long-Term Nourishment Study is to examine a comprehensive approach identify new benefits and maximize existing benefits to the existing New Jersey Shore Coastal Protection system.

The study will build upon the above-described analysis to refine strategies to reduce future coastal damage, such as:

Nourishment Prioritization: This strategy intends to prioritize projects to focus on the most vulnerable developed areas that have shown the highest erosion rates independent of individually authorized project boundaries. Current practice allows for a potential delay in scheduled nourishment due to funding limitations leaving highly eroded areas subject to severe damage. A prioritized approach allows for smaller prioritized based nourishments and thus reducing the potential for future damages at these locations.

Structural Improvements: This set of strategies involves coastal structure (either hard engineering or soft engineering) construction, adjustment or modification to improve sediment management. Improved sediment management can reduce the loss of protection from existing projects between nourishment cycles and thereby reduce the potential for future damage. As discussed in the NAP-PL's previous analysis, such improvements include potential new site-specific structural projects, or features within existing projects, at sites at Lower Cape May Meadows, Cape May City, Wildwood, Absecon Island, Ocean City, Brigantine Island, Shark River Inlet, Avalon and Stone Harbor and Ludlam Island and Peck Beach. These strategies vary from additional groin construction, groin modification, inlet thalweg relocation, bio-engineered solutions, bulkhead improvements, etc.

Borrow Area Development: The potential exists for future shortages in the availability of sediment versus the sediment needs. This may result in an inability to perform future nourishment cycles leaving the coastline susceptible to future damage. This study effort helps ensure that resources are available when needed for the sustainability of the coastal protection system, and thus reducing the potential for future damage.

Breach Contingency Plan: The study will look at the need for breach contingency plans in key areas to facilitate rapid response to potential barrier island breaches as experienced with Hurricane Sandy. Rapid breach closure using an in place contingency plan will reduce the potential for damage when the time and volume of material needed to remedy the breach are reduced.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)	
Reconnaissance	49	0	49		Allocations thru FY11	1,799
NJ Feasibility	2,649	2,149	4,798		FY 12 Allocation	100
					FY 13 Allocation	250
					FY 14 Allocation	500
					FY 15 Budget	0

Schuylkill River Basin, Wissahickon Creek Watershed, Philadelphia & Montgomery Counties, PA

- **Authority:** House Resolution by the Committee on Public Works and Transportation
- **Congressional District:** PA-1, PA-2, PA-13
- **Non-Federal Sponsor:** City of Philadelphia, Water Department
- **Date of Project Agreement:** April 12, 2004
- **Target Completion Date:** December 2014
- **Total Estimated Cost:** $2.8M
- **Federal Funds Appropriated:** $1.4M
- **Non-Federal Share:** $1.4M

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Eroding stream banks are a prevalent issue within the Wissahickon Creek watershed, making stabilization an important measure under consideration.

The Authority for this study is House Committee on Public Works and Transportation Resolution dated March 15, 1988.

A Reconnaissance Report identified impaired areas of the watershed and potential solutions for each, including but not limited to, ecosystem restoration, fish and wildlife habitat restoration, flood damage reduction, and allied purposes. Based on this study, it was determined that the primary problems within the Wissahickon watershed include stream flow variability, poor quality aquatic habitat, aquatic habitat degradation, flooding, and overall ecosystem imbalances. Various solutions to address these problems exist, and are being considered in depth during feasibility investigations. For example, riparian buffer enhancement, stream bank stabilization, natural stream channel restoration, construction of fish passages, dam removal, wetland creation and restoration, and structural flood damage reduction measures are being considered for specific locations within the watershed. A Feasibility Cost Sharing Agreement was signed with the City of Philadelphia Water Department in April 2004.

The investigation focuses primarily on the Philadelphia County portion of the Wissahickon Creek watershed.

Schuylkill River Basin, Wissahickon Creek Watershed, Philadelphia & Montgomery Counties, PA

- **Project Goals:** The purpose of this project is to investigate the best solution for ecosystem restoration, fish and wildlife habitat restoration, flood damage reduction, and allied purposes.

The project team is narrowing its focus on the removal of Cresheim Dam. The Cresheim Creek project site extends from several hundred feet upstream of Cresheim Dam downstream to the north side of McCallum Street for an approximate distance of 3,400 feet. Cresheim Dam is a rock structure approximately 12 feet high with a culvert that allows stream flow to pass through the middle of the dam. It is an obstruction to fish passage and has led to extensive sedimentation upstream.

The restoration goals for this project are to provide fish passage over the dam; reduce sediment inputs to the creek; increase filtration of water containing excess nutrients, chemicals, and/or sediment; improve aquatic habitat; and restore a more naturally functioning stream system. These goals would be realized by removing the structure and/or modifying the channel downstream of the dam.

Additional opportunities exist in Montgomery County, however the Corps has not indentified a cost share partner to proceed with additional studies. If a sponsor is identified, the Corps will need to seek approval for a new start under the SMART Planning principles.

Total Estimated Project Cost ($000)	**FEDERAL**	**NON-FEDERAL**	**TOTAL**		**Summarized Federal Financial Data ($000)**		
Feasibility	1,422	1,422	2,844		Allocations thru FY11	896.9	
					FY 12 Allocation	200	
					FY 13 Allocation	367	
					FY 14 Allocation	0	
					FY 15 Budget	0	
					Balance to Complete	0	

Upper Delaware River Watershed, Livingston Manor, NY

- **Authority:** House Resolution by the Committee on Transportation and Infrastructure
- **Congressional District:** NY-19
- **Non-Federal Sponsor:** NYSDEC
- **Date of Project Agreement:** May 26, 2009
- **Target Completion Date:** December 2014
- **Total Estimated Cost:** $1,166,000
- **Federal Funds Appropriated:** $786,000
- **Non-Federal Share:** $583,000 (including $49k IKS)

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Downtown flooding in the Livingston Manor Hamlet, Town of Rockland, NY caused by severe flooding in 2006. The project gained momentum after this event, although the original project was a result of $15 Million in damages back in 1996.

The study is authorized by the U.S. House of Representatives, Committee on Transportation and Infrastructure Resolution No. 2495, Upper Delaware River Watershed, NY adopted May 9, 1996**.**

The recurring flooding problem in the Livingston Manor area have been documented since the late 1800's with significant events recorded in June 1969, June 1973, January 1996, November 1996, September 2004, April 2005, June 2006, and September 2012. Typical damages include inundation of residential and commercial structures, as well as erosion of roads, retaining walls, and bridge abutments. In addition, some of the storms have resulted in the loss of local bridges. From the January, 1996 storm alone, Sullivan County reported infrastructure damages of $5,500,000 and property damages of $4,400,000.

Non-federal funding was received in September 2009 which initiated the feasibility study. This information was used as the basis for an Interim Feasibility Report that was completed in May 2013. Alternatives that are being recommended in the draft report include: expanding the floodway area downstream of the Main Street Bridge; and floodplain restoration / construction of a flood retention structure within an abandoned gravel pit-airstrip site located upstream of downtown Livingston Manor.

Upper Delaware River Watershed, Livingston Manor, NY

- **Project Goals:** The purpose of this project is to evaluate to investigate flood risk management and ecosystem restoration for the Little Beaver Kill and Willowemoc Creek in the Town of Rockland (Livingston Manor).

Phase II Tasks include:

- Further analysis of potential floodplain storage and ecosystem restoration opportunities at the Poultry Plant.
- Further explore and complete a hydraulic analysis of the floodplain storage and restoration potential at the Sewage Treatment Plant as the infrastructure and levee is relocated further away from the Willowemoc Creek.
- Further explore and complete a hydraulic analysis for the potential restoration and construction of a floodwall/levee on Pearl Street.
- With the recent loss of the Lazy Beagle Restaurant (corner of Main St. and Pearl St.) due to fire damage, explore extending the floodway expansion design from downstream of the Main St. Bridge to the area upstream of the Main St. Bridge, previously occupied by the building.
- Further economic analysis of the potential buyout properties in the Town that get repeated damages.
- Further explore various plan combinations that were not included in this report (e.g., combining Plans D (floodway expansion and Main Street Bridge widening) and F (Fulton Plan).
- Further explore restoration options as stand-alone projects (e.g., Fulton Plan without the flood damage berms).

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility (Livingston Manor)	786	786	1.572		Allocations thru FY11	586	
					FY 12 Allocation	200	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	0	

Upper Delaware River Watershed, NY

- **Authority:** House Resolution by the Committee on Transportation and Infrastructure
- **Congressional District:** NY-19
- **Non-Federal Sponsor:** Delaware County, NY NYSDEC (pending)
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $839,000 (All but $94,000 reprogrammed to studies under this parent)
- **Non-Federal Share:** TBD

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Authorized by the U.S. House of Representatives, Committee on Transportation and Infrastructure Resolution No. 2495, Upper Delaware River Watershed, NY adopted May 9, 1996.

Initial impetus for the study was the January 1996 storm event that caused significant flood damage throughout the area. Consecutive major floods in September 2004, April 2005 and June 2006, again caused devastation along the main stem Delaware River and its tributaries, repeatedly damaging property and disrupting tens of thousands of lives.

Several interim studies are currently in process under this parent authority including a study for Livingston Manor and a floodplain reconnection study. Delaware County, NY and the Corps are currently negotiating a project management plan and Feasibility Cost Share Agreement (FCSA) for a continuing study under this parent authority for flood risk management and ecosystem restoration along the East Branch Delaware River and its tributaries. New York State Department of Environmental Conservation is also considering participation on the study.

Upper Delaware River Watershed, NY

- **Project Goals:** The purpose of this project is to evaluate alternatives in the larger watershed beyond those already in the feasibility phase for flood risk management and ecosystem restoration.

An expedited 905(b) reconnaissance study addendum was approved. Recent flood events and corresponding field visits of problem areas in the Upper Delaware River Watershed with other agencies show the need for a comprehensive Upper Delaware River Watershed Study to evaluate alternatives in the larger watershed beyond those already in the feasibility phase (ie. Livingstone Manor).

The Corps has made several field inspections over the last year and participated in multiple communities meetings to better define the problem and identify cost share partners. In order to initiate a full Feasibility Study, a cost-sharing sponsor and the Corps must execute a Feasibility Cost Share Agreement (FCSA). The Corps anticipates executing such an agreement in Fiscal Year 2014.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Reconnaissance	150	0	150		Allocations thru FY11	839	
Update Reconnaissance	248	0	248		FY 12 Allocation	0	
Feasibility (Livingston Manor)	583	583	1,166		FY 13 Allocation	0	
Feasibility (Upper Delaware River Floodplain Reconnection)	1,000	1,000	2,000		FY 14 Allocation	0	
Comprehensive Upper Delaware River Watershed	1,000	1,000	2,000		FY 15 Budget	TBD	
					Balance to Complete	TBD	

Section 22 Planning Assistance to States, DE & NJ (Effects of Flow Dynamics, Salinity and Water Quality on Key Biological Populations in the Delaware Estuary)

- **Authority:** Section 22, Water Resources Development Act of 1974
- **Congressional Districts:** DE-AL, NJ-1, NJ-2
- **Non-Federal Sponsor:** South Jersey Port Corporation
- **Date of Project Agreement:** September 2008 w/ amendments
-
- **Target Completion Date:** June 2014
- **Total Estimated Cost:** $1,200,000
- **Federal Funds Appropriated:** $622,000
- **Non-Federal Share:** 50%

Delaware Estuary Location Map

The Planning Assistance to States program authorized by Section 22 of the Water Resources Development Act of 1974, as amended, provides the Federal funding for this project. Section 22 provides authority for the U.S. Army Corps of Engineers (USACE) to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The authority allows the Corps of Engineers to provide technical assistance in the form of studies and plans, but does not allow for actual design or construction assistance.

A regional concern of global warming is the acceleration of sea-level rise in the Delaware Estuary. This study provides an update of a hydrodynamic model to examine flow dynamics, salinity, and water quality. The model will be used to assess the impacts of salinity variance to estuarine water users and the information gathered would be useful to the States of New Jersey, Delaware and the Delaware River Basin Commission in assessing low flow augmentation for the Delaware River and Bay, natural resource managers, and shipping and port users.

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Section 22 Planning Assistance to States, DE & NJ (Effects of Flow Dynamics, Salinity and Water Quality on Key Biological Populations in the Delaware Estuary)

- **Project Goals:** The purpose of this project is to study provides an update of a hydrodynamic model to examine flow dynamics, salinity, and water quality. The oligohaline portion of the estuary provides critical habitat for the Easter oyster and Atlantic sturgeon, and short nose sturgeon. A regional concern of global warming is the acceleration of sea-level rise in the Delaware Estuary.

The oligohaline portion of the estuary provides critical habitat for the Eastern oyster and Atlantic sturgeon, and short nose sturgeon. Populations of these species are at historically low levels along the Atlantic coast of North America. The information collected is essential to understanding population dynamics and requirements for these three important estuarine species.

The project is in the final year based on the current scope. The final report in undergoing review by the Corps prior to its release. impacts of the species, their distribution and their food supply.

Crushed shells being deposited into Delaware Bay to create substrate for oyster beds.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
PAS Study (Phase 1)	197	197	394		Allocations thru FY11	597	
PAS Study (Phase 2)	200	200	400		FY 12 Allocation	25	
PAS Study (Phase 3)	200	200	400		FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	0	
					Balance to Complete	0	

Planning Assistance to States, Section 22, Assessment of Bridges and Impacts on Flows and Flooding, Delaware County, NY

- **Authority:** Section 22, Water Resources Development Act of 1974
- **Congressional Districts**: NY-19
- **Non-Federal Sponsor:** Delaware County, NY
- **Date of Project Agreement:** January 6, 2012
- **Target Completion Date:** June 2014
- **Total Estimated Cost:** $225,000
- **Federal Funds Appropriated:** $225,000
- **Non-Federal Share:** 50%

Inspection of small span bridge at Walton, NY

The Planning Assistance to States program authorized by Section 22 of the Water Resources Development Act of 1974, as amended, provides the Federal funding for this project. Section 22 provides authority for the U.S. Army Corps of Engineers (USACE) to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The authority allows the Corps of Engineers to provide technical assistance in the form of studies and plans, but does not allow for actual design or construction assistance.

Currently, the small bridge & culverts in Delaware County, NY are in varying stages of decline with impediments to stream flow creating a potential for flooding. The goal of the project is to analyze structural integrity and potential for flooding due to flow impediments at stream crossings in Delaware County, NY. The structures to be evaluated are small bridges/culverts with a span in the range of 5-20 feet. The resulting data would be used to: 1) produce conveyance capacity designs for 10, 50 and 100-year storm events, 2) prioritize replacement or upgrading of infrastructure. The results of the evaluation would be made available to the local government officials.

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Planning Assistance to States, Section 22, Assessment of Bridges and Impacts on Flows and Flooding, Delaware County, NY

- **Project Goals:** The purpose of this project is to analyze structural integrity and potential for flooding due to flow impediments at stream crossings in Delaware County, NY.

To date, the Corps has completed inspections on 55 bridges and finalized 41 inspection reports. The remaining 14 reports are under development. The Corps is working with Delaware County on identifying additional bridges that required an inspection. Additional funding is necessary to support further inspections.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
PAS Investigation	150	150	300		Allocations thru FY11	150	
					FY 12 Allocation	0	
					FY 13 Allocation	75	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Planning Assistance to States, Section 22, Daily Flow Modeling (Dwarf Wedgemussel), NY

- **Authority:** Section 22, Water Resources Development Act of 1974
- **Congressional District**: NY-19, PA-10
- **Non-Federal Sponsor:** Delaware River Basin Commission.
- **Date of Project Agreement:** 13 Sept 2004
- **Target Completion Date:** June 2014
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $400,000
- **Non-Federal Share:** $300,000 Cash and $100,000 in In-kind services.

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Dwarf Wedge Mussels found in the Upper Delaware River Basin on a recent survey.

The Planning Assistance to States program authorized by Section 22 of the Water Resources Development Act of 1974, as amended, provides the Federal funding for this project. Section 22 provides authority for the U.S. Army Corps of Engineers (USACE) to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The authority allows the Corps of Engineers to provide technical assistance in the form of studies and plans, but does not allow for actual design or construction assistance.

A cost share agreement with the Delaware River Basin Commission (DRBC) was executed in FY04. The results of the study will be used to improve flow management in the Upper Delaware River Basin to protect the habitat of the endangered Dwarf Wedgemussel and to protect and improve overall environmental quality in the upper basin. Habitat conservation measures relating to flow management that are recommended on the basis of the study will be part of water management plans and allocation plans that are Federally mandated for the Upper Basin.

Planning Assistance to States, Section 22, Daily Flow Modeling (Dwarf Wedgemussel), NY

- **Project Goals:** The purpose of this project is to improve instream flow management to protect and support the recovery of dwarf wedgemussel (DWM) habitat in the river sections containing potential habitat.

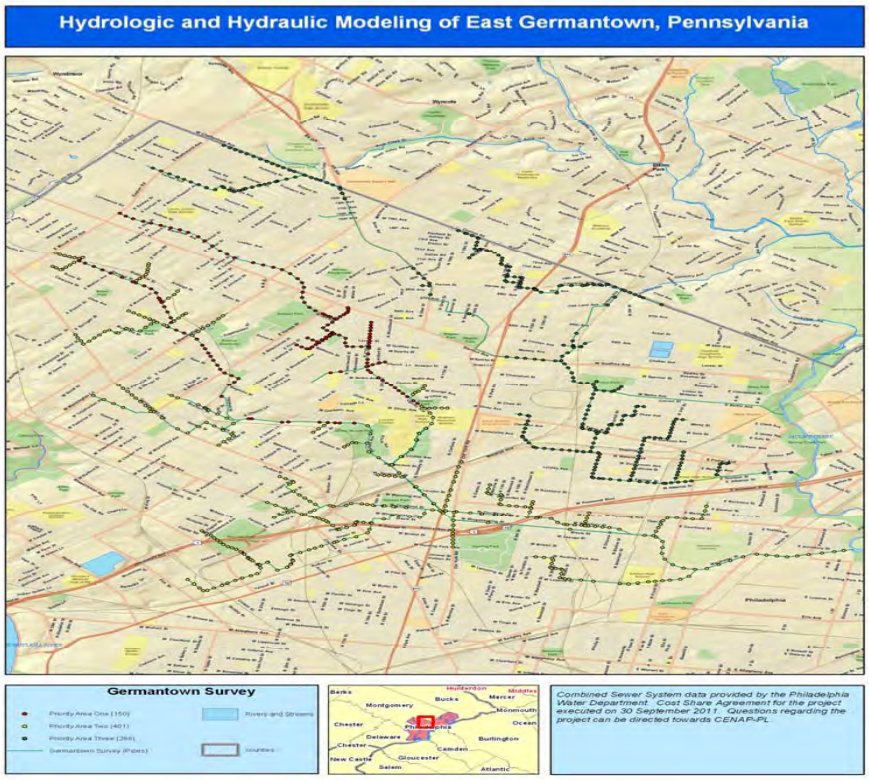
This project is important to protect the habitat of the endangered Dwarf Wedgemussel and to protect and improve overall environmental quality in the upper basin. The freshwater mussel *Alasmidonta heterodon* (dwarf wedgemussel) has been historically recorded in approximately 70 locations in 15 Atlantic slope drainages from New Brunswick, Canada to North Carolina, USA (USFWS 1993). During the past 100 years, however, the species has declined precipitously. It is now thought to be extirpated from all but 20 locations, confined to eight drainages (Master 1986) and is no longer found in Canada (Hanson and Locke, 2000). Dwarf wedgemussels (DWM) are listed as federally endangered and are also locally listed in the states included in the Upper Delaware River study area, New York, New Jersey, and Pennsylvania.

The USGS is completing the technical analysis on behalf of the Corps. The Corps anticipates completion of the study in FY14.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
PAS Study	400	400	800		Allocations thru FY11	400	
					FY 12 Allocation	0	Collection of Data
					FY 13 Allocation	0	Report Completion
					FY 14 Allocation	0	
					FY 15 Budget	0	
					Balance to Complete	0	

Section 22 Planning Assistance to States, PA (Germantown Hydrologic and Hydraulic Modeling)

- **Authority:** Section 22, Water Resources Development Act of 1974
- **Congressional District:** PA-2
- **Non-Federal Sponsor:** Philadelphia Water Department
- **Date of Project Agreement: 28 September 2011**
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $250,000
- **Non-Federal Share:** $250,000



The sewer system within the Germantown area of the City in many instances follows the historical location of long forgotten stream channels. During high precipitation events, the area can experience flooding situations similar to those if the original stream channels still existed.

The Planning Assistance to States program authorized by Section 22 of the Water Resources Development Act of 1974, as amended, provides the Federal funding for this project. Section 22 provides authority for the U.S. Army Corps of Engineers (USACE) to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The authority allows the Corps of Engineers to provide technical assistance in the form of studies and plans, but does not allow for actual design or construction assistance.

Development within Philadelphia over time contributed to increased levels of flooding throughout the City. Problems such as localized flooding and sewer back up in neighborhoods throughout the City occur regularly, even in areas without natural waterways. One neighborhood in particular is Germantown. A cost share agreement was executed with the Philadelphia Water Department in FY11. This project evaluates existing hydrologic and hydraulic performance of the existing combined sewer system

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Section 22 Planning Assistance to States, PA (Germantown Hydrologic and Hydraulic Modeling)

- **Project Goals:** The purpose of this project is evaluates existing hydrologic and hydraulic performance of the existing combined sewer system within the Germantown community and develops short- term solutions to flood problems.

- Additional project goals include evaluating the potential for a levee to protect the Eastwick neighborhood. This evaluation will consider geotechnical, hydrologic, hydraulic and environmental concerns.

within the Germantown community and develops short- term solutions to flood problems in the interim while the City of Philadelphia completes their long-term mitigation plan.

In May 2013, the Corps and PWD modified the scope of work to evaluate a second neighborhood regularly impacted by flooding. Specifically, PWD requested the Corps to evaluate the potential for a levee construction to protect the Eastwick neighborhood near the confluence of the Darby and Cobbs Creeks.

The Corps completed a technical review of hydrologic and hydraulic modeling completed by PWD for the East Germantown neighborhood. Efforts involving the Corps on evaluating mitigation opportunities were placed on hold while the Corps studied the impacts of a potential levee in Eastwick. The Corps anticipates completion of the Eastwick report in March 2014.

Additional Federal funding is required if PWD requests the Corps to continue efforts in East Germantown.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
PAS Study (Phase 1)	120	120	240		Allocations thru FY11	120	
PAS Study (Phase 2)	150	150	300		FY 12 Allocation	130	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Section 22 Planning Assistance to States, PA (Lehigh River Model)

- **Authority:** Section 22, Water Resources Development Act of 1974
- **Congressional Districts**: PA-11, PA-15
- **Non-Federal Sponsor:** Pennsylvania Department of Conservation and Natural Resources; and Pennsylvania Fish and Boat Commission
- **Date of Project Agreement:** June 9, 2009
- **Target Completion Date:** April 2014
- **Total Estimated Cost:** $504,000
- **Federal Funds Appropriated:** $257,000
- **Non-Federal Share:** $247,000

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Downstream of F.E Walter Dam during water release episode

The Planning Assistance to States program authorized by Section 22 of the Water Resources Development Act of 1974, as amended, provides the Federal funding for this project. Section 22 provides authority for the U.S. Army Corps of Engineers (USACE) to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The authority allows the Corps of Engineers to provide technical assistance in the form of studies and plans, but does not allow for actual design or construction assistance.

The US Army Corps of Engineer, Philadelphia District, in partnership with the PA Department of Conservation and Natural resources and the PA Fish and Boat Commission is investigating whether temporary changes in operational pool levels at the F.E. Walter Dam would provide downstream fisheries habitat improvements and recreational opportunities. If the Section 22 study demonstrates that temporary manipulation of pool levels alone cannot provide more favorable water temperature conditions downstream, then the District may evaluate permanent reallocation of storage and/or structural modifications at F.E. Walter Dam that allow selective withdrawal capabilities for improved downstream temperature control. The dam presently has bottom flood control gates used for most reservoir releases and a smaller capacity bypass system approximately 50 feet above the flood control gates.

Section 22 Planning Assistance to States, PA (Lehigh River Model)

- **Project Goals:** The purpose of this project is to model water levels and temperature for proposed operational scenarios at F.E. Walter Dam and Reservoir to enhance downstream and in lake recreation and habitat. Also physical and chemical water quality parameters for a minimum of six additional proposed operational scenarios at F.E. Walter Dam to enhance downstream and in lake recreation and habitat.

The objective of this study was to model water levels and temperature for proposed operational scenarios at F.E. Walter Dam and Reservoir to enhance downstream and in lake recreation and habitat. The results were used to help evaluate the potential positive and negative impacts that these operational scenarios will have on flood control, recreational boating, and aquatic resources. A Final Report was completed on July 27, 2009. Phase 2 of the Lehigh River Model Study was executed with the Pennsylvania Department of Conservation and Natural Resources (PADCNR) and the Pennsylvania Fish and Boat Commission (PAFBC), the co-sponsors, on 9 Jun 09.

Although temperature and flow are the major questions to be addressed in this Section 22 study, there is concern for other water quality parameters as well, especially low dissolved oxygen (DO), sulfide, and reduced iron and manganese. If at the conclusion of this study, funding becomes available, these parameters will be modeled.

A final Phase 2 Report has been completed and is currently under review. A meeting will be held with ERDC, PADCNR and PAFBC on Feb 28, 2014 to address any remaining comments or issues.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
PAS Study (Phase 1)	75	75	150		Allocations thru FY11	257	
PAS Study (Phase 2)	172	172	344		FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	0	
					Balance to Complete	0	

Section 22 Planning Assistance to States, PA (Delaware River Waterfront Pier Analysis)

- **Authority:** Section 22, Water Resources Development Act of 1974
- **Congressional Districts**: PA-1, PA-2, PA-13
- **Non-Federal Sponsor:** Delaware River Waterfront Corporation
- **Date of Project Agreement:** January 2012
- **Target Completion Date:** November 2013
- **Total Estimated Cost:** $740,000
- **Federal Funds Appropriated:** $370,000
- **Non-Federal Share:** $370,000 (In-Kind Services)

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The Planning Assistance to States program authorized by Section 22 of the Water Resources Development Act of 1974, as amended, provides the Federal funding for this project. Section 22 provides authority for the U.S. Army Corps of Engineers (USACE) to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The authority allows the Corps of Engineers to provide technical assistance in the form of studies and plans, but does not allow for actual design or construction assistance.

A cost share agreement was executed with the Delaware River Waterfront Corporation (DRWC) in January 2012. This project evaluated the structural integrity of Spring Garden/Festival Piers along the Delaware River Waterfront in Philadelphia, PA for possible redevelopment and ecosystem restoration potential.

A follow up investigation of this and remaining piers along the waterfront are pending the execution of a cost sharing agreement with the City of Philadelphia.

Section 22 Planning Assistance to States, PA (Delaware River Waterfront Pier Analysis)

- **Project Goals:** The purpose of this project is to evaluates existing piers along the Delaware River Waterfront in Philadelphia, PA for possible redevelopment and ecosystem restoration potential.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
PAS Study (Phase 1)	220	220	440		Allocations thru FY11	200	
PAS Study (Phase 2)	150	150	300		FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	170	

Section 22 Planning Assistance to States, PA (Rose Valley Creek Flood Hazard Analysis)

- **Authority:** Section 22, Water Resources Development Act of 1974
- **Congressional Districts**: PA-13
- **Non-Federal Sponsor:** Whitpain Township
- **Date of Project Agreement:** 2 August 2012
- **Target Completion Date:** June 2014
- **Total Estimated Cost:** $160,000
- **Federal Funds Appropriated:** $80,000
- **Non-Federal Share:** $80,000

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The Planning Assistance to States program authorized by Section 22 of the Water Resources Development Act of 1974, as amended, provides the Federal funding for this project. Section 22 provides authority for the U.S. Army Corps of Engineers (USACE) to assist states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development, use, and conservation of water and related land resources. The authority allows the Corps of Engineers to provide technical assistance in the form of studies and plans, but does not allow for actual design or construction assistance.

Rose Valley Creek is one of three tributaries to the Wissahickon Creek that begin in Upper Dublin Township and flow through Ambler Borough to its confluence with the Wissahickon Creek in Whitpain Township. The drainage area of Rose Valley Creek is the largest of the three tributary watersheds, spanning about 2 square miles, and includes portions of Lower Gwynedd, Upper Dublin, and Whitpain Townships and Ambler Borough. The effective Flood Insurance Rate Maps (FIRM) do not depict a major section of the lower reach of the stream as special flood hazard areas (SFHA) under the National Flood Insurance Program (NFIP) and many homeowners lack insurance. This section also contains an asbestos remediation site, damaged by Tropical Storm Lee along with several homes and businesses in 2011. A cost share agreement was executed with Whitpain Township in FY12.

Section 22 Planning Assistance to States, PA (Rose Valley Creek Flood Hazard Analysis)

- **Project Goals:** The purpose of this project is to completes a detailed flood hazard study for the Rose Valley Creek Watershed that will include updating new Flood Insurance Rate Maps (FIRM) and the development of a flood mitigation plan.

Flooding problems have seriously hampered housing, economic development and public safety in the Borough of Ambler and the northeastern section of Whitpain Township. In these areas, the creek is channelized and buried in sections, with undersized culverts that create flooding conditions in even modest storms.

This project includes an effort to complete a detailed flood hazard study for the Rose Valley Creek Watershed that will include updating new Flood Insurance Rate Maps (FIRM) and the development of a flood mitigation plan. The project includes ten work tasks, implemented over approximately fifteen months. Temple University, through the Center for Sustainable Community Development, is assisting with the project.

To date, the Corps and Temple have completed the majority of the technical work including the creation of new hydrologic and hydraulic modeling. The project is experiencing delays in creating the mitigation report due to administrative issues with the Federal Emergency Management Agency (FEMA). FEMA is requiring a letter of map revision application due to previous work completed in Whitpain Township not associated with this project. The Corps is working with FEMA to resolve.

Total Estimated Project Cost ($000)	**FEDERAL**	**NON-FEDERAL**	**TOTAL**		**Summarized Federal Financial Data ($000)**		
Mitigation Plan	80	80	160		Allocations thru FY11		
					FY 12 Allocation	80	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	0	
					Balance to Complete	TBD	

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US ARMY CORPS OF ENGINEERS
Building Strong

US Army Corps of Engineers
Philadelphia District

Continuing Authorities Program (CAP)

Program Authority	Description	Federal Funding Limits (incl. WRDA 2007 changes)	
		Project	Annual Program
Section 14	Flood Control Act of 1946 (PL 79-526), as amended for emergency streambank & shoreline erosion protection for public facilities & services.	$1,500,000	$15,000,000
Section 103	River & Harbor Act of 1962 (PL 87-874), as amended, amends PL 727, an act approved August 13, 1946 which authorized Federal participation in the cost of protecting the shores of publicly owned property from hurricane & storm damage.	3,000,000	30,000,000
Section 107	River & Harbor Act of 1960 (PL 90-483), as amended for navigation.	7,000,000	35,000,000
Section 111	River & Harbor Act of 1968 (PL 90-483), as amended, for mitigation of shoreline erosion damage caused by Federal navigation projects.	5,000,000	N/A
Section 145	Placement of Dredged Material on beaches, Water Resources Development Act of 1976 (PL 94-587), as amended.	N/A	N/A
Section 204	Beneficial Uses of Dredged Material, Water Resources Development Act of 1992 (PL 102-580), as amended.	5,000,000	15,000,000
Section 205	Flood Control Act of 1948 (PL 80-858), as amended, for flood control.	7,000,000	55,000,000
Section 206	Aquatic Ecosystem Restoration, Water Resources Development Act of 1996 (PL 104-303), as amended.	5,000,000	50,000,000
Section 208	Flood Control Act of 1954 (PL 83-780), as amended, originally Section 2, Flood Control Act of August 28, 1937 (PL 75-406) for snagging and clearing for flood control.	500,000	7,500,000
Section 1135	Project Modifications for Improvement of the Environment, Water Resource Development Act of 1986 (PL 99-662), as amended.	5,000,000	40,000,000

Color Code	
State	Color
Delaware	Red
New Jersey	Blue
New York	Black
Pennsylvania	Green
Multiple	Purple

Assunpink Creek, Hamilton Township, Mercer County, NJ

- **Authority:** Section 205, Flood Control Act of 1948
- **Congressional Districts:** NJ-4 and NJ-12
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Agreement:** TBD
- **Target Completion Date:** September 2015
- **Total Estimated Cost:** $500,000
- **Federal Funds Appropriated:** $150,000
- **Non-Federal Share:** $250,000

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Flood waters from the Assunpink Creek on Sweet Briar Avenue in Hamilton Township during an April 2007 storm event.

The authority for this project is Section 205 of the Flood Control Act of 1948 (Public Law 80-858), as amended. Under this authority, the USACE is authorized to plan, design, and construct small flood damage reduction projects. Each project is limited to a Federal cost of not more than $7 million, including all project-related costs for feasibility studies, planning, engineering, design, and construction.

The focus of this feasibility study is the lower reach of the Assunpink and its tributaries that are located in the City of Trenton, Hamilton Township, and Lawrence Township, New Jersey. Within the study area, flooding problems are widespread. The wide floodplains of the relatively low gradient streams are subject to chronic flooding and, on several occasions, extensive flood damage has occurred. Most recently, the study area experienced record flood levels and a great deal of property damage as a result of the heavy rains brought by Hurricane Irene in August of 2011. Flooding on the Assunpink Creek that resulted from Hurricane Irene shut down the rail lines in the City of Trenton for three days. This disrupted one of the busiest parts of the nation's passenger train system between Philadelphia and New York.

This feasibility study is examining the flooding problems along the Assunpink Creek and evaluating the Federal interest in implementing flood risk management solutions.

Assunpink Creek, Hamilton Township, Mercer County, NJ

- **Project Goals:** The purpose of this project is to examine potential solutions to reduce the frequent flooding problems and environmental degradation.

The New Jersey Department of Environmental Protection (NJDEP) has provided the Corps with a letter of interest to act as the non-Federal sponsor for the study, with a responsibility for 50 percent of the costs of the Assunpink Creek Flood Risk Management Feasibility Study. The District is currently coordinating with the North Atlantic Division (NAD) to obtain approval to execute a Feasibility Cost Share Agreement (FCSA) with NJDEP.

FY14 funds, subject to availability, would be used to execute a FCSA with the non-Federal sponsor and complete the feasibility study.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	300	200	500		Allocations thru FY11	100	
Design & Implementation			TBD		FY 12 Allocation	0	
					FY 13 Allocation	50	
					FY 14 Budget	50	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Assunpink Creek, Trenton, NJ

- **Authority:** Section 1135 of the WRDA 1986
- **Congressional Districts:** NJ-4, NJ-12
- **Non-Federal Sponsor:** City of Trenton, New Jersey
- **Date of Project Agreement:** September 2009
- **Target Completion Date:** 2015
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:**
- **Non-Federal Share:** TBD

View of existing creek culvert looking upstream toward the historic Broad Street Bridge in downtown Trenton, NJ

This project is authorized by Section 1135 of WRDA 1986, Environmental Restoration and project encompasses demolition and removal of a 500-foot buried concrete box culvert that currently contains a section of the Assunpink Creek between Broad and Warren Streets downstream from Mill Hill Park. The culvert roof has failed on two occasions and is a public safety hazard. Day lighting of the stream will occur by completely removing the culvert roof, walls and floor, and exposing the stream to natural daylight and channel conditions. Natural channel conditions are more conducive to aquatic habitat. The new channel will improve anadromous fish migration by eliminating low-light conditions which disorient migrating fish and hinders their ability to spawn upstream.

This reach of the Assunpink Creek was the site of the second battle of Trenton during the Revolutionary War and is immediately downstream of the historic Broad Street Bridge.

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Assunpink Creek, Trenton, NJ

- **Project Goals:** The purpose of this project is to demolish and remove a 500-foot buried concrete box culvert to improve anadromous fish migration by eliminating low-light conditions. It also provides educational and cultural opportunities for the community as the site is the location of the Battle of the Assunpink Creek, known also as the Second Battle of Trenton during the American Revolutionary War in January, 1777.

The Corps is currently completing the 90% design and specifications set necessary to pursue and finalize permitting. The anticipation is to advertise and award a construction contract by the end of FY2014.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	422	105	527		Allocations thru FY11	1,002	
Design & Implementation	4,500	1,125	5,625		FY 12 Allocation	200	
					FY 13 Allocation	290	
					FY 14 Budget	3,200	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Barnegat Inlet Regional Sediment Management, Ocean County, New Jersey

- **Authority:** Section 204 of the Water Resources Development Act of 1992
- **Congressional Districts:** NJ-3
- **Non-Federal Sponsor:** None required
- **Date of Project Agreement:** None required
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $100,000
- **Non-Federal Share:** None required

Barnegat Inlet, New Jersey

This study is authorized under Section 204 of the Water Resources Development Act of 1992, as modified by Section 2037 of WRDA 2007. This authority allows USACE to collaborate with a State in the preparation of a comprehensive State or regional sediment management plan within the boundaries of the State. This is a 100% Federally funded study only authority.

The study will develop a regional sediment management (RSM) plan for Barnegat Inlet to identify and evaluate opportunities to beneficially use dredged material from the navigation channel for the most cost effective and hydraulically advantageous near shore placement of sandy material.

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Barnegat Inlet Regional Sediment Management Ocean County, New Jersey

- **Project Goals:** The purpose of this project is to develop a regional sediment management plan for Barnegat Inlet to identify and evaluate opportunities to use dredged material from the navigation channel.

Sediment management practices have historically been used by the U.S. Army Corps of Engineers (USACE) on a project by project basis. This method of management has often resulted in unanticipated consequences since natural systems do not always coincide with project, jurisdictional, or state boundaries or other activities impacting sediment sources. Some of these consequences have included erosion or sedimentation in nearby areas, inefficient planning for dredged material management, and missed opportunities to more cost-effectively manage sediment resources. Recently, however, the USACE and other federal and state resource agencies have begun to look at sediment management from a regional perspective. This systems based approach is aimed at increasing cooperation and coordination among agencies, adaptive management across multiple projects based on shared goals, improved management through the application of best available science and engineering practices, and implementation of policies to achieve maximum long-term economic, social, and environmental benefits.

FY 14 funds, subject to availability, would be used to continue the RSM effort.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	200	0	200		Allocations thru FY11	72	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Budget	50	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Bethany Beach, Pennsylvania Avenue Improvement, DE

- **Authority:** Section 205 of the Flood Control Act of 1948 and PL 113-2
- **Congressional Districts:** DE-AL
- **Non-Federal Sponsor:** Town of Bethany Beach
- **Date of Feasibility Cost Share Agreement:** March 12, 2012
- **Target Completion Date:** November 30, 2015
- **Total Estimated Cost:** $430,000
- **Federal Funds Appropriated:** $301,000
- **Non-Federal Share:** $165,000

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Flooding in northern Bethany Beach during a September 2009 storm event.

The authority for this project is Section 205 of the Flood Control Act of 1948 (Public Law 80-858), as amended. Under this authority, the USACE is authorized to plan, design, and construct small flood damage reduction projects. Each project is limited to a Federal cost of not more than $7 million, including all project-related costs for feasibility studies, planning, engineering, design, and construction.

The purpose of this study is to investigate Federal interest in providing flood damage reduction for the northern half of Bethany Beach along the back bay area where flooding occurs numerous times per year during high tide events that are accompanied by heavy rainfalls. Tidal elevations in the canals prevent runoff from attenuating into the surrounding drainage area. The ground elevation of Bethany Beach is near sea level with little difference in elevation across the community. Approximately sixty percent of the community is within the 100-year floodplain.

Bethany Beach, Pennsylvania Avenue Improvement, DE

- **Project Goals:** The feasibility study is the first phase of the two-phased Corps of Engineers' planning process. The purpose of the feasibility study is to fully evaluate all reasonable solutions to the water resource problems identified in the study area. The feasibility report provides the basis for a decision on project construction.

- **Problem:** The Project Area experienced flooding for five days as a result of Hurricane Sandy. Flooding occurs multiple times per year on the northern half of the 1.2 square mile Town of Bethany Beach. The flooding is tidally related and impacts the Town through the man made canals that connect the Indian River Bay to the north and to the Little Assawoman Bay to the south.

The objectives of the Feasibility Phase of the project are to:

- Prepare the Feasibility Report for the project
- Prepare an Environmental Assessment and NEPA documentation for the project,
- Prepare a Project Management Plan (PMP) for the Design and Implementation Phase,
- Develop other supporting plans as needed for completion of the Feasibility Report.

Following the initiation of the study effort, the Philadelphia District determined that some of the potential sites for flood risk management (FRM) solutions along the man made canals were located well beyond the municipal limits of the Town. The District and the non-Federal sponsor coordinated with the Delaware Department of Natural Resources and Environmental Control (DNREC) and discussed the implications of constructing FRM solutions at the proposed locations outside of the Town. DNREC expressed support for the study and indicated that they could possibly provide funding to the NFS for use in their cost sharing with USACE.

KEY ISSUES

- Funding from NFS is uncertain beyond the amount which has already been provided ($55,000). DNREC may be able to provide funds to the NFS if there is a decision to proceed after the initial screening of alternatives.
- IEPR may be required because this is a CAP 205 study. The District will be requesting an exclusion from IEPR.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)	
Feasibility	265	165	430		Allocations thru FY11	103
Design & Implementation	TBD	TBD	TBD		FY 12 Allocation	60
					FY 13 Allocation	128
					FY 14 Allocation	TBD
					FY 15 Budget	TBD
					Balance to Complete	TBD

East Point Shoreline Protection, Cumberland County, NJ

- **Authority:** Section 14 of the Flood Control Act of 1946
- **Congressional Districts:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection (NJDEP)
- **Date of Project Agreement:** 23 June 2011
- **Target Completion Date:** February 2013
- **Total Estimated Cost:** $1,540,000
- **Federal Funds Appropriated:** $998,584
- **Non-Federal Share:** 35%

Completed gabion revetment with restored beach.

This project is authorized under Section 14 of the Flood Control Act of 1946, as amended (Emergency Stream bank and Shoreline Erosion Protection).

The study area is located along Bay Avenue on the tidal Delaware Bay in Maurice River Township, Cumberland County, New Jersey. Bay Avenue provides the only access to 19 residences of East Point. Wave action during storm events caused erosion along increasing the risk associated with the residents along Bay Avenue. The bay water would overtop the berm, and Bay Avenue became impassable. Without providing some type of protection, continued erosion and road failure from reoccurring coastal storms was anticipated. The selected plan is a 350-foot long and 4-foot high gabion revetment placed on stone-filled marine mattresses covered with geotextile material to protect the beach profile.

Construction started in December 2012 and was completed in February 2013. The project performed well during several storm events since completion of construction. Project close-out is expected in 3rd Quarter FY14.

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East Point Shoreline Protection, Cumberland County, NJ

- **Project Goals:** The purpose of this project is to provide protection from erosion caused by storm events along Bay Avenue in Cumberland County.

Marine mattresses under construction.

Completed section of gabion wall.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Total Coast	1,000	538	1,538		Allocations thru FY11	1,000	
					FY 12 Allocation	200	
					Balance to Complete	0	Fully funded

Little Mill Creek, New Castle County, DE

- **Authority:** Section 205 of the Flood Control Act of 1948
- **Congressional Districts**: DE-AL
- **Non-Federal Sponsors:** State of Delaware, Department of Natural Resources and Environmental Control, New Castle County Special Services and New Castle Conservation District
- **Date of Project Agreement:** 23 June 2009
- **Target Completion Date:** 08 November 2014
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $6.9M
- **Non-Federal Share:** 35%

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Flood waters from Little Mill Creek overtop Maryland Avenue at the intersection with Brookside and Germay Drives in new Castle County, DE.

This project is authorized under Section 205 of the Flood Control Act of 1948, as amended.

Residents and businesses along Little Mill Creek have experienced flooding of homes and commercial properties. Several conditions contribute to the flooding problems in the project area: decades of urbanization, short duration, high intensity storms, and long duration storms. The project area was divided into upper and lower reaches. The Upper Reach portion of the Little Mill Creek project was completed in 2008. The State of Delaware Department of Natural Resources and Environmental Control (DDNREC), the non-Federal sponsor for the project along with New Castle County have signed a new PPA to construct the Lower Reach channel. The lower reach extends from the AMTRAK Railroad right of way upstream to the Delaware Route 4 (Maryland Avenue) Bridge. Work on the lower reach will consist of widening and deepening the channel to increase flow capacity and reduce flood damages to over fifty businesses and commercial properties along Germay, Brookside and Meco Drives. The channel will be deepened 3 feet and widened to a bottom width of 30 feet for a total length of 2,170 feet. The work includes the removal and remediation of some minor PCB and PAH contaminated channel material.

Little Mill Creek, New Castle County, DE

- **Project Goals:** The purpose of this project is to widen and deepen the existing channel to increase flow capacity and reduce flood damages to over fifty businesses and commercial properties along Germay, Brookside and Meco Drives.

New Castle County acquired all real estate needed for construction including two parcel easements by imminent domain. A construction contract was awarded 30 September 2013 to RC&D, Inc. in the amount of $2,696,391. Construction is estimated to be completed by November 2014.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Total Cost	7,000	2,500	9,500		Allocations thru FY11	6,833	Includes $3M used for the construction of the upper reach
					FY 12 Allocation	100	
					FY 13 Allocation	290	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Mordecai Island Coastal Wetlands Restoration, Ocean County, NJ

- **Authority:** Section 1135 of Water Resources Development Act of 1986
- **Congressional Districts:** NJ-2, NJ-3
- **Non-Federal Sponsor:** Mordecai Land Trust/NJDEP Bureau of Coastal Engineering
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** $6,666,667
- **Federal Funds Appropriated:** $492,837
- **Non-Federal Share:** $1,666,667

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Mordecai Island is located west of Long Beach Island near Beach Haven Borough, New Jersey and is adjacent to the New Jersey Intracoastal Waterway (NJIWW), the main navigation channel of Barnegat Bay. Erosion along the coastline pictured above.

The Mordecai Island Coastal Wetlands Restoration Project, Beach Haven, NJ is authorized under Section 1135 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, Project Modifications for Improvement of the Environment. The entire coastline of Mordecai Island has suffered from erosion; however, the western edge, adjacent to the Federal New Jersey Intracoastal Waterways navigation channel, has receded at a more substantial rate on the order of 3 - 6 ft. per year. Over the past 100 years, half the island has been lost through erosion. If nothing is done to protect the island, the erosion will continue and a highly valuable habitat, including a nesting colony of state-threatened black skimmers, will be at risk. The goal of the project is to preserve and protect Mordecai Island's diverse natural bird and marine habitats by stabilizing the shoreline and reducing future erosion and limit impacts to habitat.

Several erosion protection measures were evaluated and a 90% level design for an offshore wave barrier was completed in 2009; however, the expected wave reducing efficiency (40%) of the structure and new living shorelines rules in New Jersey prompted the sponsor to request another alternative incorporating living shorelines into the solution. Various types of hybrid living shorelines solutions (rock and vegetation) to the erosion are being evaluated by USACE's Engineer Research and Development Center (ERDC). The Project Partnership Agreement must be approved and signed by the co-sponsors this Fiscal Year.

Mordecai Island Coastal Wetlands Restoration, Ocean County, NJ

- **Project Goals:** The goal of the project is to preserve and protect Mordecai Island's diverse natural bird and marine habitats by stabilizing the shoreline and reducing future erosion and limit impacts to habitat.

FY13 funds are being used to coordinate the draft Project Partnership Agreement and work on the alternative analysis and conceptual design. Additional funds (both Federal and non-Federal) are needed to complete the project design.

The Project Partnership Agreement must be approved and signed by the co-sponsors this Fiscal Year. This older project has not had a Project Partnership Agreement signed and new regulations require that the agreement be signed before additional Federal funds are allocated.

Continued erosion of Mordecai Island threatens an abundant diversity of natural wildlife habitats including open marsh, salt ponds, exposed mud flats, shrub-dominated areas and shallow water eelgrass beds. These habitats provide breeding, foraging, nesting and resting areas for many species of migratory birds, including shorebirds, wading birds, raptors and waterfowl. The continual erosion along the western edge of Mordecai Island threatens this rich diversity of natural habitats.

USACE's Operations Division is currently evaluating dredging a shoal in the IWW adjacent to Mordecai island and possibly beneficially placing the material on the island. The larger ecosystem restoration project (led by Planning) will build on this shorter timeframe effort and Planning and Operations will continue to coordinate as design progresses.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Planning & Design Analysis	493	0	493		Allocations thru FY11	443	
Design & Implementation	4,507	1,667	6,174		FY 12 Allocation	0	
Total	5,000	1,667	6,667		FY 13 Allocation	50	
					FY 14 Allocation	50	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Musconetcong River Dam Removals, Bloomsbury, NJ

- **Authority:** Section 206 of the Water Resources Development Act of 1996
- **Congressional District:** NJ-7
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection, Office of Natural Resource Restoration
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** $825,000
- **Federal Funds Appropriated:** $150,000
- **Non-Federal Share:** $290,000

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A view of the Bloomsbury Dam and the upstream impoundment area where natural river habitat conditions have been degraded due to the presence of the dam.

This project is authorized under the Water Resources Development Act of 1996, Section 206, Aquatic Restoration. Work under this authority may carry out aquatic ecosystem restoration projects that will improve the quality of the environment, are in the public interest, and are cost-effective.

This project investigates the removal of the Bloomsbury Dam in an effort to restore the connectivity of 8 miles of a Federally-designated National Wild and Scenic River. This project would restore natural river ecological functions and would re-establish the free passage of aquatic species including resident fish, amphibians, freshwater crustaceans, and macro invertebrates. It would also remove a hazardous impediment and improve kayaking and canoeing conditions on a river that has been identified by the NJDEP Office of Natural Lands Management in its New Jersey Trails Plan as a Waterways Trail.

The Corps completed the feasibility study and environmental assessment in April 2013 recommending partial dam removal.

Musconetcong River Dam Removals, Bloomsbury, NJ

- **Project Goals:** The purpose of this project is to investigating the removal of the Bloomsbury Dam in an effort to restore the connectivity of 8 miles of a Federally-designated National Wild and Scenic River.

The New Jersey Department of Environmental Protection (NJDEP) is interested in sponsoring the project through design and implementation. The Corps is in the process of updating the Project Management Plan and Review Plan necessary to obtain North Atlantic Division (NAD) approval to execute a Feasibility Cost Share Agreement (FCSA) with the NJDEP. This project is part of a larger, river-wide effort to remove dams along the Musconetcong River and restore the passage of migratory fish (shad, alewife, and herring) from the Delaware River.

The Musconetcong River has been federally designated as a National Wild and Scenic River that has outstanding ecological value in free-flowing condition. Bloomsbury Dam is one of three remaining dams on the lower Musconetcong River that acts as an impediment to migratory fish from the Delaware River. A partnership of federal and state agencies and non-profit organizations is currently conducting feasibility studies for removal of the other two dams. When all three of these dams are removed, it will restore 13.3 miles of the Musconetcong River to its natural, free-flowing condition and allow migratory fish to access spawning habitat which they have not been able to reach for over 200 years.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	100	0	100		Allocations thru FY11	132	
Design & Implementation			TBD		FY 12 Allocation	0	
					FY 13 Allocation	28	
					FY 14 Allocation	200	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

New Jersey Intracoastal Waterway, Dredged Hole 34 Restoration, Atlantic City, NJ

- **Authority:** Section 204 of the Water Resources Development Act of 1992
- **Congressional Districts:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Transportation
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $172,000
- **Non-Federal Share:** TBD

Aerial photograph depicting the project site for Dredge Hole 34 including the proposed dredged hole and dredged material locations.

This project was authorized by Section 204, Water Resources Development Act of 1992, as amended. This authority provides for the use of dredged material from new or existing Federal projects to protect, restore, or create aquatic and ecologically related habitats, including wetlands.

This 60-foot deep, anoxic dredged hole was historically excavated in the bay area located behind Atlantic City and adjacent to the NJIWW as a source of borrow material for nearby road and bridge construction. The Dredged Hole 34 Restoration Project involves partially filling the existing dredged hole with dredged material from NJIWW maintenance dredging to within 19 feet of the water surface and restore approximately 16 acres of fisheries habitat.

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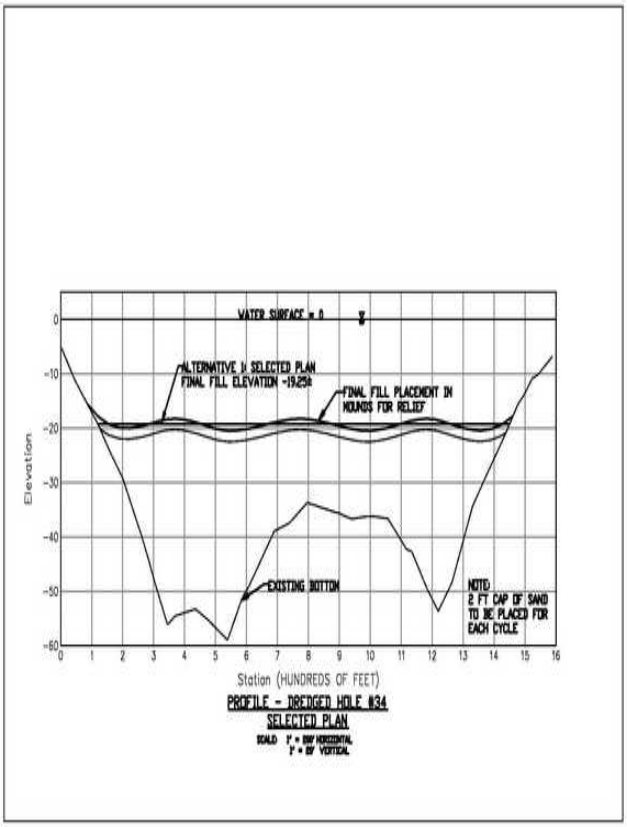
New Jersey Intracoastal Waterway Dredged Hole 34 Restoration, Atlantic City, NJ

- **Project Goals:** The purpose of this project is to partially filling the existing dredged hole with dredged material from NJIWW maintenance dredging to within 19 feet of the water surface and restore approximately 16 acres of fisheries habitat.

The District is coordinating with the New Jersey Department of Environmental Protection (NJDEP and the New Jersey Department of Transportation (NJDOT) to develop a project management plan and identify mutal interests in continuing with this project. FY14 funds, subject to availability, would be used to execute the PPA and initiate plans and specs.



The Dredged Hole 34 Restoration Project involves partially filling the existing dredged hole with dredged material from NJIWW maintenance dredging to within 19 feet of the water surface and restore approximately 16 acres of fisheries habitat.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Design & Implementation	3,716	1,239	4,955		Allocations thru FY11	32	
					FY 12 Allocation	0	
					FY 13 Allocation	50	
					FY 14 Allocation	50	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Pond Creek Salt Marsh Restoration Project, Cape May County, NJ

- **Authority:** Section 1135 of the Water Resources Development Act of 1986
- **Congressional Districts:** NJ-2
- **Proposed Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Agreement:** Projected - October 2014
- **Target Completion Date:**
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $400k spent to date.
- **Non-Federal Share:**

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This project is authorized by Section 1135 of the Water Resources Development Act of 1986, as amended.

The purpose of the Pond Creek Salt Marsh Restoration Project is to restore approximately 270 acres of estuarine intertidal emergent wetland habitat for fish and wildlife resources. This will be accomplished by reintroducing tidal flushing in the lower marsh areas of Pond Creek to eliminate and control common reed (*Phragmites australis*), an exotic and invasive species which has formed an extensive, dense stand throughout most of Pond Creek marsh. Once established, *Phragmites* often out competes native salt marsh vegetation, creating habitat less suitable for wildlife. Control of common reed will allow the reestablishment of native salt marsh vegetation [e.g., smooth cordgrass (*Spartina alterniflora*), salt hay grass (*S. patens*), and spike grass (*Distichlis spicata*)], thus increasing habitat available for a variety of fish and wildlife resources, in particular, the diamondback terrapin (*Malaclemys terrapin*), egrets, herons, shorebirds, and waterfowl.

The Pond Creek marsh (totaling 417 acres) is located along the Delaware Bay and runs north of Sunset Boulevard in Lower Township and in the Borough of West Cape May, Cape May County, New Jersey. The marsh, once a free-flowing estuarine tidal marsh before human disturbance, is part of the State of New Jersey's Higbee Beach Wildlife Management Area.

Pond Creek Salt Marsh Restoration Project, Cape May County, NJ

- **Project Goals:** The purpose of this project is to restore Pond Creek to an estuarine intertidal emergent marsh, dominated by native species such as smooth cord grass (Spartina alterniflora).

The Sponsor is currently developing a conceptual design for this project. Upon completion of these designs, the Corps will review the technical information and if appropriate will pursue execution of a Project Partnership Agreement to complete the designs and award a contract for construction.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Planning & Design Analysis	450		450		Allocations thru FY11	389	
Construction	1,500	650	2,150		FY 12 Allocation	0	
Total	1,950	650	2,600		FY 13 Allocation	50	
					FY 14 Allocation	50	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Restoration of Grassdale, New Castle County, DE

- **Authority:** Section 1135 of the Water Resources Development Act of 1986
- **Congressional Districts:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** $2,600,000
- **Federal Funds Appropriated:** $815,000
- **Non-Federal Share:** $650,000

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The Restoration of Grassdale Project will restore degraded tidal marsh choked by the invasive reed *Phragmites*. Highly valuable wildlife habitat will be restored by re-establishing tidal flow, stabilizing eroding embankments, and creating tidal flats, near Delaware City, Delaware.

This project is authorized under Section 1135 of the Water Resources Development Act of 1986, Public Law 99-662, as amended, Project Modifications for Improvement of the Environment.

Hundreds of acres of marsh were excavated and channelized to create the Chesapeake and Delaware Canal in the early 20th century. The C&D Canal has been operated and maintained by the US Army Corps of Engineers, Philadelphia District, since 1919. The canal was widened, straightened, and deepened, dikes were built, and tide/flap gates were installed. These changes, especially the decrease in tidal flow, created ideal conditions for a highly-invasive reed, Phragmites australis, that eliminated the previously valuable marsh habitat. If nothing is done, the area will remain poor habitat.

The project will restore approximately 50 acres of degraded tidal marsh habitat by re-establishing tidal flow, stabilizing eroding embankments, and creating a combination of open water areas, shallow water habitats, and mud flats. The re-establishment of tidal flow will have a detrimental impact to Phragmites. These restored habitats will serve as foraging habitat for wading birds, waterfowl and other transient species along with a myriad of fish and wildlife species that use the nearby Pea Patch Island heronry and the Delaware Bay estuary.

Restoration of Grassdale, New Castle County, DE

- **Project Goals:** The purpose of this project is to restore approximately 50 acres of degraded tidal marsh habitat by re-establishing tidal flow, stabilizing eroding embankments, and creating a combination of open water areas, shallow water habitats, and mud flats.

FY13 funds are being used to coordinate the draft Project Partnership Agreement (PPA), update the real estate estimate and cost estimate, complete a monitoring plan, and update the Project Management Plan, re-coordinate the 2002 Environmental Assessment with environmental agencies. Additional funds (both Federal and non-Federal) are needed to finalize the project design and construction specifications and award a construction contract.

The Project Partnership Agreement must be approved and signed by the sponsor this Fiscal Year. This older project has not had a Project Partnership Agreement signed and new regulations require that the agreement be signed before additional Federal funds are allocated.

DNREC is considering the possibility of performing the real estate appraisal themselves for in-kind credit. They must provide a Scope of Work to USACE's Real Estate office for approval prior to performing the work.

A pedestrian bridge will be installed over one of the excavated channels so the public can view the restored tidal marsh and see the ecological and aesthetic benefits of the project. The project will compliment surrounding wildlife areas, such as Fort DuPont State Park, the C&D canal greenway, Lums Pond State Park, and Bethel Wildlife Management Area.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	676	0	676		Allocations thru FY11	740	
Design & Implementation	1,274	650	1,924		FY 12 Allocation	0	
Total	1,950	650	2,600		FY 13 Allocation	50	
					FY 14 Allocation	50	
					FY 15 Budget	TBD	
					Balance to Complete	1,110	

Schuylkill River, North Coventry Township, Chester County, PA

- **Authority:** Section 14 of the Flood Control Act of 1946
- **Congressional Districts:** PA-6
- **Non-Federal Sponsor:** North Coventry Township, Chester County, PA
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $145,000
- **Non-Federal Share:** TBD

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Erosion of the right bank of the Schuylkill River along River Road in North Coventry Township, PA.

This project is authorized under Section 14 of the Flood Control Act of 1946, as amended: Emergency Stream Bank Stabilization.

The project site is located along the right bank of the Schuylkill River parallel to River Road between the Pennsylvania State Route 100 and Hanover Street Bridges in North Coventry Township, PA. The proximity of the steep River Road embankment to the Schuylkill River at this location contributes to the continual erosion of the river bank eventually resulting in undermining the road shoulder and ultimately the road, exposing the existing utilities to failure and motorists to the potential danger of driving off the embankment. River Road also provides the only local access to the residential community of South Pottstown. Closure of this local road would force local residents to use U.S. Route 422 adding seven miles to their daily commute.

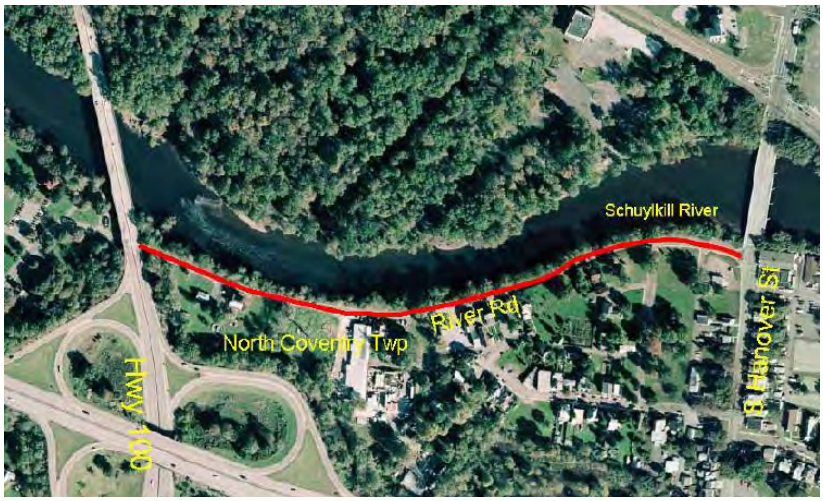
The project consists of bank stabilization of the right bank of the Schuylkill River along River Road between Laurelwood Road and the Hanover Street Bridge. The river bank would be stabilized using a combination of riprap and vegetative cover in a bio-engineering solution known as longitudinal peak stone toe protection (LPSTP) for a total length of about 1,000 feet. An analysis of alternatives and coordination of an environmental assessment will also be required prior to any construction.

Schuylkill River, North Coventry Township, Chester County, PA

- **Project Goals:** The purpose of this project is to protect motorists, pedestrians and exiting utilities by stabilizing the existing eroding stream bank and shoulder of River Road which runs along the Schuylkill River in North Coventry Township, Chester County, PA. High river flow events combined with the steep embankment conditions at the site pose a threat to public safety along the road alignment.

The District is currently coordinating with the North Atlantic Division (NAD) to obtain approval to execute a Project Partnership Agreement with the non-Federal sponsor. Upon execution of the Project Partnership Agreement (PPA) with the Non Federal Sponsor for design and construction, all design and environmental compliance activities necessary for construction will be completed. Environmental activities will include an Environmental Assessment that documents existing conditions and with project conditions, along with more data on potential impacts (cultural resources and HTRW). Permits and formal coordination with resource agencies will occur after the design and implementation PPA is signed. Engineering tasks will include geotechnical characterization of the project site, final project design, and a detailed cost estimate followed by award of the construction contract.

FY14 funds, subject to availability, would be used to execute the PPA, coordinate an environmental assessment, prepare plans and specs, and award a construction contract.



Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	100	0	100		Allocations thru FY11	145	
Design & Implementation	1,400	490	1,890		FY 12 Allocation	0	
					FY 13 Allocation	50	
					FY 14 Allocation	200	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Schuylkill Watershed Restoration, Counties of Carbon, Schuylkill, Lehigh, Berks, Lebanon, Bucks, Montgomery, Chester, Delaware, & Philadelphia, PA

- **Authority:** Section 14 of the Flood Control Act of 1946
- **Congressional Districts:** PA-1, PA-2, PA-6, PA-7, PA-8, PA-11, PA-13, PA-15, PA-16, PA-17
- **Non-Federal Sponsor:** None required
- **Date of Project Agreement:** None required
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $100,000
- **Non-Federal Share:** None required

A degraded stream that has been impacted by acid mine run off from an abandoned coal mine.

This study is authorized under Section 204 of the Water Resources Development Act of 1992, as modified by Section 2037 of WRDA 2007. This authority allows USACE to collaborate with a State in the preparation of a comprehensive State or regional sediment management (RSM) plan within the boundaries of the State. RSM provides the basis for a systems wide approach to sediment management to quantify and manage sediment sources and sinks, minimize dredging requirements and more effectively utilize dredged material as a resource. As a planning and management tool, RSM is a means to identify and involve multiple stakeholders to integrate data on sources of dredged sediment, demands for sediment, and impacts on commerce and the environment to both promote the beneficial uses of dredged sediment and to streamline dredging projects. Using this approach, project managers can use RSM as a tool to decrease overall life-cycle dredging costs while utilizing dredged material in a more environmentally sensitive and cost effective manner.

This is a 100% Federally funded study only authority.

The project will develop a regional sediment management (RSM) plan for the Schuylkill River watershed to identify and evaluate opportunities to beneficially use dredged material from existing Corps disposal sites to restore streams degraded by acid mine drainage from abandoned mines.

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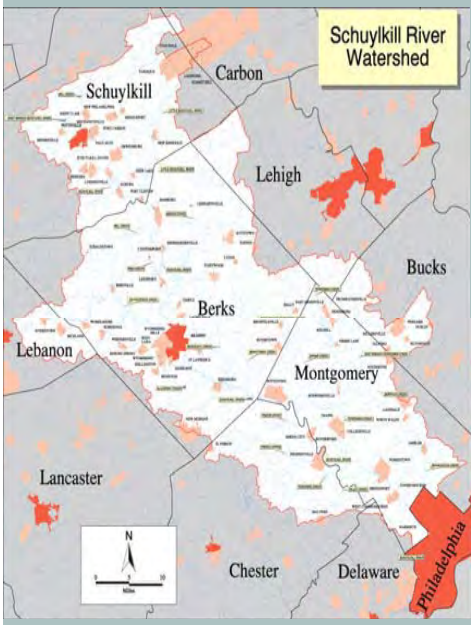
Schuylkill Watershed Restoration, Counties of Carbon, Schuylkill, Lehigh, Berks, Lebanon, Bucks, Montgomery, Chester, Delaware, & Philadelphia, PA

- **Project Goals:** The purpose of this project is to develop a regional sediment management (RSM) plan for the Schuylkill River watershed.

Sediment management practices have historically been used by the U.S. Army Corps of Engineers (USACE) on a project by project basis. This method of management has often resulted in unanticipated consequences since natural systems do not always coincide with project, jurisdictional, or state boundaries or other activities impacting sediment sources. Some of these consequences have included erosion or sedimentation in nearby areas, inefficient planning for dredged material management, and missed opportunities to more cost-effectively manage sediment resources. Recently, however, the USACE and other federal and state resource agencies have begun to look at sediment management from a regional perspective. This systems based approach is aimed at increasing cooperation and coordination among agencies, adaptive management across multiple projects based on shared goals, improved management through the application of best available science and engineering practices, and implementation of policies to achieve maximum long-term economic, social, and environmental benefits.

FY14 funds, subject to availability, would be used to continue coordination and development of the RSM plan.



Schuylkill Watershed - A map of the Schuylkill River Watershed.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	200	0	200		Allocations thru FY11	55	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Budget	50	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Seaside Park, Ocean County, NJ

- **Authority:** Section 103 of the River and Harbor Act of 1962 and PL 113-2
- **Congressional Districts:** NJ-3
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Feasibility Cost Share Agreement:** September 2011
- **Target Completion Date:** November 2017
- **Total Estimated Cost:** $500,000
- **Federal Funds Appropriated:** $300,000
- **Non-Federal Share:** $200,000

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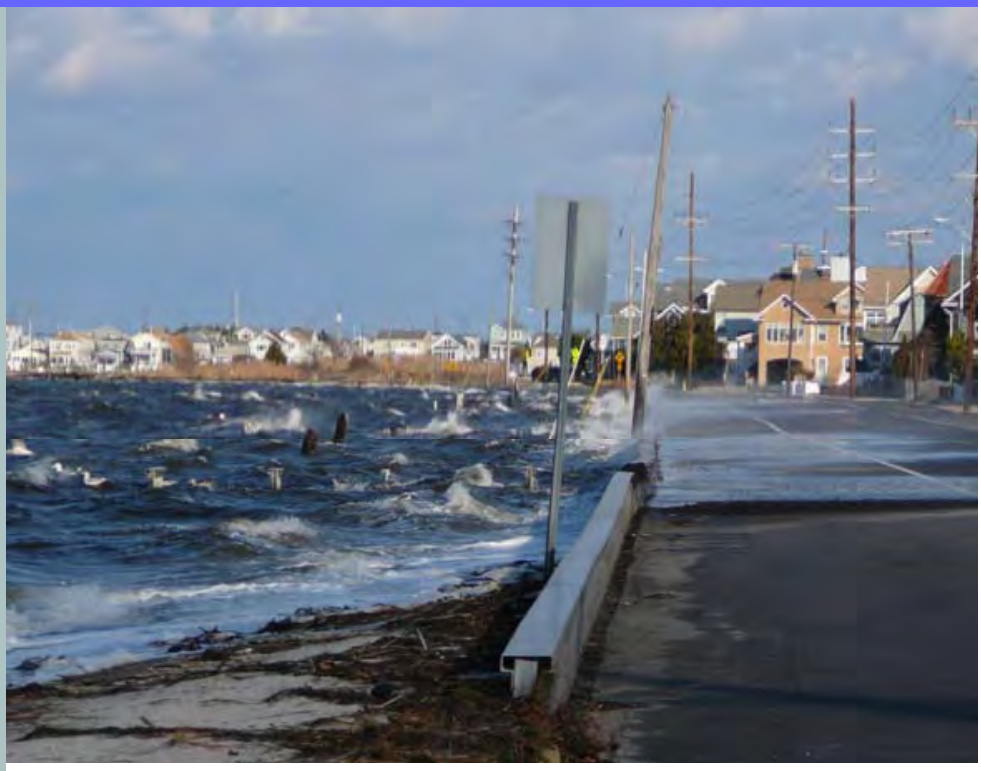


Bayside flood problems are a common issue in Barnegat Bay and tidal bays along New Jersey and Delaware. The solution is usually more complicated than ocean-front areas due to available land area.

The authority for this feasibility study is provided by Section 103 of the River and Harbor Act of 1962, Public Law 87-874, as amended, in accordance with the policies and procedures prescribed by the Chief of Engineers. Section 103 provides authority for the Corps of Engineers to develop and construct small beach erosion and flood damage reduction projects. Each project is limited to a Federal cost of not more than $3 million, including all project-related costs for feasibility studies, planning, engineering, design, and construction.

The study area is located along Barnegat Bay in the Borough of Seaside Park , Ocean County, New Jersey. Seaside Park sits on a barrier island approximately 11 miles north of Barnegat Inlet. The study area includes the bayside shoreline of the Borough of Seaside Park west of Central Avenue and is subject to frequent nuisance flooding from ocean storm surges that propagate into Barnegat Bay via Barnegat Inlet, the dominant tidal connection between the ocean and Barnegat Bay. When storm surge levels in the ocean are of sufficient duration to propagate into Barnegat Bay, the low elevation areas of Seaside Park flood directly, and wind generates waves that pulse additional water into Seaside Park.

The Corps investigated the area in 1995 in a reconnaissance report, with a recommendation to proceed with a Section 103 CAP feasibility study. The NJDEP signed a Feasibility Cost Sharing Agreement for a Section 103 CAP Study in September 2011.

Seaside Park, Ocean County, NJ

- **Hurricane Sandy:** Hurricane Sandy decimated the community of Seaside Park. Response and Recovery efforts by the Community was the top priority for the non-Federal sponsor. Efforts are shifting to the long-term sustainability of Seaside Park.

- **Potential Solutions:** Any solution to the flooding problem must keep bay water out of Seaside Park or get people and infrastructure out of the way of water (structure elevation, relocation, etc.). Solutions on the bay side may be a small beach that needs to be evaluated in terms of response to elevated bay water levels, etc. or it may be structural in nature. The solution proposed in the 1995 Reconnaissance study of Seaside Park was a beachfill and this will be evaluated in the Feasibility study. However, the most economically efficient elevation (maximum NED benefits) of a sandfill or other barrier may not be institutionally acceptable due to esthetics. These challenges will be addressed as we move forward with the Feasibility Study.

The objectives of the Feasibility Phase of the project are to:

- Prepare the Feasibility Report for the project
- Prepare an Environmental Assessment and NEPA documentation for the project,
- Prepare a Project Management Plan (PMP) for the Design and Implementation Phase,
- Develop other supporting plans (e.g. Real Estate Plan, Value Engineering, etc.) as needed for completion of the Feasibility Report.

The District is using the damage information collected by the Borough and FEMA after Hurricane Sandy to rescope the study. After examining the extent of the damages, the District decided to expand the study area to include the entire Borough of Seaside Park. This rescoping is being coordinated with the local sponsor, the New Jersey Department of Environmental Protection, and the Borough of Seaside Park.

There is increased urgency to complete Seaside Park Bayside Beach Erosion and Storm Damage Reduction Feasibility Study and to implement the recommendations, in the wake of Hurricane Sandy within the Project Area.

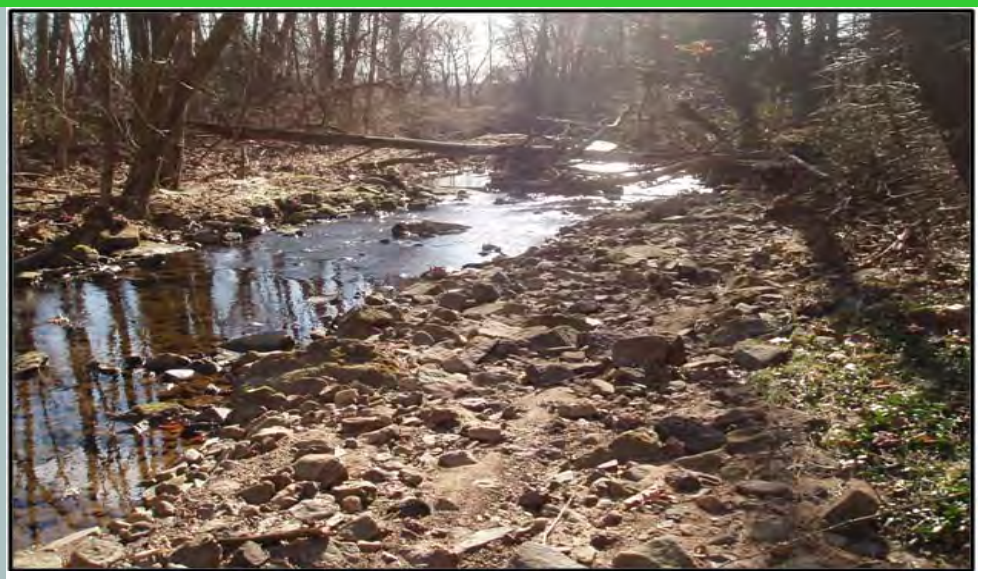
Challenges

One of the technical challenges faced with the project is formulating cost-effective flood protection alternatives that are compatible with highly developed backbay shorelines. Some of the less costly alternatives for raising elevation (e.g., sand berms, geotubes, etc) may not be feasible because they require a large footprint or would interfere with existing infrastructure (docks, marinas, piers, etc). Structural options such as bulkheads, revetments, etc. could be cost prohibitive over entire project reaches.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)	
Feasibility	300	200	500		Allocations thru FY11	100.7
Design & Implementation			TBD		FY 12 Allocation	199.3
					FY 13 Allocation	308
					FY 14 Budget	TBD
					FY 15 Budget	TBD
					Balance to Complete	TBD

Southampton Creek Stream Restoration, Bucks County, PA

- **Authority:** Section 103 of the River and Harbor Act of 1962
- **Congressional Districts:** PA-8
- **Non-Federal Sponsor:** Upper Southampton Township
- **Date of Project Agreement:** November 30, 2009
- **Target Completion Date:** TBD
- **Total Estimated Cost:** $987,424
- **Federal Funds Appropriated:** $751,157
- **Non-Federal Share:** $345,598



Fueled by increased development and increased storm water runoff upstream, the Creek has eroded its bed and banks and has become generally disconnected from the floodplain that is its natural ally in absorbing and temporarily storing water and thereby promoting a healthy ecosystem.

This project is authorized under Section 206, Water Resources Development Act of 1996.

The goal of the Southampton Creek Ecosystem Restoration Project, Upper Southampton Township, is to restore bank stability, improve aquatic habitat, and re-establish the sediment transport cycle in Southampton Creek. The project will improve Southampton Creek using natural stream channel design to restore the riparian ecosystem along approximately one mile of stream in a highly developed suburban section of Upper Southampton Township, Bucks County, PA. Design features include in stream structures, such as rock and log vanes, that deflect flow away from eroding banks while simultaneously providing fish habitat. In some sections, the creek will be shifted to a new streambed so it will be closer to the elevation of the adjacent floodplain and thus easier to interact with it. In these cases, the old stream bed will be used as a wetland. The design will incorporate stream restoration features and wetlands to retain and absorb storm water. Healthy vegetation surrounding the creek (the riparian buffer) and on the stream banks will filter storm water runoff, preventing sediment and pollutants from running into the creek.

After the design was finalized, the sponsor requested project termination due to the limited number of residents that chose to participate in the project. As per the sponsor's request, the Corps is conducting financial closeout and will provide a refund if funds remain after verifying the sponsor's in-kind credit requests.

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Southampton Creek Stream Restoration, Bucks County, PA

- **Project Goals:** The purpose of this project is to restore bank stability, improve aquatic habitat, and re-establish the sediment transport cycle in Southampton Creek.

Financial closeout is in progress. The sponsor provided all in-kind credit documentation. After the final accounting is performed, if it is found that there are excess non-Federal funds, the Corps will refund the excess amount to Southampton Township within 90 calendar days of the date of completion of such accounting.

If nothing is done and the stream is left in its present condition, the stream will continue to degrade; the banks will continue to erode, which may lead to additional flooding. The improvement of the water quality in Southampton Creek will have many positive impacts to the riparian eco-system. The sponsor has requested termination of the project due to the limited number of residents supporting the project. The original project length was reduced by two-thirds based upon the willingness of the local residents to sign real estate easements. In May 2013, Upper Southampton Township sent a letter requesting termination of the project.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	100	0	100		Allocations thru FY11	732	
Design & Implementation	651	345	887		FY 12 Allocation	754.9	
Total	751	345	987		FY 13 Allocation	-103	Sponsor de-cided to termi-nate project on May 21, 2013
					FY 14 Budget	0	
					FY 15 Budget	0	
					Balance to Complete	0	

Toad Creek, Borough of Topton, Berks County, PA

- **Authority:** Section 14 of the Flood Control Act of 1946
- **Congressional Districts:** PA-6
- **Non-Federal Sponsor:** Borough of Topton, Berks County, PA
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:**
- **Non-Federal Share:**

Flows under State Route 1010 (Weiss Street) from Toad Creek are continually eroding Topton Borough's municipal recreation facility property.

This project is authorized under Section 14 of the Flood Control Act of 1946, as amended: Emergency Stream Bank Stabilization.

The project site is located along the banks of Toad Creek at the Topton Borough municipal facilities between Weiss Street and the Home Avenue Bridge in Berks County, PA. The project consists of stabilizing the banks of Toad Creek along Topton's municipal facilities with riprap and vegetative cover using bio-engineering processes where feasible. The project area begins at the existing outfall pipe headwall below State Route 1010 (Weiss Street), and extends approximately 200' downstream towards Home Avenue.

The project is the proposed stabilization of the banks of the creek along the Borough's municipal recreation facilities between Weiss Street and Home Avenue. The creek banks along this section are failing and need to be stabilized to protect the borough's recreational infrastructure. An engineering investigation has been performed and a recommended solution to the problem developed along with a cost estimate for construction of the erosion protection for the borough's facilities.

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Toad Creek, Borough of Topton, Berks County, PA

- **Project Goals:** The purpose of this project is the proposed stabilization of the banks of the creek along the Borough's municipal recreation facilities between Weiss Street and Home Avenue.

The Corps completed an Initial Appraisal Report and determined there is a Federal interest in advancing this project to the next phase. Because there are elements of public infrastructure comprising the Borough of Topton's municipal facilities which are eligible for protections under Section 14 program criteria, and at least one viable protection measure was found to be more cost effective than the no Federal Action alternative, the Toad Creek, Topton Borough, Berks County, PA – Emergency Streambank Protection Section 14 project is recommended for advancement to the Design and Implementation phase.

The non-Federal sponsor is very interested in the project and has received offers of financial support for the required cost share from PADEP and the Berks County Conservancy. FY14 funds, subject to availability, would be used to complete the feasibility phase, execute the Project Partnership Agreement with the non-Federal sponsor, and complete the plans and specs.

Total Estimated Project Cost ($000)	**FEDERAL**	**NON-FEDERAL**	**TOTAL**		**Summarized Federal Financial Data ($000)**		
Feasibility	100	0	100		Allocations thru FY11	42	
Design & Implementation	TBD	TBD	TBD		FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	50	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Tookany Creek, Cheltenham Township, Montgomery County, PA

- **Authority:** Section 205 of the Flood Control Act of 1948
- **Congressional Districts:** PA-2, PA-13
- **Non-Federal Sponsor:** Cheltenham Township, Montgomery County, PA
- **Date of Project Agreement:**
- **Target Completion Date:** 2014
- **Total Estimated Cost:** $845,000
- **Federal Funds Appropriated:** $360,000
- **Non-Federal Share:** $190,000

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Portions of the creek are channelized in concrete flumes. This might appear to help the problem in one area, but only pushes the flooding problems downstream.

This project is authorized under Section 205, Flood Control Act of 1948, as amended.

The study area will comprise the Tookany Creek watershed, including, hydrologic analyses within Cheltenham and Abington Townships and Jenkintown and Rockledge Boroughs, hydraulic analyses within Cheltenham Township, environmental impacts within Cheltenham and Abington Townships and Jenkintown and Rockledge Boroughs, and economic analyses within Cheltenham Township. The formulation process involves establishing plan formulation rationale, identification and screening of alternatives, assessment and evaluation of plans responsive to identified problems and needs. The study investigates both structural and non-structural solutions to the flooding problem.

Structural measures decrease flood damage by physically limiting the flood-prone area. Non-structural measures reduce the potential for damages for structures and contents in floodplains. These measures do not significantly alter the depth or extent of flooding, but rather the negative impacts on houses and possessions.

Tookany Creek, Cheltenham Township, Montgomery County, PA

- **Project Goals:** The purpose of this project is to define a technically feasible, economically justified and environmentally acceptable solution to the flooding problems along Tookany Creek in Cheltenham Township and the surrounding areas.

The District is currently finalizing the feasibility study and anticipates a final report by June 2014. Following approval of the report and recommendations by the Township, the Corps will pursue executing a Project Partnership Agreement (PPA) to implement construction. Additional funding in FY14 and FY15 would be required.

A pump house along Tookany Creek in Cheltenham drains water from the leeward side of the levee into the main channel. However, during period of high flow, the water has no where to drain.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	472.5	372.5	845		Allocations thru FY11	100	
					FY 12 Allocation	59	
					FY 13 Allocation	200	
					FY 14 Allocation	113	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

Trenton Marine Terminal, City of Trenton, Mercer County, NJ

- **Authority:** Section 14 of the Flood Control Act of 1946
- **Congressional Districts:** NJ-12
- **Non-Federal Sponsor:** City of Trenton
- **Date of Project Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** $825,000
- **Federal Funds Appropriated:** $100,000
- **Non-Federal Share:** $290,000

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Collapsed section of the pier at the Trenton Marine Terminal

This project is authorized by Section 14 of the Flood Control Act of 1946, as amended. The purpose of Section 14 is to protect public works and non-profit public facilities from streambank and shoreline erosion. Facilities that are eligible for protection include "known historic properties whose significance has been demonstrated by a determination of eligibility for listing on, or actual listing on, the National Register of Historic Places" (ER 1105-2-100, Appendix F, Section III, F-23, b.) Federal funding for each Section 14 project is limited to $1,500,000 (as amended by Section 2023 of the Water Resources Development Act of 2007, P.L. 110-114).

The project consists of proposed bank stabilization and protection along the left bank of the Delaware River to protect a public park that is listed on the National Register of Historic Places. The site will be investigated and geotechnical analyses performed to determine the cause and solution for the existing bank instability and propose an engineering solution. An environmental assessment will also be required prior to construction.

Trenton Marine Terminal, City of Trenton, Mercer County, NJ

- **Project Goals:** The purpose of this project is of a proposed bank stabilization and protection along the left bank of the river to protect a public park that is listed on the National Register of Historic Places.

The existing pier structure at the Terminal is an open wharf type, also known as a "quay" structure. It is constructed of wood piles driven below the channel bottom with a top deck that is a reinforced concrete slab and a lower deck constructed of wood sheeting on wood frame members attached to the wood piles. The area between the two decks contains backfill material and the area below the lower deck is open to water and tidal action. A concrete gravity wall is located on the waterside of the structure between the upper deck and lower deck. The Corps completed an Initial Appraisal Report (IAR) and determined there is sufficient Federal interest to pursue a project under Section 14.

FY14 funds, subject to availability, would be used to execute a Project Partnership Agreement with the non-Federal sponsor and complete the design. Upon execution of the PPA with the non-Federal sponsor for design and construction, all design and environmental compliance activities necessary for construction will be completed. Environmental activities will include an Environmental Assessment that documents existing conditions and with project conditions, along with more data on potential impacts (historical resources and Hazardous Toxic Radioactive Waste). Permits and formal coordination with resource agencies will occur after the design and implementation PPA is signed. Engineering tasks will include geotechnical characterization of the project site, final project design, and a detailed cost estimate followed by award of the construction contract.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility	100	0	100		Allocations thru FY11	74	
Design & Implementation			TBD		FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	26	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

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US Army Corps
of Engineers
Philadelphia District

Construction General (CG)

Construction, General (CG)
Construction projects are construction and major rehabilitation projects that relate to navigation, flood control, water supply, hydroelectric power, and environmental restoration. This also includes projects authorized under the Continuing Authorities Program (CAP).

- Environmental Infrastructure
- Environmental Restoration or Compliance
- Flood and Storm Damage Reduction
- Flood Control
- Hydropower
- Navigation
- Other Authorized Project Purposes (including but not limited to Environmental Restoration or Compliance, Environmental Infrastructure, and Hydropower)
- Shore Protection

Color Code	
State	**Color**
Delaware	Red
New Jersey	Blue
New York	Black
Pennsylvania	Green
Multiple	Purple

Cape May Inlet to Lower Township, NJ

- **Authority:** PL 168 of Rivers and Harbor Act of 1907 & PL 99-662 of the Water Resources Development Act of 1986
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** July 1991
- **Target Completion Date:** On-going construction thru 2039
- **Total Estimated Cost:** TBD
- **Federal Funds (including USCG) Appropriated:** $40,311,000
- **Non-Federal Share:** $12,951,000

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Completion of initial construction and continued periodic nourishment by the Corps maintains a beach in Cape May after it was lost to erosion over the years.

APPROPRIATION / PHASE:
Construction, General (Continuing Construction, Periodic Nourishment)

BUSINESS PROGRAM:
Flood and Coastal Storm Damage Reduction (with Mitigation of Federal Navigation Project)

LOCATION: The project is located on the Atlantic coast of New Jersey in Cape May County, extending from the southwest jetty of Cape May Inlet to 3rd Ave. in Cape May City. It includes the communities of the City of Cape May and Lower Township, and the US Coast Guard Training Center.

PROJECT DESCRIPTION: The project provides flood and coastal storm damage reduction to the above-mentioned communities and USCG Training Center. The project consists of initial beachfill (25 to 180-foot wide berm at elevation +8 feet NGVD) with periodic nourishment on a 2-year cycle, extension of 17 storm water outfalls, reconstruction of 7 groins and construction of two new groins, and a shoreline monitoring program for the project area. Construction of a 2,560-foot rubble mound weir-breakwater is deferred pending demonstration of need.

Cape May Inlet to Lower Township, NJ

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction to the communities and USCG Training center.

PROJECT STATUS: FY 11 funds were used to complete the 9th periodic nourishment cycle. This contract was awarded in September 2011 and completed in January 2012. The 10th periodic nourishment cycle originally scheduled for FY 13 will be rescheduled 2 years from the completion of the repair and restoration work currently scheduled and described below in response to Hurricane Sandy. The 2 years is based on the periodic renourishment cycle. This would tentatively be FY15.

Between October 27 & 30, 2012, Hurricane Sandy caused significant damage to the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. FCCE - Flood Control and Coastal Emergencies funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. Both the PIR and Addendum were approved.

A contract to complete the repairs and restoration was awarded in April 2013 with physical construction beginning in November 2013 and completed on 18 Jan 14.

Timeline	Start	Complete	Comments
Initial Construction		Jul-91	
8th Periodic Nourishment	Oct-08	Mar-09	Truck fill
9th Periodic Nourishment	11-Oct	Jan-12	
10th Periodic Nourishment	TBD	TBD	Scheduled for FY 15

Total Estimated Project Cost ($000)	Corps ($000)	USCG	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	91,320	51,786	143,106	3,321	146,427		Allocations thru FY11	36,536	
							FY 12 Allocation	200	
							FY 13 Allocation	200	
							FY 14 Allocation	200	
							FY 15 Budget	TBD	
							Balance to Complete	54,184	

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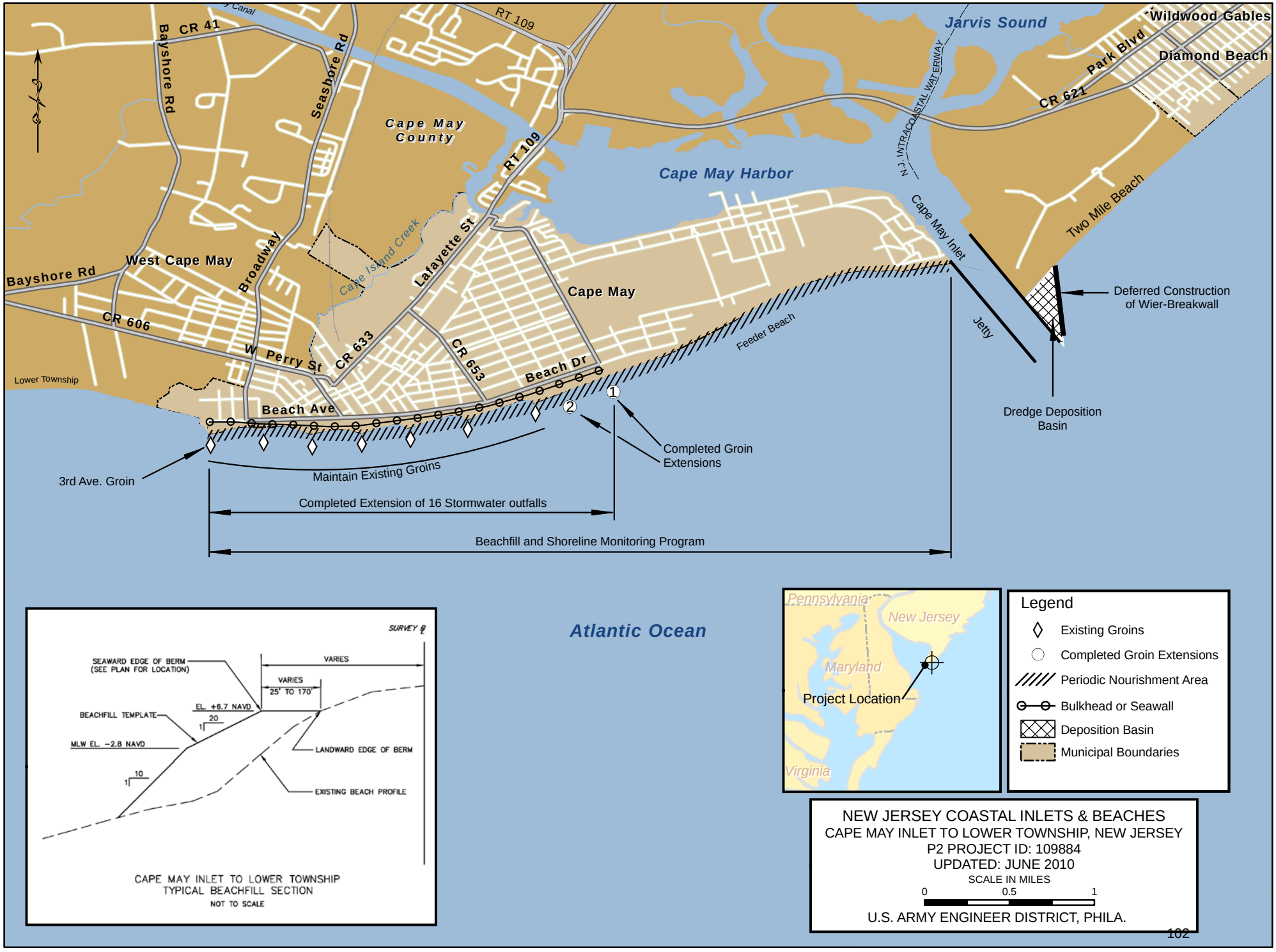

Legend

- Existing Groins
- Completed Groin Extensions
- Periodic Nourishment Area
- Bulkhead or Seawall
- Deposition Basin
- Municipal Boundaries

NEW JERSEY COASTAL INLETS & BEACHES
CAPE MAY INLET TO LOWER TOWNSHIP, NEW JERSEY
P2 PROJECT ID: 109884
UPDATED: JUNE 2010
SCALE IN MILES
0 0.5 1
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Bay Coastline, Broadkill Beach, DE

- **Authority:** Section 101 of the Water Resources Development Act of 1999
- **Congressional District:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control
- **Date of Project Agreement: TBD**
- **Target Completion Date:** TBD—Will be 50 years from advertisement of 1st construction contract
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $683,000
- **Non-Federal Share:** $130,00

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Aerial View of Broadkill Beach, DE

This project was authorized by the House Committee Resolution dated 01 October 1986.

The Delaware Bay Coastline, DE & NJ – Broadkill Beach, DE project was authorized for construction by Title I, Section 101 (a) (11) of WRDA 1999. The plan proposed in the final feasibility report for flood and coastal storm damage reduction at Broadkill Beach is a 100 foot wide berm with an elevation of +8.0 feet NGVD, and a dune with an elevation of +16.0 feet NGVD over a total project length of 14,600 feet. The selected plan includes dune grass, dune fencing and suitable advance beach fill and periodic nourishment every five years to ensure the integrity of the design. The estimated initial project cost is $14.3 million. The PED phase was completed in FY01 and consisted of completion of detailed plans and specifications for those features recommended in the feasibility report.

Delaware Bay Coastline, Broadkill Beach, DE

- **Project Goals:** The purpose of this project provides forhurricane and coastal storm damage reduction at Broadkill Beach, dune grass, dune fencing, and suitable advance beach fill and periodic nourishment every five years.

As part of the initial construction of the Delaware River Main Channel Deepening there is an opportunity to complete initial construction as a beneficial use of dredge material project. The Corps recently completed the work with DNREC and the local community on the necessary coordination and real estate requirements. This plan depends on adequate funding for the Delaware River Main Channel Deepening. The current schedule has the advertisement of the construction contract in March 2014. If initial construction is completed as part of the Delaware Deepening, the Corps (after construction) would then complete a Limited Reevaluation Report (LRR) with this change to support the Project Partnership Agreement (PPA) development. LRR are post authorization studies that evaluate a specific portion of the approved plan under current policies, criteria and guidelines, and may be limited to economics, environmental effects or, in rare cases, project formulation. A LRR documents the results of the analysis undertaken. The PPA will be necessary for future renourishment.

If initial construction is not completed as beneficial use of dredged material from the Delaware Deepening then an adequate funding stream will be needed to complete initial construction. Once that funding stream has been identified the LRR will be completed; PPA developed and executed; acquisition of the necessary real estate; completion of plans and specifications; and advertisement and award of the construction contract.

Timeline	Start	Complete	Comments
Initial Construction	TBD	TBD	Dependent on Adequate funding

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Initial Construction			TBD		Allocations thru FY11	634	
					FY 12 Allocation	49	
					FY 13 Allocation	0	
					FY 14 Budget	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

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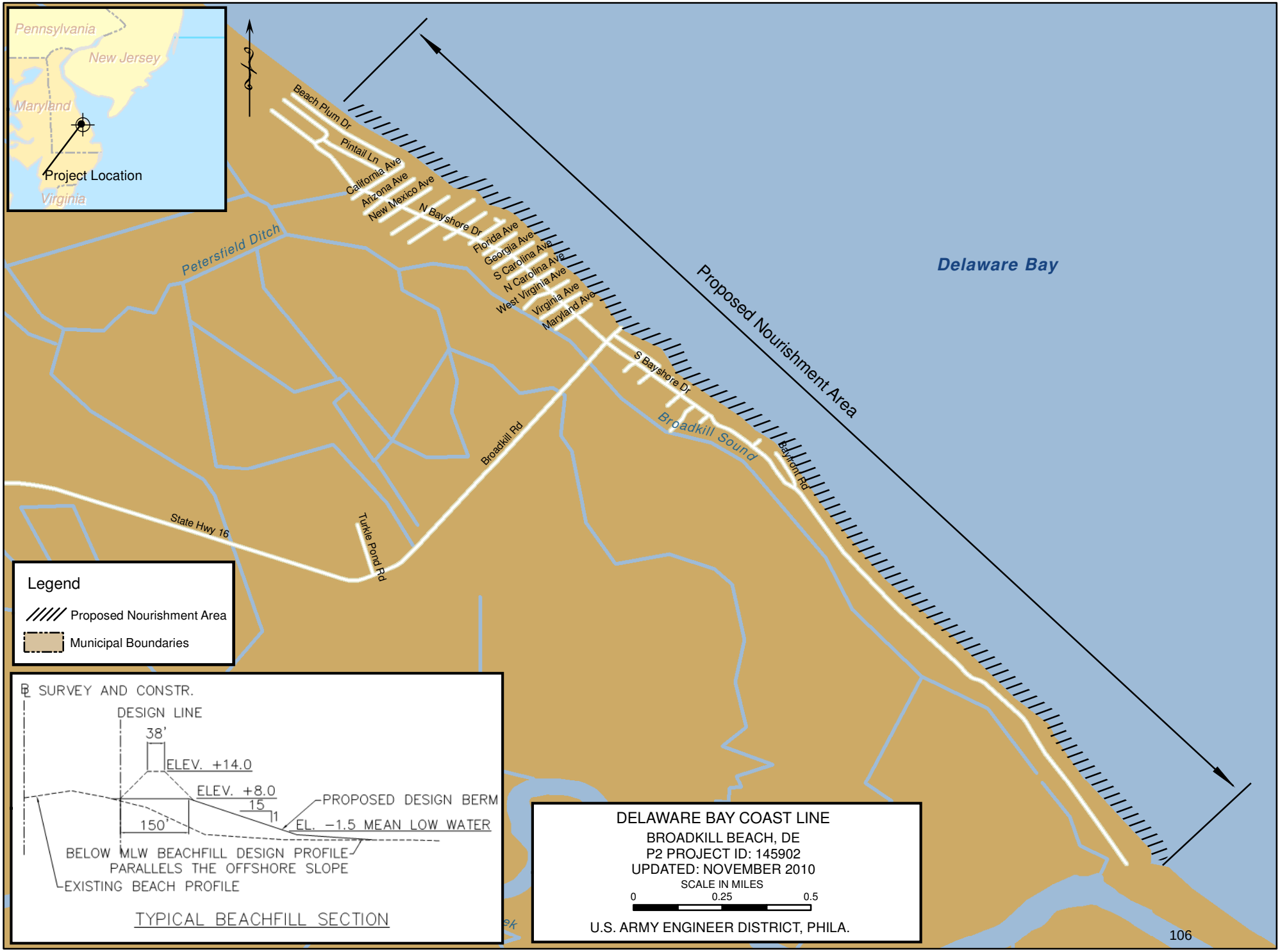
Pennsylvania
New Jersey
Maryland
Virginia
Project Location
Beach Plum Dr
Pintail Ln
California Ave
Arizona Ave
New Mexico Ave
N Bayshore Dr
Florida Ave
Georgia Ave
S Carolina Ave
N Carolina Ave
West Virginia Ave
Virginia Ave
Maryland Ave
S Bayshore Dr
Petersfield Ditch
Delaware Bay
Proposed Nourishment Area
Broadkill Sound
Bayfront Rd
Broadkill Rd
State Hwy 16
Turkle Pond Rd
Legend
Proposed Nourishment Area
Municipal Boundaries
B.L. SURVEY AND CONSTR.
DESIGN LINE
38'
ELEV. +14.0
ELEV. +8.0
15
1
150'
PROPOSED DESIGN BERM
EL. -1.5 MEAN LOW WATER
BELOW MLW BEACHFILL DESIGN PROFILE
PARALLELS THE OFFSHORE SLOPE
EXISTING BEACH PROFILE
TYPICAL BEACHFILL SECTION
DELAWARE BAY COAST LINE
BROADKILL BEACH, DE
P2 PROJECT ID: 145902
UPDATED: NOVEMBER 2010
SCALE IN MILES
0
0.25
0.5
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Bay Coastline, DE & NJ, Oakwood Beach , NJ

- **Authority:** Title I, Section 101 (b)(5) of the Water Resources Development Act of 1999
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Agreement:** Sched for April 2014
- **Target Completion Date:** TBD—Will be 50 years from advertisement of 1st construction contract
- **Total Estimated Cost:** $12.207M
- **Federal Funds Appropriated:** $343,000 (Not Including PL 113 -2 Funding)
- **Non-Federal Share:** $114,000

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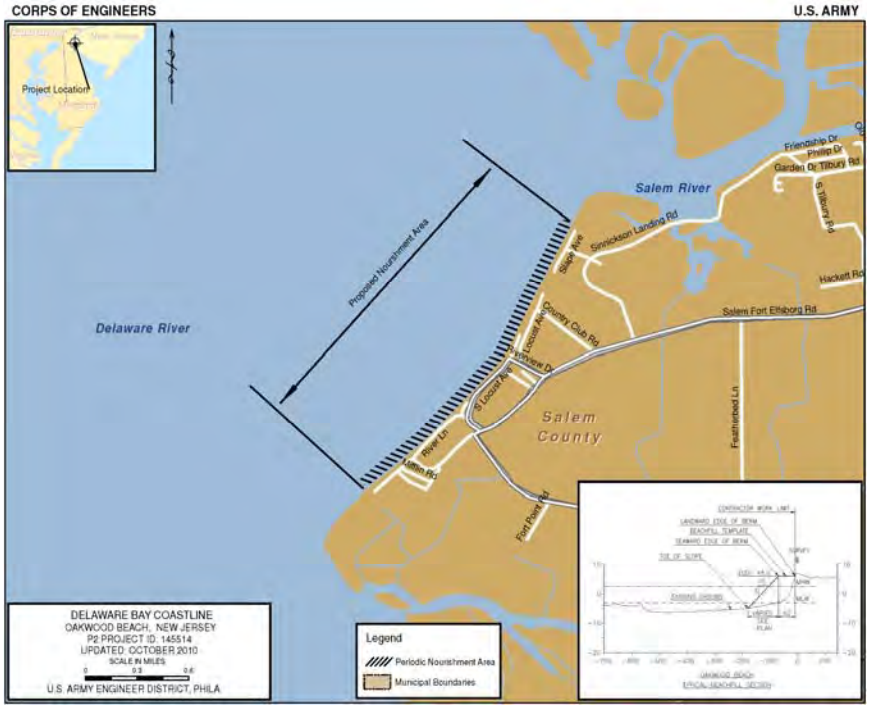

Oakwood Beach, NJ — Project Area

The Oakwood Beach, NJ project was authorized for construction by Title I, Section 101 (b) (5) of WRDA 1999.

The plan for flood and coastal storm damage reduction at Oakwood Beach is a 50-foot wide berm at an elevation of +6.0 feet NAVD over a project length of 9,500 lineal feet. The plan includes suitable advance beach fill and periodic nourishment every eight years to ensure the integrity of the design. The source of sand for the initial construction and periodic nourishment is the Delaware River Main channel. This project is not a component of the Delaware River Main Channel Deepening project. The estimated initial project cost is $12 million.

FY 01 funds of $222,000 were used to complete PED. FY12 funds were reprogrammed into the project to conduct project development team meetings and sponsor coordination.

Delaware Bay Coastline, DE & NJ, Oakwood Beach , NJ

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction at Oakwood Beach, which includes a suitable advance beach fill and periodic nourishment every eight years.

Between October 27 & 30, 2012, Hurricane Sandy caused damage to the Delaware coast from Lewes Beach to Fenwick Island and up the Delaware Bay. This project was determined to be eligible for P.L. 113 -2 2013 Disaster Relief Appropriations Act (Hurricane Sandy) funds as an Authorized but Unconstructed project. The term "authorized but unconstructed project" refers to previously authorized projects for which no physical construction has occurred as well as projects that contain elements where construction has not been completed.

$350,000 has been received to begin the process towards initiation and completion of initial construction. These funds are being used to complete the necessary steps towards initial construction. These steps include completion the Limited Reevaluation Report; develop, approve and execute the Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contract.

A LRR is a post authorization study that evaluates a specific portion of the approved plan under current policies, criteria and guidelines, and may be limited to economics, environmental effects or, in rare cases, project formulation. A LRR documents the results of the analysis undertaken.

Timeline	Start	Complete	Comments
Initial Construction	TBD	TBD	Dependent on Adequate funding

Total Estimated Initial Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	7,935	4,272	12,207		Allocations thru FY11	308	
					FY 12 Allocation	35	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	7,592	

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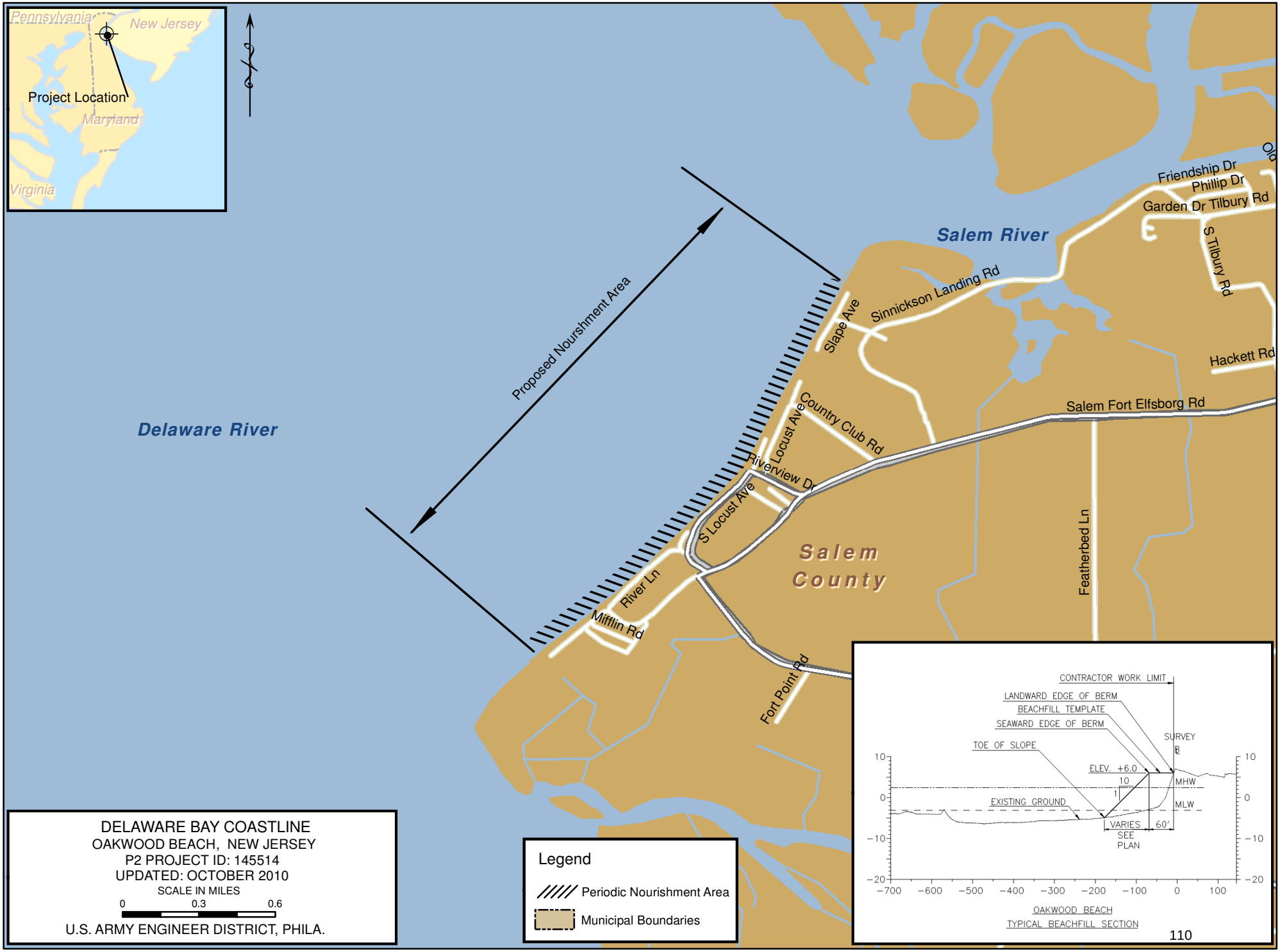
Pennsylvania
New Jersey
Project Location
Maryland
Virginia
Delaware River
Salem River
Proposed Nourshment Area
Sinnickson Landing Rd
Slape Ave
Friendship Dr
Phillip Dr
Garden Dr Tilbury Rd
S Tilbury Rd
Hackett Rd
Salem Fort Elfsborg Rd
Country Club Rd
Riverview Dr
S Locust Ave
Locust Ave
River Ln
Mifflin Rd
Fort Point Rd
Featherbed Ln
Salem County
DELAWARE BAY COASTLINE
OAKWOOD BEACH, NEW JERSEY
P2 PROJECT ID: 145514
UPDATED: OCTOBER 2010
SCALE IN MILES
0 0.3 0.6
U.S. ARMY ENGINEER DISTRICT, PHILA.
Legend
Periodic Nourishment Area
Municipal Boundaries
CONTRACTOR WORK LIMIT
LANDWARD EDGE OF BERM
BEACHFILL TEMPLATE
SEAWARD EDGE OF BERM
TOE OF SLOPE
SURVEY
ELEV. +6.0
10
1
MHW
MLW
EXISTING GROUND
VARIES
60'
SEE PLAN
10
0
−10
−20
−700 −600 −500 −400 −300 −200 −100 0 100
OAKWOOD BEACH
TYPICAL BEACHFILL SECTION

Delaware Bay Coastline, DE & NJ, Reeds Beach and Pierces Point, NJ

- **Authority:** Title I, Section 101 (b)(6) of the Water Resources Development Act of 1999.
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $1,039,000
- **Non-Federal Share:** $108K

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Delaware Bay Coastline between Reeds Beach and Pierces Point

The Reeds Beach and Pierces Point project was authorized for construction by Title I, Section 101 (b) (6) of WRDA 1999.

The plan for the purpose of ecosystem restoration at Reeds Beach and Pierces Point is an 80-foot wide berm at an elevation of +5.5 feet NAVD over a project length of 6,800 feet. The plan entails a one-time placement of sand for horseshoe crab and shorebird habitat.

With the FY 2006 funds, the Corps completed a Limited Reevaluation Report (LRR) in July 2006. Limited re-evaluation reports (LRR) are post authorization studies that evaluate a specific portion of the approved plan under current policies, criteria and guidelines, and may be limited to economics, environmental effects or, in rare cases, project formulation. A LRR documents the results of the analysis undertaken. The LRR for this project updated costs and demonstrated continued project viability.

FY 2006 funds were also used to develop a Draft Project Partnership Agreement. This project has not received funding since FY 06. The initiation of initial construction is dependent on the establishment of an adequate funding stream. The next steps toward initial construction once ade-

Delaware Bay Coastline, DE & NJ, Reeds Beach and Pierces Point, NJ

- **Project Goals:** The purpose of this project is to provide ecosystem restoration at Reeds Beach and Pierces Point, with a one-time placement of sand for horseshoe crab and shorebird habitat.

quate funding is received is to update the 2006 LRR; approve and execute the Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contract.

In order to proceed, the Corps requires additional funding to support initial construction. The current initial construction costs need to be reviewed based on impacts from Hurricane Sandy to account for changed initial conditions based on the damages caused by the storm.

Horseshoe Crabs

Timeline	Start	Complete	Comments
Initial Construction	TBD	TBD	Dependent on Adequate funding

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	6,090	3,284	9,374		Allocations thru FY11	1,039	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	5,051	

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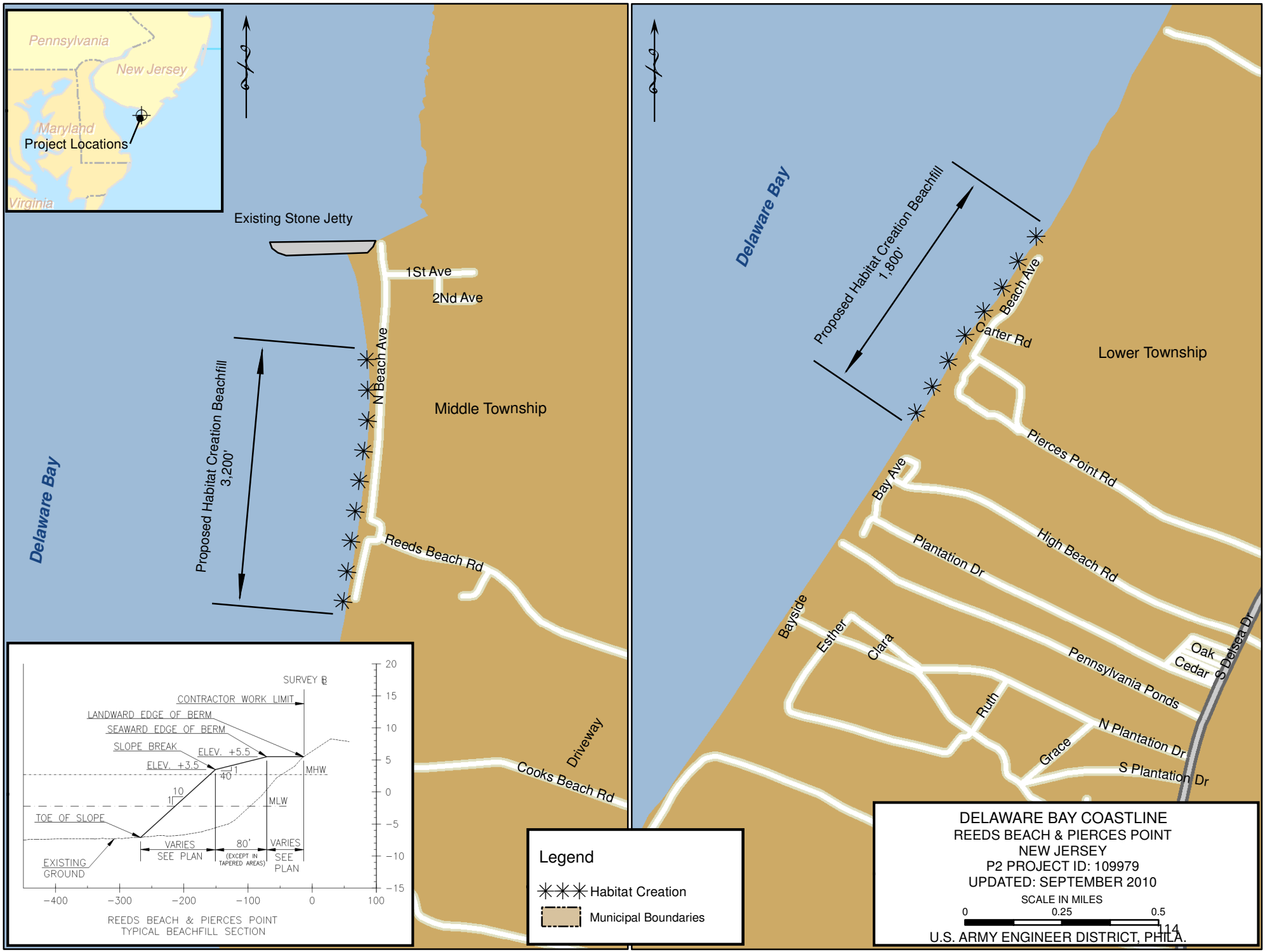
Pennsylvania
New Jersey
Maryland
Virginia
Project Locations
Existing Stone Jetty
1St Ave
2Nd Ave
N Beach Ave
Middle Township
Delaware Bay
Proposed Habitat Creation Beachfill
3,200'
Reeds Beach Rd
Driveway
Cooks Beach Rd
Proposed Habitat Creation Beachfill
1,800'
Beach Ave
Carter Rd
Lower Township
Pierces Point Rd
Bay Ave
High Beach Rd
Plantation Dr
Bayside
Esther
Clara
Ruth
Grace
Pennsylvania Ponds
N Plantation Dr
S Plantation Dr
Oak
Cedar
S Delsea Dr
SURVEY
CONTRACTOR WORK LIMIT
LANDWARD EDGE OF BERM
SEAWARD EDGE OF BERM
SLOPE BREAK
ELEV. +5.5
ELEV. +3.5
MHW
MLW
TOE OF SLOPE
EXISTING GROUND
VARIES SEE PLAN
80'
(EXCEPT IN TAPERED AREAS)
VARIES SEE PLAN
REEDS BEACH & PIERCES POINT
TYPICAL BEACHFILL SECTION
Legend
Habitat Creation
Municipal Boundaries
DELAWARE BAY COASTLINE
REEDS BEACH & PIERCES POINT
NEW JERSEY
P2 PROJECT ID: 109979
UPDATED: SEPTEMBER 2010
SCALE IN MILES
0 0.25 0.5
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Bay Coastline, DE & NJ, Villas and Vicinity, NJ

- **Authority:** Title I, Section 101 (a)(14) of the Water Resources Development Act. Of 1999.
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $1,277,000
- **Non-Federal Share:** $255,000

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Delaware Bay in the vicinity of the Villas.

Authorized under Title I, Section 101 (a) (14) of WRDA 1999.

The plan for the purpose of ecosystem restoration at Villas and Vicinity is an 80-foot wide berm over a project length of 29,000 feet. The plan entails a one-time placement of sand for horseshoe crab and shorebird habitat.

FY04 funds were added to initiate construction. FY06 funds were used to continue the Limited Reevaluation Report (LRR). LRR are post authorization studies that evaluate a specific portion of the approved plan under current policies, criteria and guidelines, and may be limited to economics, environmental effects or, in rare cases, project formulation. A LRR documents the results of the analysis undertaken. For this project the LRR updated costs and demonstrated a continued project viability.

This project has not received funding since FY 06. The initiation of initial construction is dependent on the establishment of an adequate funding stream. The next steps toward initial construction once adequate funding is received is to complete the LRR; develop, approve and execute the Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contract.

Delaware Bay Coastline, DE & NJ, Villas and Vicinity, NJ

- **Project Goals:** The purpose of this project provides ecosystem restoration at Villas and the Vicinity, with a one-time placement of sand for horse-shoe crab and shorebird habitat.

Hurricane Sandy struck the Mid-Atlantic coastline in October 2012 causing widespread damage. The Corps will need to update the LRR to adjust initial construction costs based on changed initial conditions resulting from the storm.

Timeline	Start	Complete	Comments
Initial Construction	TBD	TBD	Dependent on Adequate funding

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	9,790	4,607	14,397		Allocations thru FY11	1,277	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	8,513	

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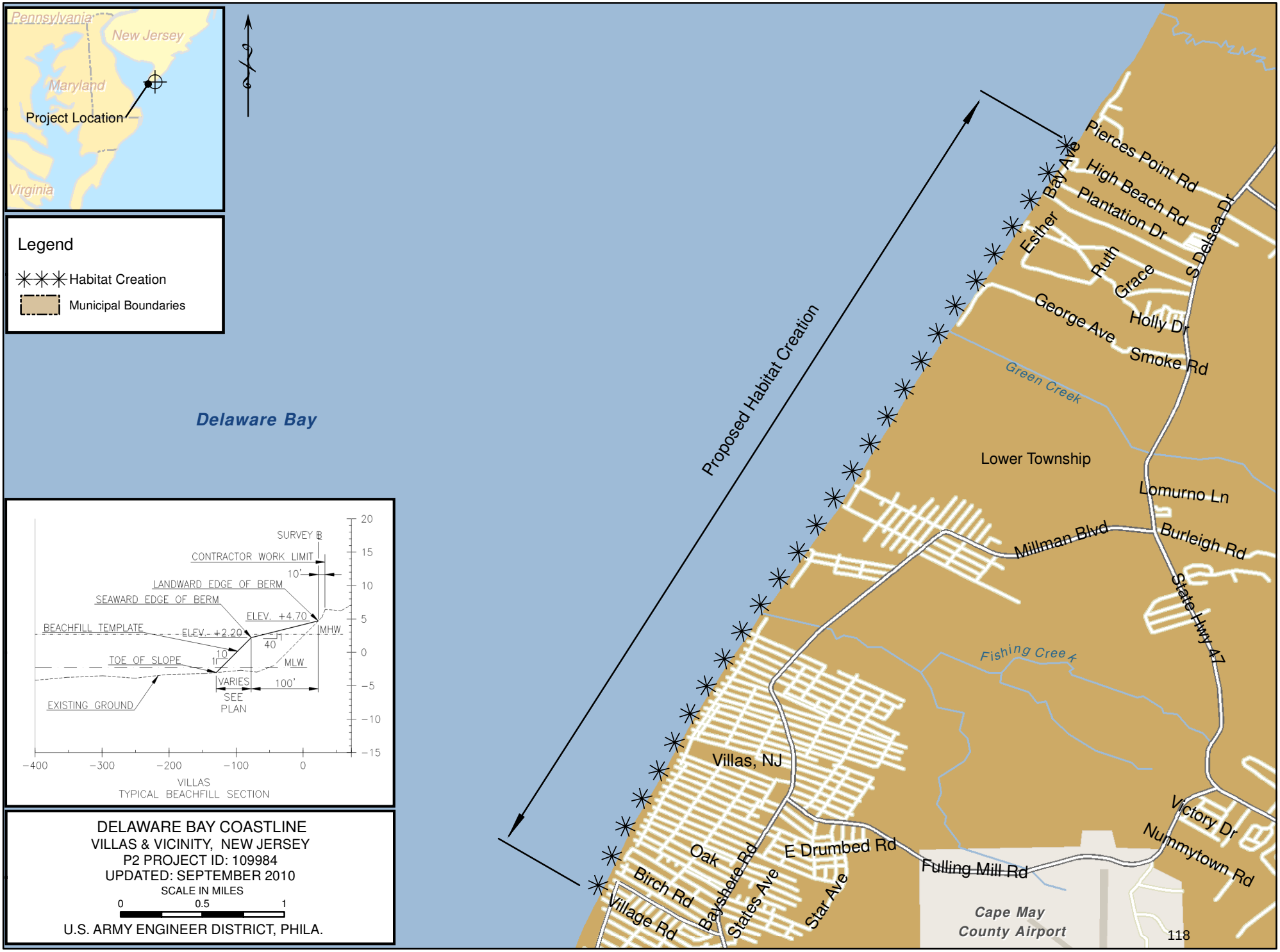
Pennsylvania
New Jersey
Maryland
Project Location
Virginia
Legend
Habitat Creation
Municipal Boundaries
Delaware Bay
Proposed Habitat Creation
Pierces Point Rd
High Beach Rd
Plantation Dr
Bay Ave
Esther
Ruth
Grace
S Delsea Dr
Holly Dr
George Ave
Smoke Rd
Green Creek
Lower Township
Lomurno Ln
Millman Blvd
Burleigh Rd
State Hwy 47
Fishing Creek
Villas, NJ
Victory Dr
Nummytown Rd
E Drumbed Rd
Fulling Mill Rd
Oak
Birch Rd
Bayshore Rd
States Ave
Star Ave
Village Rd
Cape May
County Airport
SURVEY B
CONTRACTOR WORK LIMIT
10'
LANDWARD EDGE OF BERM
SEAWARD EDGE OF BERM
ELEV. +4.70
BEACHFILL TEMPLATE
ELEV.- +2.20
MHW
40
10
TOE OF SLOPE
MLW
VARIES
100'
SEE PLAN
EXISTING GROUND
20
15
10
5
0
-5
-10
-15
-400
-300
-200
-100
0
VILLAS
TYPICAL BEACHFILL SECTION
DELAWARE BAY COASTLINE
VILLAS & VICINITY, NEW JERSEY
P2 PROJECT ID: 109984
UPDATED: SEPTEMBER 2010
SCALE IN MILES
0
0.5
1
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Bay Coastline, Port Mahon, DE

- **Authority:** Title I, Section 101 (a)(12) of the Water Resources Development Act of 1999
- **Congressional District:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control.
- **Date of Project Partnership Agreement:** TBD
- **Target Completion Date:** TBD
- **Total Estimated Cost:** $12.6M Initial Construction
- **Federal Funds Appropriated:** $1,098,000
- **Non-Federal Share:** $125,000

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Overview of Project Site — Port Mahon, DE

The Delaware Bay Coastline, DE & NJ – Port Mahon, DE project was authorized for construction by Title I, Section 101 (a) (12) of WRDA 1999.

The plan proposed in the final feasibility report for the purpose of flood and coastal storm damage reduction and ecosystem restoration at Port Mahon consists of a 5,200 foot long beach fill with periodic nourishment to provide for horseshoe crab and shorebird habitat. It also includes raising State Road 89 for a distance of 7,500 feet and placing riprap along a 1,200 foot length of the road to protect wetlands, and restoring 21.4 acres of degraded wetland habitat west of the road. The estimated initial project cost is $8.1 million. The PED phase was completed in FY01 with finishing detailed plans and specifications for those features recommended in the feasibility report.

Delaware Bay Coastline, Port Mahon, DE

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction and ecosystem restoration at Port Mahon, with a beach fill and periodic nourishment to provide for horseshoe crab and shorebird habitat.

Funds have not been received for this project since FY 2007. A Limited Reevaluation Report (LRR) was completed and approved in May 2006. LRR are post authorization studies that evaluate a specific portion of the approved plan under current policies, criteria and guidelines, and may be limited to economics, environmental effects or, in rare cases, project formulation. A LRR documents the results of the analysis undertaken.

Initiation of construction is dependent on the establishment of adequate funding. The next steps toward initial construction once adequate funding is received is to update the LRR; develop, approve and execute the Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contract. The Office of Management and Budget (OMB) provided a clearance letter for this project to the Assistant Secretary of the Army for Civil Works in June 2008.

Hurricane Sandy struck the Mid-Atlantic coastline in October 2012 causing widespread damage. The Corps will need to update the LRR to adjust initial construction costs based on changed initial conditions resulting from the storm.

Timeline	Start	Complete	Comments
Initial Construction	TBD	TBD	Dependent on Adequate funding

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	7,545	5,071	12,615		Allocations thru FY11	1,098	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	6,447	

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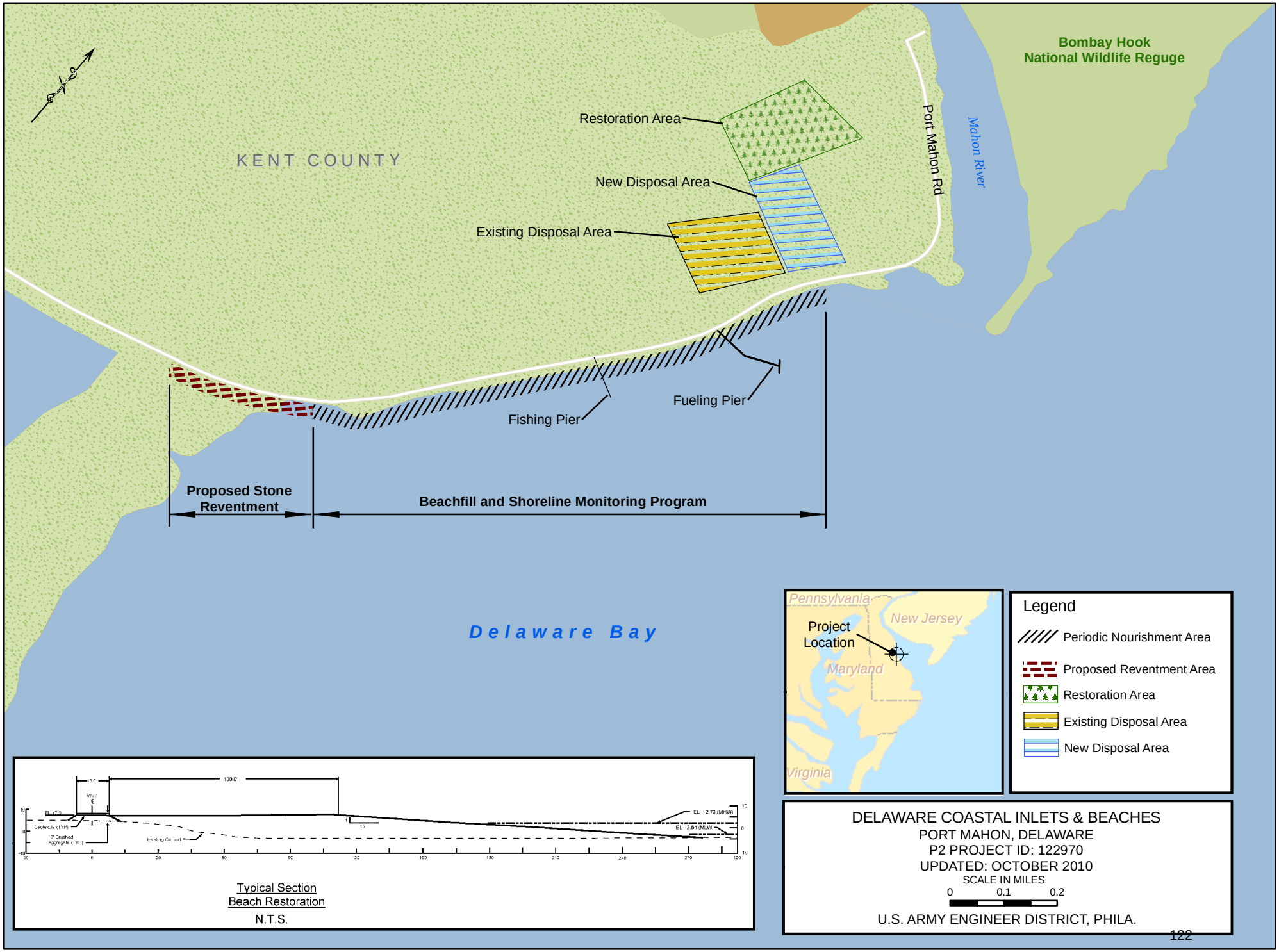
Bombay Hook
National Wildlife Reguge
Restoration Area
New Disposal Area
Existing Disposal Area
Port Mahon Rd
Mahon River
KENT COUNTY
Fishing Pier
Fueling Pier
Proposed Stone
Reventment
Beachfill and Shoreline Monitoring Program
Delaware Bay
Pennsylvania
New Jersey
Project
Location
Maryland
Virginia
Legend
Periodic Nourishment Area
Proposed Reventment Area
Restoration Area
Existing Disposal Area
New Disposal Area
Typical Section
Beach Restoration
N.T.S.
DELAWARE COASTAL INLETS & BEACHES
PORT MAHON, DELAWARE
P2 PROJECT ID: 122970
UPDATED: OCTOBER 2010
SCALE IN MILES
0 0.1 0.2
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Bay Coastline, Roosevelt Inlet-Lewes Beach, DE

- **Authority:** Title I, Section 101 (a)(13) of the Water Resources Development Act of 1999.
- **Congressional District:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control.
- **Date of Project Partnership Agreement:** 1 Nov 2002
- **Target Completion Date:** 2053
- **Total Estimated Cost:** $
- **Federal Funds Appropriated:** $9,789,000
- **Non-Federal Share:** $3,256,000

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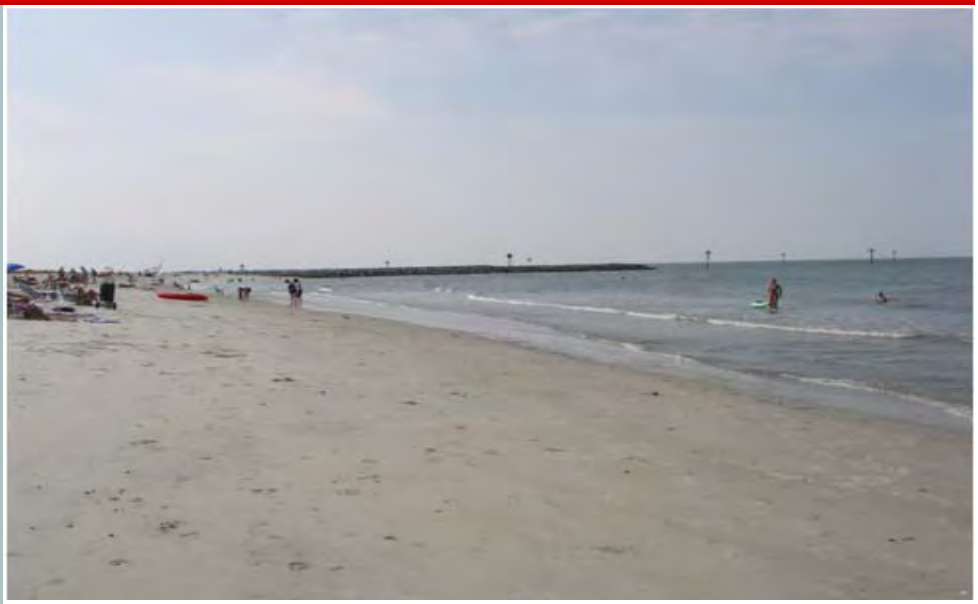

Beach along Delaware Bay Coastline between Roosevelt Inlet and Lewes Beach

The Delaware Bay Coastline, DE & NJ – Roosevelt Inlet-Lewes Beach, DE project was authorized for construction by Title I, Section 101 (a) (13) of WRDA 1999.

The plan proposed in the final feasibility report for the purposes of flood and coastal storm damage reduction and navigation mitigation is a 100-foot-wide berm at an elevation of +8.0 feet NAVD, and a dune at an elevation of +14.0 feet NAVD over a total project length of 1,400 feet. The selected plan includes dune grass, dune fencing and suitable advance beach fill and periodic nourishment every six years to ensure the integrity of the design. The plan also provides for reconstruction of the south jetty at Roosevelt Inlet.

Initial placement of beachfill was completed September 2004 while dune crossovers, sand fence, and dune grass were completed in December 2004. Artifacts were discovered on the beach during the dredging and subsequent beach placement operation. As a result, the District completed Phase 1 and 2 cultural investigations.

Delaware Bay Coastline, Roosevelt Inlet-Lewes Beach, DE

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction and navigation mitigation at Roosevelt-Lewes Beach, which includes dune grass, dune fencing, and suitable advance beach fill and periodic nourishment every six years.

A portion of the FY 11 funds were used to award a contract to complete the 2nd renourishment cycle. The Contract was awarded in September 2011 and construction was completed in Jan 2012. In FY12, $987,000 was reprogrammed to other State of Delaware projects including Rehoboth/Dewey Beaches ($739,000), Bethany/South Bethany Beaches ($150,000), Broadkill Beach ($49,000) and Fenwick Island ($49,000).

Between October 27 & 30, 2012, Hurricane Sandy caused damage to the Delaware coast from Lewes Beach to Fenwick Island and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were utilized to complete a Project Information Report (PIR). The report did not recommend proceeding beyond the PIR because the damages to the project did not qualify for assistance under PL 84-99. A PIR Addendum was developed and approved which concluded the project was eligible for P.L. 113-2 Disaster Relief Appropriations Act (Hurricane Sandy) funding to restore the project to design template. A construction contract to restore the project was awarded 19 Jul 2013. Work began in mid Oct 2013 & was completed on 6 Nov 2013.

Timeline	Start	Complete	Comments
Initial Construction		Dec-04	
2nd Periodic Nourishment Cycle	Nov-11	Jan-12	
3rd Periodic Nourishment Cycle	FY-2019 (Sched)		Dependent on Adequate funding.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	TBD	TBD	TBD		Allocations thru FY11	10,825	
					FY 12 Allocation	(987)	
					FY 13 Allocation	(49)	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

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Existing Terminal Groin

Proposed Terminal Groin

Roosevelt Inlet

Delaware Bay

Pilottown Rd.

Cedar St.

Maine Ave.

Lewes Beach

Breakwater St.

Newport St.

Nebraska Ave.

Bay Ave.

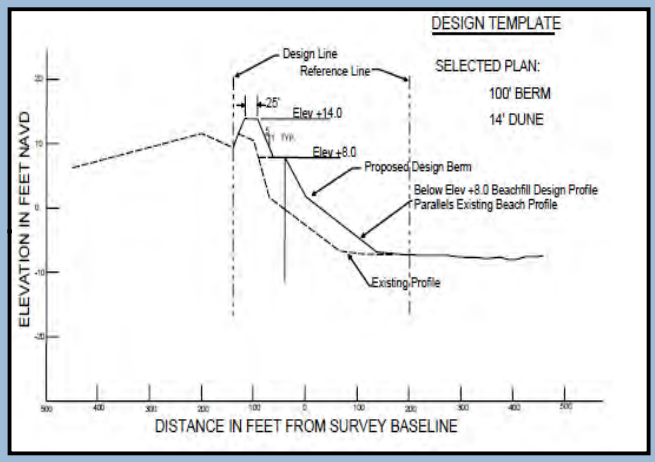
Florida Ave.

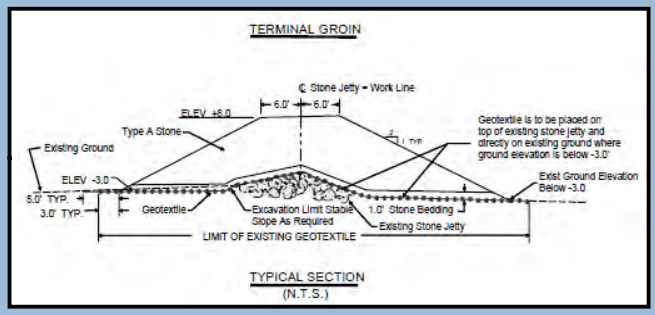
Iowa Ave.

Georgetown Ave.

Missouri Ave.

Beachfill and Shoreline Maintenance Program





Legend

/// Periodic Nourishment Area

Municipal Boundaries

DELEWARE BAY COASTLINE
ROOSEVELT INLET & LEWES BEACH
SUSSEX COUNTY, DE
P2 PROJECT ID: 109774
UPDATED: OCTOBER 2010
SCALE IN MILES
0 0.05 0.1
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Coast, Cape Henlopen to Fenwick Island: Bethany Beach/South Bethany, DE

- **Authority:** Title I, Section 101 (a)(15) of the Water Resources Development Act of 1999
- **Congressional District:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control.
- **Date of Project Agreement: 26 Jul 2006**
- **Target Completion Date:** 2057
- **Total Estimated Cost:**
-
- **Federal Funds Appropriated:** $25.878M
- **Non-Federal Share:** $13.54M

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Beach Nourishment along beachfront (Bethany Beach/South Bethany, DE)

Authorized under the Senate Committee Resolution, 23 June 1988. Project authorized for construction by Title I, Section 101 (a) (15) of WRDA of 1999.

The Bethany Beach/South Bethany project area extends along approximately 2 miles of the Atlantic Ocean coast of Delaware in Sussex County, Delaware. The plan proposed in the final feasibility report for the purpose of flood and coastal storm damage reduction consists of a sand fill beach and dune project, in two independent discontinuous segments, for both Bethany Beach and South Bethany. The project includes a 150-foot wide berm with an elevation of +7.0 feet NAVD, and a dune with an elevation of +16.0 feet NAVD over a total project length of 14,950 feet (2.8 miles). The recommended project consists of providing 3.5 million cubic yards initial beach fill, with subsequent nourishment of 480,000 cubic yards every three years. The plan includes dune grass, dune fencing, and suitable advance beach fill and periodic nourishment every three years to ensure the integrity of the design.

Initial construction was completed in June 2008. FY11 funds were used to award a contract to complete the 2nd renourishment cycle. The contract was awarded in September 2011 with construction beginning in October 2011. Construction (Pumping) was completed in March 2011 for Bethany and October 2011 for South Bethany.

Delaware Coast, Cape Henlopen to Fenwick Island: Bethany Beach/South Bethany, DE

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction consisting of a sand fill beach and dune project, in two independent segments, for both Bethany Beach and South Bethany. It includes a berm, a dune, beach fill, dune grass, dune fencing, and periodic nourishment every three years.

Between October 27 & 30, 2012, Hurricane Sandy caused damage to the Delaware coast from Lewes Beach to Fenwick Island and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. Both the PIR and Addendum were approved.

A contract to complete the repairs and restoration was awarded on 25 June 2013. Pumping began on 18 August 2013 and was completed on 28 September 2013. Crossover, etc repairs are on-going and scheduled for completion in February 2014.

Timeline	Start	Complete	Comments
Initial Construction		Jun-08	
Emergency Work	Jan-09	Jun-09	
2nd Periodic Nourishment	Oct-11	Oct-11	Bethany (March 11) & South Bethany (Oct 11)
3rd Periodic Nourishment	Sched FY16	TBD	Nourishment will be scheduled 3 years from completion of restoration work.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	17,806	9,588	27,394		Allocations thru FY11	25,429	
					FY 12 Allocation	300	
					FY 13 Allocation	150	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

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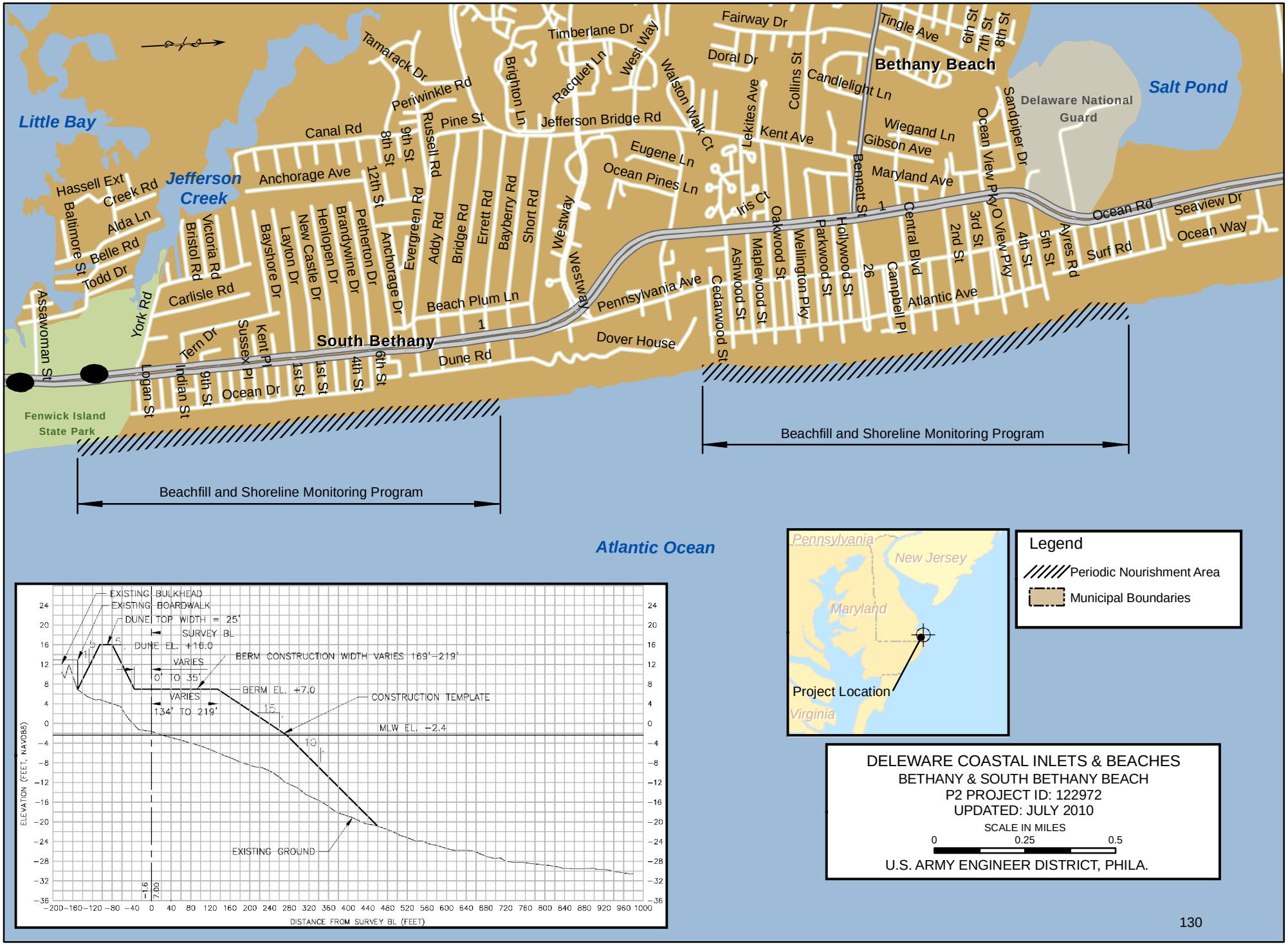

DELEWARE COASTAL INLETS & BEACHES
BETHANY & SOUTH BETHANY BEACH
P2 PROJECT ID: 122972
UPDATED: JULY 2010
SCALE IN MILES
0 0.25 0.5
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Coast, Cape Henlopen to Fenwick Island, DE

- **Authority:** Water Resources Development Act of 2000.
- **Congressional District:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control.
- **Date of Project Partnership Agreement:** 13 Sep 2004
- **Target Completion Date:** 2054
- **Total Estimated Cost:**
- **Federal Funds Appropriated:** $4.227M
- **Non-Federal Share:** $2.622M

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The plan includes dune grass, dune fencing, and suitable advance beach fill and periodic nourishment every four years to ensure the integrity of the design. Photo of Fenwick Island looking South.

This project is authorized under the Senate Committee Resolution, 23 June 1988. Project authorized for construction is included in the Water Resourced Development Act (WRDA) of 2000.

The plan proposed in the final feasibility report for flood and coastal storm damage reduction at Fenwick Island is a 200-foot wide berm with an elevation of +7.7 feet NAVD, and a dune with an elevation of +17.7 feet NAVD over a total project length of 6,500 feet. The plan includes dune grass, dune fencing, and suitable advance beach fill and periodic nourishment every four years to ensure the integrity of the design.

Initial construction was completed in November 2005. Limited funds have been received since FY 08. These funds have been used for project monitoring. The 2nd periodic nourishment cycle originally scheduled for FY 09 will be rescheduled for FY17 which is 4 years from the completion of the repair and restoration work in response to Hurricane Sandy. The 4 years is based on the approved periodic renourishment cycle.

Delaware Coast, Cape Henlopen to Fenwick Island, DE

- **Project Goals:** The purpose of this project provides for hurricane and coastal storm damage reduction at Fenwick Island, with a berm and a dune, that includes dune grass, dune fencing, a beach fill, and periodic nourishment every four years.

Between October 27 & 30, 2012, Hurricane Sandy caused damage to the Delaware coast from Lewes Beach to Fenwick Island and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. Both the PIR and Addendum were approved.

A contract to complete the repairs and restoration was awarded on 25 June 2013. Pumping began in mid-July 13 & was completed on 9 August 2013.

Timeline	Start	Complete	Comments
Initial Construction	Sep-04	Nov-05	
2nd Periodic Nourishment	Sched FY17		Nourishment will be scheduled 4 years from completion of restoration work.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	3,554	1,954	5,508		Allocations thru FY11	4,228	
					FY 12 Allocation	49	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

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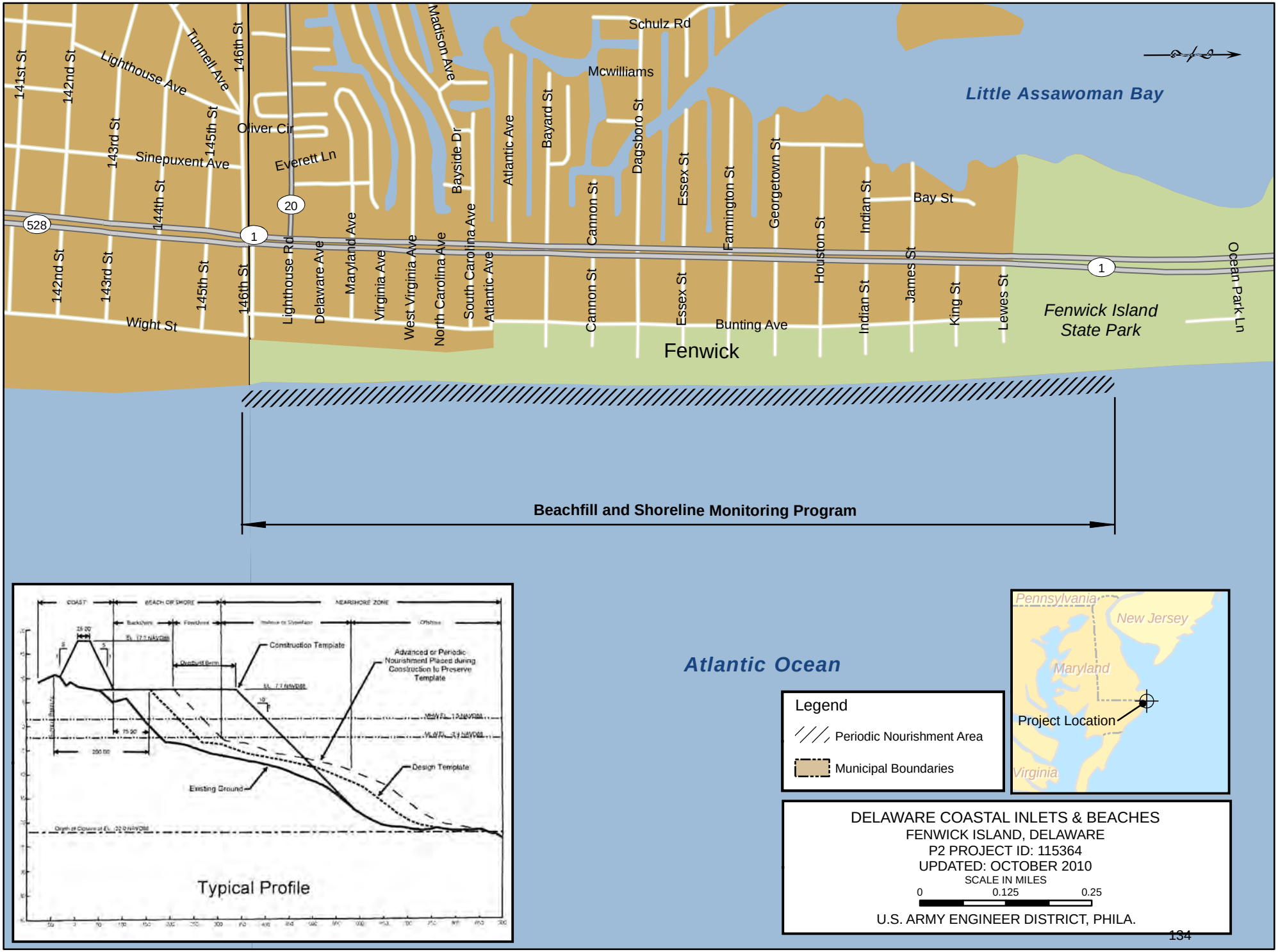
141st St
142nd St
Lighthouse Ave
Tunnell Ave
146th St
Madison Ave
Schulz Rd
Mcwilliams
Little Assawoman Bay
143rd St
145th St
Oliver Cir
Sinepuxent Ave
Everett Ln
Bayside Dr
Atlantic Ave
Bayard St
Dagsboro St
Essex St
Farmington St
Georgetown St
Indian St
Bay St
144th St
528
20
1
142nd St
143rd St
145th St
146th St
Lighthouse Rd
Delaware Ave
Maryland Ave
Virginia Ave
West Virginia Ave
North Carolina Ave
South Carolina Ave
Atlantic Ave
Cannon St
Houston St
James St
King St
Lewes St
Ocean Park Ln
Wight St
Bunting Ave
Fenwick
Fenwick Island State Park
Beachfill and Shoreline Monitoring Program
COAST
BEACH OR SHORE
NEARSHORE ZONE
Backshore
Foreshore
Offshore
Construction Template
Advanced or Periodic Nourishment Placed during Construction to Preserve Template
Design Template
Existing Ground
Typical Profile
Atlantic Ocean
Legend
Periodic Nourishment Area
Municipal Boundaries
Pennsylvania
New Jersey
Maryland
Project Location
Virginia
DELAWARE COASTAL INLETS & BEACHES
FENWICK ISLAND, DELAWARE
P2 PROJECT ID: 115364
UPDATED: OCTOBER 2010
SCALE IN MILES
0 0.125 0.25
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Coast, Cape Henlopen to Fenwick Island: Rehoboth Beach/Dewey Beach, DE

- **Authority:** Section 101 (b)(6) of the Water Resources Development Act of 1996 with a modification in WRDA 2000.
- **Congressional District:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control.
- **Date of Project Partnership Agreement:** 19 Dec 2003
- **Target Completion Date:**
- **Total Estimated Cost:**
- **Federal Funds Appropriated:** $24.208M
- **Non-Federal Share:** $13.036M

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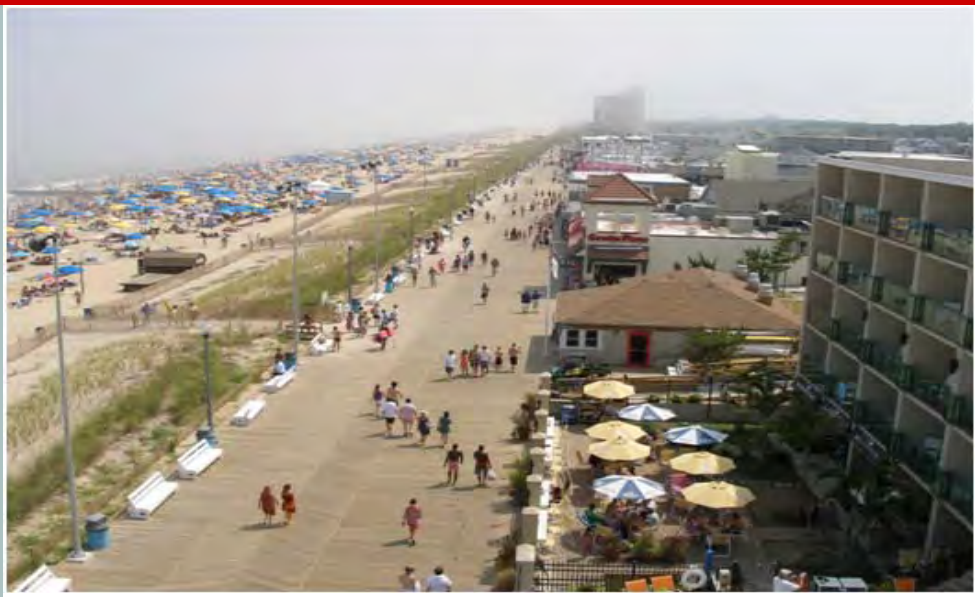

The plan includes dune grass, dune fencing, and suitable advance beach fill and periodic nourishment every three years to ensure the integrity of the design. A view of the beach looking South.

Authorized under the Senate Committee Resolution, 23 June 1988. Project authorized by Section 101 (b)(6) of WRDA 1996 and modified by Section 307 of WRDA 2000.

The plan proposed in the final feasibility report for the purpose of flood and coastal storm damage reduction at Rehoboth Beach and Dewey Beach consists of one continuous project, from the northern end of Rehoboth Beach to the southern border of Dewey Beach, a distance of 13,500 linear feet. Along Rehoboth Beach, the plan provides for a 125-foot wide berm at elevation +7.2 feet NAVD and a dune at elevation +13.2 feet NAVD. At Dewey Beach, the project would transition to a 150-foot wide berm at elevation +7.2 feet NAVD and a dune at elevation +13.2 feet NAVD. The plan includes dune grass, dune fencing, and suitable advance beach fill and periodic nourishment every three years to ensure the integrity of the design. The PED phase consisted of the completion of detailed plans and specifications for those features recommended in the feasibility report.

The beachfill portion of initial construction was completed in July 2005 with the other project features, including dune grass, dune fencing and crossovers completed in January 2006. FY08 funds were used to award a contract to initiate the 2nd periodic nourishment cycle. Due to limited funds, only Dewey Beach received renourishment. FY11 funds were used to modify the FCCE contract to complete the 2nd periodic nourishment cycle (originally scheduled for 09).

Delaware Coast, Cape Henlopen to Fenwick Island: Rehoboth Beach/Dewey Beach, DE

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction at Rehoboth Beach and Dewey Beach, with a berm, a dune for each beach, including dune grass, dune fencing, beach fill and periodic nourishment every three years.

FY 12 funds were used to permanently extend three outfalls that were covered after the completion of the renourishment. Work on these outfall extension was completed in July 2013.

Between October 27 & 30, 2012, Hurricane Sandy caused damage to the Delaware coast from Lewes Beach to Fenwick Island and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. Both the PIR and Addendum were approved.

The Corps awarded the contract for FCCE work on 25 June 2013. Pumping was completed on 3 November 2013. Crossover, etc repairs are ongoing & scheduled to be completed by 31 March 2014.

Timeline	Start	Complete	Comments
Initial Construction		Jan-06	
2nd Periodic Nourishment	Nov-08	Jun-09	Dewey Beach only
2nd Periodic Nourishment	Oct-11	Feb-12	
3rd Periodic Nourishment	Sched for FY17		Nourishment will be scheduled 4 years from completion of restoration work.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	10,726	5,779	16,505		Allocations thru FY11	23,169	
					FY 12 Allocation	889	
					FY 13 Allocation	150	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

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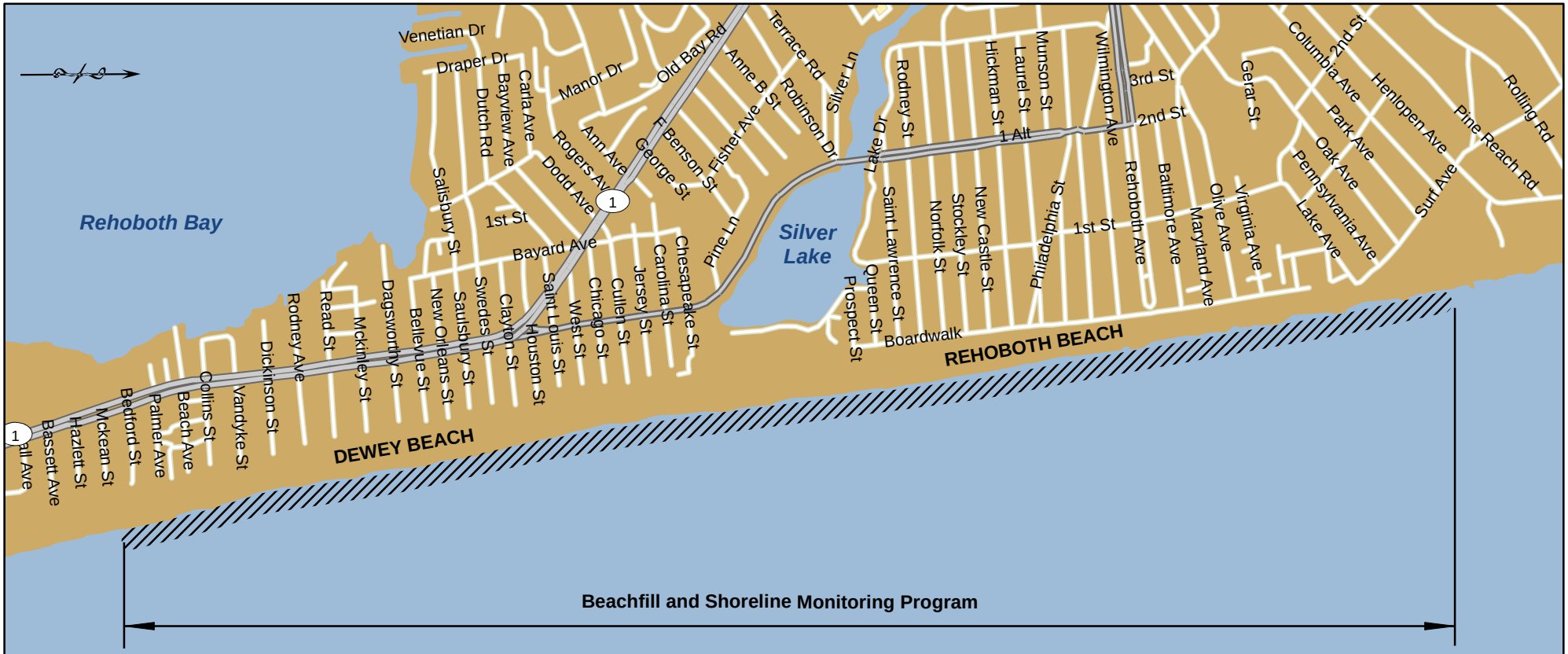

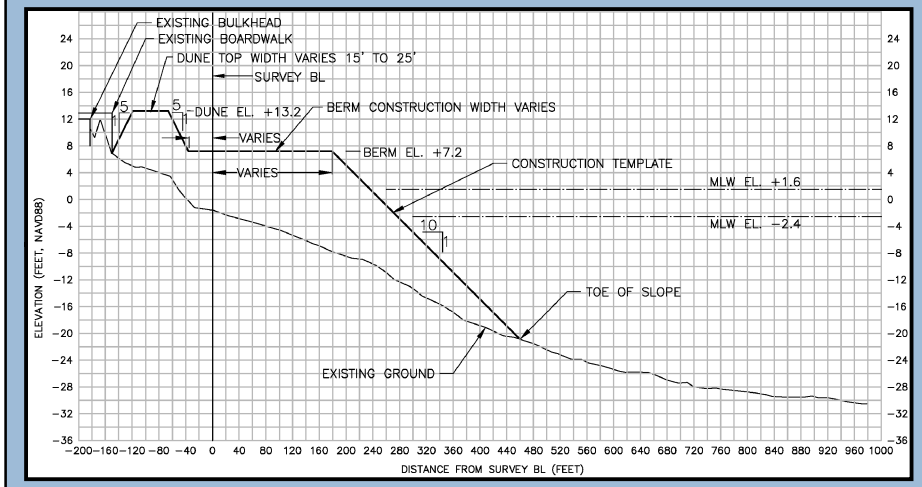

Legend

Periodic Nourishment Area

Municipal Boundaries

DELAWARE COASTAL INLETS & BEACHES
REHOBOTH BEACH & DEWEY BEACH, DELAWARE
P2 PROJECT ID: 109937
UPDATED: OCTOBER 2010
SCALE IN MILES
0 0.2 0.4
U.S. ARMY ENGINEER DISTRICT, PHILA.

Delaware Coast Protection, Sand Bypass Plant, Indian River Inlet, DE

- **Authority:** Flood Control Act, Water Resources Development Act
- **Congressional District:** DE-AL
- **Non-Federal Sponsor:** Delaware Department of Natural Resources and Environmental Control.
- **Date of Project Partnership Agreement:** 26 Oct 1988
- **Target Completion Date:** 2021
- **Total Estimated Cost:**
- **Federal Funds Appropriated:** $8.501M
- **Non-Federal Share:** $1.235M

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Indian River Inlet, Delaware, looking to the north showing the portable sand bypass system excavating a hole in the south fillet at the inlet. The system consists of a crane that holds an educator pump that removes sand from the beach face, two pumps to move the sand over the bridge, and a discharge line on the north side that discharges the sand onto the beach (where it looks wet in the photo).

This project is authorized by the Flood Control Act of 1968 and the Water Resources Development Act of 1986 (P.L. 99-662). The plan of improvement consists of constructing a sand bypassing plant and operation of said plant for periodic nourishment of a feeder beach (approximately 100,000 cubic yards of sand, annually) to nourish approximately 3,500 feet of feeder beach on the north side of the inlet and protect the Delaware Route 1 highway. The nourishment is authorized until September 2021.

Funding for this project has not been provided since FY11. Additional funds of $300K are needed to reimburse the State of Delaware for the Federal portion of the recent repairs made to the sand bypass plant. Also the $390K annual funds are needed for project monitoring and the Federal contribution to periodic nourishment performed by DNREC.

Delaware Coast Protection, Sand Bypass Plant, Indian River Inlet, DE

- **Project Goals:** The purpose of this project provides for construction of a sand bypassing beach plant, and operation of the plant for periodic nourishment of a feeder beach.

Between October 27 & 30, 2012, Hurricane Sandy caused damage to the Delaware coast from Lewes Beach to Fenwick Island and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were utilized to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. Both the PIR and Addendum were approved.

A contract to complete the repairs and restoration was awarded on 15 May 2013. Physical construction began in July 2013 and completed on 12 November 2013.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	12,300	14,398	26,698		Allocations thru FY11	8,501	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	690	
					FY 15 Budget	TBD	
					Balance to Complete	3,109	

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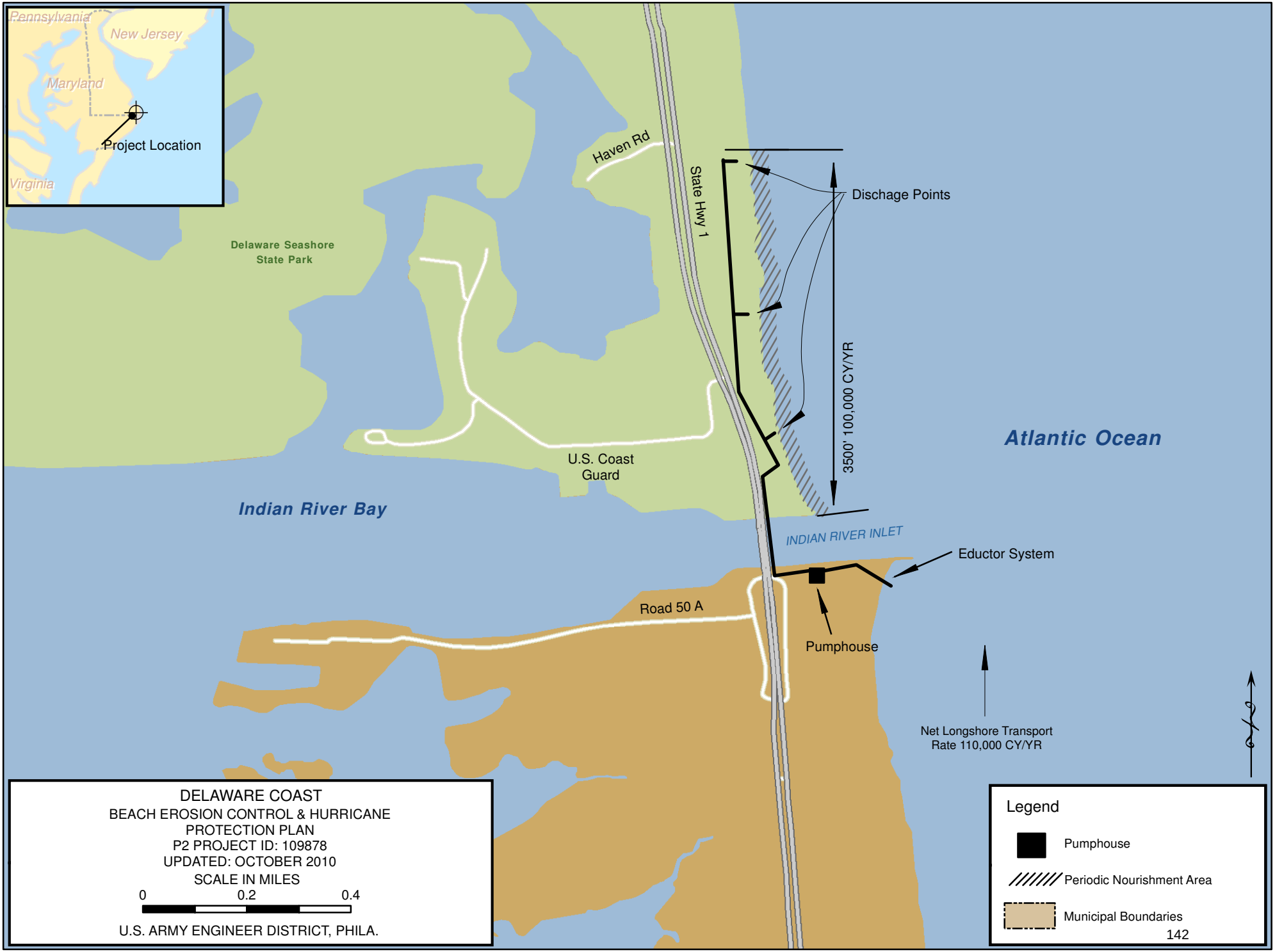
CORPS OF ENGINEERS

U.S. ARMY



Delaware River Main Channel Deepening, DE, NJ, & PA

- **Authority:** WRDA 1992, WRDA 1999 & WRDA 2000.
- **Congressional District:** DE-AL, NJ-1, NJ-2, PA-1, PA-7, PA -13
- **Non-Federal Sponsor:** Philadelphia Regional Port Authority (PRPA)
- **Date of Project Partnership Agreement:** 23 June 2008
- **Target Completion Date:** TBD
- **Total Estimated Cost:** $334M
- **Federal Funds Appropriated:** $91.493M
- **Non-Federal Share:** $54.96M

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The project will deepen the existing Delaware River Federal Navigation Channel from 40 to 45 feet from Philadelphia Harbor, Pa., and Beckett Street Terminal, Camden, N.J., to the mouth of the Delaware Bay.

The project was authorized for construction by Public Law 102-580, Section 101 (6) of WRDA 1992; modified by Public Law 106-53, Section 308 of WRDA 1999 and further modified by Public Law 106-541, Section 306 of WRDA 2000.

The project includes: deepening the existing Delaware River Federal Navigation Channel from 40 to 45 feet from Philadelphia, Pennsylvania, and Camden, New Jersey, to the mouth of the Delaware Bay; appropriate bend widening; partial deepening of the Marcus Hook anchorage; and relocation and addition of aids to navigation. Cutter-suction, hopper, and mechanical dredges will be used to remove material from the channel. The dredged material from the Delaware River portion of the project will be placed in Federally-owned confined upland disposal facilities. Dredged material from the Delaware Bay portion of the project will be used for two beneficial use projects.

Since FY 99, Congress has appropriated funds for project construction. The Project Partnership Agreement (PPA) between the Corps and the non-Federal sponsor, the Philadelphia Regional Port Authority (PRPA), was executed on June 23, 2008.

In October 2009, the Corps awarded a contract for the regularly scheduled maintenance dredging of the existing Federal channel. An Option for deepening Reach C (Station 182+000 to Station 242+514) was awarded in February 2010. Dredging in Reach C commenced in March 2010 and was completed in September 2010.

Delaware River Main Channel Deepening, DE, NJ, & PA

- **Project Goals:** The purpose of this project provides deepening of the existing Delaware River Federal Navigation Channel, bend widening, partial deepening of the Marcus Hook anchorage; and relocation and addition of aids to navigation.

The second project construction contract awarded was to deepen the lower portion of Reach B (Station 155+000 to Station 176+000). Bids for the contract were opened on July 21, 2011, and the contract was awarded on October 6, 2011 using accelerated non-Federal funds as there were not adequate Federal funds. Dredging began in November 2011 and was completed in January 2012.

The third project construction contract awarded was to deepen the upper portion of Reach A (Station 32+755 to Station 82+700). Bids for the contract were opened on July 10, 2012, and the contract was awarded on July 31, 2012 using FY 12 funds. Dredging began in September 2012 and was completed in February 2013.

The fourth project construction contract awarded was to deepen Reach D (Station 261+000 to Station 317+000). Bids for the contract were opened on October 2, 2012, and the contract was awarded on October 18, 2012 using FY 13 CRA funds. Dredging began in February 2013 and was completed in November 2013.

The fifth project construction contract will deepen the lower portion of Reach A (Station 72+574 to Station 90+000). The contract was advertised on October 22, 2013, bids opened on December 18, 2013 and contract awarded on January 28, 2014. Construction is scheduled to begin in July 2014.

The planned sixth project construction contract awarded will deepen the lower portion of Reach E (Station 432+200 to Station 512+000) with beneficial use of dredge material at Broadkill Beach. The contract is scheduled to be advertised in March 2014 with award in May 2014. The contract will be awarded using carry over FY 13 and FY 14 funds. The completion of this contract is dependent on receipt of adequate funding in FY 15.

The planned seventh project construction contract will deepen Reach AA (Station 20+300 to Station 32+900). The contract is scheduled to be advertised in April 2014 with award in May 2014. The contract will be awarded using carryover FY 13 and FY 14 funds. The remaining project construction contracts (upper Reach B, rock removal, upper Reach E) are dependent on receipt of adequate funding in FY 15, FY 16, and FY

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	223,000	111,212.8	334,212.8		Allocations thru FY11	32.713	
					FY 12 Allocation	16,864	
					FY 13 Allocation	41,916	
					FY 14 Budget	20,000	
					FY 15 Budget	35,000	
					Balance to Complete	111,507	

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PENNSYLVANIA
NEW JERSEY
DELAWARE
Philadelphia
Camden
Wilmington
Salem
Dover
Milford
Lewes
Chester County
Delaware County
Burlington County
Camden County
Gloucester County
Salem County
New Castle County
Atlantic County
Cumberland County
Cape May County
Kent County
Sussex County
Vineland
Fort Mifflin
National Park
Oldmans
Pedricktown North
Pedricktown South
Penns Neck
Killcohook
Reedy Point South
Artifical Island
Kelly Island
Egg Island Point
Cape May Point
Broadkill Beach
Cape Henlopen
Smyrna
Bombay Hook
Salem River
Chesapeake & Delaware Canal
Cohansey River
Maurice River
Mispillion River
Cape May - Lewes Ferry
102.93
Start of Project STA 19+700
STA 32 + 756
STA 90 + 000
STA 176 + 000
STA 249 + 000
STA 325 + 000
End of Project STA 0+000
Buoy 10
DREDGING STATUS
Deepened to 45'
Existing 45' Depth
Not Dredged
N
W
E
S
Scale In Miles
0 2.5 5 7.5 10
LEGEND
0 DRBC River Miles
Main Channel Location
Channel Reaches
State Boundaries
County Boundaries
Ferry
DELAWARE RIVER MAIN CHANNEL DEEPENING PROJECT
Dredging Status as of March 2014
U.S. Army Corps of Engineers
Philadelphia District
Map Document:
(E:\mainchannel\MXDs\dredging_status_4_1_14.mxd)
Last Updated: 4/1/2014

Great Egg Harbor and Peck Beach (Ocean City), NJ

- **Authority: Committee** Resolution on Dec 15, 1970 under the provisions of Section 201 of P.L. 89-298 &r Section 831(1) of the WRDA of 1986, P.L. 99-662
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** 18 September 1991
- **Target Completion Date:** 2041
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $65.067M
- **Non-Federal Share:** $35.036M

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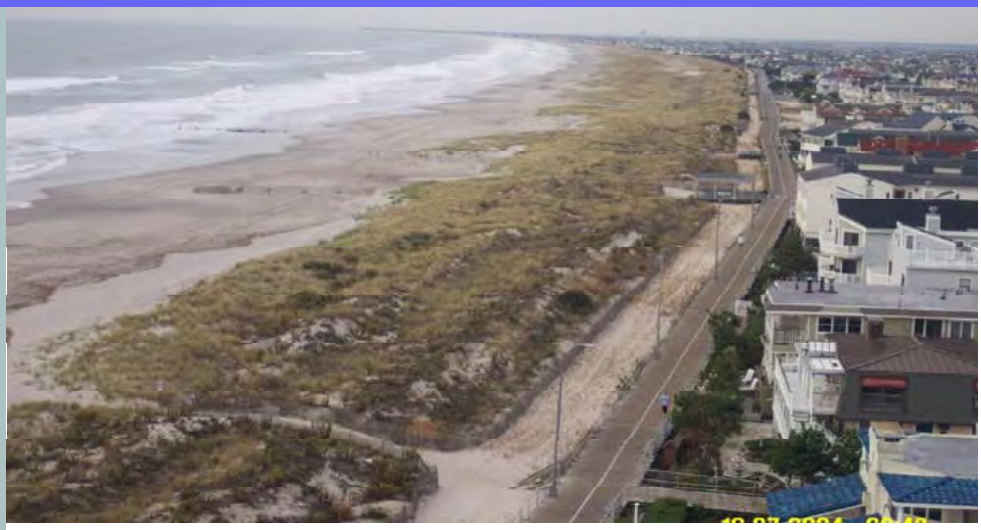

Shortly after the completion of initial construction, the City of Ocean City planted beach grass and installed sand fence to encourage dune growth. Years later, as shown above, continued periodic nourishment by the Corps has allowed the same area to expand into a substantial dune field.

Authorized by the Committee Resolution on December 15, 1970 under the provisions of Section 201 of P.L. 89-298. Project reauthorized with provisions for construction of separable elements under Section 831(1) of the Water Resources Development Act of 1986, P.L. 99-662.

The project consists of providing initial beach fill, with subsequent periodic nourishment, with a minimum berm width of 100 feet at an elevation of +8.0 National Geodetic Vertical Datum (NGVD). The beach fill extends from Surf Road southwest to 34th Street with a 1,000-foot taper south of 34th Street. This plan required the initial placement of approximately 6.2 million cubic yards of material and subsequent periodic nourishment of approximately 1.1 million cubic yards every 3 years. The material for the initial construction and periodic nourishment is being taken from the ebb shoal area located approximately 5,000 feet offshore of the Great Egg Harbor Inlet. This periodic dredging of the ebb shoal area will help alleviate the navigation difficulties in the inlet. Additionally, the initial construction of the project required the extension of 38 storm drain pipes.

Great Egg Harbor and Peck Beach (Ocean City), NJ

- **Project Goals:** For the purpose of hurricane and storm damage reduction, this project provides a beach fill with periodic nourishment, and a berm along Surf Road southwest to 34th Street in great Egg Harbor and Peck Beach.

Between October 27 & 30, 2012, Hurricane Sandy caused significant damage to the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were utilized to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funds to repair the project to pre-storm conditions. The PIR was approved, funding provided and the previously awarded renourishment contract was modified to complete the repairs and renourishment concurrently. Physical construction was completed in May 2013. The repairs and renouirshment brought the project back to the design template.

Phase	Quantity	Costs	Complete	Comments
Initial Construction (Ph I)	2,618,000	$10,952	Oct-92	
Initial Construction (Ph II)	2,727,000	$14,572	Mar-93	
Storm Rehab	846,000	$2,915	Jul-93	
1st Periodic Nourishment (Ph I)	606,000	$3,218	Dec-94	
1st Periodic Nourishment (Ph II)	1,411,000	$5,750	Aug-95	
2nd Periodic	800,000	$4,945	Oct-97	
3rd Periodic	1,351,000	$6,943	Dec-00	
4th Periodic	1,600,000	$8,314	Feb-04	
5th Periodic	1,400,000	$13,824	Mar-10	Base contract info
6th Periodic	1,000,000		May 13	
7th Periodic				Scheduled for FY16

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	270,100	157,600	427,700		Allocations thru FY11	57,077	
					FY 12 Allocation	490	
					FY 13 Allocation	7,500	
					FY 14 Allocation	500	
					FY 15 Budget	TBD	
					Balance to Complete	204,533	

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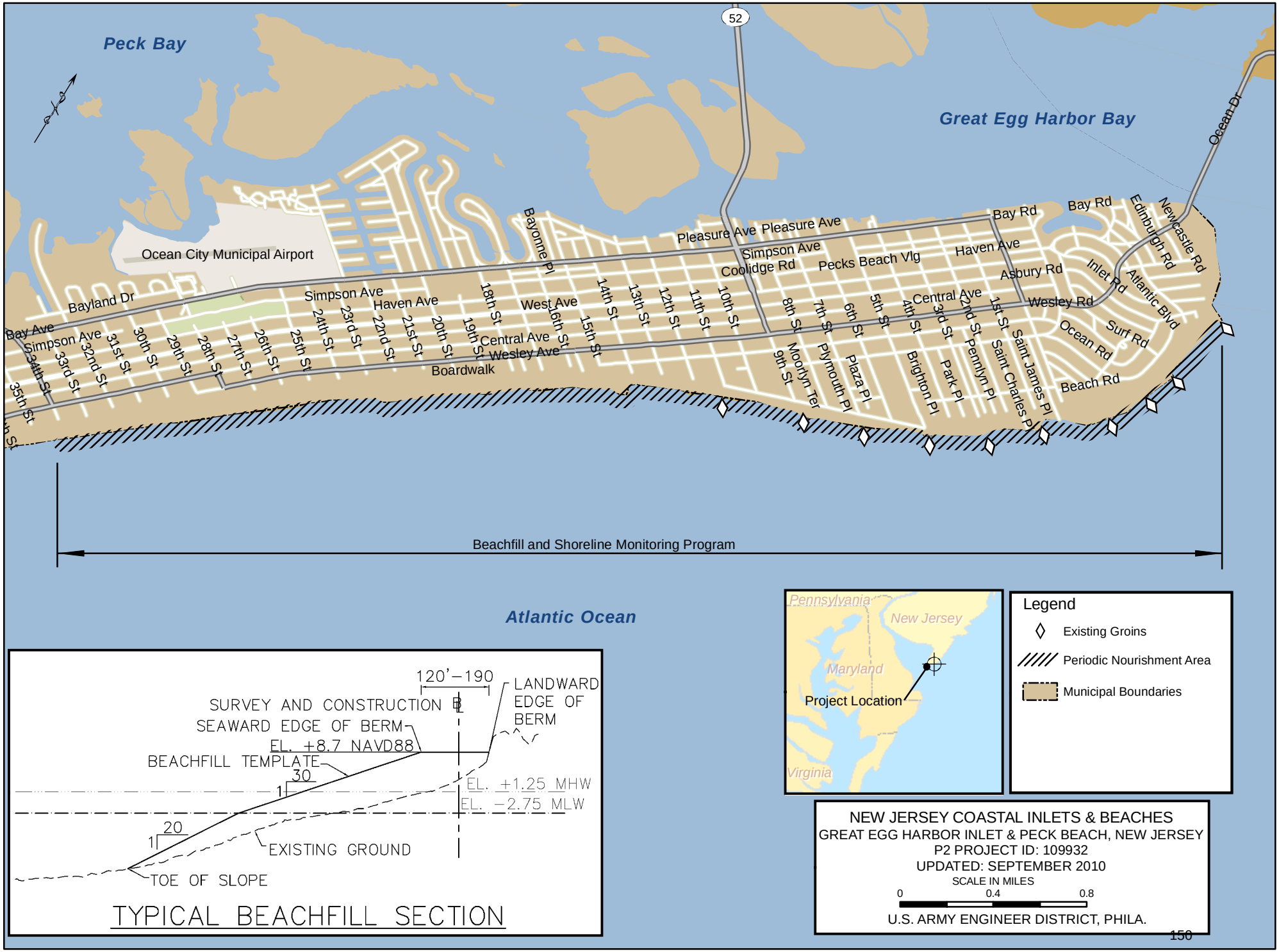
Peck Bay
Great Egg Harbor Bay
Atlantic Ocean
52
Ocean City Municipal Airport
Bayland Dr
Bay Ave
Simpson Ave
Haven Ave
Pleasure Ave
Bayonne Pl
Coolidge Rd
Pecks Beach Vlg
Asbury Rd
Bay Rd
Inlet Rd
Edinburgh Rd
Newcastle Rd
Ocean Dr
Atlantic Blvd
Central Ave
West Ave
Wesley Rd
Wesley Ave
Boardwalk
Ocean Rd
Surf Rd
Beach Rd
Moorlyn Ter
Plymouth Pl
Plaza Pl
Brighton Pl
Park Pl
Pennlyn Pl
Saint Charles Pl
Saint James Pl
Beachfill and Shoreline Monitoring Program
120'–190'
LANDWARD EDGE OF BERM
SURVEY AND CONSTRUCTION BL
SEAWARD EDGE OF BERM
EL. +8.7 NAVD88
BEACHFILL TEMPLATE
30
1
EL. +1.25 MHW
EL. −2.75 MLW
20
1
EXISTING GROUND
TOE OF SLOPE
TYPICAL BEACHFILL SECTION
Pennsylvania
New Jersey
Maryland
Virginia
Project Location
Legend
Existing Groins
Periodic Nourishment Area
Municipal Boundaries
NEW JERSEY COASTAL INLETS & BEACHES
GREAT EGG HARBOR INLET & PECK BEACH, NEW JERSEY
P2 PROJECT ID: 109932
UPDATED: SEPTEMBER 2010
SCALE IN MILES
0 0.4 0.8
U.S. ARMY ENGINEER DISTRICT, PHILA.

New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Absecon Island, NJ

- **Authority:** Water Resources Development Act of 1996
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Agreement:** 31 Jul 2003 - New PPA being negotiated per Sandy
- **Target Completion Date:** 2053
- **Total Estimated Cost:** $123.395M (Total) - $73.639M remaining to complete Initial Construction
- **Federal Funds Appropriated:** $38.203M
- **Non-Federal Share:** $20.545M

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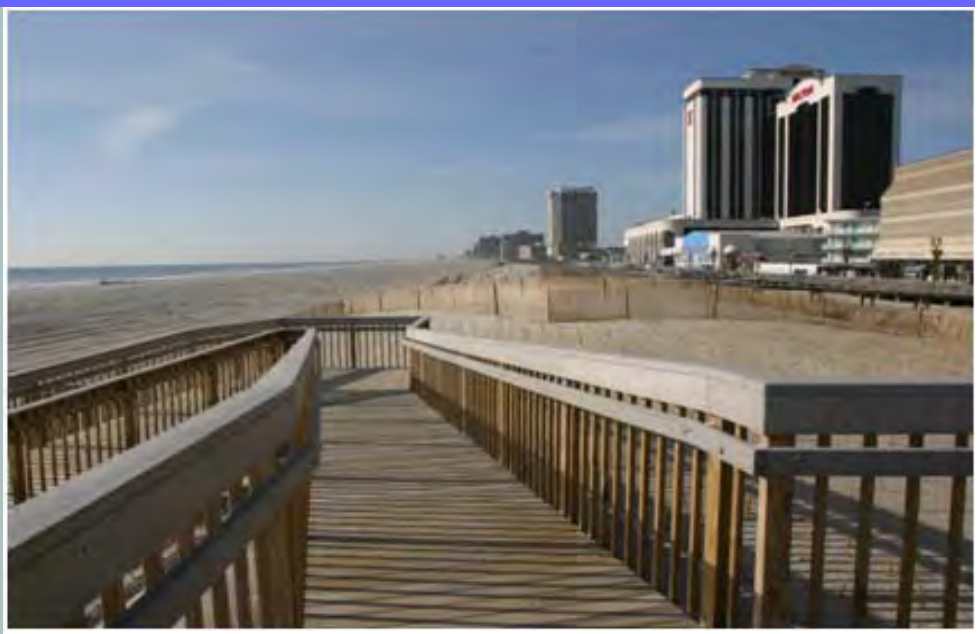

Absecon Island - Completed Handicap Dune Crossing.

This project was authorized under the Water Resources Development Act (WRDA) of 1996.

The project provides flood and coastal storm damage reduction along Absecon Island. The selected plan includes beach fill, with a 200-foot-wide berm and a dune to elevation +14.75 feet for Atlantic City and a 100-foot wide berm and a dune to elevation 12.75 for Ventnor, Margate and Longport. The plan also includes 0.3 miles of bulkhead construction along the Absecon Inlet frontage of Atlantic City.

Initial construction of the beachfill in Atlantic City and Ventnor City was completed in June 2004. The second nourishment cycle was scheduled for FY07 but did not receive funding. Funding provided in FY08, FY09 and FY10 were inadequate to initiate the second nourishment cycle. FY11 funds were used to award a contract to complete the 2nd renourishment cycle. The contract was awarded in September 2011with construction completed in June 2012. FY12 funds were used for project monitoring and completion of the Plans & Specifications for the construction of the initial section of the Atlantic City bulkhead. This contract was originally advertised on 28 August 2012. However, based on contractor questions and necessary design changes in light of Hurricane Sandy in October 2012, advertisement is currently scheduled for March 2014 but is dependent on an approved Limited Re-evaluation Report (LRR) and updated PPA.

New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Absecon Island, NJ

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction along Absecon Island, beach fills with berm. and dunes.

Between October 27 & 30, 2012, Hurricane Sandy caused significant damage to the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. Both the PIR and Addendum were approved. A contract to complete the repairs and restoration was awarded in April 2013. Repairs & restoration began on 6 July 2013 with pumping complete on 12 December 2013. Outfall repairs continue and are scheduled to be completed in Aug 2014.

This project is considered an on-going Authorized but Unconstructed project under P.L. 113-2 Disaster Relief Appropriations Act (Hurricane Sandy). Therefore, the remaining initial construction portions of the project may be eligible to be completed at 100% Federal with no sponsor payback. These components include Atlantic City Bulkhead and beachfills at Margate & Longport. $1,050,000 has been received to complete the necessary steps to construct these components to include completion of LRR, approve and execute a new Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contracts.

Timeline	Start	Complete	Comments
Initial Construction		Jun-04	
2nd Periodic Nourishment Cycle	Mar-12	Jun-12	
3rd Periodic Nourishment Cycle	Sched for FY16		Atlantic City & Ventnor

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000) Regular CG Funding		
Construction	105,980	17,415	123,395		Allocations thru FY11	34,653	
					FY 12 Allocation	3,500	
					FY 13 Allocation	50	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	67,777	

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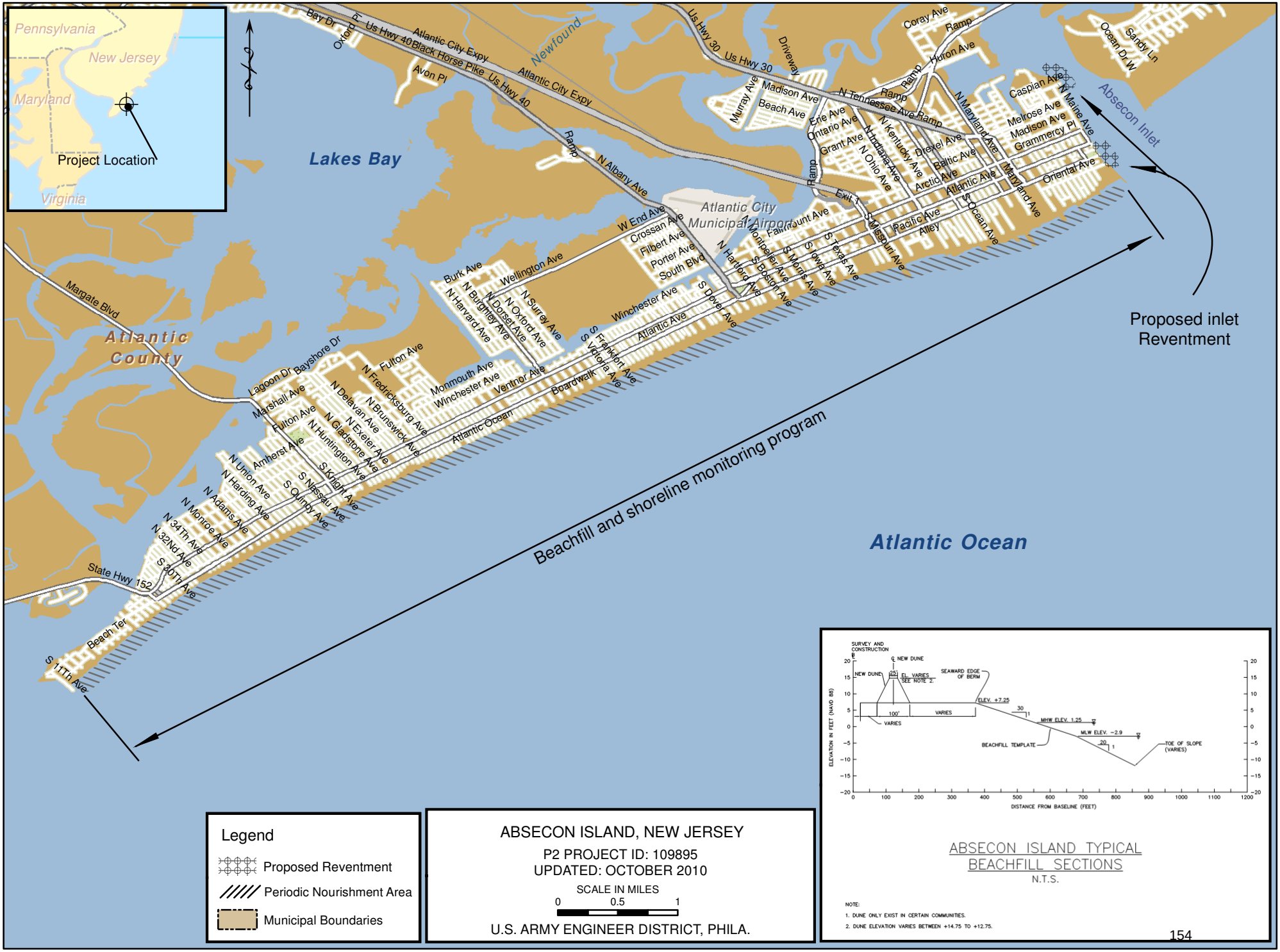

Legend

- Proposed Reventment
- Periodic Nourishment Area
- Municipal Boundaries

ABSECON ISLAND, NEW JERSEY

P2 PROJECT ID: 109895

UPDATED: OCTOBER 2010

SCALE IN MILES

0 0.5 1

U.S. ARMY ENGINEER DISTRICT, PHILA.

ABSECON ISLAND TYPICAL BEACHFILL SECTIONS

N.T.S.

NOTE:

1. DUNE ONLY EXIST IN CERTAIN COMMUNITIES.
2. DUNE ELEVATION VARIES BETWEEN +14.75 TO +12.75.

New Jersey Shore Protection, Barnegat Inlet to Little Egg Inlet, NJ

- **Authority:** Section 101 (a)(1) of the Water Resources Development Act of 2000
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** 17 Aug 2005 - New PPA being negotiated per Sandy
- **Target Completion Date:** 2055
- **Total Estimated Cost:** $125M to complete initial construction
- **Federal Funds Appropriated:** $42.052M
- **Non-Federal Share:** $23.536M

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Left: Harvey Cedars Beach fill Initial Construction
Right: Harvey Cedars Completed Dune Section

Authorized under the WRDA 2000, Section 101(a) (1).

The project will provide hurricane and coastal storm damage reduction with a beachfill and dune along the oceanfront of Long Beach Island.

FY 2006 funds were used to award a contract in September 2006 for project construction in Surf City and a portion of Ship Bottom. FY07 funds were used to complete this portion of the project. FY08 and FY09 funds were used to prepare for and award an initial construction contract at Harvey Cedars. This contract was awarded in September 2009 and completed in June 2010. Additionally Supplemental funds totaling $15.7M were received in FY08. These funds were used for Munitions and Explosives of Concern (MEC) Phase III response in Surf City and are not considered project costs. MEC Phase III response was successfully completed in May 2009. FY10 funds were used for project monitoring. FY11 funds were used to award a contract in September 2011 to complete the Brant Beach portion of the project. Construction was completed in June 2012.

New Jersey Shore Protection, Barnegat Inlet to Little Egg Inlet, NJ

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction with a beach fill and dune along the oceanfront of Long Beach Island.

Between October 27 & 30, 2012, Hurricane Sandy caused significant damage to the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. Both the PIR and Addendum were approved. A contract to complete the repairs and restoration was awarded in April 2013 with physical construction completed in Aug 2013.

This project is considered an on-going Authorized but Unconstructed project under P.L. 113-2 Disaster Relief Appropriations Act (Hurricane Sandy). The term "authorized but unconstructed project" refers to previously authorized projects for which no physical construction has occurred as well as projects that contain elements where construction has not been completed. Therefore, the remaining initial construction portions of the project may be eligible to completed at 100% Federal with no sponsor payback. $650,000 has been received to complete the necessary steps to construct these components to include completion of LRR, approve and execute a new Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contracts.

TIMELINE	Start	Complete	Comments
Initial Construction	Month/Year	Month/Year	Surf City
Initial Construction	Sep 2009	Spring 2010	Harvey Cedars
MEC Phase III Response	Jan 2009	May 2009	Surf City
Emergency Rehab (FCCE)	Jun 2011	Dec 2011	Surf City
Initial Construction	Mar 2012	Jun 12	Brant Beach

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	TBD	TBD	125,000		Allocations thru FY11	40,868	Rec'd 135,918 in FCCE funds
					FY 12 Allocation	600	
					FY 13 Allocation	584	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	TBD	

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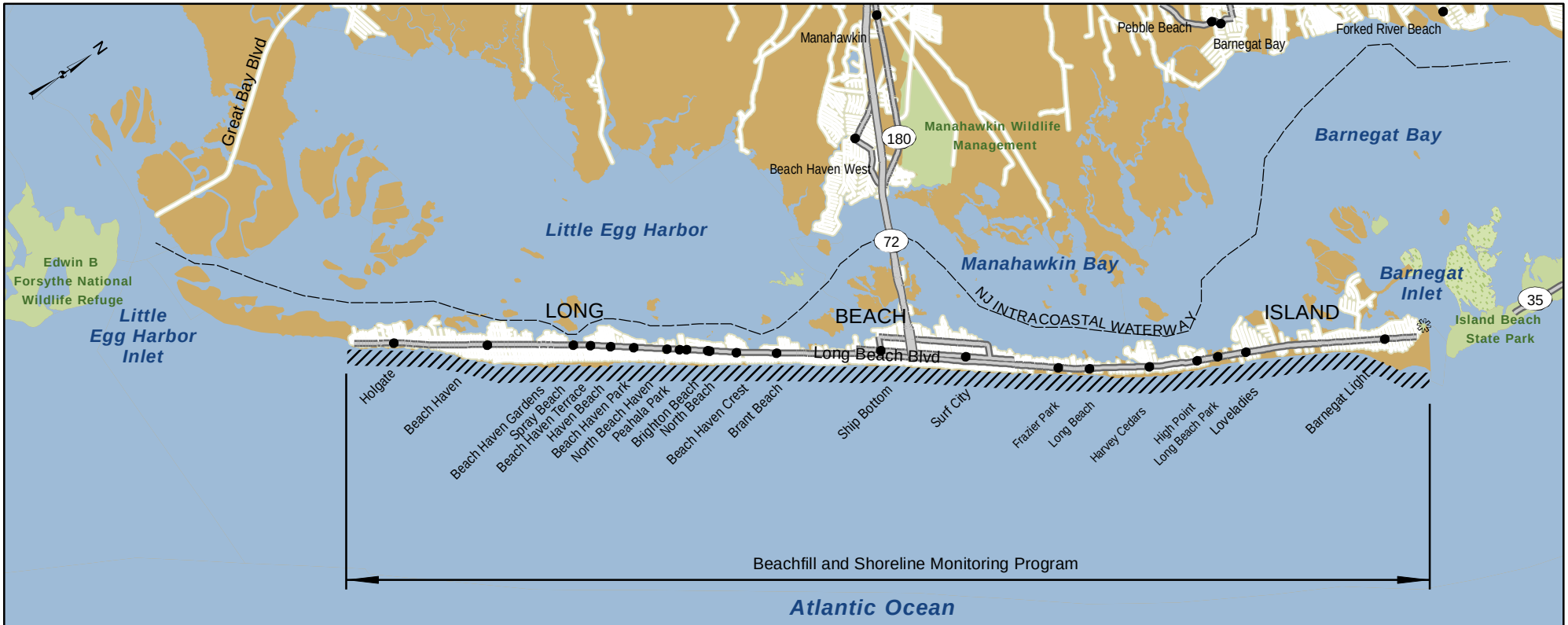
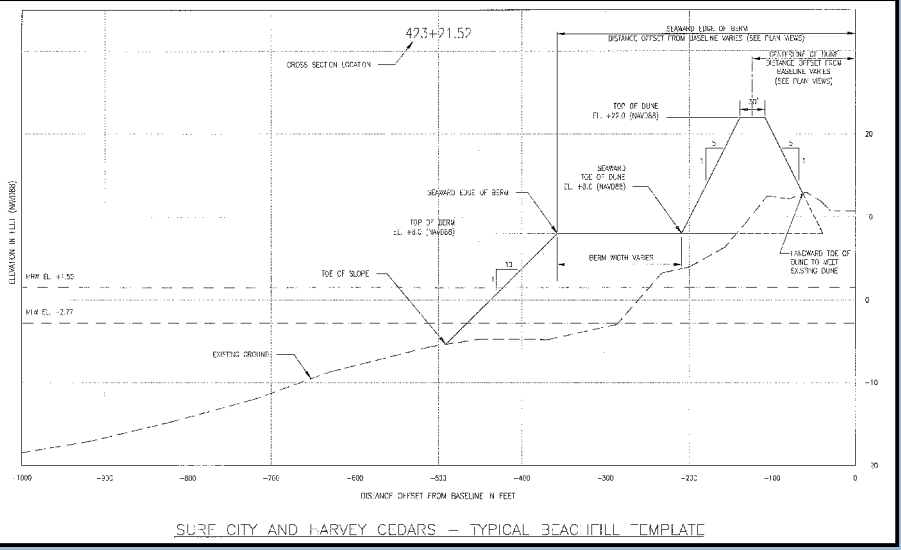




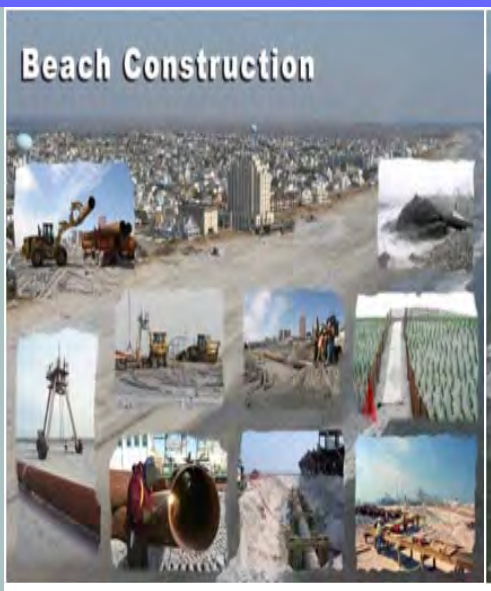
SURF CITY AND HARVEY CEDARS – TYPICAL BEACH FILL TEMPLATE

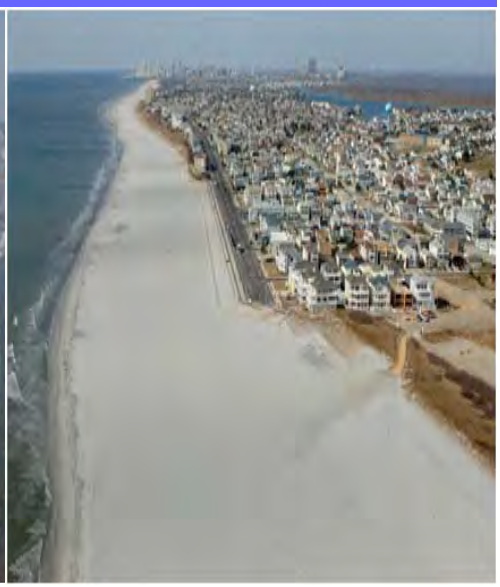
Legend
Periodic Nourishment Area
Municipal Boundaries

NEW JERSEY COASTAL INLETS & BEACHES
BARNEGAT INLET TO LITTLE EGG HARBOR INLET, NEW JERSEY
P2 PROJECT ID: 109982
UPDATED: OCTOBER 2010
SCALE IN MILES
0 1 2
U.S. ARMY ENGINEER DISTRICT, PHILA.

New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Brigantine Island, NJ

- **Authority:** Water Resources Development Act of 1999
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** 10 September 2004
- **Target Completion Date:** 2054
- **Total Estimated Cost:** $4.5M
- **Federal Funds Appropriated:** $7.570M
- **Non-Federal Share:** $4.033M





Left: Initial Storm Damage Reduction Beach Construction - Brigantine Island.
Right: Aerial Photo of the Completed Storm Damage Reduction Beach fill – Brigantine Island.

This project is authorized by the Water Resources Development Act (WRDA) of 1999.

The project provides flood and coastal storm damage reduction along Brigantine Island, utilizing sand from an offshore borrow source. The project will consist of berm and dune restoration along approximately 1.8 miles of coastline fronting the northern third of the city. The initial project construction cost is estimated at approximately $4.5 million.

FY 04, 05, & 06 funds were used to complete initial construction. The beachfill portion of the project was completed in February 2006. Dune grass, sand fencing and crossovers were also completed. FY11 funds were used for project monitoring. FY12 funds were used to award a contract to complete the 2nd renourishment cycle. The contract was awarded in September 2012 and completed in February 2013.

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New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Brigantine Island, NJ

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction along Brigantine Island, consisting of a berm and dune restoration.

Between October 27 & 30, 2012, Hurricane Sandy caused significant damage to the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. PIR was approved, funding provided and the previously awarded renourishment contract was modified to complete the repairs and renourishment concurrently. Pumping began in January 2013 and completed in February 2013.

Additionally, in response to P.L. 113-2 Disaster Relief Appropriations Act, a PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. This Addendum was approved. The previously awarded renourishment contract was modified to complete the restoration. The pumping of sand was completed in June 2013 and the project was complete in July 2013.

TIMELINE	Start	Complete	Comments
Initial Construction		Feb 2006	
FCCE Emergency Rehab	Sep 2011	Dec 2011	
2nd Periodic Nourishment Cycle	Jan 2013	Feb 2013	Sand pumping
3rd Periodic Renourishment Cycle	Sched FY19		6 years after restoration

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	30,771	16,569	47,340		Allocations thru FY11	3,910	
					FY 12 Allocation	3,580	
					FY 13 Allocation	80	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	23,201	

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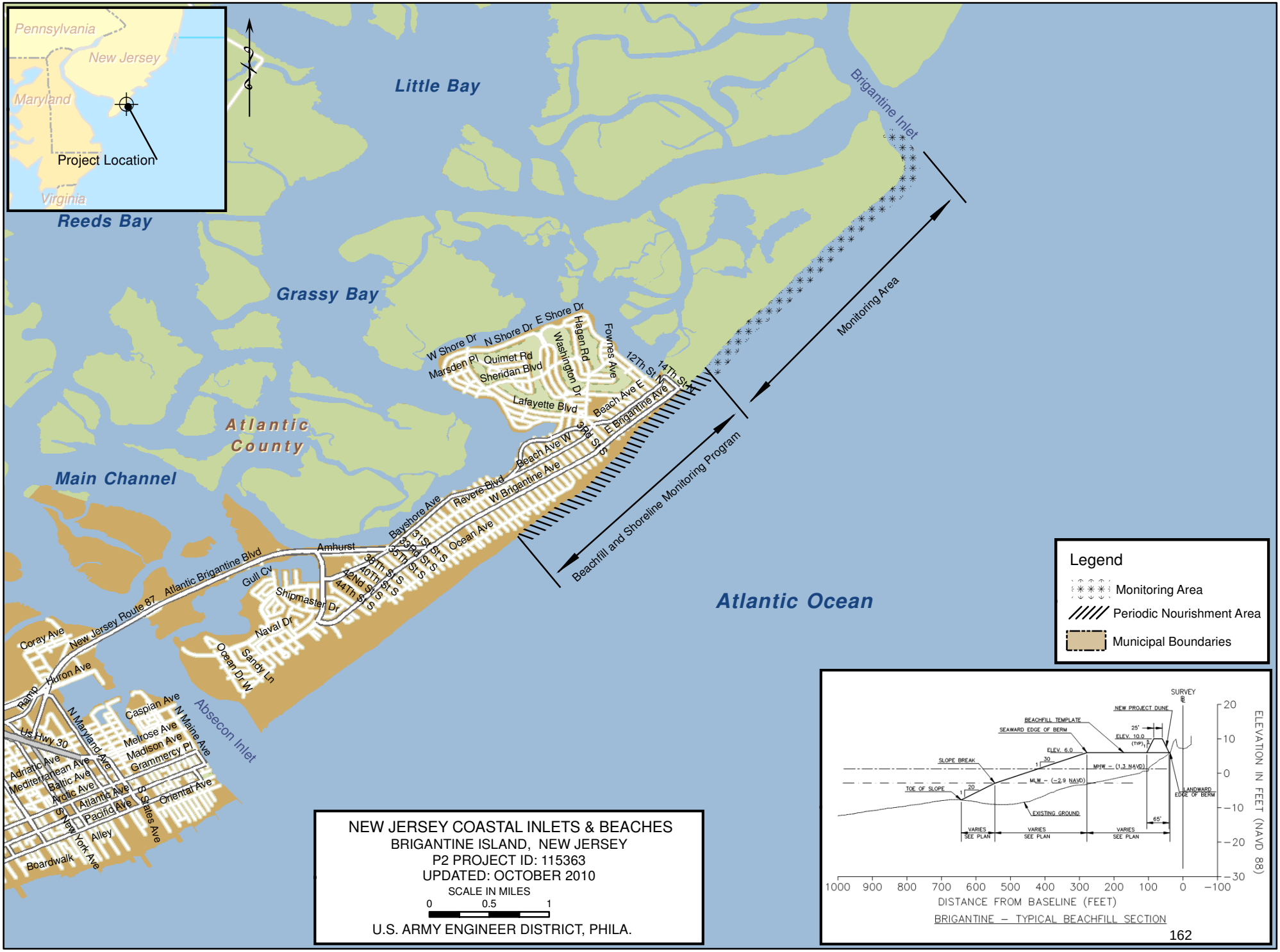

NEW JERSEY COASTAL INLETS & BEACHES
BRIGANTINE ISLAND, NEW JERSEY
P2 PROJECT ID: 115363
UPDATED: OCTOBER 2010
SCALE IN MILES
0 0.5 1
U.S. ARMY ENGINEER DISTRICT, PHILA.

New Jersey Shore Protection, Great Egg Harbor Inlet to Townsends Inlet, NJ

- **Authority:** Section 1001 (30) Water Resources Development Act of 2007
- **Congressional District**: NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** Scheduled for March 2014
- **Target Completion Date:** TBD—Will be 50 years from advertisement of 1st construction contract
- **Total Estimated Cost:** $84.941M for initial construction
- **Federal Funds Appropriated:** $1.942M
- **Non-Federal Share:** $350K

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Water lapping close to the road demonstrates the need for the project. Initial construction has not yet commenced.

This project is authorized under Section 1001 (30) of the Water Resources Development Act of 2007.

The study investigated flood and coastal storm damage effects with a view toward reducing impacts from coastal erosion and storms. The recommended plan calls for construction of a beach fill with a berm and dune along the study area oceanfront utilizing sand from an offshore borrow source and periodic nourishment for a period of 50 years.

PED was completed in FY05. Chief of Engineer's Report was signed on 24 October 2006. The project was authorized in the 2007 Water Resources Development Act. The Record of Decision was signed on 18 October 2011.

Between October 27 & 30, 2012, Hurricane Sandy significantly damaged the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. In response, the Disaster Relief Appropriations Act of 2013 was passed by Congress and signed into law by the President on January 29, 2013 as Public Law 113-2 (Act).

New Jersey Shore Protection, Great Egg Harbor Inlet to Townsends Inlet, NJ

- **Project Goals:** The purpose of this project investigated hurricane and coastal storm damage effects with a view toward reducing impacts from coastal erosion and storms.

The legislation provides supplemental appropriations to address damages caused by Hurricane Sandy and to reduce future flood risk in ways that will support the long-term sustainability of the coastal ecosystem and communities, and reduce the economic costs and risks associated with large-scale flood and storm events. In determining how to move forward in implementing specific measures contained in PL 113-2, the Corps initiated expedited limited re-evaluations of its projects, including those included in Interim Report 2, which address resiliency, economics, risks, environmental compliance, and long-term sustainability.

Limited re-evaluation reports (LRR) are post authorization studies that evaluate a specific portion of the approved plan under current policies, criteria and guidelines, and may be limited to economics, environmental effects or, in rare cases, project formulation. A LRR documents the results of the analysis undertaken.

This project is considered an on-going Authorized but Unconstructed project under P.L. 113-2 Disaster Relief Appropriations Act (Hurricane Sandy). The term "authorized but unconstructed project" refers to previously authorized projects for which no physical construction has occurred as well as projects that contain elements where construction has not been completed. Therefore, the remaining initial construction portions of the project may be eligible to completed at 100% Federal with no sponsor payback. $350,000 has been received to complete the necessary steps to construct initial construction to include completion of LRR, approve and execute a new Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contracts.

Timeline	Start	Complete	Comments
Initial Construction	TBD	TBD	Dependent on Adequate funding

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Initial Construction	84,941	0	84,941		Allocations thru FY11	1,942	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	82,999	

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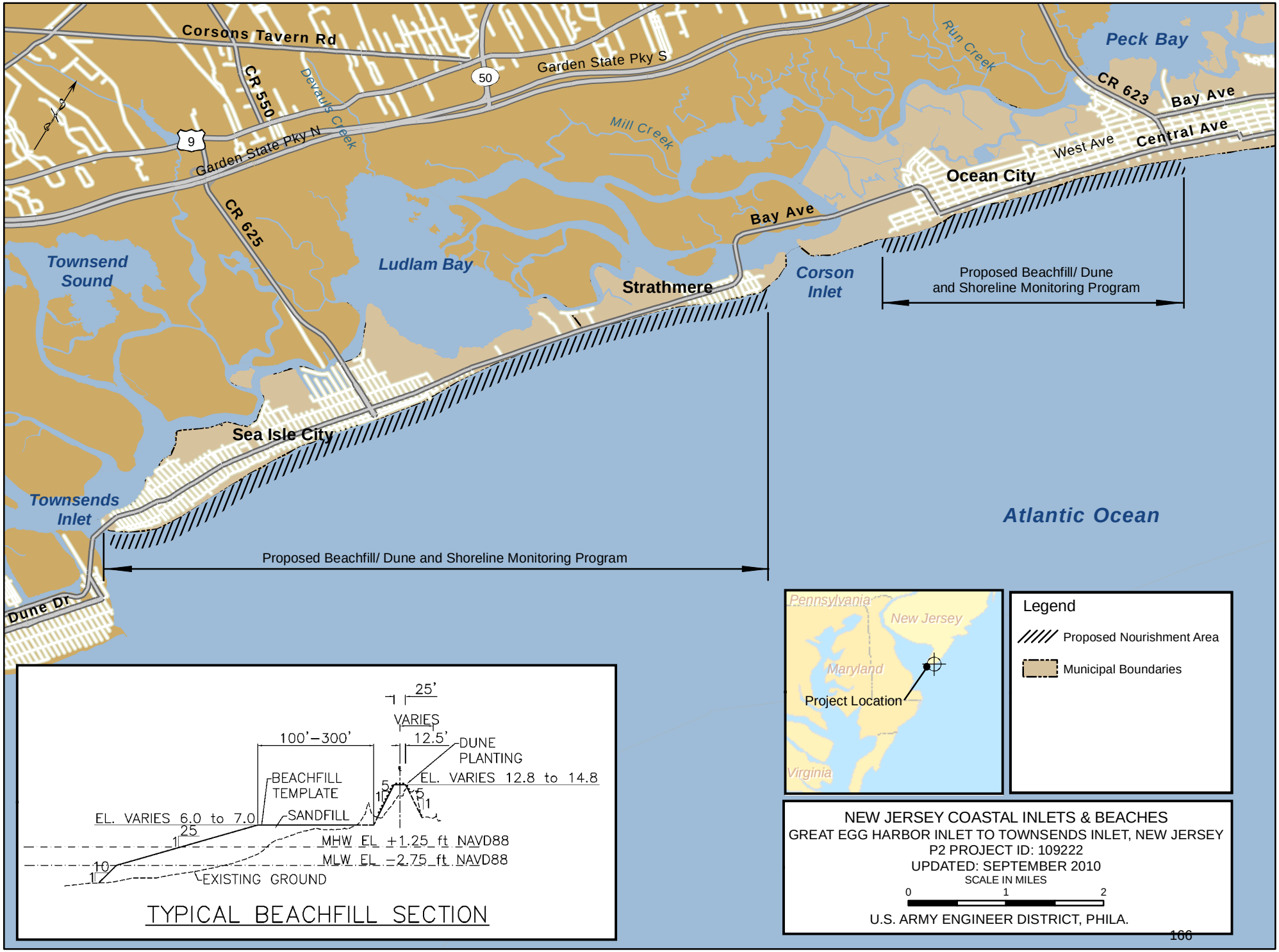
Corsons Tavern Rd
CR 550
Garden State Pky S
50
Garden State Pky N
9
Devaul's Creek
Mill Creek
Run Creek
Peck Bay
CR 623
Bay Ave
West Ave
Central Ave
Ocean City
CR 625
Townsend Sound
Ludlam Bay
Bay Ave
Strathmere
Corson Inlet
Proposed Beachfill/ Dune and Shoreline Monitoring Program
Sea Isle City
Townsends Inlet
Atlantic Ocean
Proposed Beachfill/ Dune and Shoreline Monitoring Program
Dune Dr
25'
VARIES
12.5'
100'–300'
DUNE PLANTING
BEACHFILL TEMPLATE
EL. VARIES 12.8 to 14.8
EL. VARIES 6.0 to 7.0
SANDFILL
MHW EL +1.25 ft NAVD88
MLW EL –2.75 ft NAVD88
EXISTING GROUND
TYPICAL BEACHFILL SECTION
Pennsylvania
New Jersey
Maryland
Virginia
Project Location
Legend
Proposed Nourishment Area
Municipal Boundaries
NEW JERSEY COASTAL INLETS & BEACHES
GREAT EGG HARBOR INLET TO TOWNSENDS INLET, NEW JERSEY
P2 PROJECT ID: 109222
UPDATED: SEPTEMBER 2010
SCALE IN MILES
0 1 2
U.S. ARMY ENGINEER DISTRICT, PHILA.

New Jersey Shore Protection, Lower Cape May Meadows-Cape May Point, NJ

- **Authority:** Title I, Section 101 (a)(25) of the Water Resources Development Act of 1999
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** 28 July 2003
- **Target Completion Date:** 2054
- **Total Estimated Cost:**
- **Federal Funds Appropriated:** $35.161M
- **Non-Federal Share:** $9.559M

Left: Beach and wetlands that were lost to long-term erosion have been restored, and the dune line has been reconstructed seaward.
Right: Beach is restored in the Borough of Cape May Point

The Lower Cape May Meadows – Cape May Point project was authorized for construction by Title I, Section 101 (a) (25) of WRDA 1999.

Lower Cape May Meadows Project for the purposes of ecosystem restoration, hurricane and coastal storm damage reduction and navigation mitigation is approximately 350 acres in area containing Cape May Point State Park and the Nature Conservancy's Cape May Migratory Bird Refuge. The Meadows consists of important coastal freshwater wetlands, which are vital resting areas for shorebirds and birds of prey during their seasonal migration along the Atlantic flyway. The project restores and protects fish and wildlife habitat and provides flood and storm damage reduction throughout the entire study area. This project was completed on 15 June 2007.

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New Jersey Shore Protection, Lower Cape May Meadows-Cape May Point, NJ

- **Project Goals:** The purpose of this project provides ecosystem restoration, hurricane and coastal storm damage reduction and navigation mitigation in an area containing Cape May Point State Park and the Nature Conservancy's Cape May Migratory Bird Refuge.

FY 08 funds were used to award a contract to initiate the 2nd periodic nourishment cycle. This contract was completed in March 2009. FY 11 funds in the amount of $8,920,000 were used for project monitoring and to continue the 2nd periodic nourishment cycle. The contract to continue the 2nd periodic nourishment cycle was awarded on 5 November 2010. Physical construction began in December 2010 and was completed in February 2011. FY12 funds were used to award a contract to complete the 2nd renourishment cycle. The contract was awarded in September 2012. Physical construction began in November 2012 with sand pumping completed in January 2013. Other project features will be completed by May 2013.

Between October 27 & 30, 2012, Hurricane Sandy caused significant damage to the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. Flood Control and Coastal Emergencies (FCCE) funds under Public Law 84-99 were used to complete a Project Information Report (PIR). The results of the PIR determined that the recent renourishment brought the project back to design template. Therefore it was not eligible for PL 84-99 funding.

The 3rd periodic nourishment cycle is currently scheduled for FY16. This is based on a 4 year renourishment cycle.

TIMELINE	Start	Complete	Comments
Initial Construction		Jun 2007	Beach fill
Initial Construction		Jun 2007	Environmental Restoration
Continue 2nd Periodic Nourishment Cycle	Dec 10	Feb 2011	
Complete 2nd Periodic Nourishment Cycle	Nov 12	Jan 13	Pumping complete.
Complete 3rd Periodic Nourishment Cycle			Scheduled for FY16

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	70,160	10,840	81,000		Allocations thru FY11	27,265	
					FY 12 Allocation	7,497	
					FY 13 Allocation	399	
					FY 14 Allocation	400	
					FY 15 Budget	TBD	
					Balance to Complete	34,599	

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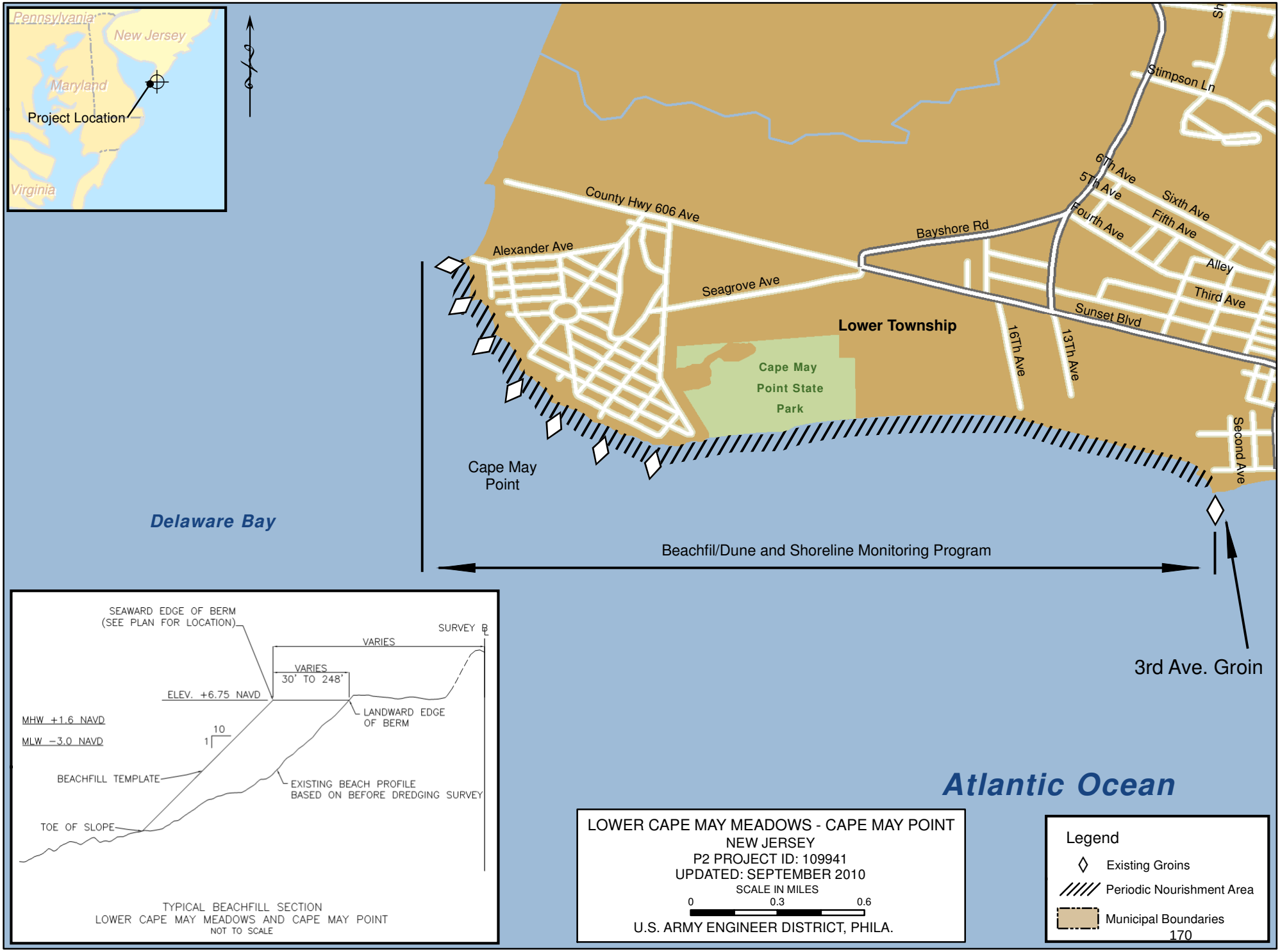
CORPS OF ENGINEERS

U.S. ARMY



TYPICAL BEACHFILL SECTION
LOWER CAPE MAY MEADOWS AND CAPE MAY POINT
NOT TO SCALE

LOWER CAPE MAY MEADOWS - CAPE MAY POINT
NEW JERSEY
P2 PROJECT ID: 109941
UPDATED: SEPTEMBER 2010
SCALE IN MILES
0 0.3 0.6
U.S. ARMY ENGINEER DISTRICT, PHILA.

Legend
Existing Groins
Periodic Nourishment Area
Municipal Boundaries

New Jersey Shore Protection, Manasquan Inlet to Barnegat Inlet, NJ

- **Authority:** Section 1001 (32) of the Water Resources Development Act of 2007
- **Congressional District:** NJ-3, NJ-4
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** Scheduled for April 2014
- **Target Completion Date:** TBD—50 year after 1st initial construction contract advertisement
- **Total Estimated Cost:** $158M Initial Construction
- **Federal Funds Appropriated:** $855K
- **Non-Federal Share:** $337,000

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Mantoloking New Jersey without-project conditions. (Before Hurricane Sandy)

This project was authorized by Section 1001 (32) of the Water Resources Development Act of 2007.

The study investigated flood and coastal storm damage effects with a view toward reducing impacts from coastal erosion and storms. The recommended plan calls for construction of a beach fill with a berm and dune along the study area oceanfront utilizing sand from an offshore borrow source and periodic nourishment for a period of 50 years. Initial fill requirements would be about 10 million cubic yards, with periodic nourishment at 4-year intervals with about 1 million cubic yards placed.

The Chief of Engineers Report was completed in December 2003. This project was authorized in the 2007 Water Resources Development Act (WRDA). Funding was not received in FY12 to initiate initial construction.

New Jersey Shore Protection, Manasquan Inlet to Barnegat Inlet, NJ

- **Project Goals:** The purpose of this project investigated hurricane and coastal storm damage reduction, and recommendation of a beach fill. With a berm and dune and a periodic nourishment for a period of 50 years.

Between October 27 & 30, 2012, Hurricane Sandy significantly damaged the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. This project was hit especially hard with a breach in Mantoloking and significant damage to Seaside Heights, Mantoloking, Ortley Beach, Lavallette and Seaside Park. Significant damage also occurred to piers, boardwalks, amusements, residential and commercial properties.

This project was determined to be eligible for P.L. 113-2 2013 Disaster Relief Appropriations Act (Hurricane Sandy) funds as an Authorized but Unconstructed project. The term "authorized but unconstructed project" refers to previously authorized projects for which no physical construction has occurred as well as projects that contain elements where construction has not been completed.

$1,050,000 has been received to begin the process towards initiation and completion of initial construction. These funds are being used to complete the necessary steps towards initial construction. These steps include completion of the Limited Reevaluation Report; develop, approve and execute the Project Partnership Agreement; acquire the necessary real estate; complete plans and specifications; and advertise and award the construction contract.

Timeline	Start	Complete	Comments
Initial Construction	TBD	TBD	Dependent on Adequate funding

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	102,700	55,300	158,000		Allocations thru FY11	855	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	101,845	

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CORPS OF ENGINEERS

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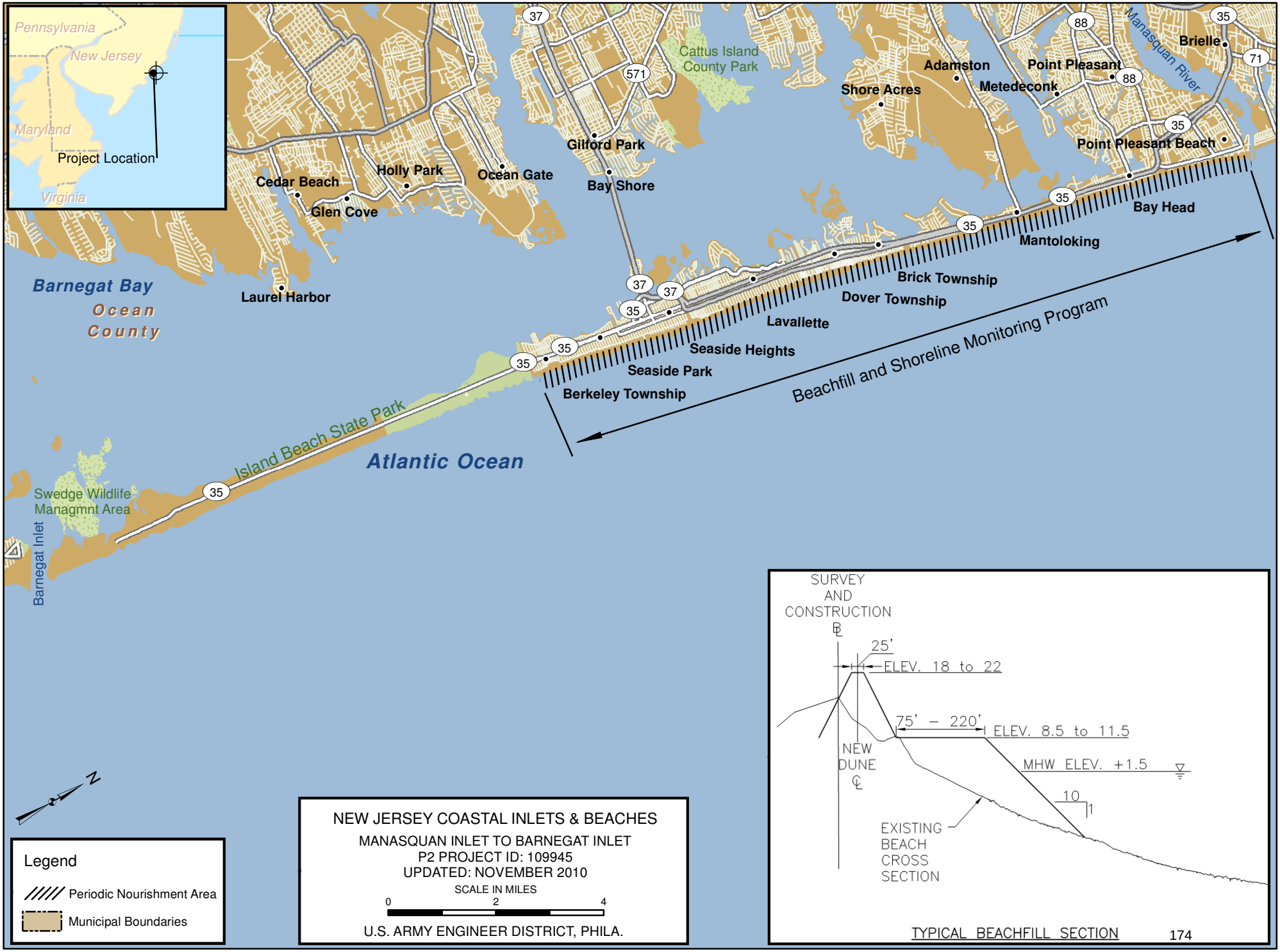

New Jersey Shore Protection, Townsends Inlet to Cape May Inlet, NJ

- **Authority:** Section 101 (a)(26) of the Water Resources Development Act of 1999.
- **Congressional District:** NJ-2
- **Non-Federal Sponsor:** New Jersey Department of Environmental Protection
- **Date of Project Partnership Agreement:** 8 March 2002
- **Target Completion Date:**
- **Total Estimated Cost:**
- **Federal Funds Appropriated:** $60.553M
- **Non-Federal Share:** $33.441M

Left: Avalon Seawall During construction.
Right: Avalon Seawall Completed Section

Authorized under the WRDA 1999, Section 101(a)(26).

The recommended plan for flood and coastal storm damage reduction includes: (1) 4.3 miles of beach fill with a berm width of 150-feet and a dune crest at +14.75 feet NAVD, with periodic nourishment at 3 year intervals; (2) 2.2 miles of seawall construction along the Townsends Inlet frontage of Avalon and the Hereford Inlet frontage of North Wildwood; (3) ecosystem restoration of approximately 116 acres of natural barrier island habitat at Stone Harbor Point including beach fill and dune construction. The restoration includes the planting of approximately 56 acres of bayberry and red cedar roosting habitat.

The initial beachfill construction within Avalon and Stone Harbor was completed in FY03. Initial construction contracts were awarded for both the Avalon and North Wildwood seawalls in FY04. Construction of both the Avalon (September 2006) and Hereford (June 2009) Seawalls are complete. These seawalls were completed utilizing FY 05, 06, 07 and 08 funds. The 2nd nourishment cycle was scheduled for FY07. However, renourishment did not proceeded due to inadequate funding. FY11 funds were also inadequate to proceed with initiation of the 2nd nourishment cycle. A small portion of the funds were used for project monitoring. Additionally in FY09 $1.5M in Emergency Supplemental funds were used to initiate and complete a truck-fill operation in Avalon.

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New Jersey Shore Protection, Townsends Inlet to Cape May Inlet, NJ

- **Project Goals:** The purpose of this project provides hurricane and coastal storm damage reduction, including a beach fill with a berm and dune, with a periodic nourishment at three year intervals.

As a result of Hurricane Irene in August 2011$40,000 in FCCE funds were provided to complete a Project Information Report under Public Law 84-99. The PIR completed in March 2012 determined that the project met the requirements of PL84-99 and was eligible for FCCE funding. A contract to repair the project was awarded in September 2012. Physical construction began in December 2012.

Between October 27 & 30, 2012, Hurricane Sandy caused significant damage to the New Jersey coast from Sandy Hook to Cape May and up the Delaware Bay. FCCE under PL 84-99 were again used to complete a PIR Addendum to the Hurricane Irene PIR. The results of the PIR determined that the project was eligible for FCCE funding to repair the project to pre-storm conditions. Therefore, the previously awarded Hurricane Irene repair contract was modified to complete the repairs for Hurricanes Irene & Sandy concurrently. Additionally, in response to P.L. 113-2 DRAA, a second PIR Addendum was completed to determine whether the project was eligible for FCCE funding under P.L. 113-2 to restore the project to design template. This Addendum was approved. The contract was further modified to complete the restorations. Pumping of sand was completed in July 2013. Repairs to Hereford Seawall are on-going & scheduled to be completed by Jun 2014.

Timeline	Start	Complete	Comments
Initial Construction		Jul 2002	Beach fill
Initial Construction		Jun 2009	Avalon & Hereford Seawalls
FCCE Emergency Rehab (Nor'Ida Nov 09)	Apr 2011	Dec 2011	Pumping completed in Jun 2011
FCCE EMERGENCY Rehab (Hurricane Irene & Sandy)	Dec 2012	Jul 13	
2nd Periodic Nourishment Cycle	Sched for FY16		

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Construction	61,200	32,889	94,089		Allocations thru FY11	33,441	
					FY 12 Allocation	0	
					FY 13 Allocation	0	
					FY 14 Allocation	0	
					FY 15 Budget	TBD	
					Balance to Complete	27,759	

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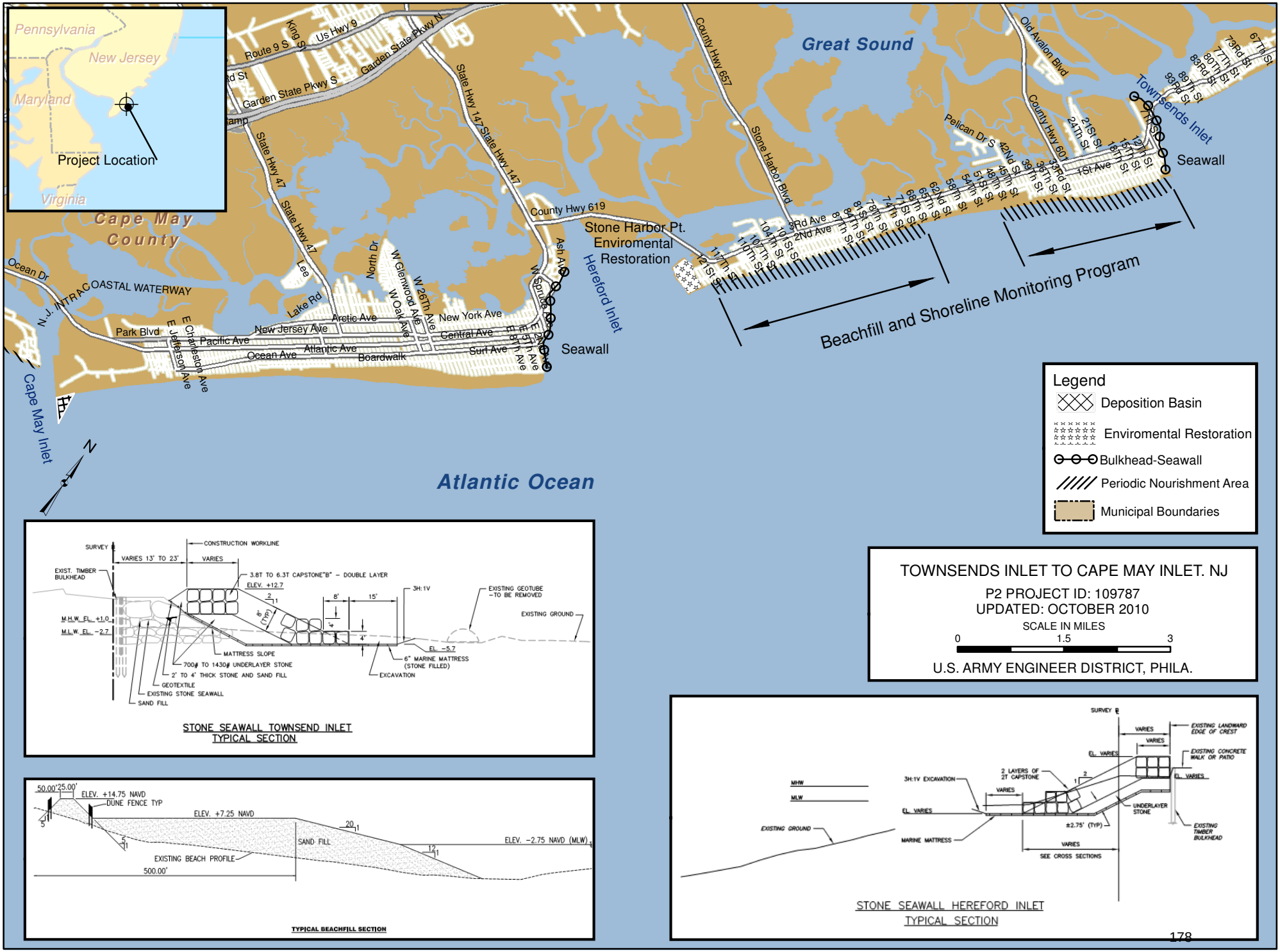


STONE SEAWALL TOWNSEND INLET
TYPICAL SECTION

TYPICAL BEACHFILL SECTION

STONE SEAWALL HEREFORD INLET
TYPICAL SECTION

TOWNSENDS INLET TO CAPE MAY INLET. NJ

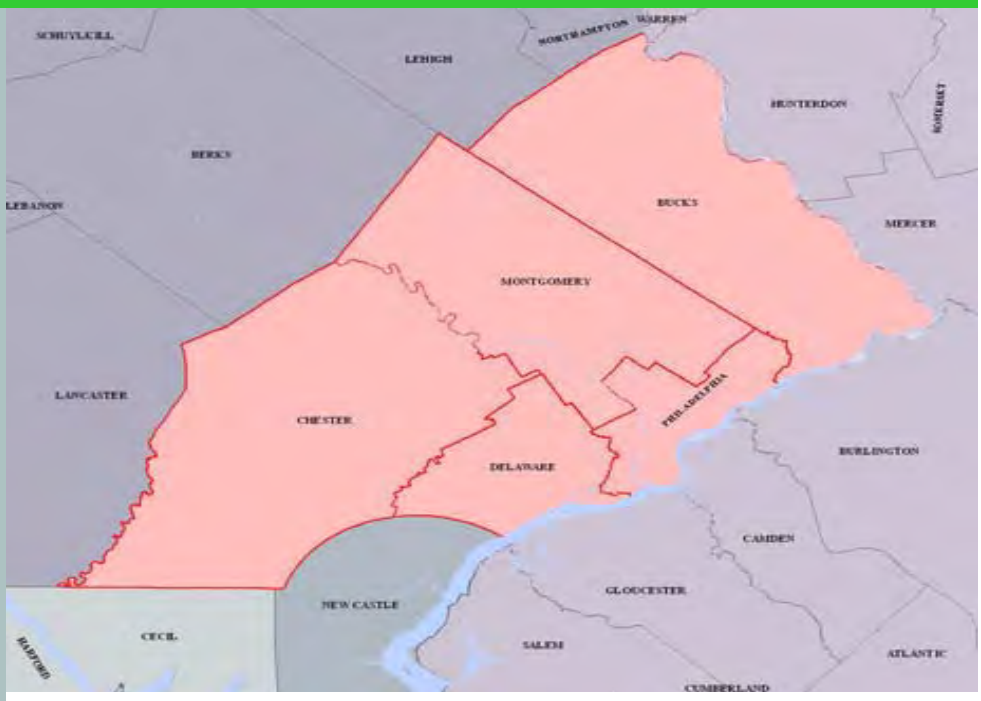
P2 PROJECT ID: 109787
UPDATED: OCTOBER 2010

SCALE IN MILES
0 1.5 3

U.S. ARMY ENGINEER DISTRICT, PHILA.

Southeastern PA Environmental Improvements Program, Bucks, Chester, Delaware, Montgomery & Philadelphia Counties, PA

- **Authority:** Section 566 of the Water Resources Development Act of 1996.
- **Congressional District:** PA-1, PA-2, PA-6, PA-7, PA-8, PA-13, PA-15, PA-16
- **Non-Federal Sponsor:** see individual projects for specific project locations.
- **Federal Funds Appropriated:** $12M (Authorized to $25M)
- **Non-Federal Share:** 25%



Authorized under Section 566 of the Water Resources Development Act (WRDA) of 1996, as amended.

Funding for this authority is at the sole discretion of Congress through Congressionally Directed Spending and is not part of the USACE annual budget. The Southeastern Pennsylvania Environmental Improvement Program, authorized by Section 566 of WRDA 1996, as amended, provides design and construction assistance to non-Federal interests for carrying out water related environmental infrastructure, and resource protection and development projects in southeastern Pennsylvania, including projects for wastewater treatment and related facilities, water supply and related facilities, and surface water resource protection and development. Section 552 of WRDA 1999 amended the authority to include environmental restoration as an authorized project purpose under this program. The process consists of three phases: (1) Project Approval (2) Project Design, and (3) Project Construction. All phases are costs-shared with a non-Federal sponsor with the sponsor providing 25% of the total project costs.

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Southeastern PA Environmental Improvements Program, Bucks, Chester, Delaware, Montgomery & Philadelphia Counties, PA

- **Project Goals:** The purpose of these projects are to provide design and construction assistance to non-Federal interests for carrying out water related environmental infrastructure, ecosystem restoration and resource protection and development projects in southeastern Pennsylvania.

Project	Sponsor	Status		Program Funding					
				FY06	FY08	FY09	FY10	FY12	FY14
Chester, Delaware and Montgomery County Watershed	Pennsylvania Department of Environmental Protection	Design Phase				120 399*	0	0	0
Cobbs Creek Fish Passage Restoration	Philadelphia Water Department	Design Phase		28		80*	0	0	1,500
Cobbs Creek Habitat Restoration	Philadelphia Water Department	Construction		10		239 254*	0	2,300	0
Hatfield Borough Sewer Improvements	Hatfield Borough	Close Out			236		0	0	0
Mill Creek Diversion	Philadelphia Water Department	Design Phase		522			0	0	0
Sandyford Run	Philadelphia Water Department	Negotiation Design Agreement		0	0	0	242	0	0
Tacony Creek Ecological Improvements	Philadelphia Water Department	Close Out		18	492	478 1,832*	388	0	0
Whitpain Township	TBD	Factsheet approval			49		0	0	0
Total Funding				594	777	837 2,567*	630	2,300	1,500

Zero funding received in FY07, FY11 and FY 13
**Stimulus Funds Received in addition to normal FY09 funding*

Chester, Delaware & Montgomery County Streams

- **Authority:** Section 566 of the Water Resources Development Act of 1996.
- **Congressional District:** PA-7, PA-16
- **Non-Federal Sponsor:** Pennsylvania Department of Environmental Protection (PADEP)
- **Date of Project Agreement:** 17 August 2010
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $501,000
- **Non-Federal Share:** 25%

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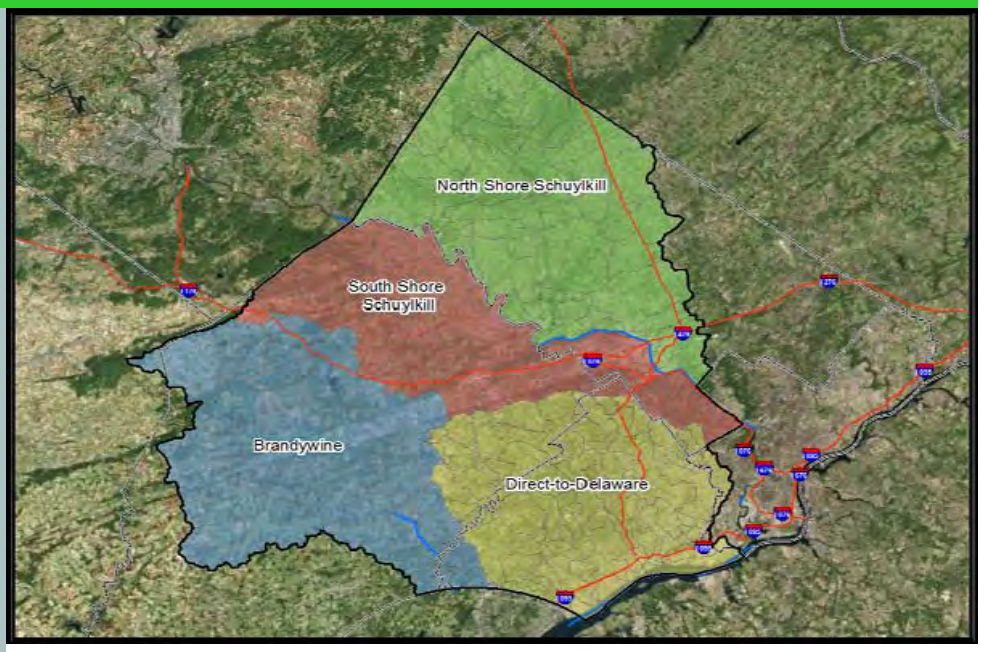


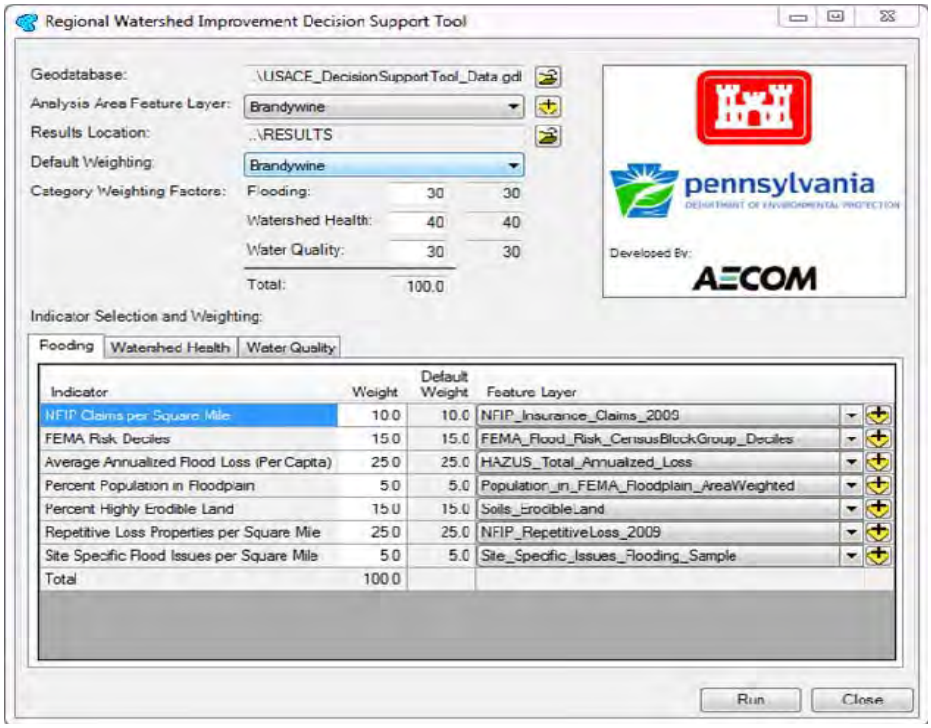
Project area for the development of the decision support tool and project alternatives. The project area is divided into 4 sub-basins based on similar characteristics.

Many Chester, Delaware and Montgomery County streams are in need of assistance to restore their environmental conditions including habitat and water quality. The objective of this effort is to develop preliminary designs for multiple environmental improvement projects that address watershed problems in Chester, Delaware and Montgomery Counties, Pennsylvania. The approach follows an Integrated Water Resource Management principle to ensure project designs address system-wide problems and issues and result in a comprehensive watershed solution. This project involves evaluating a wide range of parameters including but not limited to sedimentation, erosion, aquatic habitat, ecosystem restoration and improvement, point and non-point source pollution and flood damage reduction. The final product will contain prioritized preliminary designs (30% designs), including project costs, and a detailed implementation report for a holistic solution to the degradation of the environmental systems within Chester, Delaware and Montgomery Counties.

Chester, Delaware & Montgomery County Streams

- **Project Goals:** The purpose of this project is to develop preliminary designs for multiple environmental improvement projects that address watershed problems in Chester, Delaware and Montgomery Counties, Pennsylvania.

Available funding will not support the project moving into additional phases including plan formulation and project design. Additional non-Federal cost-share from PADEP is also required.



Screenshot from the Decision Support Tool. This tool runs in ESRI ArcGIS and combines hundreds of calculations into a simple to use format for the novice and advanced GIS users.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Initial assessment and Fact-sheet	9	3	12		Allocations thru FY11	519	
Design Agreement	21	7	28		FY 12 Allocation	0	
Decision Support Tool	525	175	700		FY 13 Allocation	0	
Plans & Specifications *	TBD	TBD	TBD		FY 14 Allocation	0	
Construction	TBD	TBD	TBD		FY 15 Budget	TBD	
					Balance to Complete	TBD	

Cobbs Creek Fish Passage

- **Authority:** Section 566 of the Water Resources Development Act of 1996.
- **Congressional District:** PA-1, PA-2
- **Non-Federal Sponsor:** Philadelphia Water Department
- **Date of Project Agreement:** 6 August 2009
- **Target Completion Date:** FY2015
- **Total Estimated Cost:** $575,000 (design) & $2M (construction)
- **Federal Funds Appropriated:** $400,000
- **Non-Federal Share:** 25%

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The Woodland Avenue Dam is the first impediment along Cobbs Creek preventing fish passage. Stored sediment behind the dam must be controlled during removal to prevent adverse upstream impacts.

In August 2009, PWD and the Corps partnered to investigate, select, design and construct the best alternative to reestablish fish passage along Cobbs Creek at the Woodland Dam. Through the Corps' planning process and following the National Environmental Policy Act (NEPA) the project team began to determine the feasibility of the following fish passage alternatives:

- No Action
- Dam Removal (Full)
- Dam Removal (Partial)
- Fish Ladder

The Woodland Dam is located just upstream of the Woodland Avenue Bridge across Cobbs Creek. The potential limits of disturbance from the project extend from the bridge upstream approximately 1,050 feet. The project area is within property contained in the Fairmount Park System. Portions of the project area extend in Delaware County, Pennsylvania. The Woodland Dam is located approximately 5.4 miles downstream of the confluence of Cobbs Creek and Indian Creek. The dam is also the first impediment to fish passage along Cobbs Creek.

Modification or removal of a small dam on Cobbs Creek near Island Avenue and Woodland Avenue would restore fish passage and improve the aquatic habit along this stream. The Woodland Dam, also known as Old Swedes Mill, is a low concrete structure managed by the Philadelphia

Cobbs Creek Fish Passage

- **Project Goals:** The purpose of this project is to investigate, select, and construct the best alternative to reestablish fish passage on Cobbs Creek.

Parks and Recreation Department. The purpose of the Cobbs Creek Fish Passage Restoration Project is to investigate, select, and construct the best alternative to reestablish fish passage on Cobbs Creek. Typically, the most effective method of restoring fish passage is to eliminate the obstruction by removing the dam.

The Corps is currently finalizing 90% Plans and Specifications for final review by PWD. The project will include full removal of the dam plus stream restoration for approximately 1,000 feet upstream of the dam necessary to stabilize the channel.

Funding is sufficient to finalize the plans and specifications, however additional funding is required to proceed with construction.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Initial assessment and Fact-sheet	9	3	12		Allocations thru FY11	498	
Design Agreement	18	6	24		FY 12 Allocation	0	
Decision Support Tool	100	33	133		FY 13 Allocation	0	
Plans & Specifications	300	100	400		FY 14 Budget	1,500	
Construction	1,500	500	2,000		FY 15 Budget	TBD	
					Balance to Complete	TBD	

Cobbs Creek Watershed Habitat Restoration

- **Authority:** Section 566 of the Water Resources Development Act of 1996.
- **Congressional District:** PA-1, PA-2
- **Non-Federal Sponsor:** Philadelphia Water Department
- **Date of Project Agreement:** 19 January 2010
- **Target Completion Date:** March 2014
- **Total Estimated Cost:** $4.1M
- **Federal Funds Appropriated:** $3.0M
- **Non-Federal Share:** 25%

Once constructed, the project will reduce the combined sewer overflow volume from this location by approximately 58% and the annual number of occurrences from 24 to 3.

During storm events, the flow within the combined sewer surpasses its capacity and the excess flow discharges raw sewage into Indian Creek. The urbanization of this watershed consequently increased storm flows and contributes to sedimentation and debris accumulation within the sewer system leading to frequent flooding of the area during minor storm events. The West Branch of Indian Creek enters the combined sewer system upstream of City owned tennis courts in Morris Park, between Brockton and Ruskin Roads. The proposed project includes the design and construction a new stream channel to the East Branch of Indian Creek that bypasses the sewer system. This will remove the flow of the West Branch of Indian Creek from the combined sewer thereby reducing sewer overflow events, decreasing flooding of the park by providing an alternate route for the water, and restoring the stream to a more natural state. The project will construct approximately 650ft to 1000ft of new channel, including pools and riffles.

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Cobbs Creek Watershed Habitat Restoration

- **Project Goals:** The purpose of this project provides design and construction a new stream channel to the East Branch of Indian Creek that bypasses the sewer system. This will remove the flow of the West Branch of Indian Creek from the combined sewer thereby reducing sewer overflow events, decreasing flooding of the park by providing an alternate route for the water, and restoring the stream to a more natural state.

Construction began in December 2012 and is expected to be complete in March 2014.

Temple University Libraries, Urban Archives

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Init. Appraisal Report	10	0	0		Allocations thru FY11	503	
Design Agreement	12	4	16		FY 12 Allocation	2,300	
Final Design	400	133	533		FY 13 Allocation	0	
Construction	2,250	75	3,000		FY 14 Allocation	0	
					FY 15 Budget	0	
					Balance to Complete	0	

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US ARMY CORPS OF ENGINEERS
Building Strong

US Army Corps
of Engineers
Philadelphia District

Operations and Maintenance

Operations and maintenance projects include the preservation, operation, maintenance, and care of existing river and harbor, flood control, and related activities at the projects that the Corps operates and maintains.

Deep-Draft Harbor and Channel Maintenance

Inland Waterway Maintenance

Navigation Maintenance

Other Authorized Project Purposes

Small, Remote, or Subsistence Navigation Maintenance

Color Code	
State	**Color**
Delaware	Red
New Jersey	Blue
New York	Black
Pennsylvania	Green
Multiple	Purple

Absecon Inlet, Atlantic County, NJ

- **Authority:** HD 375, 504
- **Congressional District:** NJ-2

Project area showing Absecon Inlet, located between Brigantine and the northern end of Atlantic City.

Approved by HD 375, 67th Congress and HD 504, 79th Congress.

The project provides for an inlet entrance 20 feet deep at mean low water and 400 feet wide, an entrance channel 15 feet deep and 200 feet wide from the inlet channel into Clam Creek, and a turning basin 15 feet within Clam Creek. The total length of the section included in the project is about 1.5 miles.

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Absecon Inlet, Atlantic County, NJ

- **Project Goals:** The purpose of this project provides for an inlet entrance 20 feet deep at mean low water and 400 feet wide, an entrance channel 115 feet deep and 200 feet wide from the inlet channel into Clam Creek, and a turning basin 15 feet within Clam Creek.

In FY14 the Corps will conduct Project Condition Surveys and potential entrance channel dredging with the Currituck or Murden using remaining post-Sandy supplemental funds. PL 113-2 Supplemental Funds (Sandy) received on this project are $750,000.

This project provides a safe navigation channel for commercial, recreational and USCG use, with a direct fish value of over $22M annually. A shoaling problem in the ocean entrance portion of the channel was identified by local users in June 2012. A portion of this shoal was removed in July 2012 by the Government Dredge Currituck, however, shoaling was exacerbated by Superstorm Sandy. Post-Sandy supplemental funds were received and the entrance channel shoal was dredged as a borrow source for the adjacent Absecon Island Federal shore protection project. Future beach fill operations should continue to utilize the entrance channel as a borrow source. A severe shoal exists at the entrance to the Clam Creek portion of the channel; sediment analyses were conducted in 2010, but no placement area or funding is available. For the last four years, the project has been affected by Low Use Navigation budget cuts.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	374	
FY 12 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 13 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 14 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 15 Budget	0	
FY 16 Budget	TBD	

Barnegat Inlet, Ocean County, NJ

- **Authority:** HD 73-19, HD 74-85, HD 79-358
- **Congressional District:** NJ-2, NJ-3

Project area showing Barnegat Inlet between Island Beach State Park and Barnegat Light.

Adopted as HD 73-19 in 1935 and modified as HD 74-85 in 1937 and HD 79-358 in 1946.

Project provides for a channel 8 ft deep through the inlet and 10 ft deep through the outer bar, a channel of suitable hydraulic characteristics extending in a northwesterly direction from the inlet gorge to Oyster Creek channel and through the latter channel to deep water in the bay, and the maintenance of a channel 8 ft deep and 200 ft wide to connect Barnegat Light Harbor with the main inlet channel. Project has two rubble-mound jetties. The project length is about 4.5 miles as described above. It was originally completed in 1940, but the Supplemental Appropriation Act of 1985 contained language stating that the existing project had not worked as projected and, in fact, created a hazard to navigation. As a result, the following administratively approved modifications were constructed in 1991 as design deficiency measures: a new south jetty 4,270 feet in length along an alignment generally parallel to the existing north jetty, a navigation channel 300 feet wide to a depth of 10 feet below mean low water from the outer bar in the Atlantic Ocean to the north end of the existing sand dike in Barnegat Bay, jetty sport fishing facilities on the new jetty.

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Barnegat Inlet, Ocean County, NJ

- **Project Goals:** The purpose of this project provides for a channel through the inlet and through the outer bar, a channel of suitable hydraulic characteristics extending in a northwesterly direction from the gorge in the inlet to Oyster Creek channel and through the latter channel to deep water in the bay, and the maintenance of a channel to connect Barnegat Light Harbor with the main inlet channel. The project also provides for protecting the inlet channel with two converging stone jetties.

The FY13 funds were used to dredge the inlet channel, collect vibracores and perform surveys. Funding provided is only sufficient to keep channel open and is not adequate to remove shoal or maintain channel to authorized depth. FY14 O&M Funds will be used for surveys and dredging with the Currituck or Murden.

PL 113-2 Supplemental Funds (Sandy) received: $9,000,000
Post-Sandy funds were used to dredge shoaling that occurred in Oyster Creek (work completed Dec 2013) and prepare plans & specs to repair post-Sandy damage to the north jetty (contract awarded Dec 2013). Jetty repair began in February 2014 and will continue through Sept 2014.

The project requires dredging to provide a safe, reliable navigation channel for one of the most dangerous inlets on the east coast. The project is critical to a large fishing fleet consisting of full-time commercial, charter and recreational vessels that contribute to the economic value of the nation and an annual direct fish value of over $30M/year. The US Coast Guard designates this site as a “Surf Station” due to the hazardous inlet and requires a safe channel to fulfill their Homeland Security mission and critical life safety, search and rescue operations. Material dredged from inlet is beneficially used by placing it back into the near shore in support of the Federal beach fill along Long Beach Island.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	2,854	Dredge Inlet & Oyster Creek
FY 12 Allocation	343	Dredge Inlet & surveys
FY 13 Allocation	370	Dredge Inlet, vibracores and surveys
FY 14 Allocation	766	
FY 15 Budget	420	
FY 16 Budget	TBD	

Beltzville Lake, Beltzville, PA

- **Authority:** HD 87 522
- **Congressional District:** PA-11

The project consists of an earth and rock filled dam; a spillway around the north end of the dam; and gate controlled outlet works discharging through a conduit on rock along the right abutment.

The project was adopted as HD 87 522 in 1962.

The dam is located on Pohopoco Creek 4 1/2 miles from its confluence with the Lehigh River and 4 miles east of Lehighton, Pennsylvania. The project was completed in 1971. Annual funding is used for routine operations and maintenance of the dam and related structures, including project buildings, grounds and equipment; also water control data collection, evaluation data gathering and analysis, water quality analysis, real estate and dam safety efforts.

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Beltzville Lake, Beltzville, PA

- **Project Goals:** The purpose of this project provides for multiple purpose development for water supply, flood control and recreation. It consists of a dam, spillway around the north end of the dam, and a gate controlled outlet.

In FY14 the Corps will finalize required periodic dam inspection and potential failure modes analysis and IRRMP reports. Additionally, the Corps will construct a solar power system in Summer 2014 using sustainability funding received in FY13 (300k).

Project has prevented cumulative damages of over $33M between 1972 and 2012.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	6,056	
FY 12 Allocation	1,444	Required dam safety inspections and positional survey; sustainability funds used for electrical upgrades in operations building.
FY 13 Allocation	1,409	Conduct dam safety exercise; seepage investigation; conduct required periodic dam inspection and potential failure modes analysis, construct storage facility, design solar power system.
FY 14 Allocation	1,238	
FY 15 Budget	1,835	
FY 16 Budget	TBD	

Blue Marsh Lake, Leesport, PA

- **Authority:** HD 87 522
- **Congressional District:** PA-17

Project site showing Blue Marsh Lake.

The project was adopted as HD 87 522 in the Flood Control Act of 1962. It consists of an earth and rock fill dam; a spillway south of the dam and gate controlled outlet works discharging through a conduit on rock along the right abutment. The dam site is located on Tulpehocken Creek about 1.5 miles upstream from its confluence with Plum Creek and about six miles northwest of Reading, PA.

Project construction was completed in 1980. Annual funding is used for routine operations and maintenance of the dam and related structures, including project buildings, grounds and equipment, management of public-use areas such as access roads, parking lots, picnic areas and an overlook area; also evaluation data gathering and analysis, real estate actions, dam safety efforts; recreation and environmental stewardship actions.

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Blue Marsh Lake, Leesport, PA

- **Project Goals:** The purpose of this project provides for multiple purpose development for water supply, flood control, and recreation. It consists of an earth and rock fill dam; a spillway south of the dam and gate controlled outlet works discharging through a conduit on rock along the right abutment.

The Corps initiated Bernville levee accreditation required by FEMA, completed the required maintenance actions and submitted report to FEMA in December 2013.

Additionally, the Corps received $52k of sustainability funding in FY14 to construct a geothermal heat system. Required Periodic Assessment including a Potential Failure Modes Analysis and tabletop exercise will be conducted in FY14. Coordination is ongoing with Delaware River Basin Commission and Western Berks Water Authority for potential non-Federal water supply usage.

Project has prevented cumulative damages of over $85M between 1978 and 2012. The recreation program at the project attracts almost 900,000 visitors a year, with an economic benefit to the local community of $9.44 million in visitor spending. The stewardship program at the project provides an environmental benefit by protecting 6,162 acres of land and 1,150 acres of water. Blue Marsh Lake was selected as USACE Recreation Project of the Year for FY13.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	8,703	
FY 12 Allocation	2,834	
FY 13 Allocation	2,524	Required dam safety inspections & positional survey; Intermediate dam inspection, roof repairs, conduct Bernville levee accreditation required by FEMA
FY 14 Allocation	2,851	Complete Bernville levee accreditation, conduct required periodic assessment and exercise, install geothermal heat pump .
FY 15 Budget	2,670	
FY 16 Budget	TBD	

Cedar Creek, Sussex County, DE

- **Authority:** Section 107 of the Rivers and Harbors Act
- **Congressional District:** DE-AL

Confluence of Mispillion River and Cedar Creek

The existing project was adopted by the Chief of Engineers on 23 December 1981 under the authority of the Rivers and Harbors Act of 1960, Section 107.

The Project provides a channel five feet deep, 80 feet wide and 3,730 feet long from the confluence of Cedar Creek with the Mispillion River to the state launching ramp, and five feet deep and 50 feet wide thereafter for a distance of 2,470 feet to a point 1,000 feet upstream of the State Route 36 Bridge.

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Cedar Creek, Sussex County, DE

- **Project Goals:** The purpose of this project is to deepen the channel from the confluence of Cedar Creek with the Mispillion River, to the state launching ramp.

The U.S. Coast Guard has expressed concerns in the past that poor channel conditions could delay the response of oil spill emergency clean-up and containment contractors during lower tide stages. An Environmental Assessment of the channel with a negative declaration was completed on 22 September 1981. The Corps will perform a new channel condition survey in the spring of FY 2014.

This waterway supports the only launch service that provides safe transport of personnel and supplies to large tanker vessels anchored in the Delaware Bay, and the nearby Atlantic Ocean. This is a critical part of the logistics of lightering tankers so they can proceed up the Delaware River to the various refineries. The launch service operates four commercial crew boats that require drafts up to 6 feet. They annually complete over 5000 vessel trips per year and transport 12,000 tons of supplies, as well as transporting 10,000 passengers including Delaware River pilots.

The local commercial fishing fleet stationed within this project totals approximately 35 vessels. A large number of tourists are attracted to the charter fishing opportunities at Cedar Creek. Recreational use of this waterway is also significant. The State of Delaware operates a public launching facility within the project limits.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	0	Impacted by Low Use Navigation budget cuts
FY 12 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 13 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 14 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 15 Budget	0	
FY 16 Budget	TBD	

Cold Spring (Cape May) Inlet, Cape May County, NJ

Authority: Existing project, adopted in 1907 and modified in 1945.

Congressional District: NJ-2

Project area showing Cold Spring Inlet and Cape May Harbor.

This project provides for an entrance channel 25 feet deep and 400 feet wide, protected by two parallel stone jetties, and extending from the 25-foot depth curve in the ocean to a line 500 feet landward of a line joining the inner ends of the jetties; thence 20 feet deep and 300 feet wide to deep water in Cape May Harbor. The total length of the section included in the project is about 2 1/4 miles.

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Cold Spring (Cape May) Inlet, Cape May County, NJ

- **Project Goals:** The purpose of this project is to provide a safe navigation channel for commercial, recreational and US Coast Guard

The inlet and portions of the harbor channel were dredged in FY2013 using the Government Dredge Currituck. The Government Dredge Murden will be used to dredge the inlet channel in FY2014.

PL 113-2 Supplemental Funds (Sandy) received for this O&M navigation project total $400,000. These funds were used to dredge the Cape May Harbor channel and remove shoaling that occurred as a result of Hurricane Sandy (completed in September 2013).

Project provides a safe navigation channel for commercial, recreational and US Coast Guard use for the largest Fishery Landing in NJ (13th largest in the US), contributing $71 M/yr in direct fish value and $300M in economic value. Project services the only USCG enlisted training base in the country. USCG Station, Cape May is also located on the waterway and needs a reliable channel for their Homeland Security mission and critical life safety, search and rescue operations. Material dredged is beneficially used in the near-shore in support of the adjacent Federal beach fill.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	1,704	
FY 12 Allocation	353	Dredge Inlet and surveys
FY 13 Allocation	444	Dredge Inlet and surveys
FY 14 Allocation	371	
FY 15 Budget	375	
FY 16 Budget	TBD	

Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA

- **Authority:** Section 516 of the Water Recourses Development Act
- **Congressional District:** DE-AL, NJ-1, NJ-2, NJ-3, NJ-4, PA-1, PA-8, PA-13
- **Non-Federal Sponsor:** 100% Federally Funded
- **Date of Project Agreement:** NA
- **Target Completion Date:** TBD
- **Total Estimated Cost:** TBD
- **Federal Funds Appropriated:** $500,000

This project is approved under WRDA 1996, Section 516.

This project is bringing together partners, stakeholders and interest groups to manage dredged sediments on a regional basis for the Delaware Estuary, and supports a longer-term regional sediment management plan (RSMP). The goals of this project are to assemble and manage a diversified Regional Dredging Team; commence a RSMP Team to develop a long-term sustainable RSMP and a multiagency Memorandum of Understanding; and to compile USACE data to populate the NJDOT's Dredged Material Management System (DMMS) GIS database and 'dredged material marketplace'. Compilation of dredging data will assist in freeing up Confined Disposal Facilities (CDFs) capacity for future dredging efforts for the Philadelphia-to-Trenton section of the river.

Compilation of dredging data will assist in freeing up Confined Disposal Facilities (CDFs) capacity for future dredging efforts for the Philadelphia-to-Trenton section of the river.

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Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA

- **Project Goals:** The purpose of this project is to assemble and manage a diversified Regional Dredging Team; commence a RSMP Team to develop a long-term sustainable RSMP and a multiagency Memorandum of Understanding; and to compile USACE data to populate the NJDOT's Dredged Material Management System (DMMS) GIS database and 'dredged material marketplace'.

Managing sediment to benefit a region potentially saves money, allows use of natural processes to solve engineering problems, and improves the environment. As a management method, RSM:

- Includes the entire environment, from the watershed to the sea
- Accounts for the effect of human activities on sediment erosion as well as its transport in streams, lakes, bays, and oceans
- Protects and enhances the nation's natural resources while balancing national security and economic needs

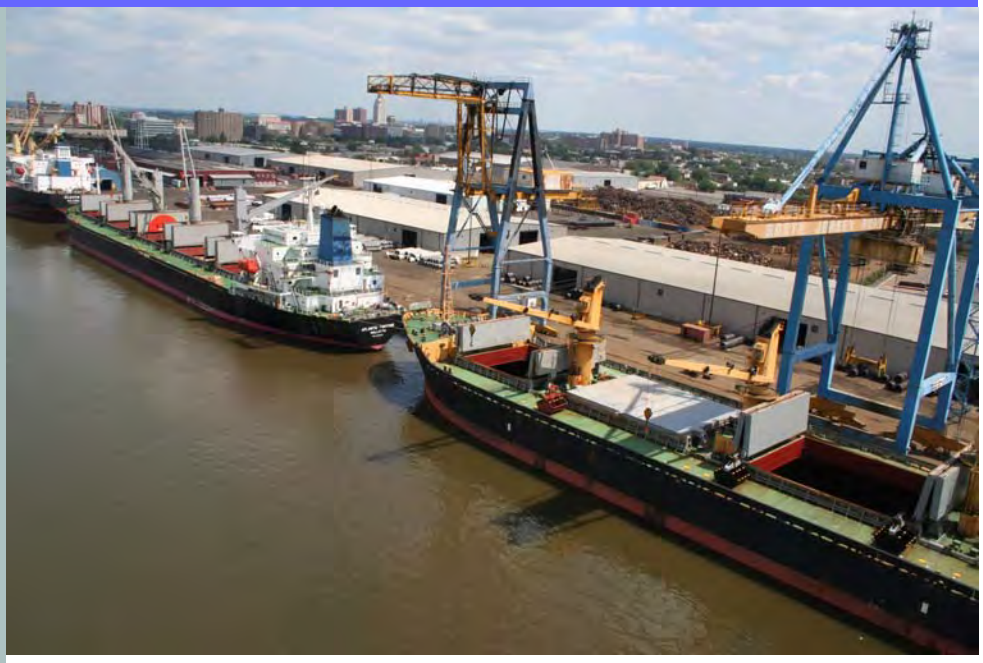
The Corps of Engineers holds in trust and manages lands and waterways across the U.S. Using regional sediment management concepts will significantly improve the Corps' mission accomplishment. The Corps' engineers and scientists develop new technologies through research to make management decisions more accurate and efficient. Simultaneously, they evaluate RSM concepts through projects that highlight and improve sediment management activities.

FY4 efforts include obtaining technical and advocacy review of the RSM Plan, and commencing implementation of the Plan.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	500	
FY 12 Allocation	0	
FY 13 Allocation	0	
FY 14 Allocation	0	
FY 15 Budget	0	
FY 16 Budget	TBD	

Delaware River at Camden, Camden County, NJ

- **Authority:** Section (3a) of the Water Resources Development Act
- **Congressional District:** NJ-1



Beckett St. Terminal—Camden, NJ

The existing project which is a modification to the Delaware River from Philadelphia to the Sea project was adopted as House Document No. 63 1120 in 1919 and modified by House Document No. 70-111 in 1930 and House Document No. 77-353 in 1945. Section (3a) of the Water Resources Development Act of 1988 authorized the modification of the existing Delaware River in the vicinity of Camden, New Jersey project. The project document referenced in the authorizing legislation is House Document 100-167 (Delaware River, Philadelphia to Wilmington, Pennsylvania and Delaware). Federal participation in the latest modification work (to 40') within Beckett Street Terminal was accomplished as a result of the project sponsor furnishing assurances of compliance with Section 221 of the Flood Control Act of 1970 (Public Law 91-611) and, entering into a Local Cooperation Agreement as per the Water Resources Development Act of 1986 (PL99-662).

The Port of Camden has all of the necessary infrastructure for efficient cargo transportation: rail links, major highways, access to trucking services, and a network of warehouses. The Port handles industrial and commercial cargo, as well as perishables. The Port is known for its handling of breakbulk cargoes, especially wood and steel products.

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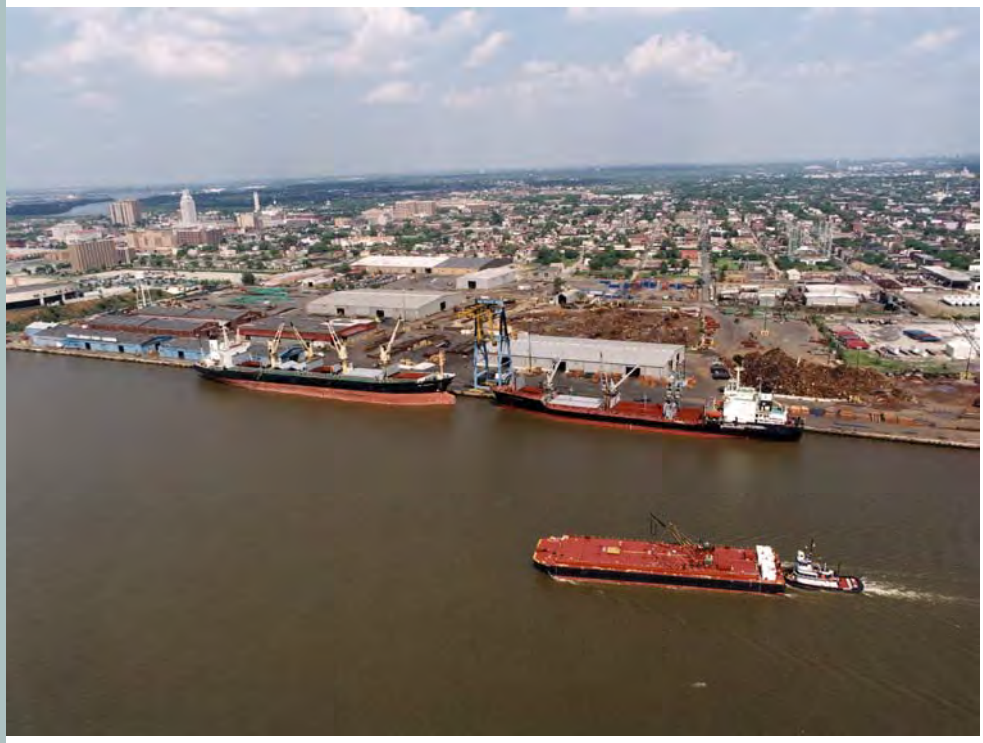
Delaware River at Camden, Camden County, NJ

- **Project Goals:** The purpose of this project provides for modification of the existing Delaware River project in the vicinity of Camden, New Jersey.

The funds in FY14will be used to perform condition surveys. Project is at the authorized depths.

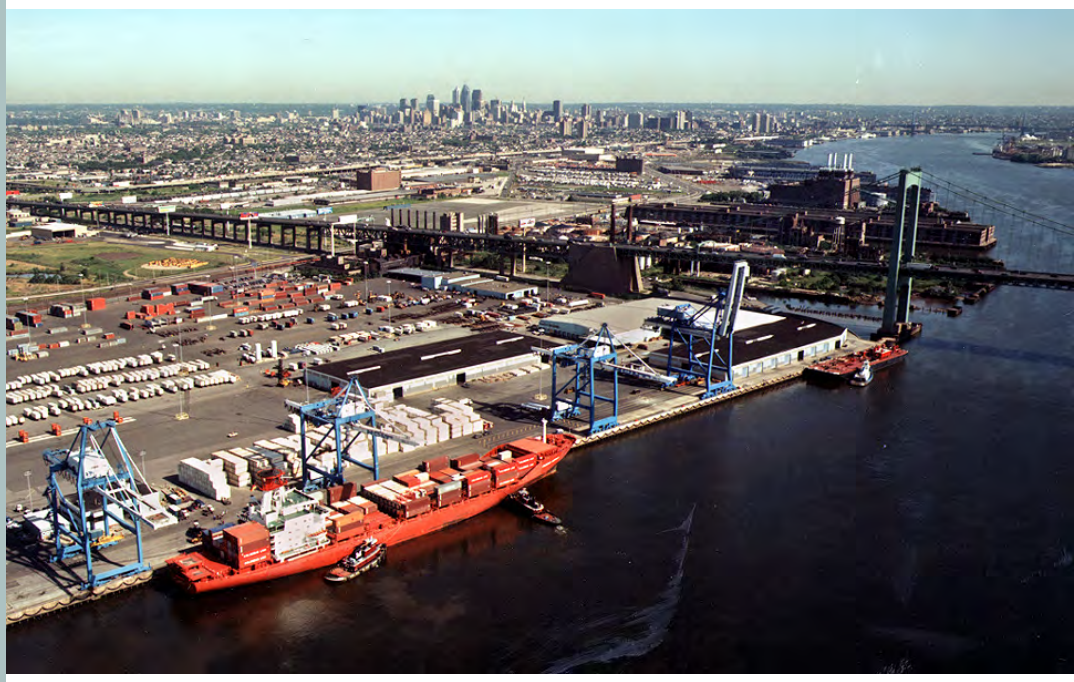


Port activity in the vicinity of Camden, NJ.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	34	
FY 12 Allocation	14	
FY 13 Allocation	13	
FY 14 Allocation	15	
FY 15 Budget	15	
FY 16 Budget	TBD	

Delaware River, Philadelphia to the Sea, DE, NJ & PA

- **Authority:** HD 733, 304, 580, 340, 358, 185.. R&H Comm. Doc 5. SD 159.
-
- **Congressional District:** DE-AL, NJ-1, NJ-2, PA-1, PA-7, PA -13



Packer Avenue Marine Terminal with Center City Philadelphia in background.

The existing project was authorized in 1910 (HD 733, 61st Cong., 2nd Session) and modified in 1930 (HD 304, 71st Cong., 3rd Session); 1935 (R&H Comm. Doc 5, 73rd Cong., 1st Session); 1938 (SD 159, 75th Cong., 3rd Session); 1945 (HD 580, 76th Cong., 3rd Session and HD 340, 77th Cong., 1st Session); 1954 (HD 358, 83rd Cong., 2nd Session) and 1958 (HD 185, 85th Cong., 1st Session).

Project channel dimensions are 40' deep, and 400' to 1000' wide. The Hopper Dredge McFarland will dredge 70 days in the river to address any spot shoaling within the Federal channel. Additionally, annual contract maintenance dredging removes approximately 2.5M CY of material in high shoal areas. There will also be maintenance work done in the upland disposal areas to assure there is sufficient capacity to accept the dredged material from these events.

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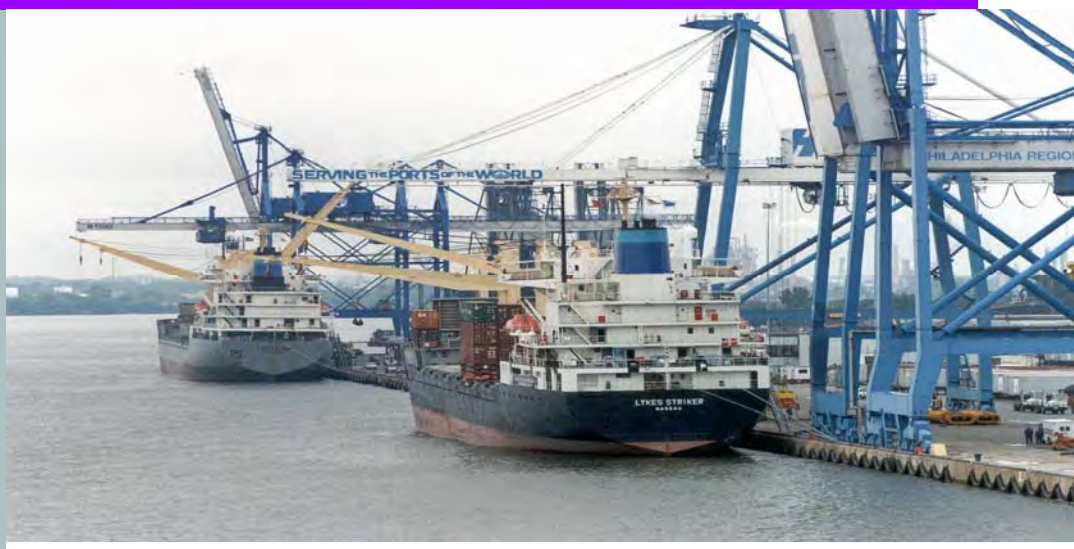
Delaware River, Philadelphia to the Sea, DE, NJ & PA

- **Project Goals:** The purpose of this project provides for a 96.5 mile channel from Allegheny Avenue in Philadelphia, to deep water in Delaware Bay, six anchorages, construction of dikes and training works for the regulation and control of tidal flow.



Container Vessels being unloaded at Port of Philadelphia

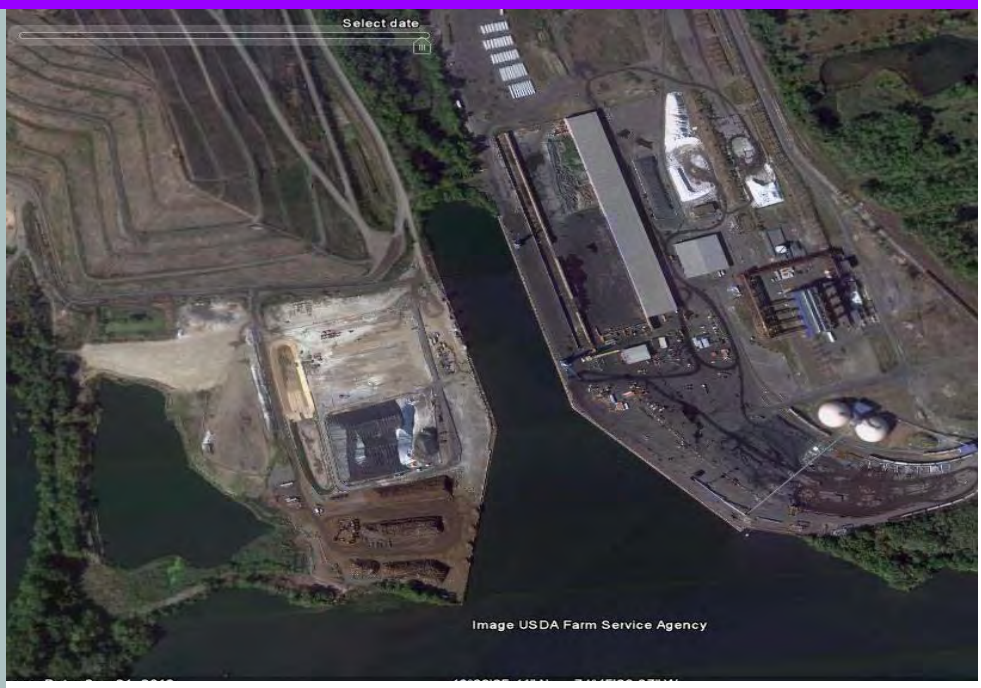
The Port of Philadelphia is located in the heart of the Northeast Corridor, with superior connections to New York City, Washington DC, the U.S. Midwest, and Canada. It is estimated that 100 people live within a day's drive of Philadelphia. All of the terminal facilities have access to major trucking routes (e.g. I-95), and rail lines.

The Port of Philadelphia handles many different types of cargo (containers, bulk, breakbulk, fruit). It is ranked 2nd after New York based on total tonnage. It is considered to be the #1 port for perishable cargo in the U.S.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	58,658	
FY 12 Allocation	20,989	
FY 13 Allocation	21,413	
FY 14 Allocation	19,548	
FY 15 Budget	20,445	
FY 16 Budget	TBD	

Delaware River, Philadelphia to Trenton, NJ & PA

- **Authority:** HD 679, 358. R&H Comm. Doc 3, 11, 66, 90.
- **Congressional District:** NJ-3, NJ-4, PA-1, PA-8, PA-13.



Port of Bucks County—Fairless Turning Basin

Adopted in 1930 (R&H Com Doc 3, 71st Cong., 1st Session) and modified in 1935 (R&H Com Doc 11, 73rd Cong., 1st Session and R&H Com Doc 66, 74th Cong., 1st Session), 1937 (R&H Com Doc 90, 74th Cong., 2nd Session), 1946 (HD 679, 79th Cong., 2nd Session), and 1954 (HD 358, 83rd Cong., 2nd Session).

The project provides for a channel 40-feet deep and 400-feet wide from Allegheny Avenue in Philadelphia, PA to the upper end of Newbold Island, thence to various depths from 25 feet to 12 feet upstream to the Penn Central Railroad Bridge at Trenton, NJ.

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Delaware River, Philadelphia to Trenton, NJ & PA

- **Project Goals:** The purpose of this project provides for a navigation channel and turning basins, and bank protection in the Delaware River.

FY 2014 O&M funding will accomplish periodic channel examinations, environmental support services, 30 Dredge McFarland training days to remove spot shoals along the lower reach of the 40-foot channel, and leased equipment disposal area maintenance activities at Money Island disposal area. This project received $6.3 million in Operation and Maintenance Emergency Supplemental funding to repair and restore projects damaged by Super Storm Sandy. A $5,496,000 contract for emergency maintenance dredging of the Upper Reach of the Delaware River 40-foot channel including Fairless Turning Basin and Duck Island Range was completed on 29 November 2013.

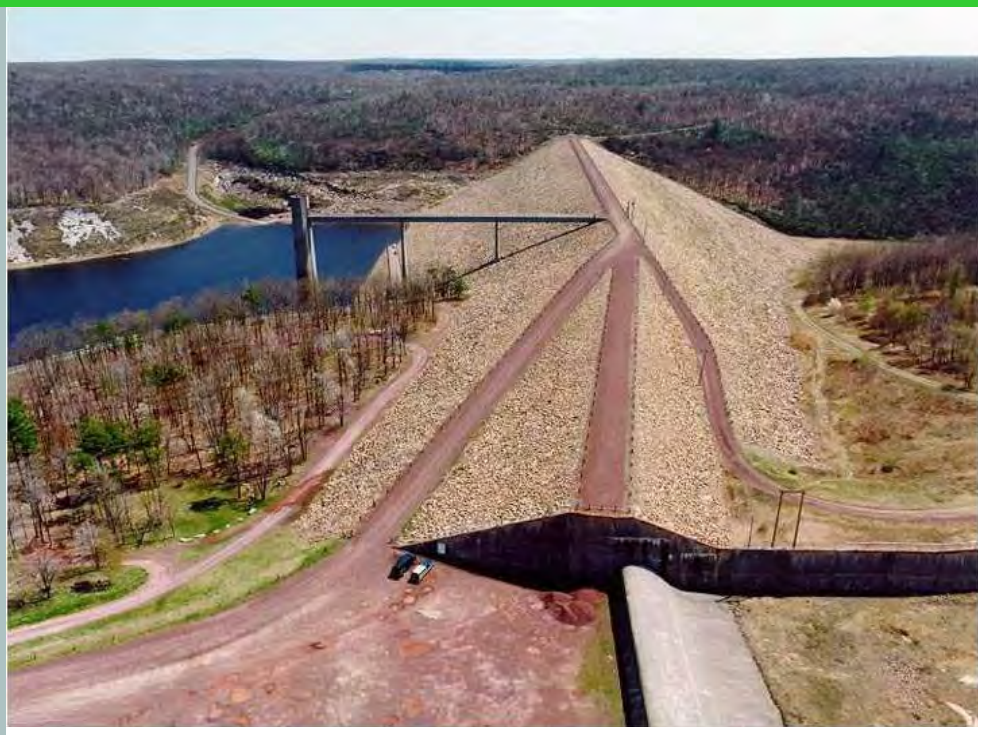
FY 2015 maintenance activities planned are channel exams, environmental support services and leased equipment work at upland containment sites.

The availability of adequate disposal capacity along the lower reach of the 40-foot federal channel continues to be a problem.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	9,947	
FY 12 Allocation	1,693	
FY 13 Allocation	818.0	
FY 14 Allocation	4,688	
FY 15 Budget	5,410	
FY 16 Budget	TBD	

Francis E Walter Dam, White Haven, PA

- **Authority:** HD 79 587, 87 522
- **Congressional District:** PA-11



The existing project, initially constructed in 1961, provides for multipurpose development for water supply, recreation and flood control. The project is located on the Lehigh River, five miles above White Haven, Pa.

The existing project, adopted as HD 79-587 in 1946, and modified by HD 87-522 in 1962.

The project provides for multi-purpose development for water supply, recreation and flood control. The existing dam, completed under the 1946 Flood Control Act as a single purpose flood control project, is located on the Lehigh River, five miles above White Haven, Pa. The project is also authorized to provide for recreational benefits.

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Francis E Walter Dam, White Haven, PA

- **Project Goals:** The purpose of this project provides for improvements including altering the spillway, increasing the height of the dam, extending the outlet tunnel, constructing new dikes and raising the height of existing dikes.

Stakeholders have expressed interest in the opportunity for water supply at the reservoir. The Corps is currently conducting an Initial Appraisal Report (IAR) to determine if site conditions have significantly changed in the basin that would warrant the Corps to complete a re-allocation study. This IAR is expected to be completed in FY14.

This project has prevented over $199M in cumulative damages between 1961 and 2012. A Screening for Dam Safety Portfolio Risk Assessment (SPRA) was conducted in 2006 resulting in a Dam Safety Action Classification (DSAC) rating of III for this project. As a result of the DSAC III rating, an Interim Risk Reduction Measures Plan (IRRMP) was prepared in 2011. A Periodic Assessment and Potential Failure Modes Analysis was conducted in FY12. Ultimately, rating was re-evaluated and changed to DSAC IV in 2013.

Whitewater and fishing industries utilize dam releases and there is significant interest from the public, stakeholders and elected officials in these programs. Project lake operations continue to have a significant positive impact on the regional economy as well as producing environmental bene-

	Summarized Federal Financial Data ($000)		
	Allocations thru FY11	2,519	
	FY 12 Allocation	1,192	Required dam safety inspections, periodic dam inspection, PFMA , periodic positional survey and update of the water control manual; timber management initiative; IRRM measures.
	FY 13 Allocation	1032	Finalize PA/PI Report for DSAC re-evaluation in January 2013. Initiate IAR.
	FY 14 Allocation	945	
	FY 15 Budget	916	
	FY 16 Budget	TBD	

General Edgar Jadwin Dam, Honesdale, PA

- **Authority:**
- **Congressional District:** PA-10
- **Federal Funds Appropriated:** $2,580,000

Project area showing General Jadwin Dam and Dyberry Creek.

The existing project, adopted in 1948, consists of a single purpose flood control reservoir formed by a dam on Dyberry Creek, located approximately three miles above the confluence of Dyberry Creek with

Dyberry Creek at base of General Jadwin Dam.

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General Edgar Jadwin Dam, Honesdale, PA

- **Project Goals:** The purpose of this project provides for routine operation & maintenance of the dam and related structures, water control data collection & analysis, real estate, continuing evaluation data gathering & analysis, and dam safety efforts.

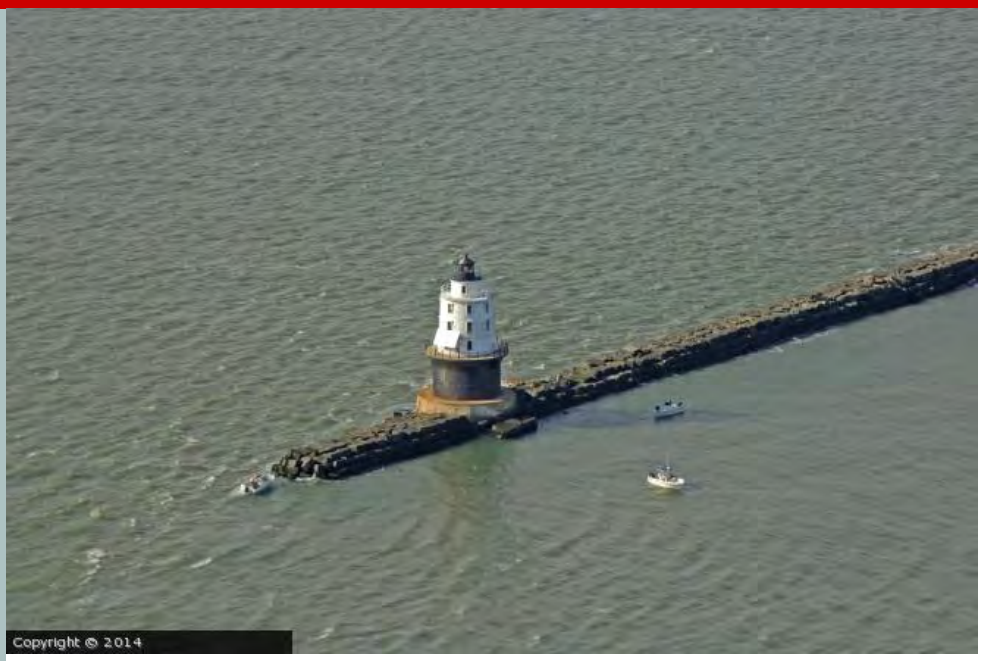
In FY14, the Corps will perform routine operations and maintenance activities for the project and grounds, dam safety actions and oversight, water control and other data collection and analyses, and real estate actions as required.

This project has prevented over $31M in cumulative damages between 1960 and 2012. A Screening for Dam Safety Portfolio Risk Assessment (SPRA) was conducted in 2009 resulting in a Dam Safety Action Classification (DSAC) rating of II for this project. As a result of the DSAC II rating, a required Interim Risk Reduction Measures Plan (IRRMP) was finalized and approved in FY12. Project is covered by an EIS.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	1,903	
FY 12 Allocation	392	IRRMP finalized, inspect intake/outlet works.
FY 13 Allocation	285	Periodic positional survey; Intermediate dam inspection.
FY 14 Allocation	316	
FY 15 Budget	300	
FY 16 Budget	TBD	

Harbor of Refuge, Lewes, DE

- **Authority:** HD 52 112, 70 15, 74 56.
- **Congressional District:** DE-AL



Harbor of Refuge Lighthouse and Breakwater

Authorized by HD 52-112 in 1894, HD 70-15 in 1930 and HD 74-56 in 1935.

The Harbor of Refuge project provides for the stone breakwater, which is listed in the National Register of Historic Places. The Harbor of Refuge Lighthouse, an historic 1926 structure, is located on the south end of the National Harbor of Refuge Breakwater.

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Harbor of Refuge, Lewes, DE

- **Project Goals:** The purpose of this project provides for a breakwater 8,000 feet long; 11 ice piers; and an inner navigation channel and turning basin.

FY14 funding capability ($45,000) identified to monitor and inspect the breakwater.

The Corps of Engineers built two stone breakwaters in the 19th and early 20th centuries to create a safe refuge near the entrance to the Delaware Bay. A lighthouse was built in 1926. The Federal project was originally authorized to protect commercial navigation. The navigation channel was authorized to provide deep draft landing for vessels such as tugs, and vessels carrying passengers and injured seafarers. The lighthouse is still used as a navigation aid, and the breakwater provides protection for the Lewes shoreline. The entire Harbor of Refuge complex is listed on the National Register of Historic Places. Cape May-Lewes Ferry vessels, commercial fishing boats, marine lubricant delivery vessels, Coast guard vessels, and recreational watercraft still actively seek shelter from bad weather at the Harbor of Refuge.

	Summarized Federal Financial Data ($000)		
	Allocations thru FY11	2,835	
	FY 12 Allocation	0	
	FY 13 Allocation	0	
	FY 14 Budget	0	
	FY 15 Budget	0	
	FY 16 Budget	TBD	

Indian River Inlet & Bay, Sussex County, DE

- **Authority:** R&H Doc. 41. HD 330
- **Congressional District:** DE-AL

Aerial view of project area showing Indian River Inlet.

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The project was authorized in 1937 (R&H Doc 41, 75th Cong, 1st Session) and modified in 1945 (HD 330, 76th Cong, 1st Session).

The project authorization includes stabilizing the inlet by construction of parallel jetties 500 ft apart; the dredging of a channel generally 200 ft wide and 15 ft deep from the inner ends of the jetties to a point in the Bay substantially 7000 ft from the ocean shoreline, dredging a channel 9 ft deep, 100 ft wide in the Bay and 80 ft wide in the River, from that depth in the existing channel in Indian River Bay to and including a turning basin 9 ft deep, 175 ft wide and 300 ft long at Old Landing; then about 8200 ft to highway bridge at Millsboro, 60 ft wide, 4 ft deep.

Indian River Inlet & Bay, Sussex County, DE

- **Project Goals:** The purpose of this project provides safe navigation channel for commercial, recreational and U.S. Coast Guard use. Indian River Inlet is the only water access point into the Delaware Inland Bay area that includes Indian River Bay and Rehoboth Bay.

PL 113-2 Supplemental Funds (Sandy) received for this O&M navigation project total $1,300,000. These funds were used to repair 300 linear feet of the north jetty including removal of the severely damaged walkway and sand tightening of this portion of the structure. This work was completed in December 2013. Additionally, the Indian River Inlet flood shoal was utilized as a borrow source for the post-Sandy shore protection project constructed to the north of the navigation project.

Indian River Inlet jetties are in poor condition with over 350 linear feet of loss from the seaward end of the north jetty since 1960. Continued monitoring and management of the inlet channel, jetties and scour holes is critical to protect the surrounding infrastructure and Federal investments in the area. Also, severe shoaling in the Massey's Ditch portion of the project is of significant concern.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	4,987	
FY 12 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 13 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 14 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 15 Budget	0	Impacted by Low Use Navigation budget cuts
FY 16 Budget	TBD	

Inland Waterway from Rehoboth Bay to Delaware Bay, Sussex County, DE

- **Authority:** HD 823, 77 344. R&H Comm. Doc. 51, 74 56.
- **Congressional District**: DE-AL

Roosevelt Inlet at Lewes, Delaware

The existing project was adopted in 1912 (HD 823, 60th Congress, 1st session and R&H Committee Doc. 51, 61st Congress, 3rd session) and modified in 1935 (R&H Committee Doc 74-56) and 1945 (HD 77-344)

The project provides for an entrance channel through Roosevelt Inlet near Lewes, Delaware, 10 feet deep and 200 feet wide protected by two parallel jetties 500 feet apart, and extension of the jetties; a channel 10 feet deep and 100 feet wide to the South Street Bridge at Lewes; a channel 6 feet deep and 50 feet wide to Rehoboth Bay entrance. It also provides for a channel 6 feet deep and 100 feet wide from Roosevelt Inlet to Broadkill River, and a highway bridge and railroad bridge at Rehoboth Beach.

A new channel condition survey will be performed in FY 2014. FY2014 funding capability exists to perform maintenance dredging of the Entrance Inlet Channel ($1,005,000) and repair and stabilize bank erosion along the L and R Canal in the vicinity of Rehoboth Ave Route 1A ($1,990,000).

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Inland Waterway from Rehoboth Bay to Delaware Bay, Sussex County, DE

- **Project Goals:** The purpose of this project provides for an entrance channel through Roosevelt Inlet near Lewes, Delaware, a channel to the South Street Bridge at Lewes, and a channel to the Rehoboth Bay entrance.

The Inland Waterway from Rehoboth Bay to Delaware Bay (DE) is a shallow draft navigation project utilized by both commercial and recreational users. It has an authorized depth of 10 feet through the entrance channel. Failure to maintain the waterway on a 3-year cycle would result in the channel being unavailable to the primary users 50% of the time.

The local commercial fleet consists of approximately 65 Charter boats and 15 Head boats. The University of Delaware maintains four research vessels that are stationed within the project, and mooring for research vessels from visiting universities.

The Roosevelt Inlet Coast Guard Station located on the waterway performs routine patrols, emergency response activities, and operates a 47 foot buoy tender. Lack of periodic maintenance of the channel will affect the ability of the Coast Guard to respond to emergency situations at lower tide stages.

The Delaware Bay and River Cooperative (DBRC), whose mission is oil spill emergency response/cleanup for events occurring in the Delaware River and Bay, is based in this waterway. The DBRC has positioned the oil spill response vessel DELRIVER in Lewes. The location of DELRIVER in the University of Delaware's harbor, with direct access to Roosevelt Inlet, is strategically important for response to potential spills in the Big Stone Beach Anchorage and approaches. On average more than one million barrels of crude oil a day move into the Delaware Bay and River area. A majority of the bulk crude oil carriers lighter at Big Stone Beach Anchorage, and require spill coverage before proceeding up the Bay to the Delaware River refineries. DBRC located the DELRIVER in Lewes because a 45 minute response time is possible from its mooring location at Roosevelt Inlet. Continuing maintenance dredging, when needed, is critical to the ability of the DELRIVER to respond to emergency situations in a timely manner regardless of tide stage.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	207	
FY 12 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 13 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 14 Allocation	0	
FY 15 Budget	0	
FY 16 Budget	TBD	

Intracoastal Waterway, Delaware River to Chesapeake Bay, DE & MD (C & D Canal)

- **Authority:** HD 201. R&H Comm. Doc. 11, 18, 24. PL 310. SD 123
- **Congressional Districts:** DE-AL, MD-1

Senator Roth Bridge (SR-1).
Philadelphia District will assume maintenance responsibility from DEL DOT in the near future.

The project was authorized in 1935 (HD 201, 72nd cong., 1st Session) and modified in 1935 (R&H Com Doc 11, R&H Docs 18 and 24, 73rd Cong., 2nd Session), in 1939 (PL 310, 76th Cong., 1st Session and in 1954 (SD 123, 83rd Cong., 2nd Session).

This project includes the waterway, a channel 35 feet deep and 450 feet wide, extending from Reedy Point on the Delaware River about 41 miles below Philadelphia, PA through a land-cut westward to Elk River thence following Elk River and the upper Chesapeake Bay to deep water near Pooles Island, including five high-level fixed highway bridges, a vertical lift railroad bridge, a bascule drawbridge, extensions of the entrance jetties at Reedy Point, enlargement of the anchorage and mooring basin in Back Creek, and maintenance of Delaware City Branch channel (8' x 50' x 2 miles) and basin.

The Chesapeake and Delaware Canal (C&D Canal) connects the Delaware River to the Chesapeake Bay. The C&D Canal system provides a continuous sea level channel connecting the Port of Baltimore to the ports of Wilmington (DE), Philadelphia, and the northern trade routes.

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Intracoastal Waterway, Delaware River to Chesapeake Bay, DE & MD (C & D Canal)

- **Project Goals:** The purpose of this project provides for a waterway extending from Reedy Point on the Delaware River through a land-cut westward to Elk River, four high-level fixed highway bridges, a vertical lift railroad bridge, a bascule drawbridge, extensions of the entrance jetties at Reedy Point, enlargement of the anchorage and mooring basin in Back Creek, and maintenance of Delaware City Branch channel and basin.

Large Vessel Passing Through C&D Canal

Summarized Federal Financial Data ($000)		
Allocations thru FY11	74,001	
FY 12 Allocation	18,282	
FY 13 Allocation	17,430	
FY 14 Allocation	18,729	
FY 15 Budget	22,355	
FY 16 Budget	TBD	

Manasquan River, Ocean County, NJ

- **Authority:**
- **Congressional Districts:** NJ-3, NJ-4

Project area showing Manasquan Inlet, Pt. Pleasant Beach and Wills Hole Thorofare.

This project provides for a channel 14 feet deep and 250 feet wide, protected by jetties and bulkheads, from the Atlantic Ocean to the inshore end of the north jetty; thence 12 feet deep and 300 feet wide to within 300 feet of the New York and Long Branch RR Bridge. The channel is approximately 1.5 miles long.

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Manasquan River, Ocean County, NJ

- **Project Goals:** The purpose of this project provides for a navigation channel protected by jetties and bulkheads, from the Atlantic Ocean to the inshore of the north jetty.

PL 113-2 Supplemental Funds (Sandy) received for this O&M navigation project total $900,000. These funds were used to dredge the Manasquan Inlet channel to remove shoaling that occurred as a result of Hurricane Sandy (completed in January and July 2013 by the Government Dredge Currituck.) Funds were also used to dredge shoaling that occurred in the Wills Hole Thorofare channel (work completed by contract in December 2013.) The deteriorated landward end of the north jetty was repaired as part of the new revetment constructed by the state and county.

The project provides a safe, reliable navigation channel for commercial, recreational and US Coast Guard use with an annual direct fish value of over $28M/year. During the summer months, over 500 vessels pass through the channel per day. USCG Station, Manasquan requires a safe channel to fulfill their Homeland Security mission and critical life safety, search and rescue operations. Material dredged from the inlet is beneficially used by placing it back in the system in support of the shore protection project to the north.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	739	
FY 12 Allocation	294	Dredge Inlet channel.
FY 13 Allocation	269	Dredge Inlet channel.
FY 14 Allocation	312	
FY 15 Budget	370	
FY 16 Budget	TBD	

Mispillion River, Sussex County, DE

- **Authority:** HD 56 102, 74 83, 678. R&H Comm. Doc. 83. SD 229.
- **Congressional District:** DE-AL

Mispillion Project Area

Authorized under HD 56-102 in 1907 and modified as HD 74-83 in R & H Act HD 678, 62nd Congress, 2nd Session (1919) and modified by R & H Com Doc. 83, 74th Congress, 2nd Session (1937) and modified by SD 229, 81st Congress, 2nd Session (1954).

The waterway rises in Kent and Sussex Counties, Delaware. It flows northeasterly 13 miles along the boundary line between the two counties and empties into the Delaware Bay about 16 miles above Cape Henlopen, Delaware. The waterway provides an entrance channel six feet deep and 60 feet wide from Delaware Bay to the landward side of the jetties.

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Mispillion River, Sussex County, DE

- **Project Goals:** The purpose of this project provides for an entrance channel from the Delaware Bay to the landward side of the jetties.

Channel condition surveys will be performed in the spring of FY2014. FY2014 funding capability exists to perform maintenance dredging of the project entrance channel ($995,000) and minimal operation and maintenance caretaker tasks and response to public inquires ($25,000).

This waterway supports the only launch service that provides safe transport of personnel and supplies to tanker vessels anchored in Delaware Bay and the nearby Atlantic Ocean. The U.S. Coast Guard has expressed concern that further shoaling in the channel could delay the response of oil spill emergency clean-up and containment contractors during lower tide stages.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	1,579	
FY 12Allocation	0	Impacted by Low Use Navigation budget cuts
FY 13 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 14 Allocation	0	
FY 15 Budget	0	
FY 16 Budget	TBD	

Murderkill River, Sussex County, DE

- **Authority:** HD 21, 62 1058. SD 71 106.
- **Congressional District:** DE-AL

Entrance channel of Muderkill River at Delaware Bay

The existing project was authorized in 1892 (HD 21, 52nd Cong, 1st Session) and modified in 1912 (HD 62-1058) and 1930 (SD 71-106).

The project provides for a channel 7 feet deep at mean low water, 60 feet wide in Delaware Bay to mouth, and then 60 feet wide to Frederica, 7.5 miles above mouth. Total length of section included in project is about 8.5 miles.

A new channel exam will be accomplished in FY 14 along with the issuance of an updated channel statement to navigation users. FY 14 funding capability exists for minimal operation and maintenance caretaker tasks, and response to public inquires ($25,000). The State of Delaware recently completed maintenance dredging of the Federal navigation channel. This project will ensure safe navigation for commercial fishing and recreational boating, while the clean sand removed is being used to protect homes along the south beach.

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Murderkill River, Sussex County, DE

- **Project Goals:** The purpose of this project provides for a channel in Delaware Bay, and Frederica.

Approximately ten commercial fishing and crabbing vessels are based at Murderkill River. During peak seasons, there are additional commercial vessels operating out of the inlet, peaking at more than 100. A large number of tourists are attracted to the charter fishing opportunities.

Deteriorating shoaling conditions would negatively impact the use of this project as a safe harbor in the event of dangerous weather conditions. The U.S. Coast Guard, which operates an auxiliary station at Murderkill River, would be unable to respond to emergency situations at lower tide stages due to draft restrictions.

Failure to perform continued maintenance would result in damage to commercial vessels, and severely impact the economy of the local communities, since a majority of the local residents have occupations which are waterway-related (commercial/charter fisherman).

Summarized Federal Financial Data ($000)		
Allocations thru FY11	108	
FY 12 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 13 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 14 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 15 Budget	0	
FY 16 Budget	TBD	

New Jersey Intracoastal Waterway, NJ

- **Authority:** HD 76 133.
- **Congressional Authority:** NJ-2, NJ-3, NJ-4

Project location of the Cape May Canal and disposal areas as part of the NJIWW project.

This project was adopted in 1939 (HD 76-133, 1st session).

This sea-level inland waterway, extends along the New Jersey Coast from the Atlantic Ocean at Manasquan Inlet, about 26 miles south of Sandy Hook, NJ to the Delaware Bay about 3 miles north of Cape May Point. The waterway extends through the inlet and up Manasquan River about 2 miles and thence through Point Pleasant Canal about 2 miles to the head of Barnegat Bay. It then passes through a series of bays, lagoons and thoroughfares along the New Jersey coast to Cape May Harbor and thence across Cape May County to Delaware Bay (Cape May Canal). This project is normally maintained to a depth of 6 feet Mean Low Water (MLW), except in the southern portion in the vicinity of the Cape May Canal where it is maintained to a depth of up to 12 feet MLW. Project length is 117 miles.

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New Jersey Intracoastal Waterway, NJ

- **Project Goals:** The purpose of this project provides for a sea-level island waterway, extending along the New Jersey Coast from the Atlantic Ocean at Manasquan Inlet to the Delaware Bay. It extends through the inlet and up the Manasquan River , then passes through a series of bays, lagoons and thoroughfares along the New Jersey coast.

Project location of the Point Pleasant Canal as part of the NJIWW project.

PL 113-2 Supplemental Funds (Sandy) received for this O&M navigation project total $12.1M. These funds are being used to restore safe navigation by dredging critical post-storm shoals that occurred along the entire waterway including the Cape May ferry channel ($2.8M), repair damaged areas of the east bulkhead along the Point Pleasant Canal ($8M) and repair the damaged Lovelandtown bridge abutment located on the Point Pleasant Canal ($1.3M.)

This project provides a safe, reliable, and operational navigation channel for the East Coast's largest and 5th most valuable commercial fishing fleet in the U.S. (Cape May/Wildwood) and nine U.S. Coast Guard Stations including Cape May training base. The USCG requires a reliable channel to fulfill their Homeland Security requirements, and conduct search & rescue operations. The Delaware River and Bay Authority operates a ferry service between Cape May, NJ and Lewes, DE and the ferries dock in the Cape May Canal. Almost 1.5 million passengers and $17.2 million in revenues are dependent on maintenance dredging to keep the four vessels operating. Discontinuance of this ferry service would result in vehicle detours of 183 miles. The South Jersey economy is heavily dependent on recreational and commercial fishing and tourism, and these industries rely on the maintained channels of the NJIWW.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	13,383	
FY 12 Allocation	257	Channel Exams; manage waterway
FY 13 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 14 Allocation	957	
FY 15 Budget	260	
FY 16 Budget	TBD	

Prompton Lake, Prompton, PA

- **Authority:** HD 80 113, 87 522.
- **Congressional District:** PA-10

The existing Prompton Dam is located on the Lackawaxen River four miles above Honesdale, Pa., and 30 miles above its confluence with the Delaware River.

The existing project was adopted as HD 80-113 in 1948, and modified by HD 87- 522 in 1962. This multi-purpose project (flood control and recreation) is located on the Lackawaxen River four miles above Honesdale, Pa., and 30 miles above its confluence with the Delaware River. Original project construction was completed in 1960.

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Prompton Lake, Prompton, PA

- **Project Goals:** The purpose of this project provides for multiple-purpose development for flood control, water supply and recreation, located on the Lackawaxen River.

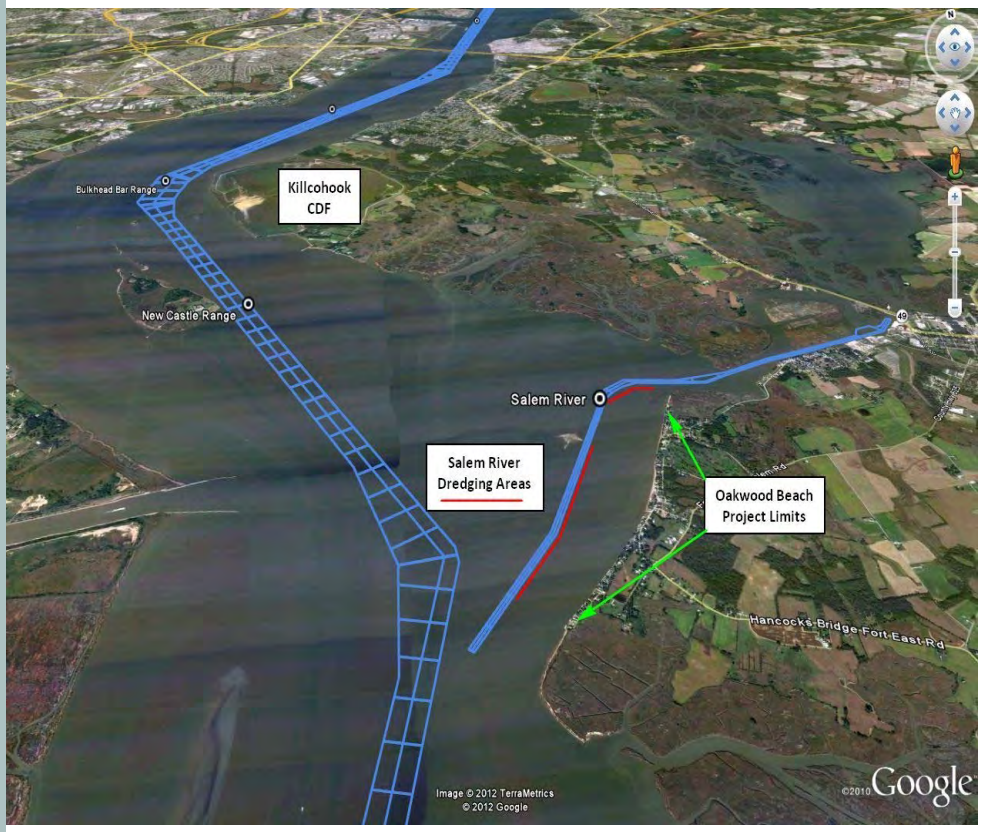
Annual funds are used for routine operations and maintenance of the dam and related structures that include the buildings, grounds & equipment, and management of public-use areas such as access roads, parking lots. Other specific work includes water control, water quality monitoring, real estate, continuing evaluation gathering, and dam safety efforts.

The project has prevented cumulative damages of $24M between 1961 and 2012.FY06 Construction General (CG) Funds were used for construction of Phase I of modifications to the dam. These modifications were done to protect the structure and downstream communities from the effects of the estimated Probable Maximum Flood (based on revised criterion since initial construction). Phase I work in the spillway and outlet works was completed in July 2007 and the construction of a crest wall across the top of dam was completed in the spring of 2008. Phase II modifications to the project using CG ARRA funds were completed in June 2012 and included a new operations building, spillway modifications and completion of a new access road and bridge over the spillway.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	27,084	
FY 12 Allocation	610	Intake/Outlet Inspections
FY 13 Allocation	438	SPRA/DSAC Re-evaluation; Periodic Positional Survey; Intermediate Dam Inspection.
FY 14 Allocation	470	
FY 15 Budget	475	
FY 16 Budget	TBD	

Salem River, Salem County, NJ

- **Authority:** HD 68 110.
- **Congressional District:** NJ-2



Salem River Project Area

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The existing project was adopted in 1925 (HD 68-110).

It provides for an entrance channel 16' deep and 150' wide in the Delaware River across Salem Cove to the mouth thence 16' deep and 100' wide to the fixed highway bridge in Salem. It also provides for a cutoff between the mouth and Salem. The project length is approximately 5 miles.

Salem River, Salem County, NJ

- **Project Goals:** The purpose of this project provides for an entrance channel in the Delaware River across Salem Cove to the fixed highway bridge in Salem.

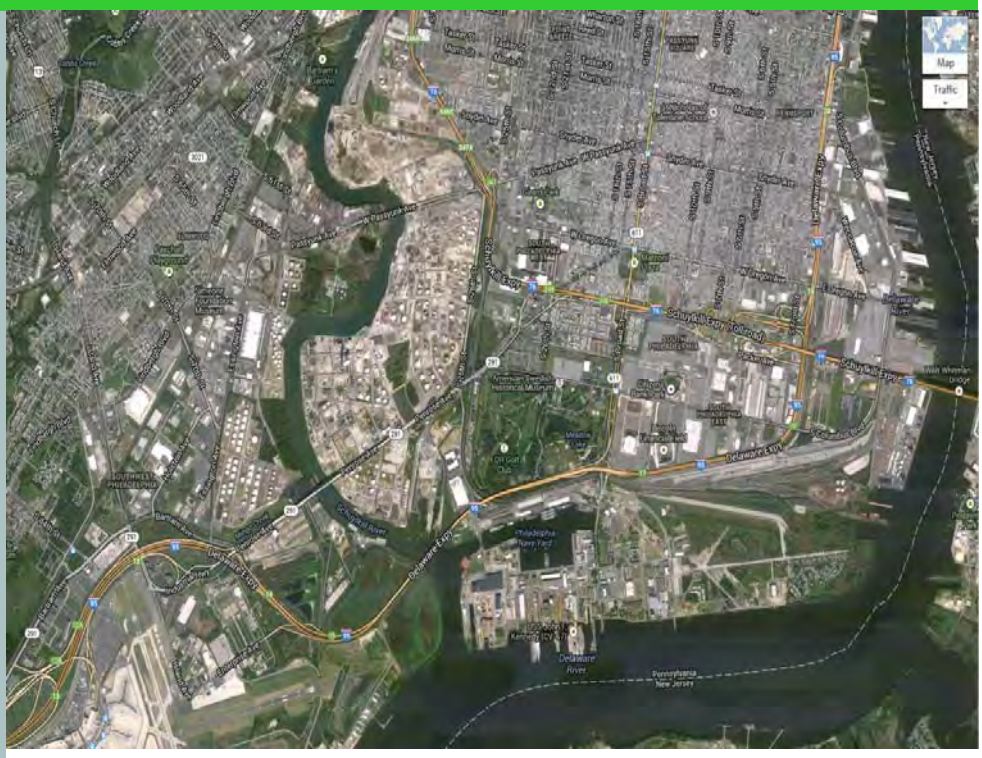
Port of Salem

The Port of Salem is a shallow-draft port located in the vicinity of the Salem River Cut-Off on the Salem River in Salem, New Jersey. The Port is located approximately 2 miles east of the Delaware River, and 54 miles from the Atlantic Ocean. The Port became a foreign trade zone in 1987. Commodities include bulk cargo (construction aggregate), break bulk cargo, containers (clothing, agricultural produce). Port activity also has at times involved literage.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	510	
FY 12 Allocation	4.300	Emergency Supplemental Funding for Maintenance Dredging
FY 13 Allocation	0	
FY 14 Allocation	0	
FY 15 Budget	0	
FY 16 Budget	TBD	

Schuylkill River, Philadelphia, PA

- **Authority:** HD 1270, 699. R&H Comm. Doc. 40.
- **Congressional District:** PA-1, PA-2.



Aerial view of project area (Lower Schuylkill River in vicinity of Delaware River).

The project was authorized 8 August 1917 (HD 1270, 64th Congress, 1st Session) and modified 3 July 1930 (R&H Committee Document 40, 71st Congress, 2nd Session) and 24 July 1946 (HD 699, 79th Congress, 2nd Session).

The project provides for a channel 6.5 miles long with depths of 22', 26', and 33' and widths of 200', 300', and 400'. Funds enable maintenance dredging within the 33-foot segment of the channel. Material is pumped directly to an upland disposal are by a cutter-head pipeline dredge.

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Schuylkill River, Philadelphia, PA

- **Project Goals:** The purpose of this project provides for a channel 6.5 miles long in the Schuylkill River.

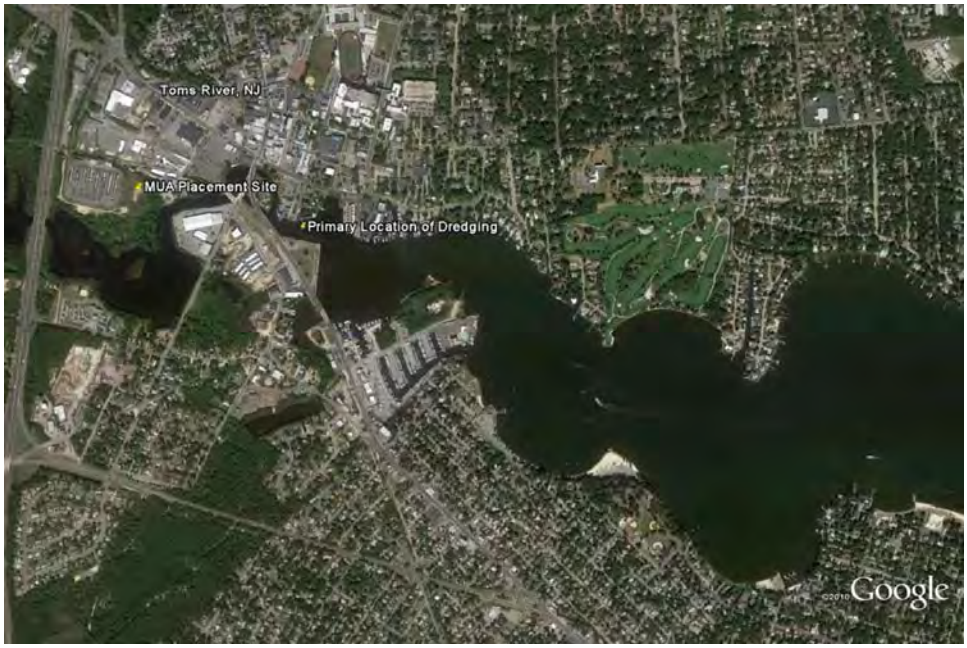
Refineries and chemical plants along Lower Schuylkill River between Routes 291 & 95

The Lower Schuylkill River provides navigation access to multiple refineries and chemical plants. The commodities include oil, gasoline and other chemical products.

Summarized Federal Financial Data ($000)		
Allocations thru FY11	8,336	
FY 12 Allocation	4,745	Emergency Supplemental Funding for maintenance dredging
FY 13 Allocation	89	
FY 14 Allocation	0	
FY 15 Budget	0	
FY 16 Budget	TBD	

Toms River, Ocean County, NJ

- **Authority:**
- **Congressional Districts:** NJ-3, NJ-4



Aerial view of project area—Toms River, NJ

This project provides for a channel 12 feet deep and 100 feet wide, from the New Jersey Intracoastal Waterway channel at Barnegat Bay to the highway bridge over South Fork at Toms River, including a turning basin. The project also provides for channel 5 feet deep for the full width of the North Fork to the highway bridge. The channel is approximately 4.5 miles long.

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Toms River, Ocean County, NJ

- **Project Goals:** The purpose of this project provides for a navigation channel from the New Jersey Intracoastal Waterway channel at Barnegat Bay to the highway bridge over South Fork.

Supplemental funds ($650,000) were received to dredge the channel following shoaling that occurred from Hurricane Irene. That work was conducted in October through December 2012 by the Government Plant Snell and work efforts were impacted by Hurricane Sandy which occurred in late October 2012. The portion of the channel dredged is near the River Lady and has an authorized depth of 5 ft MLW.

PL 113-2 Supplemental Funds (Sandy) received for this O&M navigation project total $250,000. These funds were used to dredge the channel and remove additional shoaling that occurred as a result of Hurricane Sandy. This work was completed in January 2014.

A safe navigation channel is critical to the operations of several commercial businesses in Toms River including the River Lady Riverboat Tours. Material dredged from the channel in 2012 and 2014 was sand and was placed in a confined disposal area on property owned by the Toms River Municipal Authority.

Summarized Federal Financial Data ($000)		
Allocations thru FY11		
FY 12 Allocation	650 (Irene)	Dredge channel
FY 13 Allocation	0	
FY 14 Allocation	0	
FY 15 Budget	0	
FY 16 Budget	TBD	

U.S. Army Corps of Engineers Hopper Dredge McFarland

- **Authority:** Section 2047(a) of the Water Resources and Development Act
- **Congressional District:** DE-AL, NJ-1, NJ-2, NJ-3, PA-1, PA -7, PA-8, PA-13

One of four oceangoing hopper dredges owned and operated by the U.S. Army Corps of Engineers as part the Corps' "minimum fleet" for national security and safe navigation, the McFarland is the only dredge in the world with triple capability for direct pump out, bottom discharge and side casting or boom discharge.

About: One of four oceangoing hopper dredges owned and operated by the U.S. Army Corps of Engineers as part the Corps' "minimum fleet" for national security and safe navigation, the *McFarland* is the only dredge in the world with triple capability for direct pump out, bottom discharge and side casting or boom discharge. Designed by the Corps' Marine Design Center, it was built in April 1967. Its name honors the late Arthur McFarland, a Corps of Engineers authority on dredging. The *McFarland* has a twofold mission: 1) Emergency and national defense dredging — as required and on short notice — anywhere in the world. 2) Planned dredging tests in the Delaware River and Bay.

How it Works: Dredging is accomplished by a drag arm on each side of the ship with a drag head at each end. As the ship navigates the channel with its dredging pumps engaged, the drag heads are lowered to the channel bottom. Like vacuum cleaners, they pull the dredged material into the ship's hoppers.
The *McFarland* can then discharge the material any of three ways:
1. As a conventional hopper dredge with bottom discharge into deep water.
2. As a side caster discharging dredged material aside the channel.
3. As a pipeline dredge pumping material into disposal areas or through a direct ship-to-shore pipeline to confined upland areas.

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U.S. Army Corps of Engineers
Hopper Dredge McFarland

Status: As of 31 December 2009, Hopper Dredge McFarland was placed in a Ready Reserve status to be used solely for urgent and emergency purposes as per Section 2047(a) of the Water Resources Development Act (WRDA) of 2007. The vessel periodically (annually) performs routine underway dredging tests of the equipment (not to exceed 70 days per year) of the vessel in a ready reserve status to ensure the ability of the vessel to perform urgent and emergency work. These dredging tests are limited to occur only in the Delaware River and Bay. The dredge will remain in a fully operational state and perform up to 70 days of dredging operations to test equipment and keep the crew trained and prepared. At all other times, the McFarland will remain at the dock to respond within 72 hours to any urgent or emergency dredging requirement identified by the Secretary of the Army via the Chief of Engineers. The dredge will be placed in an active status in order to perform work in those instances when private industry fails to submit a responsive or responsible bid for advertised dredging work, or where industry has failed to perform under an existing contract or in situations where industry cannot meet the demands of current dredging requirements due to work load or lack of available private industry dredges. In FY2012 the vessel was called out for a 24 day ready reserve assignment for Wilmington District at Morehead City, NC.

What It Can Do: The *McFarland* offers a degree of performance and flexibility unmatched by any other dredge: It can handle a variety of materials including silt, sand, clay, shell and mixtures, thanks to these features:

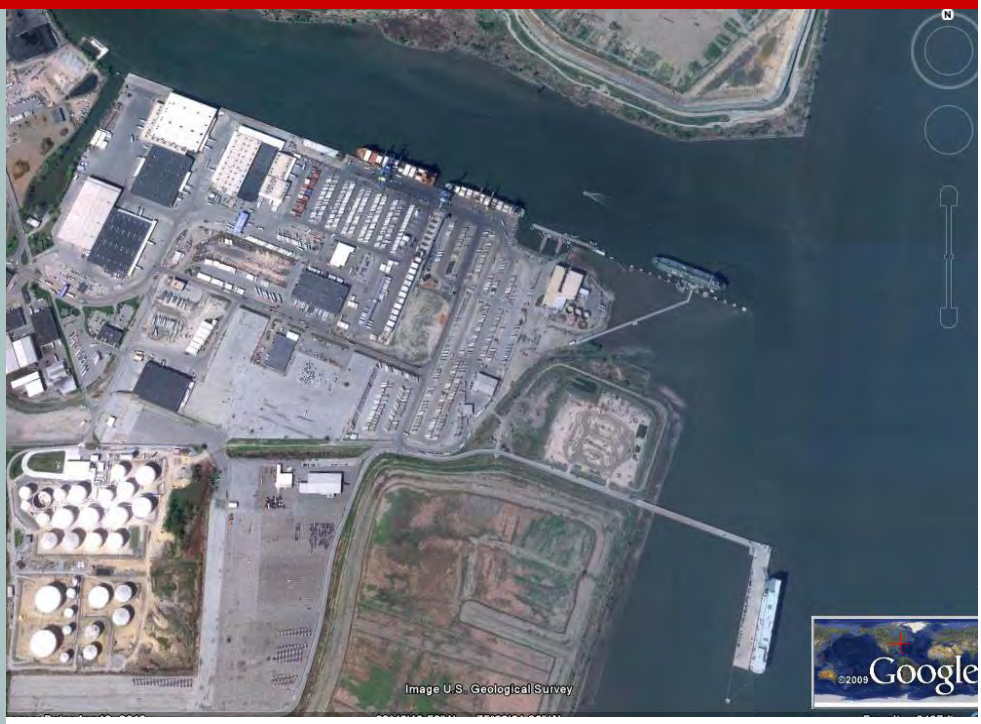
- High-powered pumps, large single open-hopper design amidships, and hopper distribution system with retention capability for efficient handling of fine materials
- It can dredge year-round in any environment, working around the clock while on assignment.
- Its average removal rate in a typical year (140 days) is 1.5 to 2 million cubic yards — enough dredged material to fill the area of a football field 900 to 1,200 feet high.

Crew: The *McFarland* is operated by a civilian crew of about 45. Many of the members, including all the deck and engine room officers, hold U.S. Coast Guard licenses. Certified as an oceangoing vessel, it undergoes regular annual safety inspections by the U.S. Coast Guard and the American Bureau of Shipping.

Dredging is accomplished by a drag arm on each side of the ship with a drag head a each end. As the ship navigates the channel with its dredging pumps engaged, the drag heads are lowered to the channel bottom. Like vacuum cleaners, they pull the dredged material into the ship's hoppers.

Wilmington Harbor, New Castle County, DE

- **Authority:** HD 54 66, 67 114, 71 20, 73 32, 76 568. SD 86 88. Section 10 of the River and Harbor Act of 1960.
- **Congressional Districts:** DE-AL



The project extends from the confluence of the Delaware River and the Christina River upstream, a length of about 9.9 miles. It is located 65 miles from the Atlantic Ocean. The photo shows Wilmington Harbor.

The existing project, adopted as HD 54-66 in 1896 and 1899, and modified by HD 67-114 in 1922, by HD 71-20 in 1930, by HD 73-32 in 1935, by HD 76-658 in 1940, by SD 86-88 in 1960, and further modified pursuant to the authority of Section 107 of the River and Harbor Act of 1960 (PL 86-645).

The project provides for a channel with depths of 38, 35, 21, 10, and 7 feet from the Delaware River to Newport, DE, a turning basin 2050 feet long, 640 feet wide and 38 feet deep opposite the Wilmington Marine Terminal, and jetties at the mouths of Christina and Brandywine Rivers.

The Port of Wilmington handles 400 ships and 5M tons of cargo annually. Commodities include fresh fruit, automobiles, breakbulk (steel and forest product), containerized cargo, livestock. The Port is located in the center of the mid-Atlantic region and provides overnight access to 1/3 of the U.S and Canadian consumers.

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Wilmington Harbor, New Castle County, DE

- **Project Goals:** The purpose of this project provides for a channel from the Delaware River to Newport, DE, a turning basin opposite of the Wilmington Marine Terminal, and jetties at the mouths of Christina and Brandywine Rivers.

In FY 2013 this project received $4 million in Emergency Supplemental funds. A $1,446,380 (Emergency Supplemental Funding) contract for “Special Maintenance Dredging” of both the 38-foot and 35-foot project channels was completed on 30 May 2013. In addition, $1,189,000 leased equipment contract to repair “Storm Sandy” damages at the Wilmington South disposal area was also accomplished.

The following work will be accomplished in FY 2014: Channel exams, annual maintenance dredging contract (August 2014), and disposal area maintenance and construction activities by both hired-labor and leased equipment contract. Notice to Proceed for a contract for “Maintenance Dredging” of the 38-foot and 35-foot channels was issued on 10 January 2014. Actual dredging operations commenced on February 17. It is expected that all work will be completed by March 31.

Proposed FY 2015 project maintenance activities identified as leased equipment/hired labor disposal area construction and maintenance, channel examinations, and annual dredging cycle (June 2015).

Summarized Federal Financial Data ($000)		
Allocations thru FY11	17,371	
FY 12 Allocation	3,186	
FY 13 Allocation	3,828	
FY 14 Allocation	5,351	
FY 15 Budget	3,690	
FY 16 Budget	TBD	

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Congressional Districts

Delaware

District Number	Representative
DE-AL	John Carney

Maryland

District Number	
MD-1	Andrew Harris

New Jersey

District Number	Representative
NJ-1	Robert Andrews
NJ-2	Frank Lobiondo
NJ-3	Jon Runyan
NJ-4	Christopher Smith
NJ-5	Scott Garrett
NJ-6	Frank Pallone Jr.
NJ-7	Leonard Lance
NJ-11	Rodney Frelinghuysen
NJ-12	Rush Holt

New York

District Number	Representative
NY-18	Sean Maloney
NY-19	Christopher Gibson
NY-22	Richard Hanna

Pennsylvania

District Number	Representative
PA-1	Robert Brady
PA-2	Chaka Fattah
PA-6	Jim Gerlach
PA-7	Patrick Meehan
PA-8	Michael Fitzpatrick
PA-10	Tom Marino
PA-11	Lou Barletta
PA-13	Allyson Schwartz
PA-15	Charles Dent
PA-16	Joseph Pitts
PA-17	Matthew Cartwright

Representative	District	Project Name
Carney	DE	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Carney	DE	Delaware River Dredged Material Utilization, DE
Carney	DE	Section 22 Planning Assistance to States, DE & NJ (Effects of Flow Dynamics, Salinity and Water Quality on Key Biological Populations in the Delaware Estuary) *[SJ Port Corp]*
Carney	DE	Delaware City Approach Channel, Wilmington (205), DE *[Diamond State Port Corporation]*
Carney	DE	Little Mill Creek, New Castle County, DE (205) *[DNREC, New Castle County]*
Carney	DE	Restoration of Grassdale, New Castle County, DE (1135) *[DNREC]*
Carney	DE	Delaware Bay Coastline, Port Mahon, DE *[DNREC]*
Carney	DE	Delaware Bay Coastline, Roosevelt Inlet - Lewes Beach, DE *[DNREC]*
Carney	DE	Delaware Coast, Cape Henlopen to Fenwick Island: Bethany Beach / South Bethany, DE *[DNREC]*
Carney	DE	Delaware Coast, Cape Henlopen to Fenwick Island: Fenwick Island, DE *[DNREC]*
Carney	DE	Delaware Coast, Cape Henlopen to Fenwick Island: Rehoboth Beach / Dewey Beach, DE *[DNREC]*
Carney	DE	Delaware River Main Channel Deepening, DE, NJ & PA *[Philadelphia Regional Port Authority]*
Carney	DE	Chesapeake & Delaware (C&D) Canal Trail *[DNREC]*
Carney	DE	Cedar Creek, Sussex County, DE
Carney	DE	Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*
Carney	DE	Delaware River, Philadelphia to the Sea, DE, NJ & PA
Carney	DE	Harbor of Refuge, Lewes, DE
Carney	DE	Inland Waterway from Rehoboth Bay to Delaware Bay, Sussex County, DE
Carney	DE	Intracoastal Waterway, Delaware River to Chesapeake Bay, DE & MD (C&D Canal)
Carney	DE	Mispillion River, Sussex County, DE
Carney	DE	Murderkill River, Sussex County, DE
Carney	DE	U.S. Army Corps of Engineers Hopper Dredge McFarland
Carney	DE	Wilmington Harbor, New Castle County, DE
Harris	MD-1	Intracoastal Waterway, Delaware River to Chesapeake Bay, DE & MD (C&D Canal)
Harris	MD-1	Chesapeake & Delaware (C&D) Canal Trail *[DNREC]*
Andrews	NJ-1	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
Andrews	NJ-1	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Andrews	NJ-1	Delaware River Dredged Material Utilization, NJ
Andrews	NJ-1	Section 22 Planning Assistance to States, Groundwater Modeling of Gloucester County, NJ
Andrews	NJ-1	Section 22 Planning Assistance to States, DE & NJ (Effects of Flow Dynamics, Salinity and Water Quality on Key Biological Populations in the Delaware Estuary) *[SJ Port Corp]*
Andrews	NJ-1	Delaware River Main Channel Deepening, DE, NJ & PA *[Philadelphia Regional Port Authority]*
Andrews	NJ-1	Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*
Andrews	NJ-1	Delaware River at Camden, Camden County, NJ

Representative	District	Project Name
Andrews	NJ-1	Delaware River, Philadelphia to the Sea, DE, NJ & PA
Andrews	NJ-1	U.S. Army Corps of Engineers Hopper Dredge McFarland
LoBiondo	NJ-2	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
LoBiondo	NJ-2	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
LoBiondo	NJ-2	Delaware River Dredged Material Utilization, NJ
LoBiondo	NJ-2	Section 22 Planning Assistance to States, DE & NJ (Effects of Flow Dynamics, Salinity and Water Quality on Key Biological Populations in the Delaware Estuary) *[SJ Port Corp]*
LoBiondo	NJ-2	East Point Shoreline Protection, Cumberland County, NJ (14) *[NJDEP]*
LoBiondo	NJ-2	NJIWW CDF85C Restoration, Ocean City, NJ (204) *[NJDOT]*
LoBiondo	NJ-2	NJIWW Dredged Hole 34 Restoration, Atlantic City, NJ (204) *[NJDOT]*
LoBiondo	NJ-2	NJIWW Dredged Hole 35 Restoration, Ocean City, NJ (204) *[NJDOT]*
LoBiondo	NJ-2	Pennsville, Salem County, NJ (205) *[Twp of Pennsville]*
LoBiondo	NJ-2	Pond Creek Salt Marsh Restoration, Cape May County, NJ (1135) *[NJDEP]*
LoBiondo	NJ-2	Delaware Bay Coastline, DE & NJ, Oakwood Beach, NJ *[NJDEP]*
LoBiondo	NJ-2	Delaware Bay Coastline, DE & NJ, Reeds Beach and Pierces Point, NJ *[NJDEP]*
LoBiondo	NJ-2	Delaware Bay Coastline, DE & NJ, Villas and Vicinity, NJ *[NJDEP]*
LoBiondo	NJ-2	Great Egg Harbor and Peck Beach (Ocean City), NJ *[NJDEP]*
LoBiondo	NJ-2	New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Absecon Island, NJ *[NJDEP]*
LoBiondo	NJ-2	New Jersey Shore Protection, Brigantine Inlet to Great Egg Harbor Inlet, Brigantine Island, NJ *[NJDEP]*
LoBiondo	NJ-2	New Jersey Shore Protection, Great Egg Harbor Inlet to Townsends Inlet, NJ *[NJDEP]*
LoBiondo	NJ-2	New Jersey Shore Protection, Lower Cape May Meadows - Cape May Point, NJ *[NJDEP]*
LoBiondo	NJ-2	New Jersey Shore Protection, Townsends Inlet to Cape May Inlet, NJ *[NJDEP]*
LoBiondo	NJ-2	Absecon Inlet, Atlantic County, NJ
LoBiondo	NJ-2	Barnegat Inlet, Ocean County, NJ
LoBiondo	NJ-2	Cold Spring (Cape May) Inlet, Cape May County, NJ
LoBiondo	NJ-2	New Jersey Intracoastal Waterway, NJ
LoBiondo	NJ-2	Salem River, Salem County, NJ
LoBiondo	NJ-2	U.S. Army Corps of Engineers Hopper Dredge McFarland
Runyan	NJ-3	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
Runyan	NJ-3	Delaware River Dredged Material Utilization, NJ
Runyan	NJ-3	New Jersey Alternative Long-Term Nourishment, RSM Study *[NJDEP]*
Runyan	NJ-3	Barnegat Inlet RSM, NJ (204) *[Sponsor Not Required]*
Runyan	NJ-3	Mordecai Island Coastal Wetlands Restoration, Ocean County, NJ (1135) *[Mordecai Land Trust and NJDEP]*
Runyan	NJ-3	Seaside Park, Ocean City, NJ (103) *[NJDEP]*
Runyan	NJ-3	New Jersey Shore Protection, Barnegat Inlet to Little Egg Inlet, NJ *[NJDEP]*
Runyan	NJ-3	New Jersey Shore Protection, Manasquan Inlet to Barnegat Inlet, NJ *[NJDEP]*
Runyan	NJ-3	Barnegat Inlet, Ocean County, NJ
Runyan	NJ-3	Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*

Representative	District	Project Name
Runyan	NJ-3	Delaware River, Philadelphia to Trenton, NJ & PA
Runyan	NJ-3	Manasquan River, Ocean County, NJ
Runyan	NJ-3	New Jersey Intracoastal Waterway, NJ
Runyan	NJ-3	Toms River, Ocean County, NJ
Runyan	NJ-3	U.S. Army Corps of Engineers Hopper Dredge McFarland
Smith	NJ-4	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
Smith	NJ-4	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Smith	NJ-4	New Jersey Alternative Long-Term Nourishment, RSM Study *[NJDEP]*
Smith	NJ-4	Assunpink Creek, Hamilton Township, Mercer County, NJ (205) *[Hamilton Township]*
Smith	NJ-4	Manasquan River, Howell Township, Monmouth County, NJ *[Howell Twp]*
Smith	NJ-4	New Jersey Shore Protection, Manasquan Inlet to Barnegat Inlet, NJ *[NJDEP]*
Smith	NJ-4	Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*
Smith	NJ-4	Manasquan River, Ocean County, NJ
Smith	NJ-4	New Jersey Intracoastal Waterway, NJ
Smith	NJ-4	Toms River, Ocean County, NJ
Garrett	NJ-5	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
Garrett	NJ-5	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Pallone	NJ-6	New Jersey Alternative Long-Term Nourishment, RSM Study *[NJDEP]*
Lance	NJ-7	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
Lance	NJ-7	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Lance	NJ-7	Musconetconng River Dam Removals, Bloomsbury, NJ (206) *[NJDEP-ONRR]*
Frelinghuysen	NJ-11	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Frelinghuysen	NJ-11	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
Holt	NJ-12	Trenton Marine Terminal, Trenton, NJ (14) *[City of Trenton/NJDEP]*
Holt	NJ-12	Assunpink Creek, Trenton, NJ (1135) *[City of Trenton]*
Holt	NJ-12	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Holt	NJ-12	Delaware River Basin Comprehensive Interim Feasibility Study for New Jersey *[NJDEP]*
Maloney	NY-18	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Gibson	NY-19	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Gibson	NY-19	Upper Delaware River Watershed, Livingston Manor, NY *[NYSDEC]*
Gibson	NY-19	Upper Delaware River Watershed, NY *[TBD]*
Gibson	NY-19	Planning Assistance to States, Section 22, Assessment of Bridges and Impacts on Flows and Flooding, Delaware County, NY (Section 22) *[Delaware County Soil & Water Conservation District]*
Gibson	NY-19	Planning Assistance to States, Section 22, Daily Flow Modeling (Dwarf Wedgemussel), NY *[DRBC]*
Brady	PA-1	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Brady	PA-1	Delaware River Waterfront, Philadelphia, PA *[City of Philadelphia]*
Brady	PA-1	Schuylkill River Basin, Wissahickon Creek Watershed, Philadelphia & Montgomery Counties, PA *[City of Philadelphia-Water Department]*
Brady	PA-1	Section 22 Planning Assistance to States, PA (Delaware River Waterfront Pier Analysis) *[DRWC]*

Representative	District	Project Name
Brady	PA-1	Philadelphia Shipyard Flood Reduction, Philadelphia, PA (Section 205) *[City of Philadelphia represented by PIDC]*
Brady	PA-1	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Brady	PA-1	Delaware River Main Channel Deepening, DE, NJ & PA *[Philadelphia Regional Port Authority]*
Brady	PA-1	Cobbs Creek Fish Passage *[City of Philadelphia-Water Department]*
Brady	PA-1	Cobbs Creek Watershed Habitat Restoration *[City of Philadelphia-Water Department]*
Brady	PA-1	Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*
Brady	PA-1	Delaware River, Philadelphia to the Sea, DE, NJ & PA
Brady	PA-1	Delaware River, Philadelphia to Trenton, NJ & PA
Brady	PA-1	Schuylkill River, Philadelphia, PA
Brady	PA-1	U.S. Army Corps of Engineers Hopper Dredge McFarland
Fattah	PA-2	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Fattah	PA-2	Delaware River Waterfront, Philadelphia, PA *[City of Philadelphia]*
Fattah	PA-2	Schuylkill River Basin, Wissahickon Creek Watershed, Philadelphia & Montgomery Counties, PA *[City of Philadelphia-Water Department]*
Fattah	PA-2	Section 22 Planning Assistance to States, PA (Germantown Hydrologic and Hydraulic Modeling) *[Philadelphia Water Department]*
Fattah	PA-2	Section 22 Planning Assistance to States, PA (Delaware River Waterfront Pier Analysis) *[DRWC]*
Fattah	PA-2	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Fattah	PA-2	Tookany Creek, Cheltenham Township, Montgomery County, PA (Section 205) *[Cheltenham Township]*
Fattah	PA-2	Cobbs Creek Fish Passage *[City of Philadelphia-Water Department]*
Fattah	PA-2	Cobbs Creek Watershed Habitat Restoration *[City of Philadelphia-Water Department]*
Fattah	PA-2	Schuylkill River, Philadelphia, PA
Gerlach	PA-6	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Gerlach	PA-6	Schuylkill River, North Coventry Township Chester County, PA (Section 14) *[North Coventry Township]*
Gerlach	PA-6	Toad Creek, Borough of Topton, Berks County, PA (Section 14) *[Borough of Topton]*
Meehan	PA-7	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Meehan	PA-7	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Meehan	PA-7	Delaware River Main Channel Deepening, DE, NJ & PA *[Philadelphia Regional Port Authority]*
Meehan	PA-7	Blue Marsh Lake, Leesport, PA
Meehan	PA-7	Delaware River, Philadelphia to the Sea, DE, NJ & PA
Meehan	PA-7	U.S. Army Corps of Engineers Hopper Dredge McFarland
Fitzpatrick	PA-8	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Fitzpatrick	PA-8	Delaware River Waterfront, Philadelphia, PA *[City of Philadelphia]*
Fitzpatrick	PA-8	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Fitzpatrick	PA-8	Southampton Creek Stream Restoration, Bucks County, PA (Section 204) *[Upper Southampton Township]*
Fitzpatrick	PA-8	Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*
Fitzpatrick	PA-8	Delaware River, Philadelphia to Trenton, NJ & PA
Fitzpatrick	PA-8	U.S. Army Corps of Engineers Hopper Dredge McFarland
Marino	PA-10	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*

Representative	District	Project Name
Marino	PA-10	General Edgar Jadwin Dam, Honesdale, PA
Marino	PA-10	Prompton Lake, Prompton, PA
Barletta	PA-11	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Barletta	PA-11	Section 22 Planning Assistance to States, PA (Lehigh River Model) *[DCNR and PFBC]*
Barletta	PA-11	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Barletta	PA-11	Beltzville Lake, Beltzville, PA
Barletta	PA-11	Francis E Walter Dam, White Haven, PA
Schwartz	PA-13	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Schwartz	PA-13	Delaware River Waterfront, Philadelphia, PA *[City of Philadelphia]*
Schwartz	PA-13	Schuylkill River Basin, Wissahickon Creek Watershed, Philadelphia & Montgomery Counties, PA *[City of Philadelphia-Water Department]*
Schwartz	PA-13	Section 22 Planning Assistance to States, PA (Delaware River Waterfront Pier Analysis) *[DRWC]*
Schwartz	PA-13	Section 22 Planning Assistance to States, PA (Rose Valley Creek Flood Hazard Analysis) *[Whitpain Township]*
Schwartz	PA-13	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Schwartz	PA-13	Tookany Creek, Cheltenham Township, Montgomery County, PA (Section 205) *[Cheltenham Township]*
Schwartz	PA-13	Delaware River Main Channel Deepening, DE, NJ & PA *[Philadelphia Regional Port Authority]*
Schwartz	PA-13	Delaware Estuary Regional Sediment Management (RSM) DE, NJ & PA *[100% Federally Funded]*
Schwartz	PA-13	Delaware River, Philadelphia to the Sea, DE, NJ & PA
Schwartz	PA-13	Delaware River, Philadelphia to Trenton, NJ & PA
Schwartz	PA-13	U.S. Army Corps of Engineers Hopper Dredge McFarland
Dent	PA-15	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Dent	PA-15	Section 22 Planning Assistance to States, PA (Lehigh River Model) *[DCNR and PFBC]*
Dent	PA-15	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Pitts	PA-16	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Pitts	PA-16	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Pitts	PA-16	Chester, Delaware and Montgomery County Streams *[PaDEP]*
Cartwright	PA-17	Delaware River Basin, Pine Knot, Schuylkill County, PA *[PADEP]*
Cartwright	PA-17	Delaware River Comprehensive, DE, NJ, NY & PA (Watershed Flood Management Plan) *[DRBC]*
Cartwright	PA-17	Schuylkill Watershed Restoration, PA (Section 204) *[none required]*
Cartwright	PA-17	Blue Marsh Lake, Leesport, PA

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Major Appropriation Accounts

General Investigations (GI)

Investigations are studies to determine the need, engineering feasibility, economic justification, and the environmental and social suitability of a project. Investigations also include preconstruction, engineering, design work, data collection, and interagency coordination and research activities.

- Coastal and Deep-Draft Navigation
- Environmental Restoration or Compliance
- Flood and Storm Damage Reduction
- Flood Control
- Inland Navigation
- Navigation ($2 million)
- Other Authorized Purposes (including but not limited to Environmental Restoration or Compliance and Remote, Coastal, or Small Watershed)
- Remote, Coastal, or Small Watershed
- Shore Protection
- Small, Remote, or Subsistence Navigation

Construction, General (CG)

Construction projects are construction and major rehabilitation projects that relate to navigation, flood control, water supply, hydroelectric power, and environmental restoration. This also includes projects authorized under the Continuing Authorities Program (CAP).

- Environmental Infrastructure
- Environmental Restoration or Compliance
- Flood and Storm Damage Reduction
- Flood Control
- Hydropower
- Navigation
- Other Authorized Project Purposes (including but not limited to Environmental Restoration or Compliance, Environmental Infrastructure, and Hydropower)
- Shore Protection

Operations & Maintenance, General (O&M, G)

Operation and maintenance projects include the preservation, operation, maintenance, and care of existing river and harbor, flood control, and related activities at the projects that the Corps operates and maintains.

- Deep-Draft Harbor and Channel Maintenance
- Inland Waterway Maintenance
- Navigation Maintenance
- Other Authorized Project Purposes
- Small, Remote, or Subsistence Navigation Maintenance

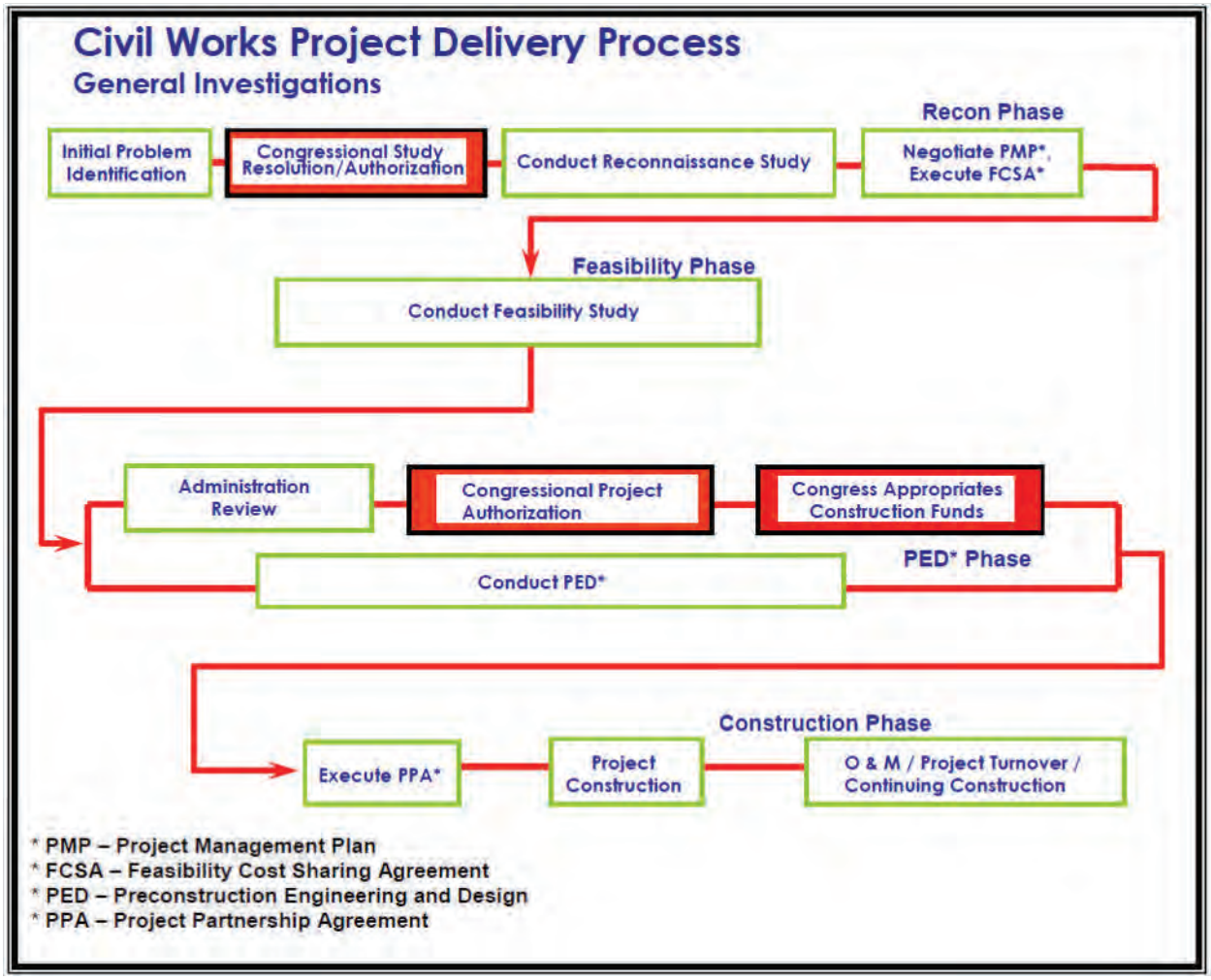
Flood Control & Coastal Emergencies (FCCE)

USACE also has authority under PL 84-99, Flood Control and Coastal Emergencies (FCCE) (33 U.S.C. 701n) (69 Stat. 186) for emergency management activities. Under PL 84-99, the Chief of Engineers, acting for the Secretary of the Army, is authorized to undertake activities including disaster preparedness, Advance Measures, emergency operations (Flood Response and Post Flood Response), rehabilitation of flood control works threatened or destroyed by flood, protection or repair of federally authorized shore protective works threatened or damaged by coastal storm, and provisions of emergency water due to drought or contaminated source.

General Investigations

General Investigation
New Start Project

Reconnaissance Phase	Feasibility Phase	Preconstruction Engineering & Design (PED)	Construction
• Full Fed cost of $100K-$200K • Identifies Project Study Plan and cost share responsibilities of Sponsor • 9 to 12 months	• Cost share with Sponsor 50/50 • Avg. cost $1 to $3 million • Non-Federal share can be in-kind • 3 to 5 years	• Cost share with Sponsor, % varies • 1 to 2 years	• Cost share with Sponsor, % varies • Time varies



Continuing Authorities Program (CAP)
Construction General Appropriation

US Army Corps of Engineers
Philadelphia District

CAP
(Continuing Authorities Program)

Section	Authority	Purpose	Cost Share % (Fed/Non-Fed)	Federal Project Limit
14	Emergency Streambank Protection	Protection for public and nonprofit facilities	65/35	$1,500,000
103	Beach Erosion Control	Protection of public shorelines	65/35	$3,000,000
107	Small Navigation Projects	Small river and harbor improvements	Non-Fed share 10 to 50% depending on depth	$7,000,000
111	Mitigate Shore Damage Attributed to Navigation Works	As a result to a Federal navigation project	Same as original project	$5,000,000
204	Beneficial Uses of Dredged Material	Dredged material to create aquatic habitat and wetlands	65/35	$5,000,000
205	Flood Damage Protection	Small flood damage reduction projects	65/35	$7,000,000
206	Aquatic Ecosystem Restoration	Restore degraded aquatic ecosystems in the public interest	65/35	$5,000,000
208	Snagging and Clearing for Flood Control	Removal of snags and trees in navigable streams and tributaries in the interest of flood control	65/35	$500,000
1135	Modifications for Improvement of the Environment	Restoration in a degraded ecosystem resulting from Corps project operations	75/25	$5,000,000

Planning Assistance to States Program
General Investigation Appropriation

US Army Corps of Engineers
Philadelphia District

Planning Assistance to States/Tribes Program

Section 22 of the 1974 Water Resources Development Act, as amended

50/50 Cost share with:

- Limited to $2,000,000 per State per year, based on availability of annual appropriations
- Sponsor's share can be all in-kind services

Planning assistance to help States and Indian Tribes deal with their water resource problems. Eligible sponsors can be States, local governments, other non-Federal entities or federally recognized Native American Indian Tribes.

Examples

- Flood damage reduction
- Water resource development
- Water conservation and water quality
- Hydropower
- Erosion
- Scopes vary from environmental investigations on individual reservoirs to comprehensive studies to establish state or tribal water budgets.

Floodplain Management Services
General Investigation Appropriation

US Army Corps of Engineers
Philadelphia District

Floodplain Management Services

Authority Stems from Section 206 of the 1960 Flood Control Act (P.L. 86-645)

The objective is to foster public understanding of the options for dealing with flood hazards and to promote prudent use and management of the Nation's floodplains.

Types of Assistance

- General Technical Services: Development or interpretation of site specific flood hazard data.
- General Planning Assistance: "Special Studies" on all aspects of floodplain management planning.

Most Common Types of Special Studies:

- Floodplain delineation/flood hazard evaluation studies
- Dam break analysis studies
- Hurricane evacuation studies (HES)
- Flood warning/preparedness studies
- Regulatory floodway studies
- Comprehensive floodplain management studies
- Flood damage reduction studies
- Urbanization impact studies
- Stormwater management studies
- Floodproofing studies
- Inventory of flood prone structures

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SPONSORS' GUIDE TO PROJECT DOCUMENTS
Corps Models, Outlines and Forms Used In Project Development

INTRODUCTION

A variety of different types of documents are prepared during the development of a Corps project, and you, the sponsor, will be involved in many of them. Some documents are reports about work that was done, some are agreements concerning responsibilities, and some serve other important purposes. Since most of these documents are required for every project, standardized models and outlines are used to make preparing them easier and ensure that all Corps offices are using similar documents. Where a certain document may have a somewhat different format and content for each project, examples of previous documents are available.

TYPES OF DOCUMENTS

The types of standardized documents that you will encounter are generally characterized as follows:

- *Models* - These are standardized fill-in-the -blanks formats for documents where much of the information Is the same for all projects. Some models are short forms, while others are more lengthy text. Model documents are available for the certificate of lobbying, disclosure of lobbying activities, escrow agreement, feasibility cost sharing agreement (FCSA), Project Partnership Agreement (PPA), project executive summary, and statement of financial capability.

- *Outlines* - These are standardized checklists of the information to be included in various project reports. Outlines are available for the chart of accounts cost estimate, design memorandum (DM), environmental impact statement (EIS), Feasibility report, financing plan, and reconnaissance report.

- *Examples* - Some documents are needed for every project, but their content and possibly their format differs from project to project. These documents include the study authority, project construction authority, budget authority, environmental assessment (EA), initial project management plan (IPMP), justification sheet, letter of credit, letter of intent, and project management plan (PMP).

Your Project Manager can provide you with examples of these documents, as well as examples of blank and complete models (such as a Project Partnership)
and report outlines (such as a feasibility report).

DESCRIPTION OF DOCUMENTS

The following is a list of some of the generally standardized reports, agreements and other documents that you are likely to be involved with over the life of a project. This list presents the documents in the general chronological order in which they would be used. Not all of these documents are used in all cases, and the order of when they are needed may vary for any given study or project.

- Authority (Study)
- Justification Sheet
- Authority (Budget)

- Reconnaissance Report Certificate of Lobbying
- Disclosure of Lobbying Activities
- Escrow Agreement
- Letter of Credit
- Letter of Intent
- Chart of Accounts
- Initial Project Management Plan
- Feasibility Cost Sharing Agreement
- Project Executive Summary
- Feasibility Report
- Environmental Impact Statement (or Environmental Assessment)
- Project Master Plan
- Authority (Project Construction)
- Design Memorandum
- Financing Plan
- Statement of Financial Capability
- Project Partnership Agreement

The following is an alphabetical listing and explanation of the generalized standardized reports, agreements and other documents listed above.

Authority - This is either a resolution of a committee of the U.S. Congress, or a Federal public law, which gives us approval to: conduct a study (study authority), construct a project (project construction authority), or spend Federal funds on an authorized study or project (budget authority). and is usually only a line, a sentence, or a paragraph in length. Your Project Manager can provide an example of each type of authority.

Certificate of Lobbying - This is your statement concerning lobbying of Congressional and other Federal officials. The certificate must accompany a feasibility cost sharing agreement and a Project Cooperation Agreement. A one-page model certificate is in Appendix Q of the "Planning Guidance Notebook' (Corps regulation number ER 1105-2-100).

Chart of Accounts - This is a list of detailed accounting categories for preparing study and project cost estimates. The accounts outline and cost estimate checklist are in Corps circular number EC 1110-2-538, including revisions provided by letter of 29 September 1989 to all Corps finance and accounting officers (subject: Life Cycle Project Management (LCPM) Chart of Accounts).

Design Memorandum (DM) - This report presents the results of detailed engineering studies needed to prepare a project's plans and specifications for construction. The format for a design memorandum is in Appendix C to Corps circular number EC 1110-2-265.

Disclosure of Lobbying Activities - This is a form (Standard Form LLL), completed by you, concerning lobbying of Congressional and other Federal officials. In certain circumstances it must accompany a certificate of lobbying (see above). A copy of the form is In Appendix Q of the “Planning Guidance Notebook”.

Environmental Assessment (EA) - This report presents the results of the evaluation of environmental effects of the project and its alternatives. In certain circumstances, an environmental assessment may be adequate and an environmental impact statement (see below) may not be required. A finding of no significant impact (FONSI) must also be prepared for each environmental assessment. Your Project Manager can provide an example environmental assessment and finding of no significant impact.

Environmental Impact Statement (EIS) - This report presents the results of the evaluation of environmental effects of the project and its alternatives. Outlines for statements that are combined or integrated

with feasibility reports are in Appendix F of the "Planning Guidance Notebook". An outline for statements prepared for other reports or in other circumstances is in the Council on Environmental Quality's regulation titled "Regulations for Implementing the Procedural- Provisions of the National Environmental Policy Act" (40 CFR 1502.10). A record of decision (ROD) must also be prepared for each environmental impact statement Your Project Manager can provide an example record of decision.

Escrow Agreement - This is a written agreement among you, your financial Institution, and the Department of the Army in which the parties agree that your funds are to be deposited in an interest bearing account at the financial institution' and the Corps can withdraw those funds as needed for the study or project A four-page model escrow agreement is in Appendix H to Corps regulation number ER 1165-2-131.

Feasibility Cost Sharing Agreement (FCSA) - This is a written agreement between you and the Department of the Army, represented by the local District Engineer, to share the cost of a feasibility phase study. A seven page model agreement is in Appendix E of the 'Planning Guidance Notebook. The model is for both specifically authorized studies and studies under the Continuing Authorities Program.

Feasibility Report - This report presents the results of the formulation, evaluation and selection of project plans conducted during the feasibility phase of project planning. A report outline is in Table 23 of the "Planning Guidance Notebook". The outline is for both feasibility reports for specifically authorized studies and detailed project reports (DPR) under the Continuing Authorities Program.

Financial Plan - This report describes the sources and uses of your project funds as support for the statement of financial capability (see below). A plan outline is in paragraph 6-197 of the 'Planning Guidance Notebook.'

Initial Project Management Plan (IPMP) - Ills is a management document that describes the tasks, costs, and responsibilities, both yours and ours, required to conduct the feasibility phase of a study. It is appended to the FCSA (see above). Your Project Manager can provide an example plan.

Justification Sheet - This is a brief description of how funds are to be used for a study or project in an upcoming fiscal year. It is submitted to the Congress in support of a President's budget request for the upcoming fiscal year. Your Project Manager can provide an example justification sheet.

Letter of Credit - This is a letter from your financial Institution that guarantees to the Federal government that the funds are available to meet required cash outlays. Your Project Manager can provide an example letter.

Letter of Intent - This is a letter from you to the local District Engineer stating that you are ready, willing and able to execute the feasibility cost sharing agreement. Your Project Manager can provide an example letter.

Project Partnership Agreement (PPA) - This is a written agreement between you and the Department of the Army that describes our financial and other responsibilities for construction, operation and maintenance of a project Model agreements are available for:

- Specifically authorized structural flood control projects - Nineteen-page model in

Appendix A to Corps regulation number ER 1165-2-131.

- Specifically authorized harbor projects - Twenty-page model in Appendix D to Corps regulation number ER 1165-2-131.

- Flood control projects under the Continuing Authorities Program ('Section 205 projects') - Twenty-four-page model, distributed by Corps Headquarters letter of 23 April 1990.

- Snagging and clearing for flood control projects under the Continuing Authorities Program ("Section 208 projects") - Twenty-four-page model, distributed by Corps Headquarters letter of 23 April 1990.

- Emergency streambank or shoreline erosion projects under the Continuing Authorities Program ("Section 14 projects) - Twenty-page model, distributed by Corps Headquarters letter of 21 May 1990.

Project Executive Summary - This is a form, completed monthly by your Corps Project Manager, which summarizes the status of a project's cost estimate, schedule and other important issues. A copy of the form is in Appendix E of Corps regulation number ER 5-2.1, which also describes other life cycle project management (LCPM) periodic reporting forms.

Project Management Plan (PMP) - This Is a continually- evolving collection of management documents that describe how a project will be designed and constructed, including a description of the project scope, cost estimate budget, and schedule. Your Project Manager can provide an example plan.

Reconnaissance Report - This report presents the results of the preliminary project analyses conducted during the reconnaissance (first) phase of planning. A report outline is in Table 2-2 of the "Planning Guidance Notebook".

Statement of Financial Capability - This is your description of your capability to meet your project financial obligations In accordance with the project funding schedule. Your Project Manager can provide an example statement. A model bond consultant's letter in support of a statement is in paragraph 6-187 of the "Planning Guidance Notebook".

NEED MORE INFORMATION?

Your Project Manager can provide copies of the models, outlines and examples described above, and answer any questions about their preparation and use. In addition, the following publications explain much of the Corps guidance about these documents:

- "Annual Program and Budget Request for Civil Works Activities, Corps of Engineers, Fiscal Year 19XX" (Corps circular number EC 11-2-XXX issued annually) - Provides guidance on the justification sheet.

- "Civil Works Project Cost Estimating - Chart of Accounts' (Corps circular number EC 1110-2538, dated 28 February 1989) - Provides guidance on the chart of accounts format for cost estimates.

- "Engineering and Design for Civil Works Projects' (Corps circular number EC 1110-2-265, dated I September 1989) - Provides guidance on the design memorandum.

- "Life Cycle Project Management System" (Corps regulation number ER 5-2-1, advance draft dated 31 July 1989) - Provides guidance on the project management plan, and the

project executive summary and other periodic reports for project management.

- "Project Partnership Agreements for New Start Construction Project (Corps regulation number ER 1165-2-131, dated 15 April 1989) - Provides guidance on the escrow agreement an Project Partnership Agreement

- “Planning Guidance" (Corps regulation number ER 1105-02-100, dated IS September 1990-, also called the "Planning Guidance Notebook', or PGN) - Provides guidance on the certificate of lobbying, disclosure of lobbying activities, environmental impact statement, feasibility cost sharing agreement, feasibility report, financing plan, initial project management plan, letter of intent, reconnaissance report, and statement of financial capability.

- “Procedures for Implementing NEPA' (Corps regulation number ER 200-2-2, dated 4 March 1988) - Provides guidance on the environmental assessment, finding of no significant impact, environmental Impact statement, and record of decision.

- “Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act" (Federal regulations numbered 40 CFR 100-1508, dated November 29, 1978, issued by the Council on Environmental Quality) - Provides guidance on the environmental assessment, finding of no significant impact, environmental impact statement, and record of decision.

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U.S. Army Corps of Engineers
Commonly Used Acronyms and Abbreviations

404(b)(1) – Water quality permit per CWA 77
902 limit - Maximum project cost per WRDA 86
905(b) – Reconnaissance Report per WRDA 86
AAA – Army Audit Agency
AAE – Average Annual Equivalent
AAR –After Action Review
ABC – Army Benefits Center
ACTEDS – Army Civilian Training, Evaluation and Development System
ADR – Alternative Dispute Resolution
AE – Architect-Engineer
AF – Acre Feet
AFB – Alternatives Formulation Briefing
AICP – American Institute of Certified Planners
AIS – Automated Information System
AKO – Army Knowledge Online
AM – Asset Management
AOR – Area of Responsibility
APIC – Army Performance Improvements Criteria
ARC – Annual Report to Congress
ASA(CW) – Assistant Secretary of the Army for Civil Works
ASAP – As Soon as Possible
ASCE – American Society of Civil Engineers
ATR - Agency Technical Review
AWOL – Absent Without Leave
BC – Benefit Cost
BCR – Benefit Cost Ratio
BFE – Base Flood Elevation
BG – Brigadier General
BLUF – Bottom Line Up Front
BMP Best Management Practice
BOD – Biological Oxygen Demand
BOY –Beginning of Year
BRAC – Base Realignment and Closure
BUB – Battle Update Briefing
BY – Budget Year
C - Construction
CADD – Computer Aided Design Drafting
CAP – Continuing Authorities Program
CCG – Consolidated Command Guidance
CDR - Commander
CE – Corps of Engineers
CEA – Cost Effectiveness Analysis
CEFMS – Corps of Engineers Financial Management System
CE/ICA – Cost Effectiveness/ Incremental Cost Analysis
CERC – Coastal Engineering Research Center
CERCLA – Comprehensive Environmental Response, Compensation and Liability Act, 1980 (Superfund)
CERL – Construction Engineering Research Laboratory
CEQ – Council on Environmental Quality
CF – Copy Furnished
CFR – Code of Federal Regulations
CFS – Cubic Feet per Second
CG - Construction General/ Commanding General
CI – Command Inspection
CMR – Command Management Review
COB – Close of Business/ Command Operating Budget
COL – Colonel
COLA – Cost of Living Adjustment
CONUS – Continental United States
COP – Community of Practice
COR – Contracting Officer's Representative
CP – Career Program
CPAC – Civilian Personnel Advisory Center
CRA – Continuing Resolution Authority
CRREL – Cold Regions Research and Engineering Laboratory
CSRA – Cost & Schedule Risk Analysis
CSRS – Civilian Service Retirement System
CVM – Contingent Value Method
CW – Civil Works
CWA – Clean Water Act, 1977
CWCCIS – Civil Works Construction Cost Index System
CWIS – Civil Works Information System
CX – Center of Expertise
CY – Cubic Yard/ Current Year
CZM – Coastal Zone Management
CZMA – Coastal Zone Management Act
DA – Department of Army
DC – District Commander/Division Commander
DCG – Deputy Commanding General
DCW – Director of Civil Works
DDC – Deputy District Commander
DDE – Deputy District Engineer
DDR – Design Documentation Report
DE – District Engineer/ Division Engineer
DEIS – Draft Environmental Impact Statement
DEMOB - Demobilization
DDN – Deep Draft Navigation
DIST – District
DIV – Division

U.S. Army Corps of Engineers
Commonly Used Acronyms and Abbreviations

DMP – Decision Management Plan
DOD – Department of Defense
DOE – Department of Energy
DOI – Department of Interior
DOJ – Department of Justice
DOT –Department of Transportation
DQC - District Quality Control
DP – Decision Point
DPM – Deputy for Project Management
DPR – Detailed Project Report
DSAP – Dam Safety Assurance Program
DX - Directory of Expertise
E&D – Engineering and Design
E&PW – Energy and Public Works (Senate)
EA Environmental Assessment
EAB – Expected Annual Benefits
EAD – Expected Annual Damages
EC – Engineering Circular
EDR – Engineering Decision Report
EEO – Equal Employment Opportunity
EFT – Electronic Funds Transfer
EGM – Economics Guidance Memorandum
EIS – Environmental Impact Statement
EM – Engineering Memorandum
EO – Executive Order
EOC – Emergency Operations Center
EOY – End of Year
ENR – Engineering News Record
EP – Engineering Pamphlet
ER – Engineering Regulation
ERDC – Engineering Research & Design Center
EROC – Electronic Reporting Organization Code
EPA – Environmental Protection Agency
ESA Endangered Species Act
ESG – Executive Steering Group
EQ – Environmental Quality
ETL –Engineer Technical Letter
F&A – Finance and Accounting
FWL – Fish and Wildlife
FWS – Fish and Wildlife Service
FCA – Flood Control Act
FCCE – Flood Control and Coastal Emergencies
FCSA – Feasibility Cost Sharing Agreement
FEHB – Federal Employee Health Benefits
FEIS – Final Environmental Impact Statement
FEMA – Federal Emergency Management Agency
FERC – Federal Energy Regulatory Commission
FERS – Federal Employees Retirement System
FFE – First Floor Elevation/ Finished Floor Elevation
FOA – Field Operating Agency/Activity
FOI – Freedom of Information
FOIA – Freedom of Information Act
FONSI - Finding of No Significant Impact
FORCON – Force Configuration
FPMS – Floodplain Management Services
FR – Federal Register
FRC – Feasibility Review Conference
FRM – Flood Risk Management
FS – Feasibility Study
FSM – Feasibility Scoping Meeting
FTE – Full-time Equivalent
FUDS – Formerly Used Defense Site
FUSRAP – Formerly Utilized Sites Remedial Action Program
FY – Fiscal Year
FYI – For Your Information
FYSA- For Your Situational Awareness
G&A – General and Administrative
GAO – Government Accountability Office
GE – General Expense
GI – General Investigations
GIS - Geographic Information Systems
GIWW – Gulf Inter-Coastal Waterway
GNF – General Navigation Features
GOV – Government/ Government-owned Vehicle
GPO – Government Printing Office
GRR – General Reevaluation Report
GS – General Schedule
GSA – General Services Administration
H&H – Hydrology and Hydraulics
HAC – Hydropower Analysis Center
HAZMAT – Hazardous Materials
HD – House Document
HEC – Hydrologic Engineering Center
HEP – Habitat Evaluation Procedures
HES – Habitat Evaluation System
HHS – Health and Human Services
HQ - Headquarters
HQUSACE – Headquarters, U. S. Army Corps of Engineers
HR – Human Resources/House of Representatives/House Resolution
HSDR – Hurricane and Storm Damage Reduction
HTIC – House Transportation & Infrastructure Committee
HTRW – Hazardous, Toxic, and Radioactive Wastes
HU – Habitat Unit
HUD – Housing and Urban Development

U.S. Army Corps of Engineers
Commonly Used Acronyms and Abbreviations

I - Investigations
IA – Initial Appraisal
IAG – Inter-agency Agreement
ICA – Intergovernmental Cooperation Act/Incremental Cost Analysis
IDC – Interest During Construction/Indefinite Delivery Contract
IDIQ – Indefinite Delivery, Indefinite Quantity
IEPR – Independent External Peer Review
IG – Inspector General
IN – Inland Navigation
IPA – Intergovernmental Personnel Act
IPR – In-Progress Review
IRC – Issue Resolution Conference
ITR – Independent Technical Review (now ATR)
IWR – Institute for Water Resources
IWW – Inland Waterways
IWTF – Inland Waterway Trust Fund
IWUB – Inland Waterway User Board
JTR – Joint Travel Regulation
L&D – Lock and Dam
LCC –Life Cycle Cost
LER – Lands, Easements, and Rights-of-Way
LERR – Lands, Easements, Rights-of-Way, and Relocations
LERRD – Lands, Easements, Rights-of-Way, Relocations, and Disposal
LOI – Letter of Intent
LPP – Locally Preferred Plan/ Local Protection Project
LRB – Buffalo District
LRC – Chicago District
LRD – Great Lakes & Ohio River Division (Cincinnati, OH)
LRE – Detroit District
LRH – Huntington District
LRL – Louisville District
LRN – Nashville District
LRP – Pittsburgh District
LRR – Limited Reevaluation Report
LSF – Local Service Facilities
LTC – Lieutenant Colonel
LWOP – Leave Without Pay
M&I – Municipal and Industrial
M&IE – Meals and Incidental Expenses
MACOM – Major Army Command
MARAD – Maritime Administration
MCACES – Micro-computer Aided Cost Engineering System
MCX – Mandatory Center of Expertise
MFR – Memorandum for Record
MG – Major General
MHHW – Mean Higher High Water
MHW – Mean High Water
MILCON – Military Construction
MIPR – Military Interdepartmental Purchase Request
MLW – Mean Low Water
MLLW – Mean Lower Low Water
MOA – Memorandum of Agreement
MOB – Mobilization
MOU – Memorandum of Understanding
MOY – Middle of Year
MR&T – Mississippi River and Tributaries
MRC – Mississippi River Commission
MSC – Major Subordinate Command
MVD – Mississippi Valley Division (Vicksburg, MS)
MVK – Vicksburg District
MVM – Memphis District
MVN – New Orleans District
MVP – St. Paul District
MVR – Rock Island District
MVS – St. Louis District
NAB – Baltimore District
NAD – North Atlantic Division (New York, NY)
NAE – New England District
NAN – New York District
NAO – Norfolk District
NAP – Philadelphia District
NAS – National Academy of Sciences
NAV – Navigation
NDC – Navigation Data Center
NED – National Economic Development
NER – National Ecosystem Restoration
NEPA –National Environmental Protection Act
NFIP National Flood Insurance Program
NGO Nongovernmental Organization
NGVD – National Geodetic Vertical Datum
NHPA National Historic Preservation Act
NLT – No Later Than
NMFS – National Marine Fisheries Service
NOAA – National Oceanographic and Atmospheric Administration
NPS – National Park Service
NRHP –National Register of Historic Places
NTE –Not to Exceed
NTP – Notice to Proceed
NWD – Northwestern Division (Portland, OR)
NWK – Kansas City District

U.S. Army Corps of Engineers
Commonly Used Acronyms and Abbreviations

NWO – Omaha District
NWP – Portland District
NWS – Seattle District/ National Weather Service
NWW – Walla Walla District
O&M – Operations and Maintenance
OBE – Overcome by Events
OC – Office of Counsel
OEO – Outside Eligible Organization
OMB – Office of Management and Budget
OMRR&R – Operations, Maintenance, Repair, Replacement and Rehabilitation
OSA – Office of the Secretary of Army
OSD – Office of the Secretary of Defense
OSE – Other Social Effects
OSHA – Occupational Safety and Health Administration
OWPR – Office of Water Project Review
P&D – Planning and Design
P&G – Principles and Guidelines
P&S – Principles and Standards/ Plans and Specifications
PA – Planning Associate/ Per Annum
PAB – Planning Advisory Board
PAC – Post-authorization Change
PACR – Post-authorization Change Report
PAS – Planning Assistance to States
PCoP – Planning Community of Practice
PCS – Permanent Change of Station
PCX – Planning Center of Expertise
PDT – Project Delivery Team
PE – Professional Engineer
PED – Pre-construction Engineering and Design
PGM – Project Guidance Memorandum
PGN – Planning Guidance Notebook
PIR – Project Implementation Report
PL – Public Law
PM – Project Manager/Management
PMBP – Project Management Business Process
PMP – Project Management Plan
PMF – Probable Maximum Flood
POA – Alaska District
POC – Point of Contact
POD – Pacific Ocean Division (Honolulu, HI)
POH – Honolulu District
POTUS – President of the United States
POV – Privately-owned Vehicle/ Point of View
PPA – Project Partnership Agreement
PPE – Pay Period Ending
PR&C – Purchase Request and Commitment
PRB – Project Review Board
PRIP – Plant Replacement and Improvement Program
PROSPECT – Proponent Sponsored Engineer Corps Training
PRP – Potential Responsible Party
PTL – Planning Technical Lead
Q's & A's – Questions and Answers
QA/QC – Quality Assurance / Quality Control
QM – Quality Manual
QMP –Quality Management Plan
QMR – Quality Management Representative
QMS – Quality Management System
RA – Risk Analysis/ Risk Assessment/Remedial Action
R&D – Research and Development
R&H – River and Harbor
R&U – Risk and Uncertainty
RBRCR – Remaining Benefits, Remaining Costs Ratio
REC - Recreation
RED – Regional Economic Development
REP – Real Estate Plan
RIT – Regional Integration Team
RITA – Relocation Income Tax Adjustment
RFP - Request for Proposal
RP – Review Plan/ Resource Provider
RMB – Regional Management Board
RMC – Risk Management Center
RMO – Review Management Organization/Resource Management Office
RMP – Risk Management Plan
ROD – Record of Decision
ROW – Right of Way
RR – Risk Register
RTS – Regional Technical Specialist
S&A – State and Agency/Supervision and Administration
S&I – Supervision and Inspection
S&S – Savings and Slippage
SAC – Charleston District/ Senate Appropriations Committee
SAD – South Atlantic Division (Atlanta, GA)
SADBU – Small and Disadvantaged Business Utilization
SAJ – Jacksonville District
SAM – Mobile District
SAME – Society of American Military Engineers
SAR – Safety Assurance Review

U.S. Army Corps of Engineers
Commonly Used Acronyms and Abbreviations

SAS – Savannah District
SAW – Wilmington District
SBH – Small Boat Harbor
SCD – Service Computation Date
SCORP – State Comprehensive Recreation Plan
SCOTUS – Supreme Court of the United States
SCS – Soil Conservation Service
SD – Senate Document
SEPWC – Senate Environment and Public Works Committee
SES – Senior Executive Service
SFO – Support for Others
SHPO – State Historic Preservation Office
SITREP – Situation Report
SMART – Specific Measurable Attainable Risk-Informed Timely
SME – Subject Matter Expert
SMSA – Standard Metropolitan Statistical Area
SOP – Standard Operating Procedure
SOS – Scope of Services/Scope of Studies
SOW – Scope of Work
SPA - Albuquerque District
SPD – South Pacific Division (San Francisco, CA)
SPF – Standard Project Flood
SPK – Sacramento District
SPL – Los Angeles District
SPN – San Francisco District
SR – Senate Resolution
SWD – Southwestern Division (Dallas, TX)
SWF – Fort Worth District
SWG – Galveston District/ Senior Working Group
SWL – Little Rock District
SWT – Tulsa District
T&A – Time and Attendance
T&ES – Threatened and Endangered Species
T&I – Transportation and Infrastructure (House)
TAD – Transatlantic Division
TAPES – Total Army Performance Evaluation System
TBA – To be Announced
TBD – To be Determined
TCM – Travel Cost Method
TDY – Temporary Duty
TMDL -Total Maximum Daily Load
TRC – Technical Review Conference
TSP – Tentatively Selected Plan/ Thrift Savings Plan
TQSE – Temporary Quarters Subsistence Expenses
UDV – Unit Day Value
USACE – U. S. Army Corps of Engineers
USC – United States Code
USCG – United States Coast Guard
USEPA – United States Environmental Protection Agency
USFWS – United States Fish and Wildlife Service
USGS – United States Geological Survey
VE – Value Engineering
VT – Vertical Team
VTC – Video Teleconference
WMP – Watershed Management Plan
WBS – Work Breakdown Structure
WCSC - Waterborne Commerce Statistics Center
WFO –Work for Others
WQ – Water Quality
WRC – Water Resources Council
WRDA – Water Resources Development Act
WS – Water Supply
WTA – Willingness to Accept
WTP – Willingness to Pay

DELAWARE PROJECTS - PHILADELPHIA DISTRICT

GENERAL INVESTIGATIONS

Christina River Watershed	GI 1
Delaware River Comprehensive WFMP	GI 2
Delaware Planning Assistance To States, (Sec.22)	GI 4
Delaware River Dredged Material Utilization, PA, DE & NJ	GI 5

CONTINUING AUTHORITIES PROGRAM (CAP)

Restoration of Grassdale (1135)	C 2
Little Mill Creek (205)	C 3
Pennsylvania Ave Improvement, Bethany Beach (205)	C4

CONSTRUCTION GENERAL

Delaware River Main Channel Deepening, PA, NJ & DE	CG 1
Delaware Coast, Cape Henlopen to Fenwick Island: Bethany Beach - South Bethany	CG 2
Delaware Coast Protection, Sand Bypass Plant, Indian River Inlet	CG 3
Delaware Coast, Cape Henlopen to Fenwick Island: Fenwick Island	CG 4
Delaware Bay Coastline, Port Mahon	CG 5
Dealaware Coast, Cape Henlopen to Fenwick Island: Rehoboth Beach - Dewey Beach	CG 6
Delaware Bay Coastline, Roosevelt Inlet - Lewes Beach	CG 7
Delaware Bay Coastline, Broadkill Beach	CG 8

OPERATION AND MAINTENANCE

Inland Waterway, Delaware River to Cheasapeake Bay (C&D Canal)	OM 1
Cedar Creek, Sussex County	OM 2
Inland Waterway from Rehoboth Bay to Delaware Bay, Sussex County	OM 3
Delaware River, Philadelphia to the Sea	OM 4
Indian River Inlet & Bay, Sussex County	OM 5
Mispillion River, Sussex County	OM 6
Murderkill River, Sussex County	OM 7
Wilmington Harbor, New Castle County	OM 8
C & D Canal Trail	OM 9
Delaware Estuary Regional Sediment Management (RSM)	OM 10
Harbor of Refuge, Lewes	OM 11

Legend

- CONSTRUCTION GENERAL
- CAP
- GENERAL INVESTIGATIONS
- OPERATIONS & MAINTENANCE
- Philadelphia District
- Rivers / Streams
- County Lines

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Last Updated 11/19/12

Delaware Projects Within Philadelphia District

N W E S

Miles

0 1.25 2.5 5 7.5 10

US Army Corps of Engineers
Philadelphia District

NEW JERSEY PROJECTS - PHILADELPHIA DISTRICT

GENERAL INVESTIGATIONS - FEASIBILITY STUDIES

Delaware River Basin Comprehensive Interim Feassibility Study for NJ	GI 1
Delaware River Comprehensive, NY,NJ,DE,PA - Watershed Flood Management Plan	GI 1
Delaware River Dredged Material Utilization - PA, NJ, DE	GI 2
Hereford Inlet to Cape May Inlet [NJDEP]	GI 3
NJ Alternative Long Term Nourishment, RSM Study [NJDEP]	GI 4

GENERAL INVESTIGATIONS - OTHER PROJECTS

Sec-22 Planning Assistances to States - Delaware Estuary Salinity Monitoring [SJ Port Corp.]	GI 6
Sec-22 Planning Assistances to States - Groundwater Modeling of Gloucester County, NJ	GI 7

CONTINUING AUTHORITIES PROGRAM (CAP)

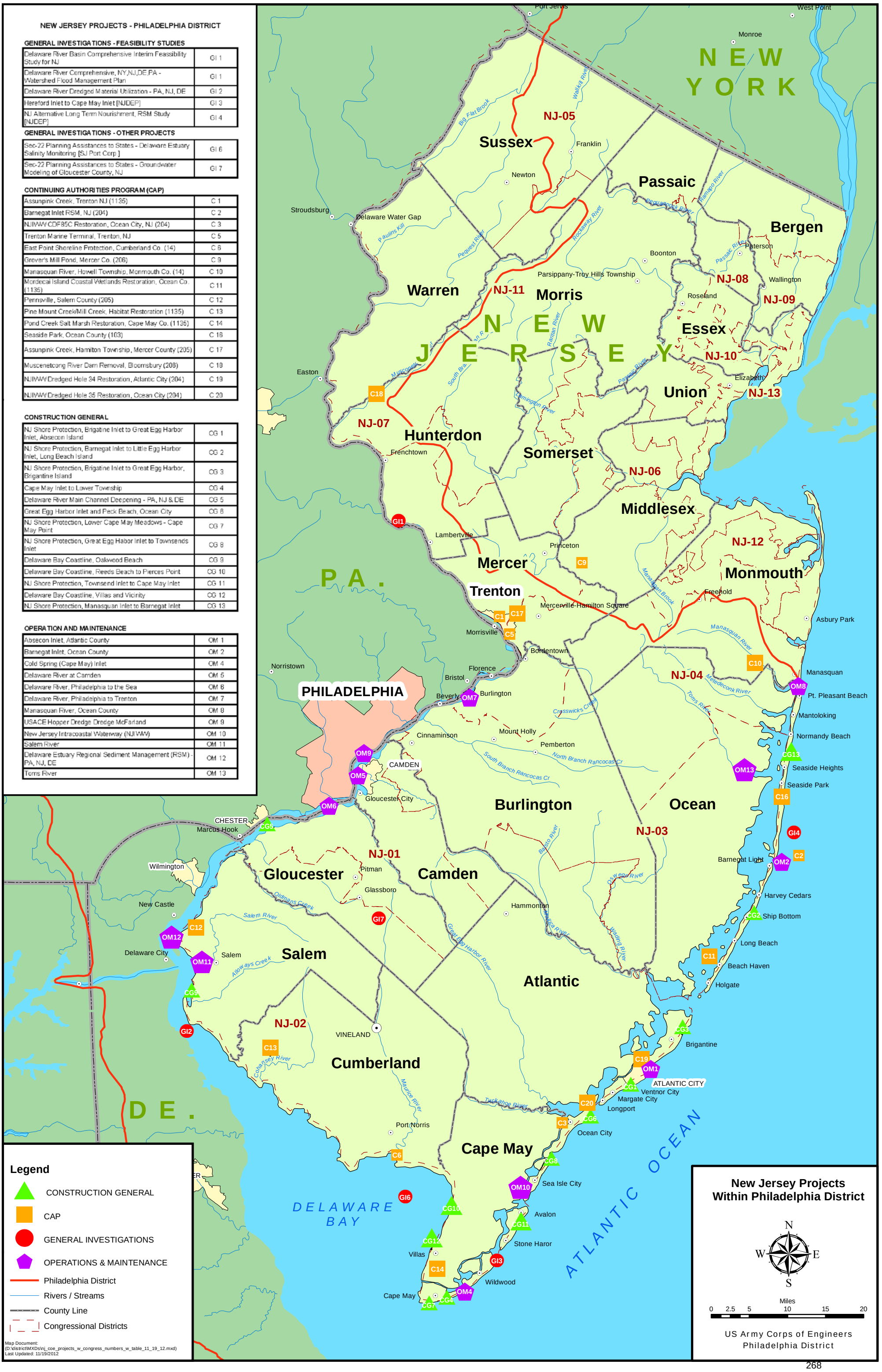
Assunpink Creek, Trenton NJ (1135)	C 1
Barnegat Inlet RSM, NJ (204)	C 2
NJIWW CDF85C Restoration, Ocean City, NJ (204)	C 3
Trenton Marine Terminal, Trenton, NJ	C 5
East Point Shoreline Protection, Cumberland Co. (14)	C 6
Grover's Mill Pond, Mercer Co. (206)	C 9
Manasquan River, Howell Township, Monmouth Co. (14)	C 10
Mordecai Island Coastal Wetlands Restoration, Ocean Co. (1135)	C 11
Pennsville, Salem County (205)	C 12
Pine Mount Creek/Mill Creek, Habitat Restoration (1135)	C 13
Pond Creek Salt Marsh Restoration, Cape May Co. (1135)	C 14
Seaside Park, Ocean County (103)	C 16
Assunpink Creek, Hamilton Township, Mercer County (205)	C 17
Muscenetcong River Dam Removal, Bloomsbury (208)	C 18
NJIWW Dredged Hole 34 Restoration, Atlantic City (204)	C 19
NJIWW Dredged Hole 35 Restoration, Ocean City (204)	C 20

CONSTRUCTION GENERAL

NJ Shore Protection, Brigatine Inlet to Great Egg Harbor Inlet, Absecon Island	CG 1
NJ Shore Protection, Barnegat Inlet to Little Egg Harbor Inlet, Long Beach Island	CG 2
NJ Shore Protection, Brigatine Inlet to Great Egg Harbor, Brigantine Island	CG 3
Cape May Inlet to Lower Township	CG 4
Delaware River Main Channel Deepening - PA, NJ & DE	CG 5
Great Egg Harbor Inlet and Peck Beach, Ocean City	CG 6
NJ Shore Protection, Lower Cape May Meadows - Cape May Point	CG 7
NJ Shore Protection, Great Egg Habor Inlet to Townsends Inlet	CG 8
Delaware Bay Coastline, Oakwood Beach	CG 9
Delaware Bay Coastline, Reeds Beach to Pierces Point	CG 10
NJ Shore Protection, Townsend Inlet to Cape May Inlet	CG 11
Delaware Bay Coastline, Villas and Vicinity	CG 12
NJ Shore Protection, Manasquan Inlet to Barnegat Inlet	CG 13

OPERATION AND MAINTENANCE

Absecon Inlet, Atlantic County	OM 1
Barnegat Inlet, Ocean County	OM 2
Cold Spring (Cape May) Inlet	OM 4
Delaware River at Camden	OM 5
Delaware River, Philadelphia to the Sea	OM 6
Delaware River, Philadelphia to Trenton	OM 7
Manasquan River, Ocean County	OM 8
USACE Hopper Dredge Dredge McFarland	OM 9
New Jersey Intracoastal Waterway (NJIWW)	OM 10
Salem River	OM 11
Delaware Estuary Regional Sediment Management (RSM) - PA, NJ, DE	OM 12
Toms River	OM 13



Legend

- CONSTRUCTION GENERAL
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- OPERATIONS & MAINTENANCE
- Philadelphia District
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- County Line
- Congressional Districts

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Last Updated: 11/19/2012

New Jersey Projects Within Philadelphia District

N W E S

Miles
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US Army Corps of Engineers
Philadelphia District

NEW YORK

PENNSYLVANIA

NEW JERSEY

Chenango County

Schoharie County

Greene County

Delaware County

Broome County

Sullivan County

Ulster County

Orange County

Stamford

Hobart

Delhi

Andes

Walton

Cannonsville Reservoir

Pepacton Reservoir

Margaretville

Fleischmanns

Pine Hill

NY - 20

Deposit

GI5

GI6

Hancock

Roscoe

West Branch Delaware River

Rockland

GI2

Livingston Manor

Neversink Reservoir

East Branch Delaware River

Main Stem Delaware River

GI4

Callicoon

Jeffersonville

GI7

Liberty

Woodridge

NY - 22

South Fallsburg

Smallwood

Monticello

GI1

Narrowsburg

Swinging Bridge Reservoir

Rock Hill

Wurtsboro

Toronto Reservoir

Otisville

NY - 19

GI3

Port Jervis

Unionville

NEW YORK PROJECTS - PHILADELPHIA DISTRICT

GENERAL INVESTIGATIONS

Delaware River Comprehensive Watershed FMP	GI 1
Upper Delaware River Watershed, Livingston Manor, NY	GI 2
PAS, Daily Flow Modeling - Dwarf Wedgemussel	GI 3
PAS, Decision Support System	GI 4
PAS, Bridge Assessment, Delaware County	GI 5
Upper Delaware River Watershed, NY	GI 6
Upper Delaware River Watershed, NY Floodplain Reconnection	GI 7

Legend

- CONSTRUCTION GENERAL
- CAP
- GENERAL INVESTIGATIONS
- Philadelphia District
- Congressional Districts
- Rivers/Streams
- County Boundary
- State Boundary

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New York Projects Within Philadelphia District

N
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Miles
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US Army Corps of Engineers
Philadelphia District

PENNSYLVANIA PROJECTS - PHILADELPHIA DISTRICT

GENERAL INVESTIGATIONS

Delaware River Basin Comprehensive, NY, NJ, DE & PA (Watershed Flood Management Plan)	GI 2
Schuylkill River Basin - Wissahickon Creek Watershed, Philadelphia & Montgomery Counties	GI 3
Section 22 Planning Assistance to States, PA (Cheltenham Township, Montgomery County)	GI 4
Delaware River Basin, Pine Knot	GI 5
Section 22 Planning Assistance to States, PA (Lehigh River Model)	GI 6
Bucks County Flood Plain Management Services	GI 7
Delaware River Waterfront	GI 8
Delaware River Dredged Material Utilization, PA, DE & NJ	GI 9
Southeastern PA Flood Plain Management Services, Bucks, Chester, Delaware, Montgomery and Philadelphia Counties	GI 10
Section 22 Planning Assistance to States, PA (Germantown Hydrologic and Hydraulic Modeling)	GI 11

CONTINUING AUTHORITIES PROGRAM (CAP)

F.E. Walter Reservoir Restoration (204)	C1
Schuylkill Watershed Restoration (204)	C2
Tookany Creek, Cheltenham Township, Montgomery County, PA (Section 205)	C 3
Toad Creek, Borough of Topton, Berks County, PA (Section 14)	C4
Southampton Creek Stream Restoration, Bucks Co. (206)	C 5
Brodhead Creek, Stroud Township, Monroe Co. PA	C 6
Fairless Hills Turning Basin, Falls Twps, Bucks Co. (Section 107)	C 9
Schuylkill River, North Coventry Twp, Chester Co. (Section 14)	C 11
Philadelphia Shipyard Flood Reduction, Phila. (205)	C 12

CONSTRUCTION GENERAL

Delaware River Main Channel Deepening, PA, NJ & DE	CG 1
Chester, Delaware & Montgomery County Streams	CG 3
Cobbs Creek Fish Passage	CG 4
Cobbs Creek Watershed Habitat Restoration	CG 5
Hatfield Sewer Collection Improvement	CG 6
Mill Creek Diversion	CG 7
Sandyford Run	CG 8
Tacony Creek Ecological Improvements	CG 9
Whitpain Township	CG 10

OPERATION AND MAINTENANCE

Beltzville Dam, Beltzville, PA	OM 1
Blue Marsh Lake, Leesport, PA	OM 2
Francis E. Walter Dam, White Haven, PA	OM 3
General Edgar Jadwin Dam, Honesdale, PA	OM 4
Prompton Lake, Prompton, PA	OM 5
Delaware River, Philadelphia to the Sea, PA, NJ & DE	OM 6
Delaware River, Philadelphia to Trenton, PA & NJ	OM 7
Schuylkill River, Philadelphia	OM 8
U.S. Army Corps of Engineers Hopper - Dredge McFarland	OM 9
Delaware Estuary Regional Sediment Management (RSM)	OM 10