US Army Corps of Engineers®
Philadelphia District

CONGRESSIONAL BRIEFING BOOK

Established in 1866, the U.S. Army Corps of Engineers 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 millions across portions of Delaware, McFarland, New Jersey, New York and Pennsylvania.

Our reach extends around the world with our support to Overseas Contingencies Operations.

April 2024

US Army Corps of Engineers
Philadelphia District

Engineering solutions for our Nation's toughest challenges

The USACE Mission: Deliver vital public and military engineering services, partnering in peace and war to strengthen our Nation's security, energize the economy, and reduce risks from disasters

Civil Works Program (Water Resources Development): We plan, design, build, operate, and maintain projects in support of—

- Maritime navigation
- Flood and coastal storm risk management
- Aquatic ecosystem restoration

The Philadelphia District covers the Delaware River Basin and adjacent portions of the mid-Atlantic coastal plain, and includes—

- >10 million people
- More than 1 million acres of wetlands
- 15,000 square miles total area
- 500-plus miles of federal navigation channels
- About 500 Army Civilian employees
- About 150 miles of coastline
- Parts of 5 states
- 5 earthfill dams
- 5 highway bridges
- 4 sea-level canals
- 1 seagoing hopper dredge

We also carry out—

- Military construction and installation support at Dover Air Force Base, Joint Base MDL, and Tobyhanna Army Depot
- Reimbursable technical services to EPA and other federal agencies upon request
- Contingency operations for the Army overseas and emergency operations for FEMA stateside

To our congressional delegation:

- Your first and best line of communication with the Corps is "district-to-district" (i.e. through Philadelphia, not our D.C. headquarters)
- If you're not sure who to call, call us anyway—if we can't help, we'll try to direct you to someone else who can
- Emailing is good, calling is better, face-to-face is best, and formal letters are best left as a last resort!

To your constituents:

- We don't have a blank check to "go forth and do good things"—every dollar we spend is tied to a project
- We can only work on projects that have been specifically authorized and funded by Congress, and for which we have a signed cost sharing agreement with a nonfederal sponsor
- Federal dollars require federal interest—each project has to benefit the Nation as a whole
- What some call a "Corps project" may turn out to be someone else's project for which the Corps issued a permit

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 U. S. Army Corps of Engineers' local legacy dates back to Revolutionary times, when Army engineers planned the encampment and defense of General Washington's colonial Army at Valley Forge. 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 and it was 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. The District continues to maintain over 550 miles of navigable channels. After the 1955 floods that claimed ninety lives, the 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 Corps 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 District's bigger tasks is 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 Corps, 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 engineering expertise has been applied to a wide variety of coastal projects.

Since the early 1990s, the District has constructed major beach-fill projects along the Delaware and New Jersey coasts. The District operates and maintaining five dams, four canals, and five highway bridges and is home to the Hopper Dredge McFarland. 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 and protected 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. 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 nation; and the people of the world.

OUR MISSION

The USACE mission is to deliver vital engineering solutions, in collabo-ration with our partners, to serve our Nation, energize our economy, and reduce risk from disaster.

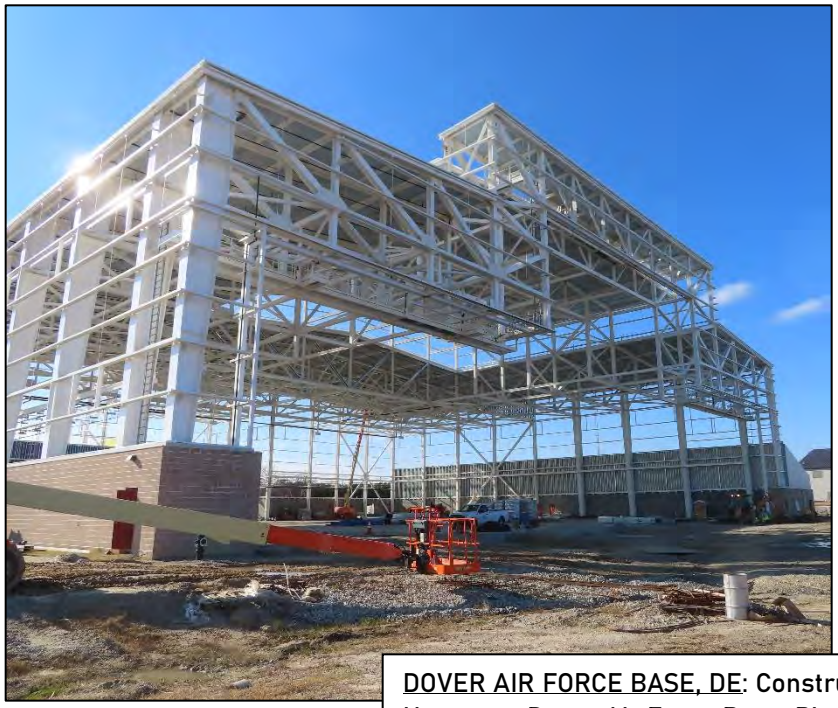
Established in 1866, the Philadelphia District manages water resources of the Delaware River basin; builds facilities for the Army and Air Force; and provides engineering and environmental services for other agencies.

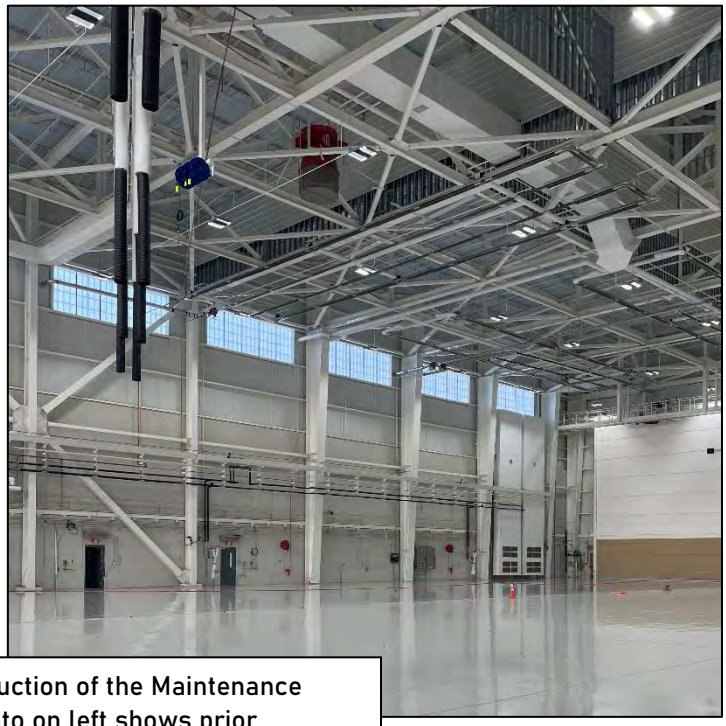
We serve more than nine million people across portions of Delaware, Maryland, New Jersey, New York and Pennsylvania. But our reach extends around the world with our support to Overseas Contingency Operations

Recent Project Highlights

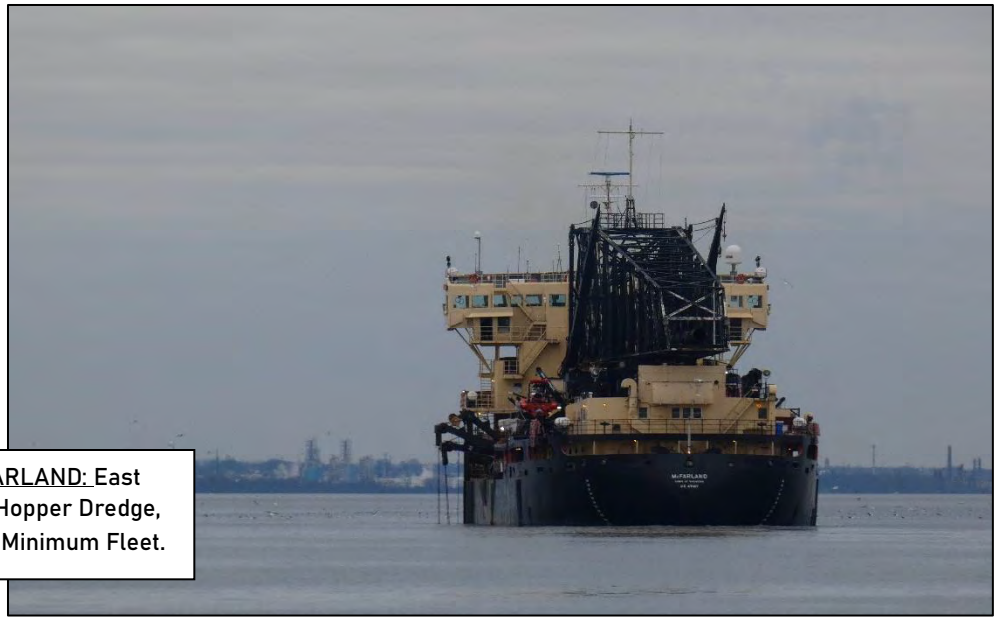
ST. GEORGES BRIDGE, DE: Ongoing construction at St. Georges Bridge along the Chesapeake & Delaware Canal. The contract includes demolishing and replacing the bridge decking, median barrier, and drainage features; replacing bridge approaches and roadways; and repairing other bridge structural features. The purpose of the repairs is to improve the structural condition and traveling surface of the bridge.

Brig. Gen. John Lloyd (right), Commander of the U.S. Army Corps of Engineers North Atlantic Division, toured USACE Philadelphia District projects in February 2024. As division commander, Lloyd oversees a regional team of more than 3,600 professionals.

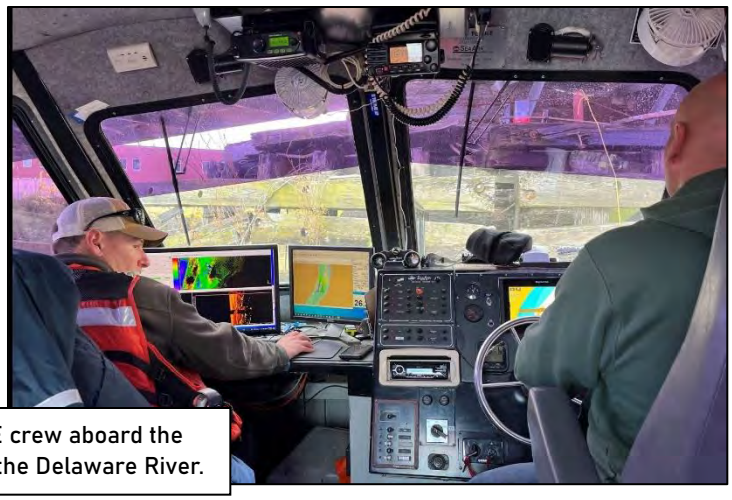




DOVER AIR FORCE BASE, DE: Construction of the Maintenance Hangar at Dover Air Force Base. Photo on left shows prior progress. Work is estimated for completion in Spring 2024.



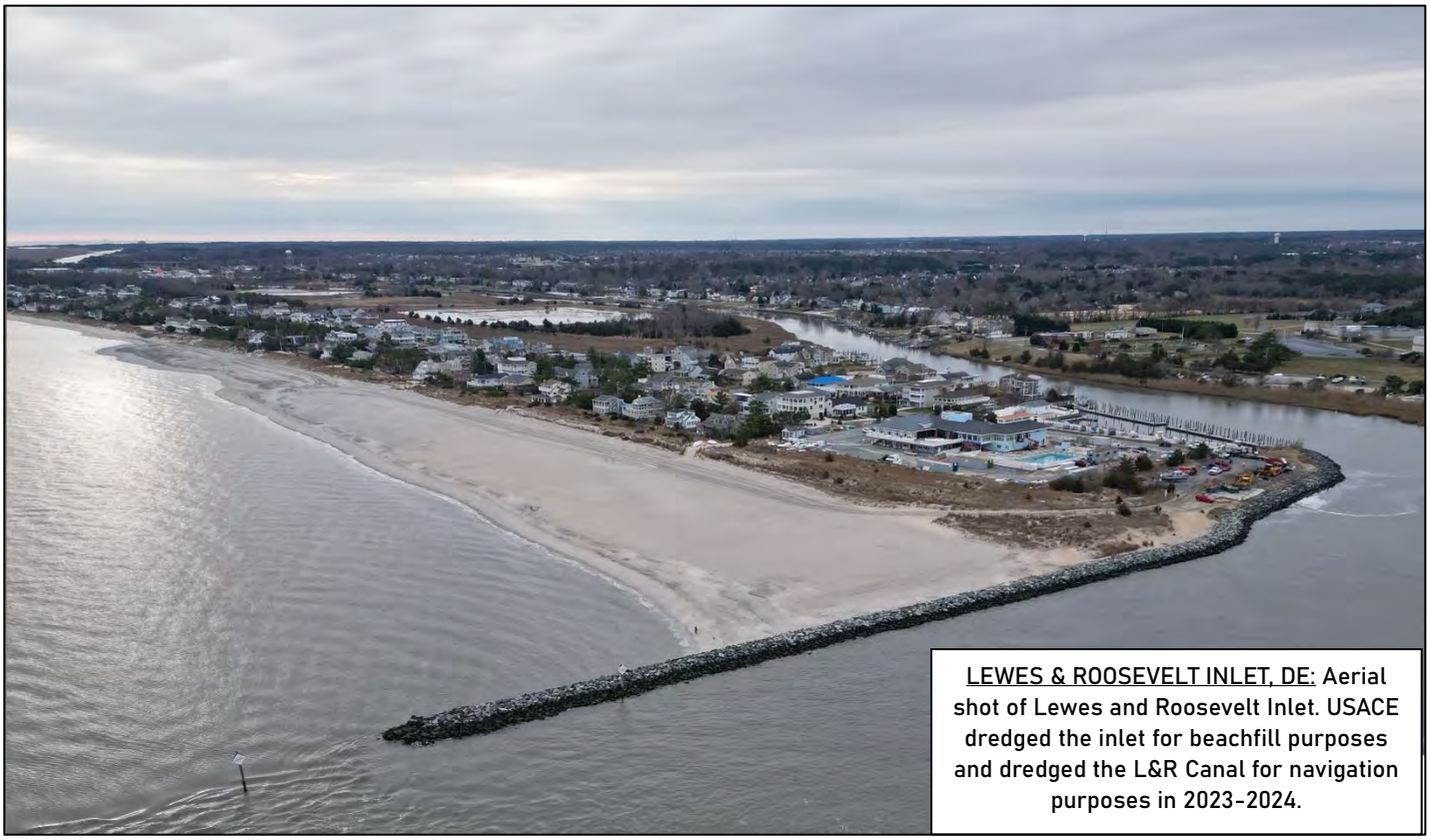
McFARLAND: East Coast Hopper Dredge, USACE Minimum Fleet.



DAUNTLESS: USACE crew aboard the Dauntless, surveying the Delaware River.

OCEAN CITY, NJ: Beach nourishment operations took place in Ocean City, NJ in winter 2023. (pictured to the left).

LEWES, DE: 2023-2024 Periodic Nourishment along Lewes Beach, DE (pictured to the right).



LEWES & ROOSEVELT INLET, DE: Aerial shot of Lewes and Roosevelt Inlet. USACE dredged the inlet for beachfill purposes and dredged the L&R Canal for navigation purposes in 2023-2024.

EPA SUPERFUND SITES: USACE has a partnership with the EPA, supporting Superfund remediation at numerous sites including Kil-Tone Site in Vineland, NJ (TOP left), and Welsbach Site in Camden and Gloucester City, NJ (below).

JADWIN DAM: The U.S. Army Corps of Engineers and its contractor constructed a Dam Safety Modification project at Jadwin Dam in Wayne County, PA. Work involved the installation of a geosynthetic liner system on part of the upstream slope and crest of the dam.

USACE Philadelphia District Civil Works Projects - DE — *Budget, Funding & Capabilities ($000)*

Project	CW Acct.	Congr. Dists.	FY23 Alloc.	FY24 Capab.	FY24 PBUD	FY24 BIL	FY24 E&W	FY24 WP (add.)	FY24 Funds (total)	FY25 Capab.	FY25 PBUD
Delaware Inland Bays & Del. Bay Coast, DE	GI	DE-a/l		-					-	TBD	
Del. R. Dredged Material Utilization - DE (PED)	GI	DE-a/l							-		
Bethany Beach/South Bethany, DE	Const	DE-a/l							-	10,000	
Delaware Coast Protection (Sand Bypass), DE	Const	DE-a/l	850	500					-	5,150	
Fenwick Island, DE	Const	DE-a/l							-		
Rehoboth Beach & Dewey Beach, DE	Const	DE-a/l	7,681						-		
Roosevelt Inlet & Lewes Beach, DE	Const	DE-a/l							-		
Brandywine Creek, DE (Sec 206)	CAP	DE-a/l	50	300						600	
Del. Estuary Oyster Restoration (Sec. 206)	CAP	DE-a/l, NJ-2	-	50					-		
Mispillion Inlet, DE (Sec. 111)	CAP	DE-a/l	150	200					-	400	
Wilmington Harbor, DE (Sec. 107)	CAP	DE-a/l	-	100					-	200	
Little Mill Creek (New Castle Co), DE (Sec. 219)	EI	DE-a/l					1,000				
Oak Orchard (Sussex Co), DE (Sec. 219)	EI	DE-a/l					1,000				
Dewey Beach (Sussex Co), DE (Sec. 219)	EI	DE-a/l					1,000				
Bethany Beach (Sussex Co), DE (Sec. 219)	EI	DE-a/l								1,000	
Kent Co, DE (Sec. 219)	EI	DE-a/l								1,000	
South Bethany (Sussex Co), DE (Sec. 219)	EI	DE-a/l								1,000	
Rehoboth Beach (Sussex Co), DE (Sec. 219)	EI	DE-a/l								1,000	
Cedar Creek, DE	O&M	DE-a/l	1,099	1,110	1,110		1,110		1,110	1,410	
Harbor of Refuge, Delaware Bay, DE	O&M	DE-a/l		18,670					-	35,000	
Indian River Inlet & Bay, DE	O&M	DE-a/l	278	50					-	72	54
ICW, Del R to Ches Bay, DE & MD (C&D Canal)	O&M	DE-a/l	30,894	59,042	20,427		20,427		20,427	31,567	18,427
ICW, Rehoboth Bay to Del Bay, DE (L&R Canal)	O&M	DE-a/l	7,475	7,190					-	580	580

USACE Philadelphia District Civil Works Projects - DE *Budget, Funding & Capabilities ($000)*

Project	CW Acct.	Congr. Dists.	FY23 Alloc.	FY24 Capab.	FY24 PBUD	FY24 BIL	FY24 E&W	FY24 WP (add.)	FY24 Funds (total)	FY25 Capab.	FY25 PBUD
ICW, Indian River Inlet to Rehoboth Bay, DE	O&M	DE-a/l								524	524
Little River, DE	O&M	DE-a/l							-	5,275	
Mispillion River, DE	O&M	DE-a/l		715					-	710	
Murderkill River, DE	O&M	DE-a/l		1,455					-		
Wilmington Harbor (Christina River), DE	O&M	DE-a/l	10,432	15,345	15,095		15,095		15,095	16,370	15,870
Delaware River, Philly to Sea, NJ, PA & DE	O&M	DE, NJ-1,2, PA-2,5	49,967	57,460	47,860	25,000	57,860		82,860	119,690	119,690

US ARMY CORPS OF ENGINEERS

Building Strong

US Army Corps of Engineers®
Philadelphia District

General Investigations

General Investigations Studies (GI)

Planning Assistance to States Program (PAS)

Floodplain Management Services (FPMS)

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 Risk Management
- Inland Navigation
- Navigation
- Other Authorized Purposes (including but not limited to Environmental Restoration or Compliance and Remote, Coastal, or Small Watershed)
- Remote, Coastal, or Small Watershed
- Coastal Storm Risk Management
- Small, Remote, or Subsistence Navigation

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

Delaware Beneficial Use of Dredged Material for the Delaware River, Delaware

Authority: Senate Resolution (dated 26 Oct 2005) on Beneficial Use of Dredged Material for the Delaware River, Delaware, New Jersey, and Pennsylvania and P.L. 113-2

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Project Agreement: Feb 2014

Completion Date: Mar 2020

Total Estimated PED Cost: $1.4M

Federal Funds Appropriated: $0

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The U.S. Army Corps of Engineers (USACE) was authorized to conduct the Delaware River, PA, NJ and DE Beneficial Use of Dredged Material for the Delaware River Study (DMU) 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 directed 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 Confined Disposal Facilities. This study explored innovative methods for management and reuse of dredged material in order to improve flood risk management. A Feasibility Cost Sharing Agreement (FCSA) was signed with the Delaware Department of Natural Resources and Environmental Control on February 27, 2014. The Chief of Engineers Report was signed on March 6, 2020.

Delaware Beneficial Use of Dredged Material for the Delaware River, Delaware

Project Goals: 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. This dredged material will be considered for projects that will reduce flood damage from coastal storms, promote coastal resilience and sustainability and create opportunities for restoration of the estuaries functions.

In response to the study resolution above, the USACE Philadelphia District conducted the Delaware River New Jersey, Delaware, and Pennsylvania Beneficial Use of Dredged Material for the Delaware River 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 flood reduction, environmental restoration, and related purposes.

In the aftermath of Hurricane Sandy and the subsequent passage of the Disaster Relief Appropriations Act, 2013 (P.L. 113-2), Congress authorized supplemental appropriations to Federal agencies for expenses related to the consequences of Hurricane Sandy. The DE DMU was identified in a Second Interim Report to Congress (dated 30 May 2013) as an "Ongoing Study" for reducing flooding and storm damage risks in the area affected by Hurricane Sandy. Therefore, the DE DMU study was conducted under both the October 2005 Senate Resolution as well as P.L. 113-2, which thereby focused the study on coastal storm risk management (CSRM) via dredged material.

Funds were received from the Disaster Relief Appropriations Act of 2013, Public Law 113-2, enacted to assist in the recovery in the aftermath of Hurricane Sandy.

In March 2020, Lt. Gen. Todd T. Semonite, USACE Commanding General and the 54th U.S. Army Chief of Engineers, signed a Chief's Report and the project was subsequently authorized by Congress in WRDA 2020. The next step is to move forward through pre-construction engineering, design, and eventual construction.

The final report had favorable recommendations for the following sites:

- Pickering Beach
- Kitts Hummock
- Bowers Beach
- South Bowers Beach
- Slaughter Beach
- Prime Hook Beach
- Lewes Beach

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility Study	2,348	0	2,348		Allocations thru FY23	2,348	
PED	910	490	1,400		FY 24 Allocation	0	
					Balance to Complete	TBD	

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Delaware Inland Bays and Delaware Bay Coast Coastal Storm Risk Management Feasibility

Authority: U.S. House of Representatives Committee on Public Works and Transportation Resolution on Oct 1, 1986 and U.S. Senate Committee on Environment and Public Works Resolution on Jun 23, 1988

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Project Agreement: 28-NOV-2022

Target Completion Date: TBD

Total Estimated Cost: TBD

Federal Funds Appropriated: $1M

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Oak Orchard during January 2016 Nor'easter

The Delaware Inland Bays and Delaware Bay Coast (DIBDBC) Focus Area includes the Delaware Inland Bays, the set of interconnected bodies of water that are separated from the Atlantic Ocean by a spit of land, and the Delaware Bay coastline of the State of Delaware in New Castle, Kent, and Sussex Counties. The Inland Bays coastline area is approximately 77 square miles and the Delaware Bay coastline is approximately 145 square miles. The authorities for the DIBDBC Study (Resolutions adopted by U.S. House of Representatives on October 1, 1986 and the U.S. Senate on June 23, 1988) support North Atlantic Coast Comprehensive Study (NACCS) outcomes, are broad in scope and application and address the development of a physical and engineering database as the basis for actions and programs to provide shoreline protection and up-to-date information for state and local management of this coastal area.

The DIBDBC Study is being performed to align with the goals of the NACCS, which are to:

- Provide a risk management framework, consistent with and NOAA/USACE Infrastructure Systems Rebuilding Principles; and
- Support resilient coastal communities and robust, sustainable coastal landscape systems, considering future sea level and climate change scenarios, to reduce risk to vulnerable populations, property, ecosystems, and infrastructure.

Delaware Inland Bays and Delaware Bay Coast Coastal Storm Risk Management Feasibility

- **Project Goals:** The purpose of this project is improved land use, responsible evacuation planning with programmatic measure to manage risk where avoidance is not possible.

  Communities must identify their acceptable level of residual risk to plan for long-term, comprehensive, and resilient risk management.

  Areas to improve risk management include enhancing collaboration, building new partnerships, and strengthening pre-storm planning. This requires local, regional, Tribal, State and Federal entities, NGOs and academia efforts.

The objective of the DIBDBC CSRM Study is to investigate coastal storm risk management problems and solutions to reduce damages from coastal flooding affecting population, critical infrastructure, critical facilities, property, and ecosystems. The study will consider past, current, and future coastal storm risk management and resilience planning initiatives and projects underway by the USACE and other Federal, State, and local agencies. Three overarching efforts will be performed:

- Assess the study area's problems, opportunities and future without project conditions;
- Assess the feasibility of implementing system-wide coastal storm risk management solutions such as policy/programmatic strategies, storm surge barriers at selected inlet entrances, or tidal gates at selected lagoon entrances; and
- If system-wide solutions are not feasible, assess the feasibility of implementing site-specific solutions, such as a combination of structural, non-structural, and natural and nature-based features.

The end product of this study will be a decision document in the form of a Chief's Report authorizing comprehensive USACE design and construction opportunities using the full array of CSRM strategies and measures for community-based solutions within a watershed-based, systems framework. Also included in the report would be recommendations of actionable and policy implementable items for non-USACE entities, including floodplain management, landscape architecture, hurricane evacuation plans, and Community Rating System enhancement opportunities. Additional recommendations will be provided for incorporating existing USACE and external programs, projects, plans and actions, as well as public-private partnership opportunities into the NACCS DIBDBC study umbrella.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility Study	1,000	1,000	2,000		Allocations thru FY23	1,000	
					FY 24 Allocation	0	
					Balance to Complete	TBD	

Wilmington Harbor, DE

Authority: Section 107 of the River and Harbors Act of 1960 as amended

Congressional District: DE-AL

Non-Federal Sponsor: DSPC

Date of Project Agreement: TBD

Target Completion Date: June 2024 (Federal Interest Determination)

Federal Funds Appropriated: $50,000

Non-Federal Share: $0

Proposed Wilmington Harbor Upper Berth 38-foot Deepening

Diamond State Port Corporation (DSPC) has requested the Philadelphia District study the proposed deepening of the upper portion of the Christina River port berth area from the currently authorized 35-foot depth to match the remaining authorized 38-foot depth berth area.

Prior to conducting a study, the District must first conduct a determination of Federal Interest at Federal expense. Assuming the FID finding is favorable and approved by HQ-USACE and the ASA(CW), a cost sharing agreement to conduct a CAP 107 study will be negotiated with DSPC.

As DSPC is currently proposing to move the majority of future vessel traffic to their newly proposed port facility at Edgemoor DE, an analysis of remaining benefits must first be completed in order to confirm Federal interest in the Section 107 proposal. USACE Deep Draft Navigation Center will conduct this analysis for inclusion in a Federal Interest Determination estimated for completion by June 2024.

Summarized Federal Financial Data ($000)		
Allocations through FY 23	50	Federal Only

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Flood Plain Management Services

Authority: Section 22 of the Water Resources Development Act of 1960

Congressional District: Numerous

Non-Federal Sponsor: Numerous

Target Completion Date: Ongoing by Fiscal Year

The Floodplain Management Services (FPMS) Program authorizes USACE to conduct technical studies using either all federal funding or in combination with a voluntary contribution from a non-federal sponsor. The FPMS authority provides for technical assistance and does not have a provision for construction. Detailed plans and specifications as well as construction would have to be accomplished under other civil works authorities or by the non-Federal sponsor.

USACE has a Silver Jackets Program that establishes interagency flood risk management teams for states. The state teams have an opportunity to submit proposals to receive funding for interagency projects that will reduce flood risk. These projects are being funded through the FPMS program. Following is a brief summary of on-going and planned studies under the FPMS program, listed by State.

Delaware:
In Delaware in FY23, Philadelphia District will began executing an Interagency Project Proposal for three Emergency Action Plan Tabletop exercises for local dams in each of the three counties in the State. The study scope is to bring together an interagency team that will develop, plan and lead stakeholders through the exercises. The purpose of the exercise will be to familiarize participants with roles, procedures, and responsibilities during an actual event and to identify needed improvements in the EAP, identify needed training/personnel deficiencies, and identify areas requiring additional coordination. The current schedule has this study being completed in late FY24 or early FY25.

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Flood Plain Management Services

New Jersey:
In FY23 the Philadelphia District began an Interagency Project with New Jersey Department of Environmental Protection (NJ DEP) to develop a playbook and data for Cost-Effective Mitigation Opportunities in local counties and municipalities. The scope of the study is to provide a framework to local stakeholders that they can use to explore flood risk, mitigation costs and proactive floodplain management as municipalities transition to a new code-coordinated flood damage prevention ordinance. By bringing municipalities and partners together around the ordinance adoption process, steps can be taken and conversations can begin that will reduce flood risk and damage within these watersheds. The current schedule has this study being completed in late FY24 or early FY25.

Pennsylvania:
In FY23 the Philadelphia District began a study to assist the City of Philadelphia with Flood Inundation Mapping that will serve to alert residents and stakeholders of flood potential in the vicinity of Tacony-Frankford Creek. This study involves developing limited hydraulic modeling in order to better understand how flood hazards affect the stakeholders in the area. The District also began a flood hazard evaluation in Berks County for Maiden Creek. This study involves developing limited hydraulic modeling in order to better understand how flood hazards affect the stakeholders in the area. The current schedule has both studies being completed in late FY24 or early FY25.

HEC-HMS Model Modifications for the Delaware River Basin

Authority: Section 22 of the Water Resources Development Act of 1974

Congressional District: Numerous

Non-Federal Sponsor: Delaware River Basin Commission

Date of Project Agreement: Oct 2019

Target Completion Date: 2023

Total Estimated Cost: $228,000

Federal Funds Appropriated: $114,000

Non-Federal Share: $114,000

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 study. 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.
DRBC is seeking assistance related to a comprehensive planning effort for the water resources of the Delaware River Basin. The effort, known as Water Sustainability 2060 (WS2060), is currently underway and requires a variety of tools, models and data to conduct the analyses upon which the comprehensive plan will be based.

USACE has developed the Corps Water Management System (CWMS) for the Delaware River Basin, which is a suite of models used for the operation of five USACE reservoirs. One of the component models of CWMS is HEC-HMS, which is a hydrologic model that can be used to generate runoff (streamflows) based on temperature, precipitation, land use and other relevant parameters. The streamflows generated in HEC-HMS are used as inputs to other CWMS component models and could also be used with non-USACE models.

For WS2060, the DRBC is using the Delaware River Basin Planning Support Tool (DRB-PST) for the simulation of long-term reservoir operations in the basin under current and future conditions. DRB-PST is configured to simulate multiple flow management options and is used by non-USACE reservoir operators (New York City) for the evaluation of flow management evaluation and policy decision-making. The input streamflows used by DRB-PST were generated from observed streamflows recorded at gages in the basin, which reflect what has happened in the past rather than what may be experienced in the future. A hydrologic model is needed so that new streamflows can be generated for both current and future conditions. For the comparison of existing and future conditions, input data sets developed with the same methodology are required.

DRBC is seeking a hydrologic model to generate new long-term streamflow records, which will become inputs to DRB-PST. DRB-PST will then be used to assess reservoir operations and water resource implications, including those affecting recreation, habitat, and reservoir storage for flow augmentation. Rather than develop a new hydrologic model, the DRBC proposes to use the HEC-HMS model developed for CWMS, but some additional work is required before it can be used for long-term planning simulations.

HEC-HMS Model Modifications for the Delaware River Basin

Project Goals: The purpose of this project is to provide support to the Delaware River Basin Commission through the generation of new input data sets for the HEC-HMS model. This will provide long term comprehensive planning for the Delaware River Basin.

USACE/DRBC Modeling Status Update:

USACE HEC-HMS Modeling complete and report drafted.

USACE HEC technical review complete.

DRBC mapped HEC-HMS model outputs to DRB-PST model.

DRBC performed diagnostics with HEC-HMS model and compared observed flows for temperature and precipitation. Some issues arose during this step and DRBC has been working with input from USACE to resolve discrepancies and select model parameters.

DRB-PST simulations with future climate conditions completed.

DRBC flow management/reservoir operations model reviewed by ERDC.

DRBC is working toward completing final report documentation to conclude the project.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL		Summarized Federal Financial Data ($000)		
Feasibility Study	114	114	228		Allocations thru FY20	114	
					FY 21 Allocation	0	
					Balance to Complete	0	

US ARMY CORPS OF ENGINEERS
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Philadelphia District

Continuing Authorities Program

CONTINUING AUTHORITIES PROGRAM

SECTION	AUTHORITY	AUTHORITY PURPOSE	FEASIBILITY COST SHARE DIVISION (Fed/non-Fed)	GENERALIZED DESIGN AND IMPLEMENTATION COST SHARE DIVISION (Fed/non-Fed)[1]	MAXIMUM FEDERAL EXPENDITURE PER PROJECT[3]	NATIONAL PROGRAM LIMIT (Per FY)[3]
14	**Emergency Stream Bank and Shoreline Protection** *(Flood Control Act of 1946, as amended, or 33 USC 701r)*	Emergency stream bank stabilization and shoreline protection for public works and non-profit public services in imminent danger of failing (e.g., roads, bridges, hospitals, schools, treatment plants). Private properties/facilities not eligible.	1st $100k Fed; 50/50 cost share for any remaining costs	65/35[2]	$10,000,000	$25,000,000
103	**Beach Erosion and Hurricane and Storm Damage Reduction** *(Rivers and Harbors Act of 1962, as amended, or 33 USC 426g)*	Protection of utilities, roadways and other public infrastructure, private properties, and facilities against damages caused by storm-driven waves and currents (e.g., construction of revetments, groins, and jetties; may also include periodic sand replenishment).	1st $100k Fed; 50/50 cost share for any remaining costs	65/35	$10,000,000	$37,500,000
107	**Navigation Improvements** *(Rivers and Harbors Act of 1960, as amended, or 33 USC 577(a))*	Plan, design, and construct small projects for commercial navigation improvements to ensure safe and efficient use of navigable waterways (e.g., channel dredging, widening of turning basins, breakwaters, jetties).	1st $100k Fed; 50/50 cost share for any remaining costs	Varies, based on depth	$10,000,000	$62,500,000
111	**Shore Damage Prevention or Mitigation of Damages Caused by Federal Navigation Projects** *(Rivers and Harbors Act of 1968, as amended, or 33 USC 426i)*	Investigate and construct projects for the prevention or mitigation of shoreline erosion damages to public and privately owned shores along the coastlines when the damages are a result of a Federal navigation project.	Shared in same proportion as the original project causing damage	Shared in same proportion as the original project causing damage	$12,500,000	N/A
204	**Beneficial Uses of Dredged Material** *(Water Resources Development Act of 1992, as amended, or 33 USC 2326(g))*	Use Regional Sediment Management concepts, restore, protect or create aquatic and wetland habitats in connection with construction maintenance dredging of an authorized Federal navigation project. Base disposal plan is least costly for typical disposal of dredged material.	100/0	100/0 for base disposal plan 65/35 for costs beyond base disposal	$10,000,000	$62,500,000
205	**Flood Risk Management** *(Flood Control Act of 1948, as amended, or 33 USC 701s)*	Local protection from flooding by non-structural measures (e.g., flood warning systems or flood proofing) or by structural flood risk management features (e.g., levees, diversion channels, or impoundments).	1st $100k Fed; 50/50 cost share for any remaining costs	65/35[2]	$10,000,000	$68,500,000
206	**Aquatic Ecosystem Restoration** *(Water Resources Development Act of 1996, as amended, or 33 USC 2330)*	Restore degraded aquatic ecosystems and wetland habitats to improve the quality of the environment.	1st $100k Fed; 50/50 cost share for any remaining costs	65/35	$10,000,000	$62,500,000
208	**Snagging and Clearing for Flood Damage Reduction** *(Flood Control Act of 1954, as amended, or 33 USC 701g)*	Channel clearing and excavation, with limited embankment construction by use of materials from the clearing operation only.	1st $100k Fed; 50/50 cost share for any remaining costs	65/35[2]	$500,000	$7,500,000
1135	**Project Modifications for Improvement of the Environment** *(Water Resources Development Act of 1986, as amended, or 33 USC 2309a)*	Modifications of USACE-constructed water resources projects to improve the quality of the environment. Also, restoration projects at locations where an existing USACE project contributed to the degradation.	1st $100k Fed; 50/50 cost share for any remaining costs	75/25	$10,000,000	$50,000,000

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Brandywine Creek, DE

Authority: Section 206 of the Water Resources Development Act of 1996 & Division J, Title III, of the Bipartisan Infrastructure Law (BIL), Public Law 117-58

Congressional District: DE-(AT LARGE)

Non-Federal Sponsor: DNREC

Target Date Project Agreement: June 2024

Federal Funds Appropriated: $100,000

Non-Federal Share: $0

Dam #7 (Breck's/Walker's Mill Dam Along Brandywine Creek

This project addresses part of a larger effort within the state of Delaware to examine the potential to modify in-water barriers along the Brandywine Creek in order to increase the number of stream miles accessible by anadromous fish (American shad, blueback herring, sea lamprey and American Eel) and improve water quality (lower water temperatures/higher dissolved oxygen).

The study area is located in New Castle County, DE The five dams under investigation (#5, 7-10) are located along approximately five miles of the Brandywine Creek. Each dam is considered a complete barrier and range in height from 3 to 10 feet and are 135 to 200 feet wide. Dams have not been prioritized within this study as they have either been breached or are currently being addressed by other parties or approaches.

This study is being conducted under Section 206 of the Water Resources Development Act (WRDA) of 1996 (P.L. 104-303). Division J, Title III, of the Bipartisan Infrastructure Law (BIL), Public Law 117-58 provides authorization and funding for the Government to conduct the study at full Federal expense; the cost of the study is limited to $3 million in Federal Funds, unless the Assistant Secretary of the Army (Civil Works) approves an exemption for the study to exceed $3 million.

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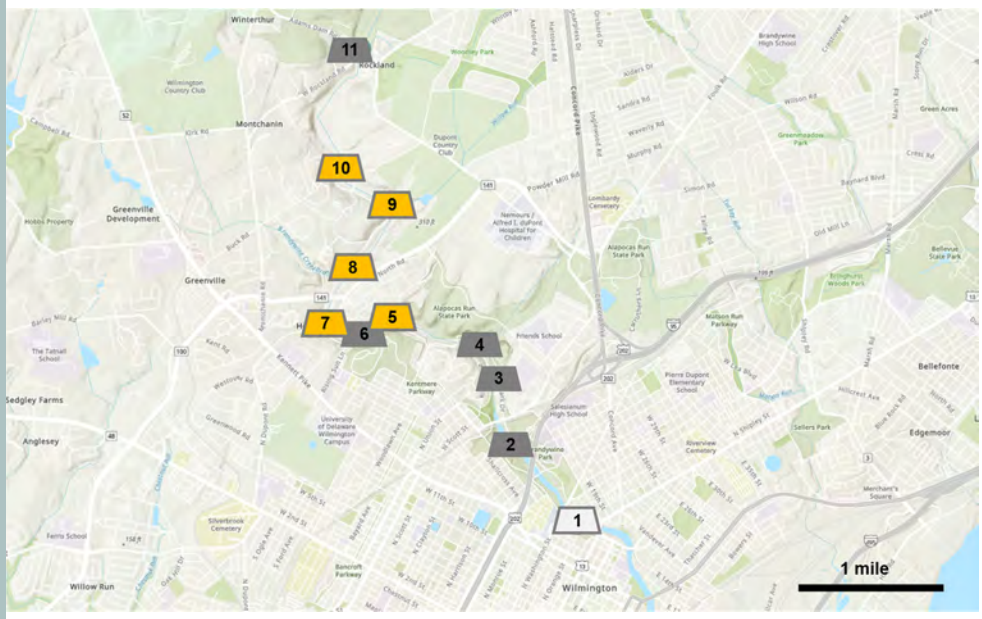
Brandywine Creek, DE

- **Project Goals:** The purpose of this project is aquatic barrier removal on the Brandywine Creek in an effort to restore the connectivity of the lower Brandywine Creek in complement with other passage improvement actions.

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

- Complete the Federal Interest Determination (FID) **CW170**

  Completed & Approved—March 2023
- Prepare a Project Management Plan (PMP) - June 2024
- Execute a Feasibility Cost Sharing Agreement (FCSA) **CW130**
- Complete the MSC Decision Milestone **CW190**
- Provide a detailed Decision Document (Feasibility Report)
- Decision Document Approval **CW170**



Historic Dams Along Brandywine Creek—Focus in Orange, with white removed

Summarized Federal Financial Data ($000)		
Allocations thru FY23	100	
FY 23 Allocation	100	IIJA/BIL
FY 24 Allocation	0	
Balance to Complete	TBD	

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Mispillion River Inlet, Sussex County, DE

Authority: Section 111 of the Rivers and Harbors Act of 1968

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Feasibility Agreement: Not Required

Target Completion Date: TBD

Federal Funds Appropriated: $470,000

Non-Federal Share: $0

Mispillion River Inlet, DE

This study is authorized under Section 111 of the Rivers and Harbors Act (RHA) of 1968 as amended – Shore Damage Prevention or Mitigation of Damages Caused by Federal Navigation Projects, P.L. 90-483, as amended by Section 940 the of Water Resources Development Act (WRDA) 1986 (P.L. 99-662); Section 214, WRDA 1999 (P.L. 106-53).

The purpose of the feasibility study would be to determine if there is evidence that the Federal navigation project at Mispillion Inlet has caused damages to the non-Federal publicly and privately owned shorelines adjacent to the inlet. The study would also consider whether mitigation measures would provide storm risk management for the Dupont Nature Center, Delaware Launch Services, and residential and commercial structures located near the inlet, as well as any incidental ecosystem restoration benefits.

The feasibility study would investigate the effects the jetties have on the state-owned beaches adjacent to the inlet, the stability of the inlet, and alternatives for mitigating those impacts.

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Mispillion River Inlet, Sussex County, DE

- **Project Goals:** An FID was completed in FY21 and determined that it is in the Federal interest to pursue further study of the area. Efforts are currently underway to update the Project Management Plan for the Feasibility Study.

The Delaware Estuary hosts the largest concentration in the Western Hemisphere of spawning horseshoe crabs. This is perhaps most prevalent near the mouth of the Mispillion River. Hundreds of thousands of shorebirds, dependent upon horseshoe crab eggs to fuel their northward migrations and breeding, stop along the shorelines of Delaware Bay to rest and feed almost exclusively on horseshoe crab eggs. The eggs provide the energy necessary for species such as red knots, dunlins, ruddy turnstones, sanderlings, semi-palmated sandpipers and other migratory species.

The U.S. Fish and Wildlife Service has listed the *rufa* subspecies of the red knot (*Calidris canutus rufa*) as an endangered species. Like many migratory birds, the red knot is known for its miraculous long-distance flights. Red knots fly 19,000 miles round-trip, leaving the wintering grounds in southern Argentina, making only one stop on the coast of Brazil, then fly nonstop to Delaware Bay, a distance of 5,000 miles.

At Mispillion Inlet, migratory shorebirds and horseshoe crabs have an important connection. In late spring, red knots, ruddy turnstones, sanderlings, short- and long-billed dowagers, black-bellied plovers, and semi-plated and least sandpipers stop at the inlet to feast on the freshly laid horseshoe crab eggs. The Delaware Bay supports a large aggregation of these birds (>500,000 individuals) and is numerically one of the most important migratory stopover points in North America. The red knot, ruddy turnstone, and sanderling have been designated as species of high conservation concern by the US Fish and Wildlife Service. Given the Delaware Bay's significant contribution to these migratory shorebirds, it is identified as a Western Hemispheric Shorebird Reserve Network site of hemispheric importance, a Wetland of International Importance, and an Important Bird Area of Global Significance. (Andres 2003).

DNREC is the non-Federal sponsor. A draft PMP is currently under development to further the feasibility study and support the ongoing plan formulation activities.

Summarized Federal Financial Data ($000)		
Allocations through FY 23	650	
FY24 Allocation	0	
Balance to Complete	TBD	

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Wilmington Harbor, DE

Authority: Section 107 of the River and Harbors Act of 1960 as amended

Congressional District: DE-AL

Non-Federal Sponsor: DSPC

Date of Project Agreement: TBD

Target Completion Date: June 2024 (Federal Interest Determination)

Federal Funds Appropriated: $50,000

Non-Federal Share: $0

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Proposed Wilmington Harbor Upper Berth 38-foot Deepening

Diamond State Port Corporation (DSPC) has requested the Philadelphia District study the proposed deepening of the upper portion of the Christina River port berth area from the currently authorized 35-foot depth to match the remaining authorized 38-foot depth berth area.

Prior to conducting a study, the District must first conduct a determination of Federal Interest at Federal expense. Assuming the FID finding is favorable and approved by HQ-USACE and the ASA(CW), a cost sharing agreement to conduct a CAP 107 study will be negotiated with DSPC.

As DSPC is currently proposing to move the majority of future vessel traffic to their newly proposed port facility at Edgemoor DE, an analysis of remaining benefits must first be completed in order to confirm Federal interest in the Section 107 proposal. USACE Deep Draft Navigation Center will conduct this analysis for inclusion in a Federal Interest Determination estimated for completion by June 2024.

Summarized Federal Financial Data ($000)		
Allocations through FY 23	50	Federal Only
FY24 Allocation	0	
Balance to Complete	TBD	

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Construction

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
- Coastal Storm Risk Management
- Flood Risk Management
- Hydropower
- Navigation
- Other Authorized Purposes (including but not limited to Environmental Restoration or Compliance, Environmental Infrastructure and Hydropower)

State Color Codes
Delaware
New Jersey
Pennsylvania
Multiple

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

Authority: Section 101 of the Water Resources Development Act of 1999

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Project Agreement: TBD

Target Completion Date: 2054

Total Estimated Cost: $164.4M

Federal Funds Appropriated: $683,000

Non-Federal Share: $130,000

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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 the purpose of costal storm risk management 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, DE & NJ, Broadkill Beach, DE

- **Project Goals:** The purpose of this project is Coastal Storm Risk Management along Broadkill Beach, which includes dune grass, dune fencing and sustainable advance beach fill and periodic nourishment every five year.

As part of the initial construction of the Delaware River Main Channel Deepening Project there was an opportunity to complete initial construction of the Broadkill project as a beneficial use of dredge material project. The Corps completed the work with DNREC and the local community on the necessary coordination and real estate requirements. The contract to complete initial construction was awarded under the Delaware Deepening project on 6 June 2014. Construction began on 30 Apr 2015 and was completed in March 2016.

The next step for the Broadkill project to continue construction including periodic nourishment is to initiate a General Reevaluation Report (GRR). The GRR would be to update the economics, environmental studies, design and formulation of the project. This would require a letter of intent (LOI) from the sponsor requesting a GRR, their willingness to enter into a cost sharing agreement for the GRR with 50/50% cost share and adequate Federal funding. After a completed GRR reauthorization of the project may be necessary. If reauthorization is not necessary the project could proceed with the development of the Project Partnership Agreement (PPA) with the sponsor. Once executed steps toward completing initial construction and the first cycle of nourishment will begin. Previous real estate easements that were received for the beneficial use of dredge material work will be reviewed to determine if additional easements are necessary.

Timeline	Start	Complete	Comments
Initial Construction	Jan 2015	Mar 2016	
Periodic Nourishment	FY 26 (S)		Was scheduled for FY 21, but without GRR & PPA nourishment will be delayed until at least FY 26

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL
Total Construction	106,890	57,477	164,367

Summarized Federal Financial Data ($000)		
Allocations thru FY22	683	
FY 23 Allocation	0	
FY 24 Work Plan	0	
FY 25 Budget	0	President's Budget
FY 25 Work Plan	TBD	
Balance to Complete	106,207	

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Delaware Bay Coastline, DE & NJ, 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: DNREC

Date of Project Agreement: TBD

Target Completion Date: TBD

Total Estimated Cost: $17.5M Initial Construction

Federal Funds Appropriated: $1,098,000

Non-Federal Share: $125,000

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Overview of Project Site in 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 costal storm risk management 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 $14.5 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, DE & NJ, Port Mahon, DE

- **Project Goals:** The purpose of this project is Coastal Storm Risk Management and Ecosystem Restoration at Port Mahon, with a beach fill and periodic nourishment to provide for horse-shoe 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. The LRR was a post authorization study 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. The LRR documented the results of the analysis undertaken.

Initiation of construction is dependent on several steps starting with a General Reevaluation Report (GRR). To initiate a GRR a letter of intent (LOI) is required from the sponsor requesting a GRR, their willingness to enter into a cost sharing agreement for the GRR with 50/50% cost share and adequate Federal funding. The GRR would be to update the economics, environmental studies, design and formulation of the project. After a completed GRR reauthorization of the project may be necessary. If reauthorization is not necessary the project could proceed with the development of the Project Partnership Agreement (PPA) with the sponsor. Once executed steps toward initial construction could begin. These steps include adequate funding and acquisition of necessary real estate easements by the non-Federal sponsor.

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.

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

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL
Initial Construction	10,411	7.083	17,494

Summarized Federal Financial Data ($000)		
Allocations thru FY22	1,098	
FY 23 Allocation	0	
FY 24 Work Plan	0	
FY 25 Budget	0	President's Budget
FY 25 Work Plan	TBD	
Balance to Complete	9,343	

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: DNREC

Date of Project Agreement: Nov 2002

Target Completion Date: 2053

Total Estimated Cost: $35.5M

Federal Funds Appropriated: $14.5M

Non-Federal Share: $4.4M

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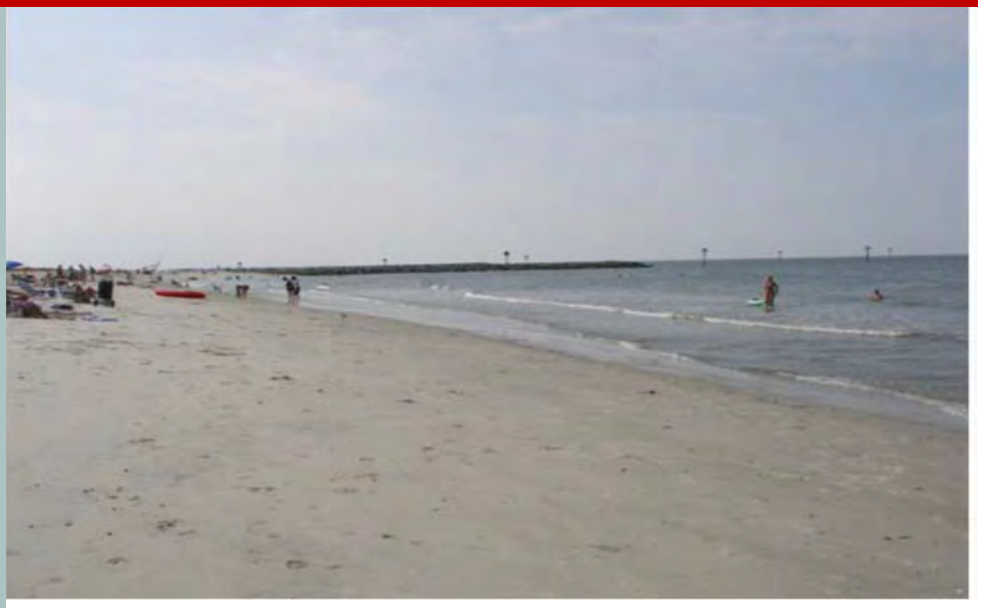

Beach along Delaware Bay Coastline between Roosevelt Inlet and Lewes Beach

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 purpose of costal storm risk management 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 beach fill 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.

A portion of the FY 11 funds were used to award a contract to complete periodic nourishment cycle. The Contract was awarded in September 2011 and construction was completed in Jan 2012.

Delaware Bay Coastline, Roosevelt Inlet-Lewes Beach, DE

- **Project Goals:** The purpose of this project is Coastal Storm Risk Management and Coastal Storm Damage Risk Reduction and Navigation Mitigation at Roosevelt Inlet-Lewes Beach, which includes dune grass, dune fencing and suitable advance beach fill with periodic nourishment every six 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 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.

This project was damaged by the Jan 2016 Nor'easter. A PIR under the authority of PL 84-99 was completed. Ultimately it was determined that this project did not qualify for FCCE repair funds. However, FY17 Supplemental CG funds were provided which will allow for a contract to complete periodic renourishment. This contract was a truck fill contract and awarded in Sep 2017. Construction began in Dec 2017 and was completed in Jan 2018.

FY22 Bipartisan Infrastructure Law (BIL) provided $4.5M to complete next nourishment cycle. Contract awarded on 30 SEP 23. Construction began in mid-DEC 2023 and completed in early JAN 2024.

Next nourishment cycle is scheduled for FY29 but is dependent on receipt of adequate funds.

Timeline	Start	Complete	Comments
Initial Construction		Dec 2004	
Periodic Nourishment	Nov 2011	Jan 2012	
FCCE Emergency (Sandy)	Oct 2013	Nov 2013	
Periodic Nourishment	Dec 2017	Jan 2018	
Periodic Nourishment	Dec 2023	Jan 2024	
Periodic Nourishment	FY29 (S)		Dependent on adequate funds

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL
Construction	27,300	8,244	35,544

Summarized Federal Financial Data ($000)		
Allocations thru FY22	14,534	
FY 23 Allocation	0	
FY 24 Work Plan	0	
FY 25 Budget	0	President's Budget
FY 25 Work Plan	TBD	
Balance to Complete	12,766	

Delaware Coast, Cape Henlopen to Fenwick Island, Bethany Beach & South Bethany Beach

Authority: Title I, Section 101 (a)(15) of the Water Resources Development Act of 1999

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Project Agreement: Jul 2006

Target Completion Date: 2057

Total Estimated Cost: $251.7M

Federal Funds Appropriated: $47.7M

Non-Federal Share: $25.8M

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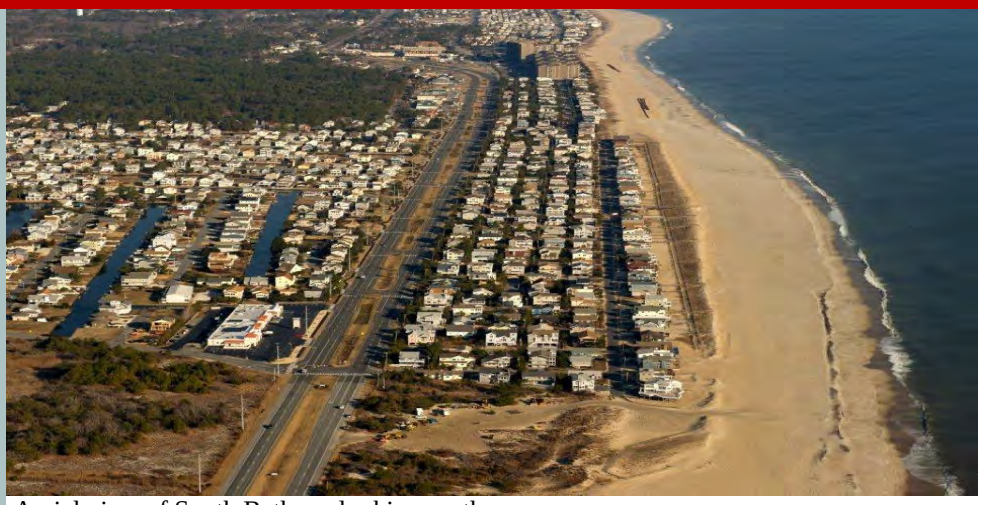

Aerial view of South Bethany looking north.

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 3 miles of the Atlantic Ocean coast of Delaware in Sussex County, Delaware. The plan proposed in the final feasibility report for the purpose of costal storm risk management consisted 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 consisted of providing 3.5 million cubic yards initial beach fill, with subsequent nourishment of 480,000 cubic yards every three years. The plan included 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. A periodic nourishment contract was awarded in September 2011 with construction beginning in October 2011. Construction (Pumping) was completed in March 2012 for Bethany and October 2012 for South Bethany.

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.

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

- **Project Goals:** The purpose of this project is Coastal Storm Risk Management 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.

This project was damaged by the Oct 2015 & Jan 2016 Nor'easters. A PIR & PIR Addendum under the authority of PL 84-99 were completed which recommended repair and restoration of the project. The PIR & Addendum were ultimately approved by Corps HQUSACE. PL 84-99 funds were received for engineering and design, plans and specification & construction. Additionally, FY17 Construction Work Plan funds of $6.5M & FY17 CG Supplemental funds of $4.0M were received to complete periodic nourishment. The FCCE funds were for construction to minimum design template while to Work Plan funds were used to complete periodic nourishment. CG Supplemental funds were determined to be excess and returned. The contract was awarded in Sep 2017. Construction began in Jun 2018 and was completed in Aug 2018.

FY20 Work Plan funds were used to award a periodic nourishment contract in Sep 2020. Construction began in Oct 2020 and was completed in Feb 2021.

FY22 Bilateral Infrastructure Law (BIL) provided $8.65M to initiate and complete periodic nourishment. Contract was awarded in Nov 2022. Construction began in Jun 2023 and completed in Jul 2023. Project was combined in a singular contract with Rehoboth Beach/Dewey Beach and Fenwick Island projects.

Next scheduled nourishment is scheduled for FY25 but is dependent on receipt of adequate funds.

Timeline	Start	Complete	Comments
Initial Construction		Jun 2008	
Emergency Work	Jan 2009	Jun 2009	
Periodic Nourishment	Oct 2011	Oct 2012	
FCCE Emergency (Sandy)	Aug 2013	Sep 2013	
FCCE Emergency (Oct 15 & Jan 16)	Jun 2018	Jul 2018	
Periodic Nourishment	Jun 2018	Jul 2018	
Periodic Nourishment	Oct 2020	Feb 2021	
Periodic Nourishment	Jun 2023	Jul 2023	
Periodic Nourishment	FY25 (Sched)		Dependent on adequate funds.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL
Construction	163,600	88,053	251,653

Summarized Federal Financial Data ($000)		
Allocations thru FY22	47,678	
FY 23 Allocation	0	
FY 24 Work Plan	0	
FY 25 Budget	0	President's Budget
FY 25 Work Plan	TBD	
Balance to Complete	115,922	

Delaware Coast, Cape Henlopen to Fenwick Island, Fenwick Island, DE

Authority: Water Resources Development Act of 2000

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Project Agreement: Sep 2004

Target Completion Date: 2054

Total Estimated Cost: $130.2M

Federal Funds Appropriated: $12.3M

Non-Federal Share: $10.5M

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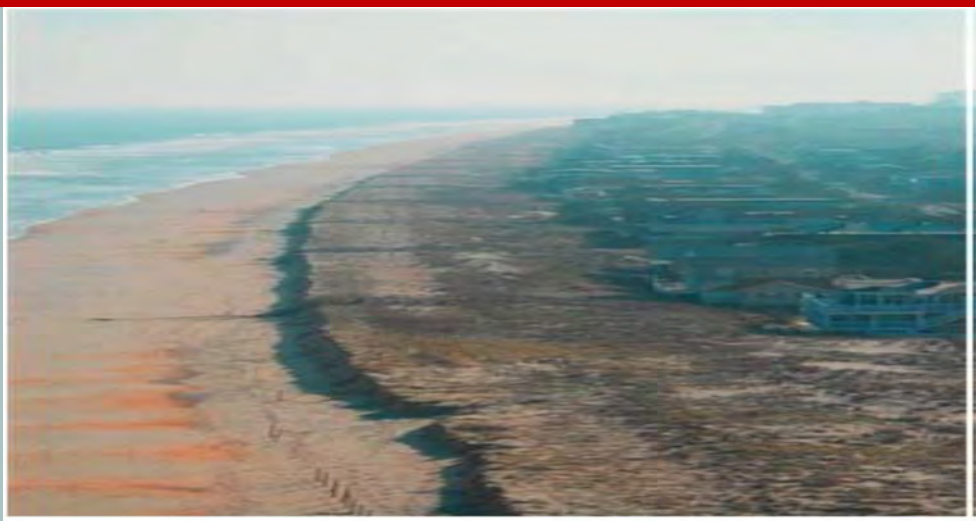

Aerial view of Fenwick Island looking south.

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 the purpose of costal storm risk management 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 Construction funds were received between FY 08 and FY 17. The funds received were used for project monitoring. Periodic nourishment originally scheduled for FY09 was delayed until 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 nourishment cycle.

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.

Delaware Coast, Cape Henlopen to Fenwick Island, Fenwick Island, DE

- **Project Goals:** The purpose of this project is Coastal Storm Risk Management at Fenwick Island, with a berm and a dune that includes dune grass, dune fencing, and beach fill and periodic nourishment every four years.

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

This project was damaged by the Jan 2016 Nor'easter. A Project Information Report (PIR) under the authority of PL 84-99 were completed which recommended repair and restoration of the project. This PIR was ultimately approved by Corps HQUSACE. PL 84-99 funds have been received for engineering and design, plans and specification & construction. Additionally, FY17 Work Plan funds of $4.0M & FY17 CG Supplemental funds of $1.9M were received. The FCCE funds were for construction to minimum design template while the Work Plan funds were used to complete periodic nourishment. CG Supplemental funds were excess and returned. The contract was awarded in Sep 2017. Construction began in Jul 2018 and completed in Aug 2018.

FY22 Work Plan provided $7.65M to initiate and complete periodic nourishment. Contract was awarded in Nov 2022. Construction began in Jun 2023 and completed in Jun 2023. Project was combined in a singular contract with Rehoboth Beach/Dewey Beach and Bethany Beach/South projects.

Next scheduled nourishment is scheduled for FY26 but is dependent on receipt of adequate funds.

Timeline	Start	Complete	Comments
Initial Construction	Sep 2004	Nov 2005	
FCCE Emergency (Sandy)	Jul 2013	Aug 2013	
FCCE Emergency (Jan 16)	Jul 2018	Aug 2018	
Periodic Nourishment	Jul 2018	Aug 2018	
Periodic Nourishment	Jun 2023	Jun 2023	
Periodic Nourishment	FY26 (Sched)		Dependent on adequate funds

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL
Construction	66,006	64,197	130,203

Summarized Federal Financial Data ($000)		
Allocations thru FY22	12,327	
FY 23 Allocation	0	
FY 24 Work Plan	0	
FY 25 Budget	0	President's Budget
FY 25 Work Plan	TBD	
Balance to Complete	53,679	

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

Authority: Section 101 (b)(6) of the Water Resources Development Act of 1996 with a modification in 2000

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Project Agreement: Dec 2003

Target Completion Date: 2054

Total Estimated Cost: $149.2M

Federal Funds Appropriated: $54.7M

Non-Federal Share: $25.2M

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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 costal storm risk management 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 beach fill 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 periodic nourishment. Due to limited funds, only Dewey Beach received nourishment. FY11 funds were used to modify the FCCE contract to complete the periodic nourishment cycle (originally scheduled for 09).

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

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

- **Project Goals:** The purpose of this project is Coastal Storm Risk Management at Rehoboth Beach and Dewey Beach, with a berm and a dune for each beach, including dune grass, dune fencing, beach fill and periodic nourishment every three years.

Between Oct 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 Sandy work on 25 Jun 2013. Pumping was completed on 3 Nov 2013. Crossover, etc repairs were completed in Mar 2014.

FY15 work plan funds were used to award a periodic nourishment contract on 16 Jul 16. Pumping began in Nov 2016 & was completed in Dec 2016. Outfall extension, sand fence & dune grass were completed in Apr 17.

FY19 Work Plan funds were used to complete periodic nourishment. Contract was awarded in Sep 2019. Construction began in Oct 2019 and was completed in Nov 2019.

FY22 Work Plan provided $7.65M to initiate and complete periodic nourishment. Contract was awarded in Nov 2022. Construction began in APR 2023 and completed in May 2023. Project was combined in a singular contract with Bethany Beach/South Bethany Beach and Fenwick Island projects.

Next nourishment is scheduled for FY25. FY22 Bilateral Infrastructure Law (BIL) Addendum funded $7,680,500 for this project. These funds were not required for the most recent nourishment cycle and will be utilized in FY25 for the next cycle.

Timeline	Start	Complete	Comments
Initial Construction		Jan 2006	
Periodic Nourishment	Nov 2008	Jun 2009	Dewey Beach Only
Periodic Nourishment	Oct 2011	Feb 2012	
FCCE Emergency (Sandy)	Jun 2013	Nov 2013	
Periodic Nourishment	Nov 2016	Dec 2016	
Periodic Nourishment	Oct 2019	Nov 2019	
Periodic Nourishment	Apr 2023	May 2023	
Periodic Nourishment	FY25 (Sched)		Will utilize FY22 BIL funds

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL
Construction	95,004	54,233	149,237

Summarized Federal Financial Data ($000)		
Allocations thru FY22	54,689	
FY 23 Allocation	0	
FY 24 Work Plan	0	
FY 25 Budget	0	President's Budget
FY 25 Work Plan	TBD	
Balance to Complete	40,315	

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

Authority: Water Resources Development Act of 1986

Congressional District: DE-AL

Non-Federal Sponsor: DNREC

Date of Project Agreement: Oct 1988, Amended Jun 2021

Target Completion Date: 2028

Total Estimated Cost: $28.6M

Federal Funds Appropriated: $11.85M

Non-Federal Share: $677K (Funding to Corps)

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The state of Delaware operates the Indian River Inlet sand bypass plant in Sussex County, DE. Sand is pumped from the south side to the sand-starved north side. Federal construction funds are used to reimburse the

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 consisted 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. Construction of the sand bypass plant began in 1989 and was completed in 1990. Per the agreement the State of Delaware operates and maintains the plant and the Corps reimburses them for the Federal share of the operation and maintenance.

Between FY 91 & FY15 the project consistently received Federal appropriations. These funds were used to reimburse the State of Delaware along with conducting proper project monitoring.
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.

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.

Some of the FY 15 funds were used to award a contract for pump house renovations. Contract was awarded on 19 Feb 16. Construction began in June 2016 and was completed in March 2017.

Per the partnership agreement executed on 26 Oct 1988 the project was authorized through end of 2021. WRDA 2014 Section 1037(a)(2) allowed for extensions of authorized water resources development projects that would expire within 10 years, Corps worked with DNREC on LCA Amendment #1. This LCA Amendment was executed on 14 June 2021 and extended the project until 2028. Utilizing Section 8129(a)(2)(B) of WRDA 2022 Corps worked with DNREC on a second LCA Amendment. WRDA 2022 authorizes an additional 6 years. LCA Amendment #2 was executed on 28 SEP 2023 which extends the project until 2034.

FY22 Work plan provided 1.2M. Until FY22 Work Plan the project had not been funded to capability since FY15. There were nominal allocations of $49,999 in FY16, FY18, FY19 & FY21 through reprogramming. The FY22 Work Plan funds were used to reimbursement the State of Delaware for shortages from 2016 and 2022. These funds were for the federal share of operation and maintenance of the plant.

FY23 Work Plan funds were used to reimburse the state for operations and maintenance of the sand bypass plant including the electric conversion and project monitoring.

The sand bypass plant has recently had the crane and engine overhauled. Currently the plant is being converted to electric. Expected to resume in operations by end of 2024.

Total Estimated Project Cost ($000)	FEDERAL	NON-FEDERAL	TOTAL
Construction	12,757	15,829	28,586

Summarized Federal Financial Data ($000)		
Allocations thru FY22	10,752	
FY 23 Allocation	1,095	$850K WP & $245K reprogramming
FY 24 Work Plan	0	
FY 25 Budget	0	President's Budget
FY 25 Work Plan	TBD	
Balance to Complete	910	

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Southeastern Pennsylvania and Lower Delaware River Basin Environmental Improvement Program

Authority: Section 566 of the Water Resources Development Act of 1996, as amended by Section 552 of WRDA 1999 and Section 8376 of WRDA 2022

Congressional District: DE-At large, NJ-1, NJ-2, NJ 3, NJ4, NJ12, PA-1, PA-2., PA-3, PA-4, PA-5, PA-6, PA-7, PA-9

SEPA Federal Funds Appropriated: $16.6M (Authorized to $50M)

Lower DE River Basin Federal Funds Appropriated: $0 (Authorized to $20M)

Non-Federal Share: 25%

SEPA Jurisdictions:

Bucks County
Chester County
Delaware County
Montgomery County
Philadelphia County

Lower Delaware River Basin Watersheds

Schuylkill Valley
Upper Estuary
Lower Estuary
Delaware Bay

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Construction of a vault structure to control sewer overflow, Philadelphia, PA

The Southeastern Pennsylvania and Lower Delaware River Basin Environmental Improvements Program (566 Program) is authorized under Section 566 of the Water Resources Development Act (WRDA) of 1996, as amended by Section 552 of WRDA 1999 and Section 8376 of WRDA 2022.

Funding for this authority is provided to the Corps through appropriated funding under the Environmental Infrastructure business line and distributed to specific projects through the annual Work Plan or Congressional directed spending. The 566 Program allows USACE to provide design and construction assistance to non-Federal interests for carrying out water related environmental infrastructure, resource protection and development projects in southeastern Pennsylvania, including projects for wastewater treatment and related facilities (including sewer overflow infrastructure improvements and other stormwater management), water supply and related facilities, surface water resource protection and development, and environmental restoration.

Section 552 of WRDA 1999 amended the authority to include environmental restoration as an authorized project purpose under this program. Section 8376 of WRDA 2022 amended the authority to expand the geographical area from Southeastern Pennsylvania to include the Lower Delaware River Basin in New Jersey and Delaware.

All phases are cost-shared with a non-Federal sponsor with the sponsor providing 25% of the total project costs. Updated Implementation Guidance from USACE HQ is pending.

U.S. Army Corps of Engineers, Philadelphia District

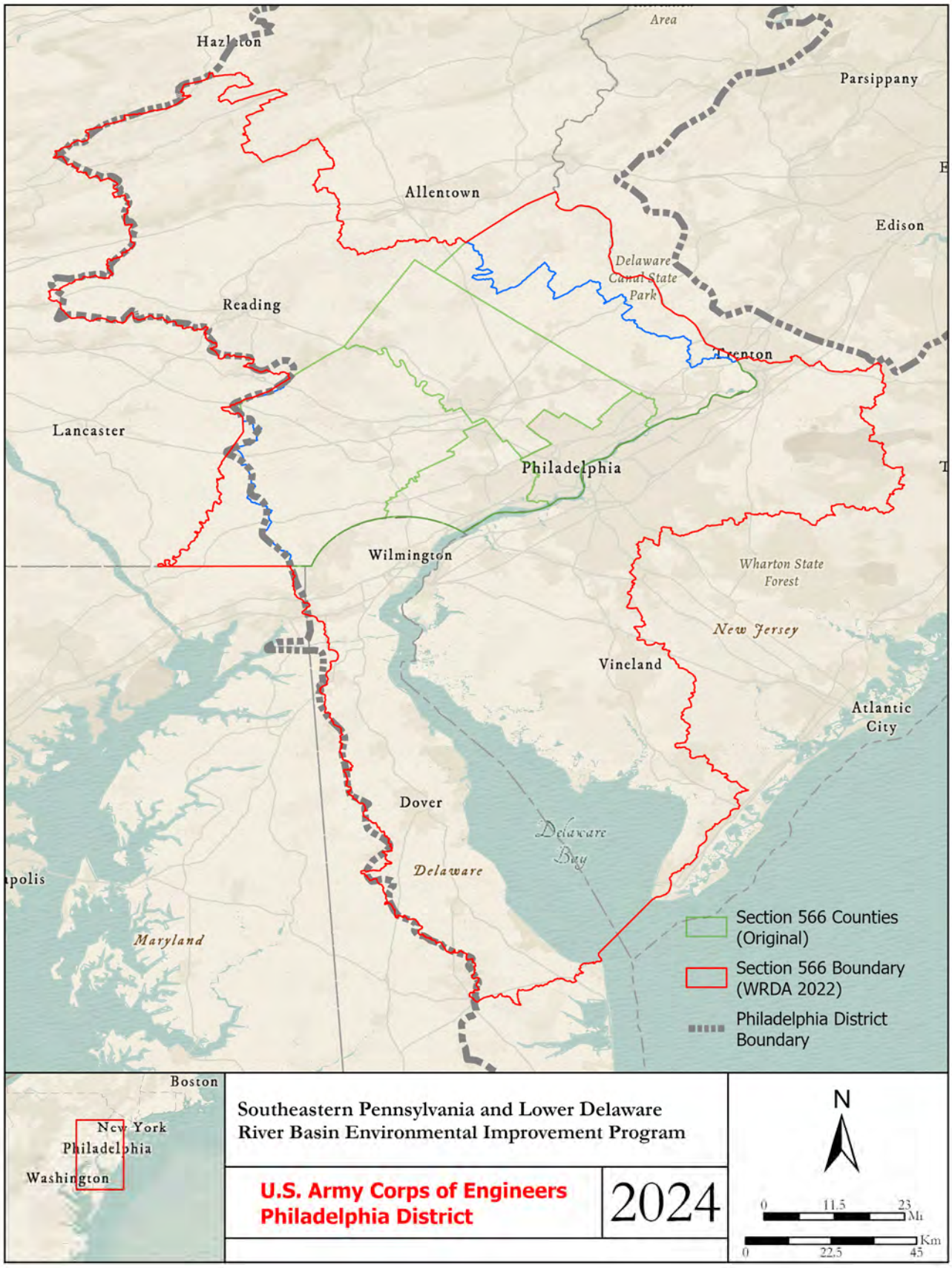
Southeastern Pennsylvania and Lower Delaware River Basin Environmental Improvement Program

The authority allows the Government to enter into agreements with a non-Federal sponsor to provide design assistance, construction assistance or both design and construction assistance. The authority also allows for the non-Federal sponsor to provide some or all of the work for design and/or construction. While sound judgment and prudent analytical approaches should be employed, the specific requirements for conducting and reporting on economic and environmental procedures as outlined in Principles and Guidelines (P&G) and Corps regulations based on P&G are not required. Because this is a service to non-Federal parties, the character and form of the Assistance should be established in partnership with the non-Federal partner.

Active/Potential Projects	Sponsor	Status	Allocation/Budget Data (000)					
			Prior to FY18	FY18	FY19	FY20	FY23	FY24
Abington Township Environmental Improvement	Abington Township	Design Phase	200	500	0	2,100	1,000	0
Roosevelt Boulevard Dam Removal	PWD	Design Phase	1,400*	0	1,000	0	-1,000	0

Note: $1M transferred from Roosevelt Boulevard Dam Removal to Abington Township Environmental Improvement to support construction

Closed/Inactive Projects	Sponsor	Status	Federal Funds	Non-Fed Funds	Credits	Total
Cobbs Creek Fish Passage Restoration	PWD	Deferred	733,732	239,847	306,578	1,280,158
Cobbs Creek Habitat Restoration	PWD	Closed	3,386,891	628,184	500,779	4,515,856
Hatfield Borough Sewer Improvements	Hatfield Borough	Closed	340,886	26,298	87,330	454,516
Mill Creek Diversion	PWD	Closed	671,618	112,740	112,041	896,401
Tacony Creek Ecological Improvements	PWD	Closed	1,900,794	283,253	350,344	2,534,393
Chester, Delaware and Montgomery County Watershed	PADEP	Closed	506,354	0	230,299	736,653
Sandyford Run	PWD	Closed	9,262	0	0	9,262
Logan/Wissinoming Homes	PWD	Closed	293,600	97,866		391,466
Philadelphia Incinerator	PWD	Closed	3,277,825	1,092,608		4,370,433
Delaware Canal	None	Closed	273,524	91,174		364,698
New Logan Homes	PWD	Closed	27,808	9,269		37,077


Hazleton
Area
Parsippany
Allentown
Edison
Delaware Canal State Park
Reading
Trenton
Lancaster
Philadelphia
Wilmington
Wharton State Forest
New Jersey
Vineland
Atlantic City
Dover
Delaware Bay
Delaware
Maryland
Section 566 Counties (Original)
Section 566 Boundary (WRDA 2022)
Philadelphia District Boundary
Boston
New York
Philadelphia
Washington
Southeastern Pennsylvania and Lower Delaware River Basin Environmental Improvement Program
U.S. Army Corps of Engineers
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US Army Corps of Engineers®
Philadelphia District

US ARMY CORPS OF ENGINEERS
Building Strong

Operations and Maintenance

Operations and Maintenance (O&M)

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
- Flood Risk Management /Flood Control
- Navigation Maintenance
- Other Authorized Project Purposes
- Small, Remote, or Subsistence Navigation Maintenance

State Color Codes
Delaware
New Jersey
Pennsylvania
Multiple

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.

Maintenance dredging removed approximately 5,000 cubic yards of material from the Cedar Creek channel between the Delaware Bay Launch Service and the juncture with Mispillion River in 2019. An additional 10,000 cubic yards of material were removed from the state launch facility through the confluence with Mispillion River in February 2024 by the Government Dredge Murden with beneficial use placement in the nearshore to the north of the Mispillion River jetties. Additional dredging and beneficial use placement alternatives are being evaluated for maintenance dredging in FY24 or FY25 (based on environmental windows).

Channel sediment sampling was completed in 2022 and updated channel condition surveys were completed in 2023 and February 2024.

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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 historically expressed concerns that poor channel conditions could delay the response of oil spill emergency clean-up and containment contractors during lower tide stages.

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, Coast Guard and Homeland Security Inspectors.

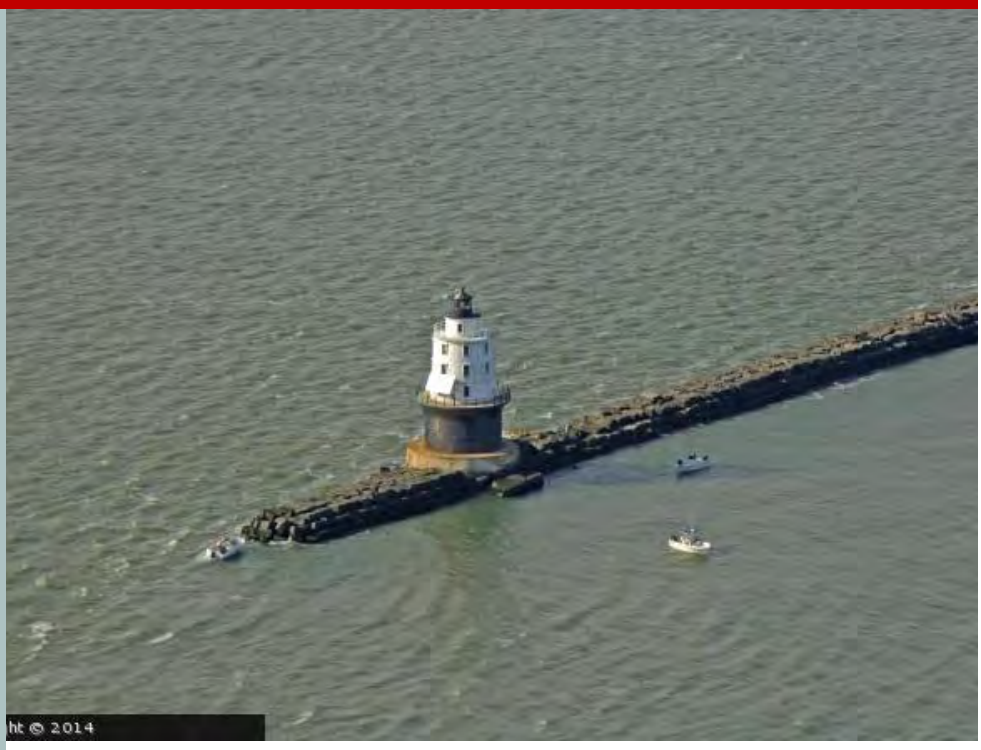
The local commercial fishing fleet stationed within this project totals approximately 35 vessels. A large number of tourists are attracted to the charter fishing opportunities at Cedar Creek. Recreational use of this waterway is also significant. The State of Delaware operates a public launching facility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

Summarized Federal Financial Data ($000)		
FY 20 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 21 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 22 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 23 Allocation	1,099	Maintenance Dredging
FY 24 Allocation	1,099	Maintenance Dredging
FY 25 Budget	0	Impacted by Low Use Navigation budget cuts

Harbor of Refuge, Lewes, DE

Authority: HD 52-112, 70-15 and 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.

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 USCG 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.

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Harbor of Refuge, Lewes, DE

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

In the interest of protecting the historic Harbor of Refuge Breakwater itself along with the historic lighthouse, periodic inspections of the breakwater, especially after hurricane season, should be conducted. FY 2022 BIL funds have been utilized to conduct surveys and an inspection as well as to complete a Major Maintenance Report (MMR) as required by HQUSACE guidance. The purpose of the MMR is to document current conditions, make recommendations for repairs and refine repair cost estimates. In addition to completion of the MMR in December of 2023, a Level 2 Operational Conditional Assessment of the Breakwater was completed in June of 2023 by coastal engineering experts from across USACE.

Both the Delaware River and Bay Lighthouse Foundation and the Delaware State Historical Preservation Office have repeatedly indicated that the deterioration of the government-owned breakwater is impacting valuable historic properties in the Harbor of Refuge. The destructive wave action from past storms, have had an erosive effect on the breakwater especially in the vicinity of the lighthouse. Many of the huge breakwater stones that once formed an interlocking protection wall at the base of the lighthouse have been dislodged.

Summarized Federal Financial Data ($000)		
FY 20 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 21 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 22 Allocation	250	Allocation is BIL Funds.
FY 23 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 24 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 25 Budget	0	Impacted by Low Use Navigation budget cuts

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Indian River Inlet & Bay, Sussex County, DE

Authority: R&H Doc. 41. HD 330

Congressional District: DE-AL

Aerial View of the project area showing Indian River Inlet with Real Estate Boundaries

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.

Channel and structure condition surveys were conducted in FY22 and FY23. Additional data collection, numerical modeling and analysis is ongoing as part of the Bipartisan Infrastructure Law (BIL) funds to repair the jetties and north bulkhead. Continued monitoring of the channel, jetties and scour holes is critical to protect surrounding infrastructure and assets and to inform the critically needed and complex repairs.

These repairs are complicated but technical expertise from the long-standing Indian River Inlet Working Group and coastal structure experts across USACE are being utilized for these critical repairs.

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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.

Concerns: A failed section of bulkhead/revetment along the interior north shoreline is compromising a section of sidewalk and other infrastructure near Delaware Seashore State Park. The condition continues to deteriorate and expand to adjacent areas and is complex due to the steep slopes into the inlet. Public access to the failed area has been restricted due to the safety risk. Additionally, the Indian River Inlet jetties are in poor condition with over 350 linear ft of loss from the north jetty seaward end since 1960 and the south jetty requires sand tightening.

Ongoing Activities: BIL funds in the amount of $43.9M were received in 2022 for design and repair of the failed bulkhead on the north interior shoreline, repair of the north and south jetties including sand tightening and to conduct a sediment budget for the inlet system. Final design plans & specifications for repair of the failed bulkhead and south jetty sand tightening were completed in FY23 and a repair contract in the amount of $5.4M was awarded to Agate Construction in September 2023. Construction is planned to start in Spring 2024. Coordination with Delaware Seashore State Park, DelDOT, and DNREC has been ongoing throughout design and will continue until construction of the bulkhead and south jetty is complete in FY2025.

Design of the north jetty requires additional data collection and evaluation of slope stability. Data collection including geotechnical data, numerical modeling of the inlet system, and evaluation by USACE technical experts continues in FY24 to determine jetty maintenance paths. Work on the sediment budget by the district and USACE's Engineering Research and Development Center will also continue in FY24. A contract advertisement by December 2024 is anticipated with Fall 2025 construction start anticipated in order to complete by the start of the 2026 recreational season.

Summarized Federal Financial Data ($000)		
FY 20 Allocation	33	Funds will be used for managing the project, channel surveys and geospatial real estate efforts.
FY 21 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 22 Allocation	43,901	$43,871 is BIL funds.
FY 23 Allocation	278	Funds to be used for project coordination, major maintenance designs and data collection
FY 24 Allocation	40	Funds to be used for surveys and project coordination
FY 25 Budget	54	Impacted by Low Use Navigation budget cuts

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

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

Authority: HD 832, 77-344, R&H Comm. Doc. 54, 74-56

Congressional District: DE-AL

Roosevelt Inlet at Lewes, DE

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, an extension of the jetties; a channel 10 feet deep and 100 feet wide to the Savannah Road Bridge at Lewes; a channel 6 feet deep and 50 feet wide from Savannah Road Bridge to the Rehoboth Bay entrance and a channel 6 feet deep and 100 feet wide from Roosevelt Inlet to Broadkill River.

The local commercial fleet consists numerous charter and head boats. The University of Delaware maintains several research vessels that are stationed within the project, and mooring for research vessels from visiting universities. 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.

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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 Savannah Road Bridge at Lewes, a channel from the inlet to the Broadkill River and a channel from Savannah Road Bridge to the Rehoboth Bay entrance.

FY 22 BIL funds were utilized to conduct maintenance dredging of the canal between Roosevelt Inlet and the Rt. 9 Bridge in Lewes, DE thru a contract awarded to Dredgit of Houston, TX in September of 2022. Approximately 40,000 cubic yards of material was removed between October 2023 and February of 2024.

FY23 funds were utilized to conduct a channel condition survey of the entire waterway in February of 2024 as well as maintenance dredging of the Roosevelt Inlet Entrance Channel using the Government Dredge Murden in February 2024. Sand was dredged from the inlet channel and placed in a designated nearshore area to support the federal beach nourishment project in Lewes. It is anticipated that the bulk of the FY23 funds will be utilized to dredge the remainder of the canal between the Rt 9 Bridge and Rehoboth Bay. It is anticipated that this work will be conducted between September of 2025 and March of 2026.

FY24 Funds will be utilized for real estate activities.

Summarized Federal Financial Data ($000)		
FY 20 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 21 Allocation	30	Impacted by Low Use Navigation budget cuts
FY 22 Allocation	3,934	$3,785,000 is BIL funds.
FY 23 Allocation	7,475	
FY 24 Allocation	149	Impacted by Low Use Navigation budget cuts
FY 25 Budget	580	

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.

Along with the Cedar Creek federal channel, 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 future shoaling in the channel could delay the response of oil spill emergency clean-up and containment contractors during lower tide stages. Failure to perform routine maintenance dredging will result in hazardous navigating conditions, damage to commercial, charter and recreational vessels, delays in service to the shipping industry utilizing the Delaware River, Philadelphia to Sea Channel, restricted and/or delayed Coast Guard national security. vessel audits and economic hardships.

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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.

Dredging and placement with the Government Dredge Currituck was designed and permitted in FY19 . Maintenance dredging has been conducted annually from February 2020 to February 2024 with the Government Dredge Murden removing up to 5,000 cubic yards of sediment each year from the Mispillion entrance channel and Cedar Creek confluence with beneficial use placement. Use of the government dredges has proven to cost-effectively remove the relatively small but critical shoaling from the interior channel and the entrance to the Delaware Bay, allowing for multiple dredging operations with funding received. The placement area is located to the north of the entrance, keeping sediments in the system and supporting coastal resilience and the adjacent beaches.

Channel condition and maintenance dredging surveys were performed in FY 23 and February 2024. Channel shoaling rates will be monitored.

The jetties were assessed and rated failed relative to structural condition, but are still considered adequate relative to functional condition ratings. Funding has been requested for a Major Maintenance Report as the decision document needed for jetty repairs. An initial cost estimate to repair the failed jetties is included in the 2022 Report to Congress on Cost to Repair the most degraded coastal navigation structures in the nation.

Summarized Federal Financial Data ($000)		
FY 20 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 21 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 22 Allocation	$400	$400 was provided thru the Work Plan.
FY 23 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 24 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 25 Budget	0	Impacted by Low Use Navigation budget cuts

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

Murderkill River, Sussex County, DE

Authority: HD 21, 62-1058.
SD 71-106

Congressional District: DE-AL

Entrance channel of Murderkill 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.

Since federal funds have not been received in recent years, the channel was dredged by the State of Delaware in 2014 and again in July 2022 with sandy material beneficially used on adjacent beaches and fines placed in a disposal area within the bay.

Beneficial Use of Dredged Material placement alternatives are under evaluation by USACE in coordination with the Engineering with Nature program and other stakeholders to be ready for future potential federal maintenance dredging and placement operations.

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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.

In FY23, a channel exam was conducted in May 2023 to update conditions and inform project users of conditions in the federal channel using Project Condition Survey funds.

Prior to the dredging conducted by the State of Delaware in July 2022, concerns were raised by congressional interests and locals that the USCG had permanently removed the seasonal markers from the federal channel due to excessive shoaling and unsafe conditions. The USCG cannot adequately mark navigable water until maintenance dredging is accomplished. Markers were replaced by the USCG following the State dredging and channel exam conducted by USACE in August 2022.

Failure to maintain this channel will result in deteriorated channel conditions that will negatively impact the use of this project by first responders and as a safe harbor for recreational and commercial users. The channel supports first responders including the Bowers Beach fire suppression boat, South Bowers water rescue boat, State of Delaware police vessels and the USCG auxiliary station operation for response to emergency situations. The channel also supports a local commercial fishing fleet. Failure to maintain waterway would result in impacts to the USCG mission, inability for emergency responders to conduct their critical missions, damage to commercial vessels and economic hardship for the region.

Coordination of this project with federal, state, academic and local partners significantly increased in recent years and continues in FY24, with objective to develop a federal maintenance dredging project for beneficial use of the mixed channel sediments on both beaches as well as degraded marshes, vs disposal of the fines in the bay.

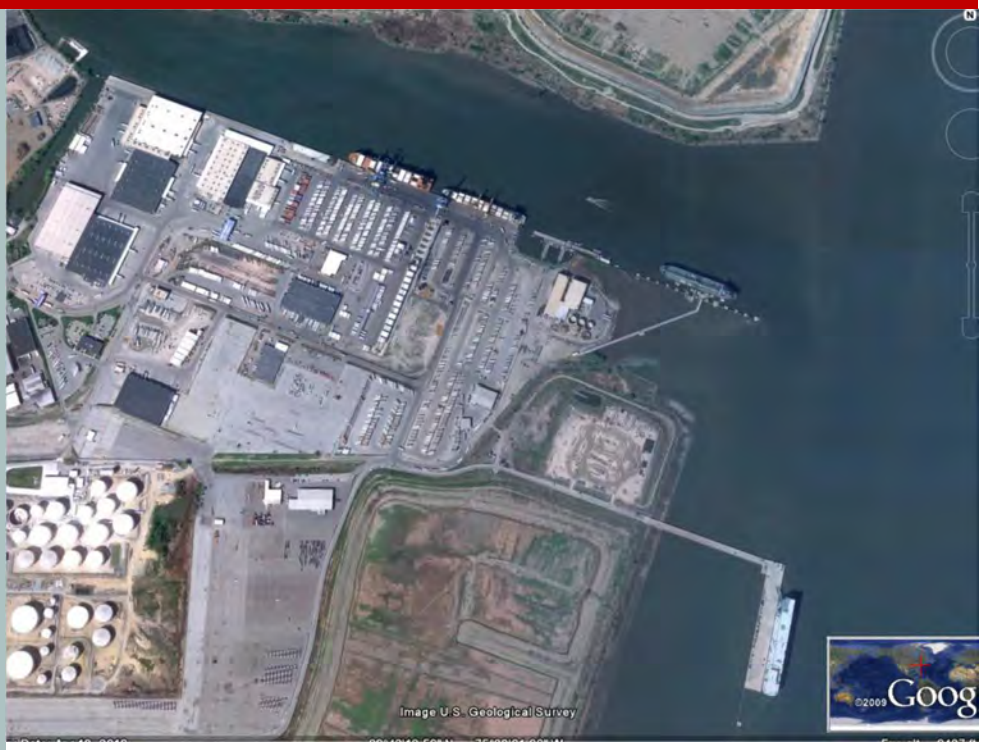
Summarized Federal Financial Data ($000)		
FY 20 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 21 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 22 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 23 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 24 Allocation	0	Impacted by Low Use Navigation budget cuts
FY 25 Budget	0	Impacted by Low Use Navigation budget cuts

U.S. ARMY CORPS OF ENGINEERS, PHILADELPHIA DISTRICT

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 District: DE-AL



Aerial view of 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.

Port Wilmington is a full service Mid-Atlantic seaport strategically located to provide overnight access to 200 million North American consumers. Wilmington ranks as the world's top banana port, and the nations leading gateway for imports of fresh fruit and juice concentrates. An economic engine for the State of Delaware and the region, it is responsible for over thousands of jobs, hundreds of millions of dollars in business revenue impact, and tens of millions of dollars in regional annual tax revenue. The Port is owned by the Diamond State Port Corporation, a corporation of the State of Delaware and operated by Enstructure.

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Wilmington Harbor, New Castle County, DE

- **Project Goals:** The purpose of this project is to provide for a navigation channel from the Delaware River to Newport, DE, a turning basin opposite of the Wilmington Marine Terminal, and a jetties the mouths of Christina River.

The FY 23 funded annual maintenance dredging for both the 35-foot and 38-foot project channels and turning basin is scheduled to be completed in July of 2024. Approximately 500,000 cubic yards of material will be removed. The project was last dredged in September and October of 2023 with approximately 675,000 cubic yards of material removed.

The following work will be accomplished in FY 2024: maintenance dredging, semi-monthly channel condition surveys and issuance of channel statements to the maritime community, disposal area maintenance and construction activities by in house hired-labor along with dike raising construction contract work and environmental support services.

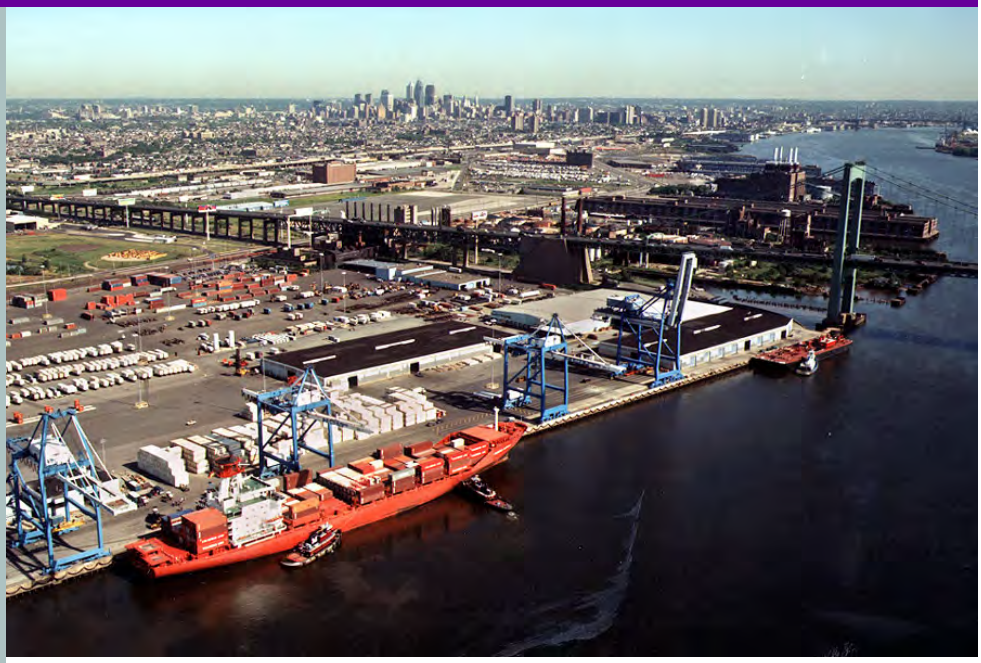
The annual maintenance-dredging contract for both the 35-foot and 38-foot project channels and turning basin is scheduled to be advertised in June of 2024. Actual dredging should commence in approximately December of 2024 with completion within approximately 30 days. Similar to FY23, it is anticipated that this work will be advertised as a consolidated contract with the Delaware River, Philadelphia to Sea, Project Maintenance Dredging solicitation.

Summarized Federal Financial Data ($000)		
FY 20 Allocation	10,263	Additional funds ($2,600) was received thru the Work Plan.
FY 21 Allocation	10,640	Additional funds ($2,750) was received thru the Work Plan.
FY 22 Allocation	9,111	Additional funds ($250) was received thru the Work Plan.
FY 23 Allocation	10,432	
FY 24 Allocation	14,945	
FY 25 Budget	15,870	

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-2, PA-3 & PA-5



Packer Ave 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 45’ and 40' deep, and 400' to 1000' wide. The Hopper Dredge McFarland will dredge 70 days in the river to address any spot, edge, or sand wave 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 102 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

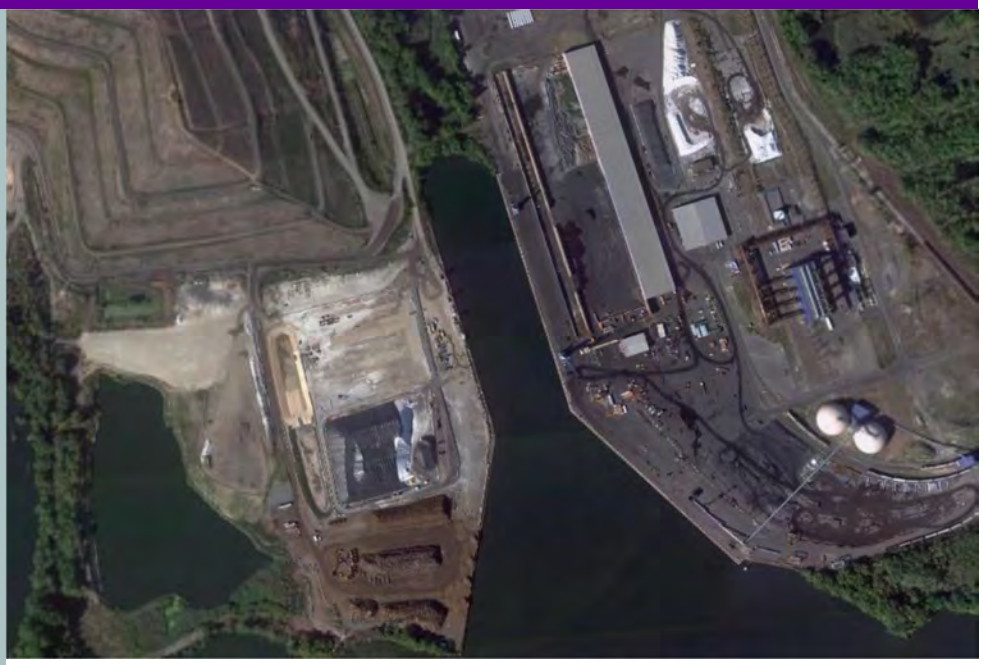
The Port of Philadelphia is located in the heart of the Northeast Corridor, with superior connections to New York City, Washington DC, the U.S. Midwest, and Canada. It is estimated that 100 million people live within a day's drive of Philadelphia. All of the terminal facilities have access to major trucking routes (e.g. I-95), and rail lines. The Port handles many different types of cargo (containers, bulk, break-bulk, 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)		
FY 20 Allocation	40,760	Additional Work Plan funding ($8,725) was provided.
FY 21 Allocation	75,536	Additional Work Plan funding ($53,216) was provided.
FY 22 Allocation	99,005	$25,000 is BIL funds and additional Work Plan funding ($28,600) was provided.
FY 23 Allocation	49,967	$500 is BIL funds and additional Work Plan funding ($3,680) was provided.
FY 24 Allocation	72,382	$25,000 is BIL funds
FY 25 Budget	119,690	

Delaware River, Philadelphia to Trenton, NJ & PA

Authority: HD 679, 358. R&H Comm. Doc. 3, 11, 66, 90

Congressional District: NJ-1, NJ-3, PA-1, PA-2



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 primary purpose of this project is to provide a 40-foot channel from Allegheny Avenue in Philadelphia, PA to the upper end of Newbold Island, New Jersey as well as the Fairless Turing Basin.

FY 2023 O&M funding accomplished periodic channel examinations, environmental support services, earthwork services at the Money Island Disposal Area to create additional dredged material storage capacity and contract maintenance dredging of the entire 40-foot channel that included the Fairless Turning Basin in Falls Township, PA.

FY 2024 O&M funds will be utilized to accomplish periodic channel examinations, environmental support services and a contract for maintenance dredging in both the lower and upper reach of the 40-foot channel, as well as the Fairless Turning Basin. Approximately 300,000 cubic yards of material will be dredged between the Tacony Palmyra Bridge and Newbold Island and placed at the Palmyra Cove Disposal Area in Burlington County, NJ as well as the Money Island and possibly Biles Island Disposal Areas in Falls Township, PA.

The past failure of the State of New Jersey to properly maintain the disposal areas previously utilized by the Army Corps along the lower reach of the 40-foot channel has been a longstanding operational issue. Recent developments however, have NJDOT and NJDEP working to re-establish capacity at the Palmyra Cove, Cinnaminson and Burlington Island CDFs. The Palmyra Cove CDF accepted the dredged material from the lower reach of the project in the Fall of 2023.

Summarized Federal Financial Data ($000)		
FY 20 Allocation	9,964	$5,875 in Work Plan funds was provided.
FY 21 Allocation	7,954	$3,350 in Work Plan funds was provided.
FY 22 Allocation	13,573	
FY 23 Allocation	17,548	
FY 24 Allocation	17,890	
FY 25 Budget	19,875	

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

Authority: HD 201. R7H Comm. Doc. 11, 18, 24. PL 310. SD 123

Congressional District: DE-AL, MD-1

Senator Roth Bridge (SR-1) carries ~34 million vehicles over the C&D canal per year

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 canal waterway, five high-level fixed highway bridges, a vertical lift railroad bridge, entrance jetties at Reedy Point, and maintenance of Delaware City Branch channel and basin. The waterway channel is 35 feet deep and 450 feet wide, extending from Reedy Point on the Delaware River, about 46 miles below Philadelphia, PA, through a land-cut westward to Elk River and onto deep water near Pooles Island in the upper Chesapeake Bay. The average annual traffic over the Chesapeake and Delaware Canal bridges equates to roughly 55 million vehicles per year (2018).

The Chesapeake and Delaware (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, five high-level fixed highway bridges, a vertical lift railroad bridge, 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 the C&D Canal

FY23 funds were used for routine operation and maintenance of the project, including five high level highway bridges, dispatching, channel exams, canal banks and dredge material containment facilities. Major bridge maintenance projects included redecking of the St. Georges Bridge, bearing replacement, steel and concrete repairs on the Reedy Point Bridge Major channel maintenance dredging projects included dredging the Pooles Island, Turkey Point and Town Point Approach Channels to the C&D Canal and the Chesapeake City Basin.

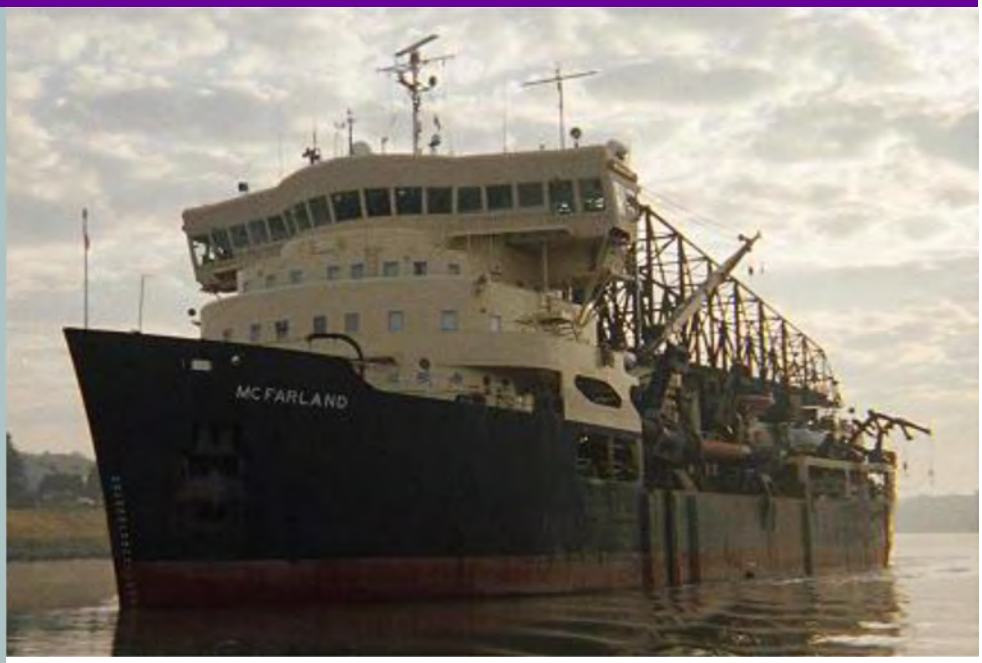
FY24 funds will be used for routine operation and maintenance of the project . Major channel maintenance dredging projects will include the dredging of the southern Approach Channels to the C&D Canal, major bridge maintenance projects include joint replacement, steel repairs and painting of Summit Bridge. BIL funding will be used for demolition and replacement of Canal Operations Building.

Summarized Federal Financial Data ($000)		
FY 20 Allocation	22,283	Additional Work Plan funding ($250) was provided.
FY 21 Allocation	38,335	Additional Work Plan funding ($20,000) was provided.
FY 22 Allocation	81,414	$3,200 is BIL funds and additional Work Plan funding ($59,275) was provided.
FY 23 Allocation	30,894	Additional Work Plan funding ($8,790) was provided.
FY 24 Allocation	20,223	
FY 25 Budget	18,427	

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-2, PA-3 & PA-5



Hopper Dredge McFarland

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.

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

The Dredge McFarland was fully funded annually through FY 2009 using O&M funding for which the vessel worked. FY 2010 was the first year in Ready Reserve status for the vessel. Under the provisions of Ready Reserve, the Dredge must be maintained in a state of readiness to be able to respond to national dredging emergencies. The vessel is authorized to perform up to 70 days of training exercise days annually on the Delaware River to maintain crew and equipment readiness. The last emergency dredging deployment was in February 2019, when the Dredge was called out for 32 days to Southwest Pass for New Orleans District. In FY24, the vessel has 27 days scheduled training days remaining to perform on the Delaware River.

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:

1. High-powered pumps, large single open-hopper design amidships, and hopper distribution system with retention capability for efficient handling of fine materials
2. It can dredge year-round in any environment, working around the clock while on assignment.
3. 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.

The McFarland is operated by a civilian crew of about 44. 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.

THE USACE CIVIL WORKS MISSION

The origins of the U.S. Army Corps of Engineers (USACE) can be traced back to 1775 and the early days of the American Revolution when the Massachusetts Provincial Congress appointed Richard Gridley to the rank of Colonel and Chief Engineer. In 1779, Congress created a separate Corps of Engineers, but the engineers dissipated from military service after the Revolutionary War ended. Congress reestablished the Corps of Engineers within the Army in 1802. At the same time, it established the United States Military Academy at West Point, NY, the country's first, and for 20 years its only, engineering school. With the Army having the Nation's most readily available engineering talent, successive Congresses and Administrations established a role for USACE as an organization to carry out both military construction and works "of a civil nature." In 1824, the Supreme Court ruled that Federal authority covered interstate commerce, including riverine navigation. Shortly thereafter, Congress enacted laws that marked the beginning of USACE's continuous involvement in civil works, with a mission focus on water resources.

Three primary mission areas are the heart of the USACE Civil Works Program.

- The **flood risk management** mission includes both inland and coastal flood risk management and addresses assessment, management, and communication of current and future flood risk in a systematic and comprehensive manner.
- The **navigation** mission focuses on safe, reliable, and efficient waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, navigational access for the Coast Guard, and recreation. Inland (riverine) and deep draft navigation, as well as small boat harbors, are all part of the USACE navigation mission.
- The **ecosystem restoration** mission restores, protects, and manages aquatic ecosystems. Ecosystem restoration projects assist in the recovery of ecosystems that have been degraded, damaged, or destroyed and focuses on establishing the ecological processes necessary to make aquatic ecosystems sustainable, resilient, and healthy under current and future conditions.

Congress has also directed the USACE Civil Works Program to address **recreation**, **hydropower**, and **water supply**. USACE engagement in these areas is generally required to be associated in some relevant manner with one or more of the three primary mission areas, e.g., a flood risk management project that also provides recreation benefits to the community.

In addition, the USACE Civil Works Program has a robust mission area in **emergency response**, including providing infrastructure and engineering response services to the Nation.

Flood Risk Management

The USACE flood risk management mission area, including both inland and coastal storm risk management, encompasses ongoing and diverse flood risk management projects, programs, and authorities, and includes engagement and partnerships with other Federal agencies, State and Tribal organizations, and regional and local agencies. USACE activities related to flood risk management include technical services, project planning and construction, dam safety, levee safety, emergency operations, and emergency response.

USACE flood risk management projects utilize structural and nonstructural measures to manage the hazards associated with flooding and reduce the negative consequences of flooding to people and property. Structural and nonstructural flood risk management measures include channel modifications, levees, floodwalls, dams,

diversion culverts, natural and nature-based features, elevating structures in the floodplain, floodproofing, acquisition or relocation, flood warning systems, floodplain management, and increasing road elevations.

USACE has an active role in assessing, managing, and communicating flood risk associated with approximately 14,000 miles of levees in the USACE Levee Safety Program portfolio, and operates and maintains approximately 700 dams through the USACE Dam Safety Program portfolio that provide multiple significant benefits to the Nation. USACE manages these important elements of the Nation's flood risk management infrastructure to ensure its civil works projects deliver their intended benefits.

Navigation

The Federal interest in navigation derives from the Commerce Clause of the Constitutionand is limited to the navigable waters of the United States. Navigation was USACE's first civil works mission dating to Federal laws in 1824, which authorized and funded USACE to improve safety on the Ohio and Mississippi Rivers and several ports. The primary objective of the USACE navigation mission is to provide safe, reliable, and efficient waterborne transportation systems, including channels, harbors, and waterways for movement of commerce, national security needs, and recreation.

Today, USACE operates and maintains nearly 12,000 miles of commercial inland and intracoastal shallow draft (9- to 14-foot) navigation channels and waterways, and 13,000 miles of channels greater than 14 feet deep, for a total of 25,000 miles operated and maintained for commerce. USACE also assists in the movement of commerce by operating about 190 lock sites on 41 waterways, dredging more than 200 million cubic yards of construction and maintenance material annually, and maintaining 926 coastal, Great Lakes, and inland harbors.

Navigation studies and projects employ various measures to improve navigation. Port and harbor development typically consists of navigation channels that permit safe passage of vessels and any necessary breakwaters or jetties for protection against hazardous wave conditions. Inland waterway projects include navigation channels and locks. USACE's non-Federal partners or other non-Federal interests are responsible for providing the infrastructure necessary for full harbor and waterway development, including dredging of berthing areas, docks, and landside warehousing and transportation facilities.

Ecosystem Restoration

The USACE Civil Works Program's ecosystem restoration mission area focuses on restoring degraded aquatic ecosystem structures, improving function and dynamic processes to a less degraded and more natural condition, and employing system-wide watershed approaches to problem solving and management for ecosystem restoration projects.

USACE's principal ecosystem restoration focus is on ecological resources and processes that are directly associated with, or directly dependent upon, the hydrological regime of the ecosystem and watershed(s). Ecosystem restoration opportunities that involve modification of hydrology or substrate are likely to be most appropriate for USACE initiatives; USACE is most likely to partner in activities addressing ecosystems associated with wetland, riparian, and aquatic systems.

Not all ecosystem restoration opportunities are appropriate for USACE involvement. Generally, it will not be appropriate for USACE to conduct ecosystem restoration activities on upland, terrestrial sites that are not closely linked to water and related land resources; such activities may best be addressed by other Federal agencies through their missions and programs.

Recreation

USACE is the second largest Federal provider of outdoor recreation, with more than 400 lake and river projects in 43 states. Recreational features can be, and often are, considered as an element to enhance the overall benefit of a USACE project to the public. However, when partnering with USACE in cost-shared civil works studies and projects, recreational features cannot be the primary objective of the project.

Hydroelectric Power

Hydropower is one of the products of developing rivers for multiple purposes. Over the years, Congress has directed USACE to build water resource projects to serve public needs. Where feasible, hydropower has also been included. USACE-operated hydropower plants offer reliable hydroelectric power services at the lowest possible cost as a benefit to the Nation, consistent with sound business principles and in partnership with other Federal and non-Federal hydropower generators, power marketing administrations such as the Tennessee Valley Authority, and hydropower customers. USACE collaborates on its hydropower efforts with the Department of Energy, the Federal Energy Regulatory Commission, and a variety of other Federal, regional, and State agencies and some private Corps-permitted hydropower facilities.

USACE is the largest operator of hydroelectric power plants in the U.S., and one of the largest in the world. The 75 Corps hydropower plants across the country have a total installed capacity of over 20,000 megawatts and produce nearly 100 billion kilowatt-hours a year. At nearly a third of the Nation's total hydropower output, it is enough energy to serve about ten million households.

Water Supply

USACE may participate and cooperate with states and local communities in developing water supplies in connection with water resource improvements when certain conditions of non-Federal participation are met. These water supply features may be included in Federal navigation, flood risk management, or multipurpose projects when they are being considered for construction, operation, maintenance, and/or modification. This USACE involvement policy is based on a recognition that states and local governments, not the Federal Government, have the primary responsibility for the development and management of their water supplies.

Emergency Management

USACE is prepared to respond to natural and man-made disasters as part of the Federal Government's unified national response to disasters and emergencies. As part of its Emergency Management mission, USACE prioritizes saving lives, protecting property, and supporting immediate emergency response needs for USACE, the Department of Defense (DoD), the Federal Emergency Management Agency (FEMA), and the Federal Government. During natural disasters and other emergencies, USACE can respond under its own authorities; as a component of the DoD; and as the designated lead agency in support of FEMA for the Public Works and Engineering Emergency Support Function. Some examples of USACE's primary Emergency Management activities include: preparing for disasters; providing technical assistance related to flood fighting, mapping, and modeling; and inspecting and rehabilitating coastal and inland flood risk management projects that have been damaged or destroyed by floods.

USACE'S ORGANIZATION & OPERATION

While largely composed of civilians, USACE operates as part of the U.S. Army and has both military and civilian leadership that operate in tandem. It is an organization of thousands of dedicated civilian and military employees representing over 100 different professional engineering, scientific, environmental, and managerial specialty areas.

The military leadership operates through a chain of command that provides a direct link within the hierarchy of the U.S. Army, USACE Headquarters, regional Division offices, and local Districts. The Headquarters, Division, and District offices are generally organized in the same way: executive leadership at all levels rests with a military commander supported by a senior civilian program manager or director.

The USACE Commanding General and Chief of Engineers is located at the USACE Headquarters (HQUSACE) in Washington D.C. Reporting to HQUSACE are nine Division offices, also known as Major Subordinate Commands (MSCs). Each Division office oversees multiple District offices within its Division boundaries.

Divisions serve as the regional USACE interface with other regional agencies and organizations within their boundaries. The Districts' Civil Works Programs are responsible for conducting and completing assigned civil works studies, projects, and programs within their respective areas of responsibility. District boundaries are based on watersheds, and thus may not correspond directly with state or other governmental boundaries.

In addition to the nine Division offices, USACE also operates a number of other organizations including specialized labs and research branches such as the Army Geospatial Center (Alexandria, VA), the Engineer Research & Development Center (Vicksburg, MS), the Institute for Water Resources (Alexandria, VA), and the Marine Design Center (Philadelphia, PA).

Need Help Answering Questions?

The online location map for Headquarters, Divisions, Districts, and other organizations includes hyperlinks with specific information about each office. You can also find USACE offices using your favorite search engine.

https://www.usace.army.mil/Locations

USACE REGIONS

Office of the Assistant Secretary of the Army for Civil Works

The USACE Commanding General and Chief of Engineers reports to the Assistant Secretary of the Army for Civil Works (ASA(CW)). The ASA(CW) is appointed by the President, confirmed by the U.S. Senate, and establishes policy direction and provides supervision of the Department of the Army functions relating to all aspects of the USACE Civil Works Program. The Office of the ASA(CW) represents USACE's interests to the Administration, and represents the Administration's interests to USACE in:

- The annual legislative program, which usually includes recommended authorizations to conduct studies and construct projects;
- The development of the annual Civil Works Program budget included in the President's Budget submission to Congress, which includes requests to fund selected studies and projects;
- The annual appropriations process, providing operations and maintenance and project-based funding for the Civil Works Program; and
- Providing policy direction and interpreting policy guidance on specific USACE studies, projects, and programs.

U.S. Army Corps of Engineers Headquarters (HQUSACE)

At HQUSACE, the Chief of Engineers is the Commanding General of the Corps of Engineers. Reporting to the Chief of Engineers, the Director of Civil Works is the senior civilian leader overseeing the Civil Works Program, and the Deputy Commanding General for Civil and Emergency Operations is the senior military leader overseeing the Civil Works Program.

HQUSACE is responsible for organizational leadership and management of the programs and resources of the agency. It ensures that policy established by the ASA(CW), including associated USACE interpretive policy and guidance on specific projects and programs, is applied to all phases of project development. HQUSACE staff also monitor and provide guidance to the Divisions and Districts; provide progress reports to the ASA(CW); support and help the ASA(CW) to work with other agencies and organizations; and, together with the ASA(CW), provide requested testimony to Congress in support of the Civil Works Program and the Administration.

Regional Divisions

Division leadership rests with the military Division Commanders, sometimes referred to as Division Engineers. The Divisions are the regional offices responsible for the supervision and management of their subordinate Districts. Divisions are also responsible for efficient use of personnel and funds, ensuring that the Districts' activities are compatible with policy, and monitoring and reporting to HQUSACE on progress. Divisions serve as the regional interface with other regional agencies and organizations within their boundaries.

Local Districts

The Districts are led by military District Commanders, sometimes referred to as District Engineers. The Districts are the local offices responsible for conducting and completing their assigned civil works studies, projects, and programs.

With their focus on implementation, the Districts represent "one door to the Corps." Large regional projects that cross state lines or District boundaries will be managed by a single District and include multidisciplinary team members from multiple USACE offices.

PARTNERING TO DEVELOP A CIVIL WORKS PROJECT

NON-FEDERAL PARTNERS

In most cases, non-Federal interests will be both a partner with, and client to, USACE. We will work together to meet the needs of the local community and Nation.

Throughout this Guide, non-Federal interests that are contractual or cost-sharing partners with USACE to plan and deliver a civil works project may also be referred to as "sponsors."

USACE works hand-in-hand with non-Federal partners throughout the country to investigate water resources and related land problems and opportunities and, if warranted, develop projects that would otherwise be beyond the sole capability of the non-Federal partner(s). Study and project non-Federal partners are States, Tribes, county or local governments, or agencies that are interested in partnering with USACE to participate in civil works projects.

These partnerships are multifaceted, and vary by the scope and scale of the project being developed. The development of a civil works project can be a complex undertaking and requires a successful partnership and a contractual agreement between USACE and the non-Federal study or project partner. In contrast, as a technical services client, a non-Federal partner's engagement with USACE may be limited in scope and duration.

USACE civil works water resources activities are initiated by non-Federal partners or potential non-Federal partners, authorized by Congress, funded by Federal and non-Federal partners, and typically constructed by private contractors supervised by USACE. A civil works project partnership between USACE and a non-Federal partner progresses through four phases: feasibility study (planning); preconstruction, engineering, and design (PED); construction; and, once project construction is complete, operation, maintenance, repair, replacement, and rehabilitation (OMRR&R). Most civil works projects – from planning through construction – are cost-shared between the Federal Government and a non-Federal partner or partners. With the exception of navigation projects, the non-Federal partner is generally responsible for the OMRR&R phase of the project.

Project Delivery Team

Each individual civil works study or project will have a Project Delivery Team (PDT) led by a project manager. PDTs are typically made up of members from the USACE planning, engineering, construction, operations, and real estate functions that bring needed expertise for that specific study or project. Other USACE personnel from branches and divisions of the District are needed from time-to-time to perform certain functions, like assisting with contracts, scheduling tasks, and funding activities.

Non-Federal partner (also referred to as the non-Federal sponsor) representatives are also members of the PDT. The sponsor is expected to contribute knowledge and perspectives on local conditions, agencies' and public views, the environmental setting, potential solutions to the water resources problem(s), and other information. While some PDT staff changes are expected as a project moves from planning, to PED, to construction, certain sponsor and USACE representatives will remain involved and play a key role throughout the entire project development process.

The PDT, including the non-Federal partner(s), works closely with other Federal, State, Tribal, and local government agencies, businesses, interest groups, homeowners, and other members of the public.

NON-FEDERAL PARTNER (SPONSOR) PROJECT DELIVERY TEAM ROLE

- *Participate as active PDT member(s).*
- *Provide funding and/or in-kind contributions that amount to the statutory share of financial costs of studies and projects.*
- *Meet agreed-upon budget, scope, quality, and schedule reporting requirements.*

Non-Federal Partner Roles and Responsibilities

A partnership combines the resources and expertise of USACE and the non-Federal partner to address water resources problems. Most USACE water resources studies and projects require non-Federal partners to share the cost of the study and the project. Sponsoring a study or project requires a formal, legal agreement that is binding, but not irreversible. Cost-sharing requirements vary by the type of problem (i.e., USACE mission area) as well as the phase of the effort (e.g., planning phase, design, or construction) and are specified by Congress. The local share generally ranges from 25 percent to 50 percent of the cost depending on the project type and the phase of project development, although some elements must be fully funded by the non-Federal partner. Sponsors may also provide negotiated "in-kind contributions" for a portion of the required cost share.

Most study and project partnerships are initiated via a request to the local USACE District office. A project manager in the District will work with an interested non-Federal partner to learn about the water resources problem and make an initial determination whether USACE has a program under which it could be considered. This is often followed by an in-person meeting and site visit to gather more information, and to discuss the details and requirements of a partnership.

If it is determined that the problem is appropriate for USACE involvement, the non-Federal partner and the USACE team will work together to define the actions to be taken, e.g., technical data needed, public involvement, or next steps in the process to advance a civil works study or project.

CONGRESSIONAL COORDINATION: AUTHORIZATION & APPROPRIATIONS

Before any USACE civil works project or study can begin, three steps must take place: 1) Congress establishes the authority for USACE to conduct the study; 2) the study is included in the President's Budget, indicating Administration support for addressing that specific study; and 3) Congress provides Federal appropriations to initiate the study or project. Each are separate actions which must happen sequentially and therefore, can take several years. There are, of course, exceptions – emergency authorities and appropriations by Congress following a large scale national disaster can enable USACE and non-Federal partners to move forward on studies or projects expeditiously.

Congress provides permission to undertake a study by providing "study authority" to USACE to evaluate the feasibility of a recommended solution (project) for a specific water resources problem. The local District can identify if there may be an existing study authority available to meet specific water resources needs. New study authorizations can be provided by a House of Representatives or Senate committee resolution, in the periodic USACE authorization laws known as "Water Resources Development Acts" (WRDAs), or, less commonly, via another legislative vehicle.

STUDY AUTHORITIES

There are many existing study authorities that cover much of the Nation's water resources needs. Check with your local District for assistance to determine what authority may be already available in advance of outreach to Congressional interests.

Congress also provides permission for USACE to undertake construction of a water resources project by providing "project authority" for a specific water resources project. Generally, Congress will not provide project authority until a completed study results in a recommendation to Congress of a water resources project, conveyed via a Report of the Chief of Engineers (Chief's Report) or Report of the Director of Civil Works (Director's Report). Without project authority, USACE cannot invest Federal dollars to construct a water resources project, even if it has been studied by USACE and recommended for authorization.

There are also several standing authorities or "continuing authorities" that cover both the study and construction authorities for certain types of water resources development projects under a total project cost threshold.

The recommended first step for any community considering a partnership on a USACE civil works project is to contact the local District office to determine whether there is already a study or project authority associated with the problem, and identify the opportunities that may exist to address the issue.

For those projects that do not fall either under an existing study or project authority or a standing authority, such as the Continuing Authorities Program (CAP) or the Tribal Partnership Program (TPP), potential non-Federal project or study partners may submit their requests for study and project authorization to the Corps for inclusion in the Annual Report to Congress on Future Water Resources Development (see Section 7001 of WRRDA 2014, as amended). Proposals are included in the report if they meet five criteria outlined by Congress. Since this process has begun in 2015, Congress has used the Annual Report to Congress to identify areas where new study and project authorities are required.

Budgetary Process

Once authorized, a study or project must have Federal funding before it can begin. Federal funding from the annual USACE appropriations will not be available for a specific study or project until the authorized study is

included in either the President's Budget, which is submitted to Congress each February, or the Administration's work plan, which is submitted by the Office of Management and Budget.

The President's Budget categorizes requested funds by the phase of the civil works project. Funds for all pre-construction activities, including feasibility studies and preconstruction, engineering and design (PED) up to the award of the first construction contract are "Investigation" funds. "Construction General" funds are then provided to complete engineering and design after award of the first construction contract and cover all remaining project construction and implementation requirements. "Operations and Maintenance" (O&M) funds are allocated for the operations and maintenance of all USACE-owned and operated projects, along with the Inspection of Completed Works program.

USACE is always looking at least two fiscal years ahead in the budgetary process. Therefore, a newly authorized study may not appear in the President's Budget in the Investigations category for at least two years. Similarly, a newly authorized project may take years before it is included in the Construction General budget.

Federal Funding: Annual Appropriations Processes

Congress provides funding for USACE civil works studies and projects through the annual Energy and Water Development Appropriations Act. This Act is one of several appropriations bills that Congress passes each year to fund the operations of the Federal Government. Other agencies are also funded by the Energy and Water Development Appropriations Act, including the Department of Energy, Department of Interior, and other agencies and commissions. Congress typically describes the studies and projects they want USACE to work on in the report attached to the appropriations bill, and requires USACE to develop a work plan that describes how the Federal funding will be allocated to specific projects and programs.

THE FEASIBILITY STUDY

Often referred to as the first step toward construction of a USACE civil works water resources development project, the feasibility study is the disciplined process under which USACE planners work with non-Federal study sponsors and multi-disciplinary study teams to identify water resources problems, formulate and evaluate solutions, resolve conflicting interests, and prepare recommendations. A feasibility study is used to establish the Federal interest, engineering feasibility, economic justification, and environmental acceptability of a recommended water resources project. A feasibility study determines if Congressional authorization and USACE implementation of a specific civil works project are warranted.

Feasibility studies are generally cost-shared equally between USACE and a non-Federal partner, and reflect the shared responsibility for management and protection of the Nation's water resources. The non-Federal share may be in the form of 100 percent work-in-kind in lieu of a partial or complete cash contribution.

The feasibility phase concludes with either the finding of no Federal interest or the recommendation for the authorization of a specific water resources project. The analyses that support the recommendation are documented in a decision document. The final feasibility report will include documentation required by the National Environmental Policy Act (NEPA) and other applicable laws and guidance. The recommended project and the technical and engineering appendices in the decision document will lay the groundwork for the preconstruction, engineering and design (PED) phase of the project.

The recommendation to Congress for authorization of a water resources project will be made by the Chief of Engineers in the form of a "Chief's Report." After the Chief's Report is signed, the ASA(CW) will officially transmit the Chief's Report to Congress along with the views of the Administration.

Note that there are other USACE post-authorization decision documents that follow a similar process to the feasibility study process. For example, General Reevaluation Reports are developed to affirm, reformulate, or modify a previously completed feasibility study and the resulting recommended water resources project, or portions of the project. Although these reports are not technically "feasibility studies," the process they follow is extremely similar.

Non-Federal partners are also authorized to independently undertake feasibility studies of proposed projects for submission directly the ASA(CW) and transmission to Congress. The Secretary of the Army reviews the feasibility study and the process under which the study was developed to determine the following: (1) whether the study complies with Federal laws and regulations, and (2) whether the project is feasible. The Secretary of the Army can also provide recommendations concerning the plan or design of the project, as well as set additional conditions that will be required for construction of the project. The local USACE District can provide valuable advice for a non-Federal partner interested in this path to a civil works project.

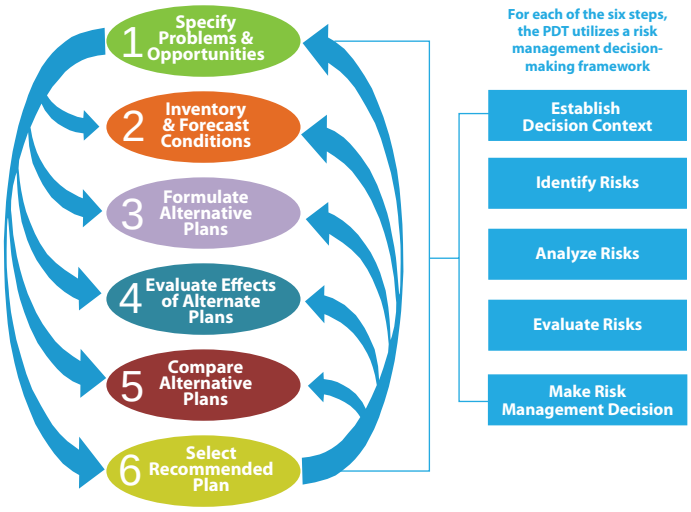
Planning Process

USACE follows the six-step planning process defined in the *Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies* developed in the 1980s to guide the formulation and evaluation of water resources projects. This process is a structured approach to problem solving which provides a rational framework for sound decision making.

The six-step process is used for all USACE feasibility studies, regardless of scale. This process is typically presented and discussed in a sequential manner for ease of understanding, but usually requires multiple, and sometimes

THE SIX STEP PLANNING PROCESS

The USACE Planning process is both sequential (left side of the diagram) and iterative (right side). Past steps can be revisited as more information is developed and more decisions are made during the study.



concurrent, iterations to formulate efficient, effective, complete, and acceptable plans, and to identify a single recommended plan.

USACE applies the six-step planning process within a risk management decision-making framework, so teams are better able to identify and communicate the way they use information and reduce uncertainty to inform decisions through iterations of the planning process. The approaches and techniques of planning provide USACE and its non-Federal partners with tools to efficiently reduce uncertainty by gathering the evidence needed to make the next planning decision and to manage the risks that result from doing so without more complete information.

SMART PLANNING

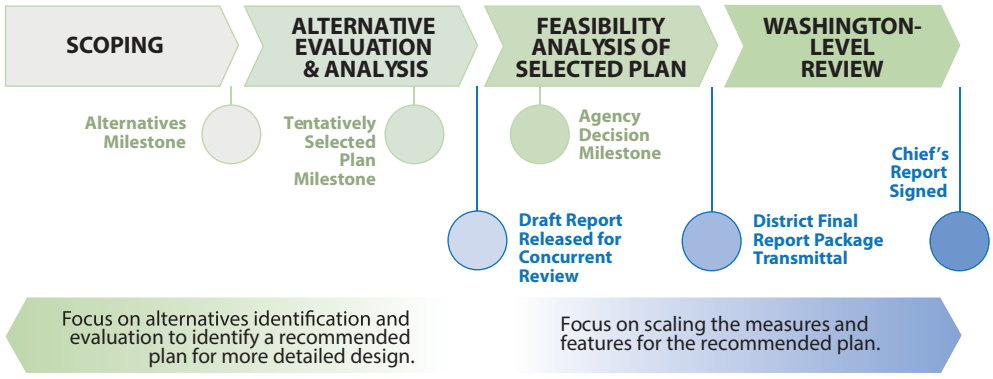
*To emphasize the need to make risk-informed decisions throughout the planning process, USACE implemented **SMART (Specific, Measurable, Attainable, Risk-Informed, Timely) Planning** in 2012 to conduct civil works feasibility studies for water resources development projects. The SMART Planning process relies on a structured multi-step risk-informed decision-making process, and is intended to improve and streamline feasibility studies (and other studies), reduce cost, and expedite completion.*

Initiating a Planning Study

No work may begin on a study until execution of a cost-sharing agreement between USACE and the non-Federal sponsor occurs. The USACE model feasibility cost-sharing agreements (FCSAs) for projects that will require specific authorization are based on completion of the study within three years, using no more than a total combined funding and in-kind contributions amount of $3 million for both the Federal and non-Federal share. The three-year timeline begins with the signing of the FCSA and ends with a signed decision document (such as a Chief's Report) or the termination of the study. Consideration of exemptions to these time and cost limits is part of the USACE feasibility decision-making process in which risk and uncertainty, scope, schedule, and funding. As a general rule, exemptions should only be required for the most complex studies. The three-year timeframe and funding limit for a feasibility study do not apply to studies conducted under the Continuing Authorities Program.

Once the FCSA has been signed, the PDT determines the initial framework for how decisions will be made and communicated, how risks will be managed, and what level of detail of information is needed to support the decision-making process. Adjustments may be made to the scope, schedule, and budget as a result of early PDT interaction, leading to agreement among principal parties on realistic expectations about study outputs, resource commitments, timeframe, and affirmation that the study can be completed within three years and for

SMART FEASIBILITY STUDY PROCESS — *KEY DECISION & PRODUCT MILESTONES*



Note: The duration of each phase of a feasibility study is unique for each study. Not to scale.

no more than $3 million. Throughout the study, the PDT will communicate with its Division office and HQUSACE if adjustments are needed that impact schedule and funding.

The USACE project manager works with the non-Federal partner and other PDT members to develop a mutually acceptable project management plan that outlines tasks, costs, schedule, and responsibilities (the what, when, and how). The resulting project management plan is signed by the study sponsor and USACE representatives and serves as a road map for the conduct of a study, and, potentially, for the related design and construction of a project.

The nature of planning is such that it is accepted that circumstances change based on new information, and decisions made leading up to that point in the study may need to be revisited. It is expected that the PDT and sponsor may identify changes to study scope, schedule, and budget during scoping and other stages of the study. Therefore, the project management plan is regularly updated and maintained throughout the study.

From Scoping to Washington-level Review

During the first months of a study, the PDT is expected to complete at least one iteration of the six-step planning process to formulate and evaluate an array of distinctly different alternative plans, and a rough order of magnitude of costs, benefits, and environmental impacts using existing and available information. The PDT coordinates with representatives from its Division and HQUSACE to affirm that there is Federal interest in developing a recommendation to address the water resources problem, and a representative array of distinctly different solutions has been formulated and will be evaluated.

Early coordination with Federal and State resource agencies, such as the National Marine Fisheries Service and / or U.S. Fish and Wildlife Service, will inform the study scope and path forward, as well as jump start Fish and Wildlife Coordination Act activities, Endangered Species Act (ESA) compliance, and other environmental and cultural resources activities. Within 90 days of study initiation, the PDT will convene an interagency meeting of all Federal, Tribal, and State agencies that may be required by law to conduct or issue a review, analysis, or opinion on, or to make a determination concerning a permit or license for the study. If the study will require an Environmental Impact Statement (EIS), the PDT's letter inviting the relevant agencies to the meeting will request that they serve as either a cooperating agency or a participating agency, if applicable.

The PDT will also hold a public scoping meeting early in the process, providing another opportunity to define the scope of the study and consider external views on the water resources problem(s).

After a focused array of alternatives is identified, the PDT continues to use iterations of the risk-informed six-step planning process, and evaluates and compares the array of distinct strategies for achieving the water resources objectives in the study area against the forecasted "future without project" condition. The result is determination

of Federal interest in recommending a water resources project and the identification of a "Tentatively Selected Plan" (TSP), which may be either the "national economic development" (NED) or "national ecosystem restoration" (NER) plan identified as reasonably maximizing the economic or ecosystem restoration benefits, respectively, of the project compared to its costs. At this point, a "Locally Preferred Plan" (LPP) may also be identified. An LPP is a plan that is preferred by the non-Federal sponsor over the NED or NER plan, and is sometimes recommended for project authorization instead of the NED or NER plan, with caveats. The analysis to determine and describe the TSP is documented in the draft feasibility report. The PDT usually takes 12 to 18 months to gather the necessary information, conduct required analyses, and develop the draft feasibility report.

The draft feasibility report is a pre-decisional document. The plan presented in the study is, at this point, the tentatively selected plan; it is not yet the recommended plan. The draft feasibility report documents the process to date, but the concurrent public comment, technical review, and policy review of the draft feasibility report may result in a change to the TSP. In addition, there are technical and policy elements that are required for the final feasibility report that will not yet be completed when the draft report is released for review.

The PDT considers all public, technical, and policy comments on the draft report as it moves forward to complete additional design and analyses of the TSP to reduce risk and uncertainty with cost data, engineering effectiveness, environmental impacts, and economic benefits. The PDT will also analyze design requirements to assure functionality of the recommended project and life safety.

There are several procedural and policy requirements that must be met by the PDT during the development of the final feasibility report and NEPA documentation. During this period, USACE and the sponsor continue to document environmental compliance activities under relevant laws and policies including NEPA, the National Historic Preservation Act, the Fish and Wildlife Coordination Act, the ESA, the Clean Water Act, the Clean Air Act, and others.

The District Commander's signed feasibility report represents the District's response to the study authority with the recommendation of a project to address the water resources problem. Once the District Commander signs the recommendations in the final feasibility report, the District will forward the final report, final NEPA document, and related materials to the applicable Division and/or HQUSACE for final USACE policy review, final NEPA review, and State & Agency review (for studies that lead to a Chief's Report).

The Chief's Report

The recommendation to Congress for authorization of a water resources project will be made by the Chief of Engineers in the form of a "Chief's Report." If a project has already received congressional authorization pending identification of an acceptable solution during the feasibility phase, the final recommendation may be made by the Director of Civil Works in a "Director's Report," depending on the project and study.

The Chief's Report provides Congress with a succinct recommendation of a project for authorization and assurance that the process to develop the recommendation is consistent with Administration policy and all applicable laws. After the Chief's Report is signed, the ASA(CW) will officially transmit the Chief's Report to Congress, along with the views of the Administration.

PRECONSTRUCTION, ENGINEERING & DESIGN (PED)

During preconstruction, engineering and design (PED), USACE and the non-Federal partner(s) complete the detailed engineering, technical studies, and design needed to begin construction of the project as recommended in the planning decision document, including engineering design documentation and the plans and specifications ("Plans and Specs") of the first significant project construction contract.

PED may begin after the District Engineer's transmittal of the final feasibility report, once PED funds have been appropriated by Congress and a Design Agreement is executed with the non-Federal sponsor. The costs of PED activities are usually shared using the same percentages as construction of the project based on the mission area (e.g., flood risk management, navigation, ecosystem restoration). This is different than the typical 50%-50% cost-sharing of feasibility studies.

PED activities usually require several years to complete, and are a critical engineering component to prepare for project construction. PED activities continue under the original study authorization and may begin before congressional project authorization and construction funding of the project are received. However, construction may not begin until the project has been authorized and construction funding has been appropriated.

USACE and its non-Federal partners use the more detailed engineering design documentation developed during PED as a resource to draft and negotiate the Project Partnership Agreement (PPA) for project construction.

PROJECT CONSTRUCTION

USACE must be congressionally authorized to participate in the construction or modification of a water resources project. The authorization can be project-specific, programmatic, or general. While most USACE project authorizations are included in Water Resources Development Acts, some construction projects are undertaken under other authorities. Your local District can help determine if there is existing authority for the construction or modification of a water resources project.

USACE's ability to act on an authorization also requires congressional funding. Once a project is authorized, appropriations are sought through annual Energy and Water Development Appropriations Acts. Once a project has secured Federal funding, the non-Federal sponsor and USACE can sign a Project Partnership Agreement (PPA). The PPA outlines Federal and non-Federal responsibilities for construction and for OMRR&R of the project once construction is complete.

After the PPA is signed, the non-Federal partner can begin acquisition of the real estate required for project implementation, as established during the feasibility study. Non-Federal partners are responsible for providing all lands, easements, rights-of-way, relocations, and disposal/borrow areas (LERRD) required for construction, operation, and maintenance of the project, and may receive credit towards cost-share responsibilities for costs associated with acquiring the LERRD necessary to implement a project. Typically, the construction is then performed by private contractors with oversight by USACE construction staff.

After the project has completed its final construction contract, a final inspection will be conducted by USACE to ensure that the project has been completed as designed. If the project will be operated and maintained by the non-Federal partner, USACE transfers the project to the sponsor along with an operation and maintenance manual.

PROJECT OPERATION & MAINTENANCE

Project operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) requirements are initially identified during the feasibility phase and considered in the economic analysis when weighing project costs and benefits. Responsibility for OMRR&R is described in the feasibility report and is outlined in the construction PPA. Responsibilities for OMRR&R are based on the project purpose. If the non-Federal partner will eventually operate and maintain the project, USACE will prepare an Operation and Maintenance manual. During the lifetime of the project, the non-Federal partner completes operations reports on a regular basis, and USACE will periodically inspect the project through the Inspection of Completed Works program.

In most cases, costs for OMRR&R for newly completed projects are 100 percent sponsor costs. Exceptions to this are for commercial navigation projects, where USACE usually pays 100 percent of OMRR&R costs for projects with depths to 50 feet, and 50 percent of increased OMRR&R costs for depths in excess of 50 feet.

TRIBAL PARTNERSHIP PROGRAM

Most Districts have a Tribal Liaison. Contact a local District office for additional assistance or use the following link: Tribal Nations Community of Practice

USACE is authorized to study and determine the feasibility of carrying out projects that will substantially benefit Indian Nations. The Tribal Partnership Program (TPP) provides USACE with broad authorities to assist with water resources projects that address economic, environmental, and cultural resource needs through studies including flood risk management, environmental restoration, and protection and preservation of natural and cultural resources. Other opportunities for TPP involvement include watershed assessments and planning activities as well as other projects as the Secretary of the Army, in cooperation with Indian Tribes and the heads of other Federal agencies, determines to be appropriate. The TPP also includes an "Ability to Pay" provision for studies and projects carried out under its authorities.

Upon request, USACE will cooperate with Tribes to study water resources problems primarily located within Tribal lands. Because the TPP is a programmatic authority, specific Congressional authorization is not needed to initiate a feasibility study. After a Tribe requests a study, a 50 percent Federal / 50 percent Tribal cost-shared feasibility study is initiated. The Tribal cost share may be in the form of 100 percent work-in-kind. During the feasibility study, potential solutions are identified, the costs, benefits, and environmental impacts are analyzed, and a recommended project is developed.

If the Federal cost share of the recommended project is below $12,500,000, USACE can carry out the project design and implementation without specific Congressional authorization. If the Federal cost share is above $12,500,000, Congressional authorization is required. Depending on the type of project to be developed, different cost-sharing responsibilities for the Tribe and Federal Government will apply. A cost-share waiver up to $482,000 may be applied to any TPP project that recommends project implementation (i.e., not a watershed study).

CONTINUING AUTHORITIES PROGRAM

In addition to project-specific authorities and the Tribal Partnership Program, there are nine additional "continuing authorities" to plan, design, and construct water resources projects under a certain cost threshold. For many communities, if a water resource problem can be addressed by an authority in the Continuing Authorities Program (CAP), the entire project may be implemented more expeditiously. Studies conducted under CAP authorities are approved at the Division level. CAP authorities and cost limits, however, are generally insufficient for particularly large or complex water resources problems.

Local governments and agencies seeking assistance can request that USACE investigate potential water resource issues that may align with a particular CAP authority. USACE will review a non-Federal partner's request to determine if it is aligned with an existing authority or whether the request would require additional Congressional authorization. Following an initial site visit to inform the determination if a project is potentially eligible to be included as a CAP project, the USACE Headquarters CAP manager will determine if and when the proposed new CAP project can be funded and started. Once approved, the District requests funds (up to $100,000 initially) to prepare a Federal Interest Determination (FID) on the advisability of continuing work consistent with the principles, priorities, and constraints of the specific CAP authority, and initiates the feasibility phase, which is then followed by a design and implementation phase. The first $100,000 for a CAP feasibility study is entirely federally funded, and then cost-shared above that amount for costs to complete the study.

Both phases of a CAP project are cost-shared between the Federal Government and the non-Federal partner. Certain territories of the U.S., including Puerto Rico and the U.S. Virgin Islands, as well as Tribes, are eligible for a reduction of the non-Federal cost-share requirement.

Timelines vary, but the feasibility phase of a CAP project is typically completed within two years. Cost and duration of the design and implementation phase of a CAP project will vary based on the size and complexity of the project.

CAP authorities are described in the following table.

CONTINUING AUTHORITIES PROGRAM

SECTION	AUTHORITY	AUTHORITY PURPOSE	FEASIBILITY COST SHARE DIVISION (Fed/non-Fed)	GENERALIZED DESIGN AND IMPLEMENTATION COST SHARE DIVISION (Fed/non-Fed)[1]	MAXIMUM FEDERAL EXPENDITURE PER PROJECT[3]	NATIONAL PROGRAM LIMIT (Per FY)[3]
14	**Emergency Stream Bank and Shoreline Protection** *(Flood Control Act of 1946, as amended, or 33 USC 701r)*	Emergency stream bank stabilization and shoreline protection for public works and non-profit public services in imminent danger of failing (e.g., roads, bridges, hospitals, schools, treatment plants). Private properties/facilities not eligible.	1st $100k Fed; 50/50 cost share for any remaining costs	65/35 [2]	$10,000,000	$25,000,000
103	**Beach Erosion and Hurricane and Storm Damage Reduction** *(Rivers and Harbors Act of 1962, as amended, or 33 USC 426g)*	Protection of utilities, roadways and other public infrastructure, private properties, and facilities against damages caused by storm-driven waves and currents (e.g., construction of revetments, groins, and jetties; may also include periodic sand replenishment).	1st $100k Fed; 50/50 cost share for any remaining costs	65/35	$10,000,000	$37,500,000
107	**Navigation Improvements** *(Rivers and Harbors Act of 1960, as amended, or 33 USC 577(a))*	Plan, design, and construct small projects for commercial navigation improvements to ensure safe and efficient use of navigable waterways (e.g., channel dredging, widening of turning basins, breakwaters, jetties).	1st $100k Fed; 50/50 cost share for any remaining costs	Varies, based on depth	$10,000,000	$62,500,000
111	**Shore Damage Prevention or Mitigation of Damages Caused by Federal Navigation Projects** *(Rivers and Harbors Act of 1968, as amended, or 33 USC 426i)*	Investigate and construct projects for the prevention or mitigation of shoreline erosion damages to public and privately owned shores along the coastlines when the damages are a result of a Federal navigation project.	Shared in same proportion as the original project causing damage	Shared in same proportion as the original project causing damage	$12,500,000	N/A
204	**Beneficial Uses of Dredged Material** *(Water Resources Development Act of 1992, as amended, or 33 USC 2326(g))*	Use Regional Sediment Management concepts, restore, protect or create aquatic and wetland habitats in connection with construction maintenance dredging of an authorized Federal navigation project. Base disposal plan is least costly for typical disposal of dredged material.	100/0	100/0 for base disposal plan 65/35 for costs beyond base disposal	$10,000,000	$62,500,000
205	**Flood Risk Management** *(Flood Control Act of 1948, as amended, or 33 USC 701s)*	Local protection from flooding by non-structural measures (e.g., flood warning systems or flood proofing) or by structural flood risk management features (e.g., levees, diversion channels, or impoundments).	1st $100k Fed; 50/50 cost share for any remaining costs	65/35[2]	$10,000,000	$68,500,000
206	**Aquatic Ecosystem Restoration** *(Water Resources Development Act of 1996, as amended, or 33 USC 2330)*	Restore degraded aquatic ecosystems and wetland habitats to improve the quality of the environment.	1st $100k Fed; 50/50 cost share for any remaining costs	65/35	$10,000,000	$62,500,000
208	**Snagging and Clearing for Flood Damage Reduction** *(Flood Control Act of 1954, as amended, or 33 USC 701g)*	Channel clearing and excavation, with limited embankment construction by use of materials from the clearing operation only.	1st $100k Fed; 50/50 cost share for any remaining costs	65/35[2]	$500,000	$7,500,000
1135	**Project Modifications for Improvement of the Environment** *(Water Resources Development Act of 1986, as amended, or 33 USC 2309a)*	Modifications of USACE-constructed water resources projects to improve the quality of the environment. Also, restoration projects at locations where an existing USACE project contributed to the degradation.	1st $100k Fed; 50/50 cost share for any remaining costs	75/25	$10,000,000	$50,000,000

[1] *For structural flood risk management purpose, non-Federal share is 35% up to 50% (based on cost of LERRDs), plus 5% must be in cash*

[2] *For non-structural flood risk management purpose, non-Federal share is limited to 35% with no cash requirements*

[3] *Per project limits and national program limits are subject to change; program funds' availability are subject to annual appropriations*

WATERSHED STUDIES

Watershed studies allow USACE to examine the water resources needs of river basins and watersheds of the United States in consultation with Federal, State, Tribal, interstate, and local governmental entities. Non-Federal partners may engage with USACE in watershed studies or assessments, using comprehensive and strategic evaluations and analyses that include diverse political, geographical, physical, institutional, technical, and stakeholder considerations. Watershed planning addresses water resources needs from any source, regardless of agency responsibilities, and provides a shared vision of a desired end state that may include recommendations for potential involvement by USACE, other Federal agencies, or non-Federal interests.

The overarching USACE strategy for watershed studies is to work in partnership with other interests on providing a shared vision with a holistic focus on water resource challenges and opportunities that reflect coordinated development and management of water and related resources. Key components of an effective watershed planning process include:

- Determining problems, needs, and opportunities in the watershed by involving non-Federal partners, water and related land resources interests (stakeholders), resource agencies, and the public.
- Preparing a collaborative inventory and future forecast of relevant water and related land resources consistent with the needs of the study, such as: land use; multiple agency programs and capabilities; jurisdictional boundaries; demands and needs within the watershed; existing models; existing mapping and data; water supply and treatment systems; water rights; transportation systems; or any inventory consistent with the needs of the study.
- Developing management measures based on a feature or activity at a site which address one or more of the planning objectives. Measures will be screened initially by using constraints, expert judgment, metrics, and specific screening criteria to focus on those that will contribute towards meeting the planning objectives.
- Providing a clear description of alternative approaches to address identified problems and needs, emphasizing alignment of actions of Federal, Tribal, State, interstate, and local governmental entities, with an explanation of expected outcomes resulting from combinations of measures and actions considered.
- Evaluating the alternative strategies, in consultation with non-Federal partners, to assess how effectively the strategies address the identified problems while focusing on collective values, missions, and the shared vision.
- Comparing the strategies against one another, noting trade-offs between the strategies, and selecting the best suited strategy for meeting the watershed study goals and objectives.

Watershed studies may identify potential USACE civil works projects consistent with priority missions; however, this is not the primary consideration of watershed planning. Ultimately, watershed studies should inform multiple audiences and decision makers at all levels of government, and provide a strategic roadmap to inform future investment decisions by multiple agencies.

It is expected that a watershed study will be completed within three years, and is typically cost-shared 75 percent Federal and 25 percent non-Federal. Specifically-authorized watershed studies and comprehensive studies may have their own cost-share requirements. Interested non-Federal partners should engage with their local District to evaluate opportunities for ongoing or new watershed studies.

TECHNICAL ASSISTANCE PARTNERSHIP OPPORTUNITIES

Floodplain Management Services

The Floodplain Management Services (FPMS) program (authorized by Section 206 of the 1960 Flood Control Act, as amended) provides information on flood hazards to local interests, State agencies, Tribes, and other Federal agencies to guide floodplain development. The FPMS program addresses the needs of people who live and work in floodplains by helping them better understand flood hazards and the actions they can take to reduce property damage and prevent the loss of life caused by flooding. The program's objective is to foster public understanding of the options available to address flood hazards and promote prudent use and management of the Nation's floodplains.

FPMS program services are provided to State, Tribal, regional, and local governments at no cost, within program funding limits. When funding is available, USACE will work with the requesting organization to develop a scope of work and assemble the appropriate study team for the effort being requested. FPMS program services for other Federal agencies and private persons are provided on a cost-recovery or fee basis. USACE may also accept voluntarily contributed funds to expand the scope or accelerate the provision of services requested. All requestors are asked to furnish available field survey data, maps, historical flood information, etc. to help reduce the cost of services. Requests for assistance under the FPMS program should be submitted by an appropriate representative of a non-Federal partner to the local District and include the location and nature of the problem to be investigated.

The FPMS program provides a full range of information, technical services, and planning guidance and assistance on floods and floodplain issues that is needed to support effective floodplain management. Under the FPMS program, USACE can compile and disseminate information on floods and flood damages, including identification of areas subject to inundation by floods of various magnitudes and frequencies, and general criteria for guidance of Federal and non-Federal interests and agencies in the use of floodplain areas. FPMS activities include advice to other Federal agencies and local interests for their use in planning to address local flood hazards. Examples of FPMS technical services include the development or interpretation of site-specific data on obstructions to flood flows, flood formation, and timing; flood depths or stages; floodwater velocities; and the extent, duration, and frequency of flooding. USACE may also provide information on natural and cultural floodplain resources of note, and flood loss potentials before and after the application of floodplain management measures.

On a larger scale, FPMS general planning guidance provides assistance in the form of "special studies" on all aspects of floodplain management planning including the possible impacts of off-floodplain land use changes on the physical, socio-economic, and environmental conditions of the floodplain. Special studies can range from helping a community identify present or future floodplain areas and related problems, to a broad assessment of which various remedial measures may be effectively used. Some of the most common types of special studies include: floodplain delineation/flood hazard evaluation studies; dam break analysis studies; hurricane evacuation studies; flood warning/preparedness studies; regulatory floodway studies; comprehensive floodplain management studies; flood damage reduction studies; urbanization impact studies; stormwater management studies; flood proofing studies; and inventories of flood-prone structures.

Through the FPMS program, USACE can also prepare guides and pamphlets to disseminate to States, Tribes, local governments, Federal agencies, and private citizens to convey the nature of flood hazards and to foster public understanding of floodplain data and available options including flood proofing techniques, floodplain regulations, floodplain occupancy, natural floodplain resources, and other related aspects of floodplain management.

Planning Assistance to States

Typical PAS studies are only conducted at a planning level of detail and do not include detailed design for project construction. Implementation of the plan is the responsibility of the State, Tribe, or Territory.

The Planning Assistance to States (PAS) program (authorized by Section 22 of WRDA 1974, as amended) offers comprehensive planning and technical assistance. Any State, or group of States, may partner with USACE under the PAS program. Federally-recognized Tribes, U.S. Territories, non-profits or other non-Federal interests working with a State, and regional coalitions of governmental entities and institutions of higher education are also eligible non-Federal partners in the PAS program. In addition, qualifying federally-recognized Tribes, U.S. Territories, and Commonwealths are eligible to apply a waiver to part or all of the cost of a PAS study. Requests for assistance under the PAS program should be submitted by an appropriate representative of a non-Federal partner to the local District and include the location and nature of the problem to be investigated.

COMPREHENSIVE WATER RESOURCES PLANNING

Comprehensive water resources plans include planning for the development, utilization, and conservation of the water and related resources of drainage basins, watersheds, or ecosystems located within the boundaries of a state, including plans to comprehensively address water resource challenges such as the State Water Plan. Comprehensive plans can extend across state boundaries, provided both states agree.

Typical water resources problems and opportunities included in comprehensive state water resource planning efforts include flood risk management, water supply, water conservation, environmental restoration, water quality, hydropower, erosion, navigation, coastal zone protection, fish and wildlife, cultural resources, and environmental resources. These PAS water resources planning efforts do not result in a recommendation for a USACE civil works project.

Comprehensive planning activities through the PAS program are cost-shared (50% USACE, 50% non-Federal partner); the partner may provide voluntarily contributed funds in excess of its cost share. The non-Federal cost share for preparation of a state comprehensive water resources plan may be provided by funds or through the provision of services, materials, supplies, or other in-kind contributions.

TECHNICAL ASSISTANCE SUPPORTING STATE WATER RESOURCES MANAGEMENT PLANS

Technical assistance provided through the PAS program also includes support of planning efforts related to the management of state water resources, provision and integration of hydrologic, economic, or environmental data, and analysis in support of the state's water resources management and related land resources development plans. These plans are often identified in the State Water Plan or other water resources management related planning documents, such as state hazard mitigation, preparedness, response, and recovery plans and plans associated with changing hydrologic conditions, climate change, long-term sustainability, and resilience. This technical assistance cannot include the preparation of site-specific designs or construction.

Technical assistance activities through the PAS program are only conducted at a planning level of detail and are cost-shared (50% USACE, 50% non-Federal partner). The non-Federal partner may provide voluntarily contributed funds in excess of its cost share. The cost share for technical assistance must be provided by funds, not in-kind contributions. Some financial credit is available for qualifying federally-recognized Tribes and U.S. Territories.

PARTNERING IN TIMES OF NEED: EMERGENCY RESPONSE AND EMERGENCY MANAGEMENT

Each year, USACE responds to domestic and world-wide disasters. In the event of a natural or man-made disaster, USACE is prepared and ready to respond as part of the Federal Government's unified national response to disasters and emergencies. In any disaster, USACE's top priorities are to save lives and protect property, and to support the Federal Government's immediate emergency response priorities.

USACE has many subject matter experts that support the Department of Defense and other Federal agencies in response to disasters around the world in areas such as emergency management, flood risk management, landslides, construction, urban search and rescue, oceanography, hydrology and hydraulics, and engineering.

FEMA Support

Domestically, USACE supports the Department of Homeland Security and the Federal Emergency Management Agency (FEMA), the Nation's primary disaster response agency. USACE assists FEMA by coordinating Federal public works and engineering-related support, as well as providing technical assistance, engineering expertise, and construction management to prevent, prepare for, respond to, and/or recover from domestic incidents or disasters.

Under the National Response Framework, USACE is assigned as the primary agency for the Public Works and Engineering Emergency Support Function, which establishes responsibilities and expertise beyond its three primary civil works mission areas. USACE Emergency Operations responsibilities include conducting needs assessments, debris management, providing emergency power to public facilities, emergency infrastructure assessments, temporary housing, temporary roofing, critical public facility restorations, demolition or structural stabilization, and technical assistance.

Public Law 84-99 and the Flood Control and Coastal Emergencies Act

During natural disasters and other emergencies, USACE can respond under its own emergency management authority, Public Law 84-99 (PL 84-99) authorized by the Flood Control and Coastal Emergency Act (33 U.S.C. 701n) (69 Stat. 186)). Under PL 84-99, USACE can undertake a variety of activities. Some activities require a Project Cooperation Agreement (PCA) between USACE and non-Federal partners:

- Disaster Preparedness, ensuring that USACE activities are available to respond to a broad range of disasters and emergencies, including coordination, planning, training, and exercises with key local, State, Tribal, and Federal stakeholders/partners under USACE statutory authorities and in support of FEMA. For example, disaster preparedness authorities provide for the purchase and stockpiling of critical supplies and equipment for flood fighting efforts. Levees and other flood risk management projects are inspected to identify issues that may keep the project from providing reliable design-level flood risk management during the next flood or coastal storm.

- Advance Measures Assistance may be provided in order to prevent or reduce damages when there is an imminent threat of unusual flooding. Technical assistance may be provided when there is a significant potential that an imminent threat of unusual flooding will develop, and is provided to Tribes, States, and local communities to help them prepare for the threat. Advance Measures projects are temporary projects that prevent or reduce impacts of floods that pose a significant threat to life and/or improved property, and are beyond the capability of Tribal, State, or local interests to perform in a timely manner. Advance Measures projects must be engineeringly feasible and capable of being constructed in time to meet the anticipated threat.

- Emergency Operations during flood and storm-related disasters include activating USACE Emergency Operations Centers to command and control the operation, providing liaisons to FEMA, States, Tribes, and local governments, providing technical assistance and direct assistance for flood fighting, and conducting rescue operations. Technical assistance includes advice on flood fighting methods and techniques, inundation mapping, flood modeling, and historical data. Direct assistance includes the provision of sandbags, pumps, and other types of flood fight materials, and emergency contracting to raise and stabilize threatened flood risk management projects.

- The Rehabilitation Program provides for the inspection and rehabilitation of Federal and non-Federal flood risk management projects damaged or destroyed by floods and coastal storms. There are approximately 9,500 miles of levees in the Rehabilitation Program, and all projects must meet certain standards in order to be eligible for rehabilitation assistance. Rehabilitation of eligible non-Federal flood risk management projects is cost-shared 80% Federal 20% local funding; rehabilitation of eligible Federal projects may be 100% percent federally funded.

- The Restoration Program provides for the inspection and restoration of Federal coastal storm damage reduction projects damaged or destroyed by floods and coastal storms. All projects must meet certain standards in order to be eligible for restoration assistance.

- Drought Assistance includes technical assistance, well drilling in limited circumstances, and transportation (but not purchase) of water to drought-distressed areas to make up for inadequate supplies of water.

- Emergency Water Assistance due to a contaminated water source may be provided when a locality is confronted with a source of contaminated water causing, or likely to cause, a substantial threat to the public health and welfare of the local inhabitants. Emergency water assistance includes technical assistance, purchase of water, transport of water to local water points, delivery of bulk or bottled water to community-level distribution points, temporary connection of a new water supply to the existing distribution system, and installation of temporary filtration.

Interested Federal and non-Federal partners should contact their local District office to get more information or request assistance.

FOR MORE INFORMATION

Find a local contact – the District public affairs or project management office is the best "first stop" for most questions.

- *Corps District and Division Office Locator:* https://www.usace.army.mil/Locations/

Study and Project Partnership Agreement Models

- *HQUSACE Project Partnership Agreement website:* https://www.usace.army.mil/Missions/Civil-Works/Project-Partnership-Agreements/

Technical Services & Engagement

- *Floodplain Management Services Fact Sheet:* https://planning.erdc.dren.mil/toolbox/library/FactSheets/fpmsfactsheet_June2017.pdf
- *Planning Assistance to States Fact Sheet:* https://planning.erdc.dren.mil/toolbox/library/FactSheets/PAS_FS_Aug2019.pdf
- *Silver Jackets Program:* https://silverjackets.nfrmp.us/

Emergency Management & Emergency Response

- *HQUSACE Emergency Operations website:* https://www.usace.army.mil/Missions/Emergency-Operations/

Submit a proposal for Congressional authority for a water resources study or project

- *Report to Congress on Future Water Resources Development website, HQUSACE:* https://www.usace.army.mil/Missions/Civil-Works/Project-Planning/WRRDA-7001-Proposals/

Project Planning & Feasibility Studies

- *HQUSACE Project Planning website:* https://www.usace.army.mil/Missions/Civil-Works/Project-Planning/
- *Corps Planning Community Toolbox:* https://planning.erdc.dren.mil/toolbox/index.cfm
- *Continuing Authorities Program:* https://planning.erdc.dren.mil/toolbox/processes.cfm?Id=229&Option=Continuing%20Authorities%20Program%20(CAP)
- *Tribal Partnership Program:* https://www.usace.army.mil/Missions/Civil-Works/Tribal-Nations/
- *Planning Manual:* https://planning.erdc.dren.mil/toolbox/library/IWRServer/96r21.pdf
- *Planning Manual Part II: Risk Informed Planning:* https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf
- *SMART Planning Feasibility Studies: A Guide to Coordination and Engagement with the Services:* https://planning.erdc.dren.mil/toolbox/library/smart/SmartFeasibility_Guide_highres.pdf

U.S. Army Corps of Engineers
Commonly Used Acronyms and Abbreviations

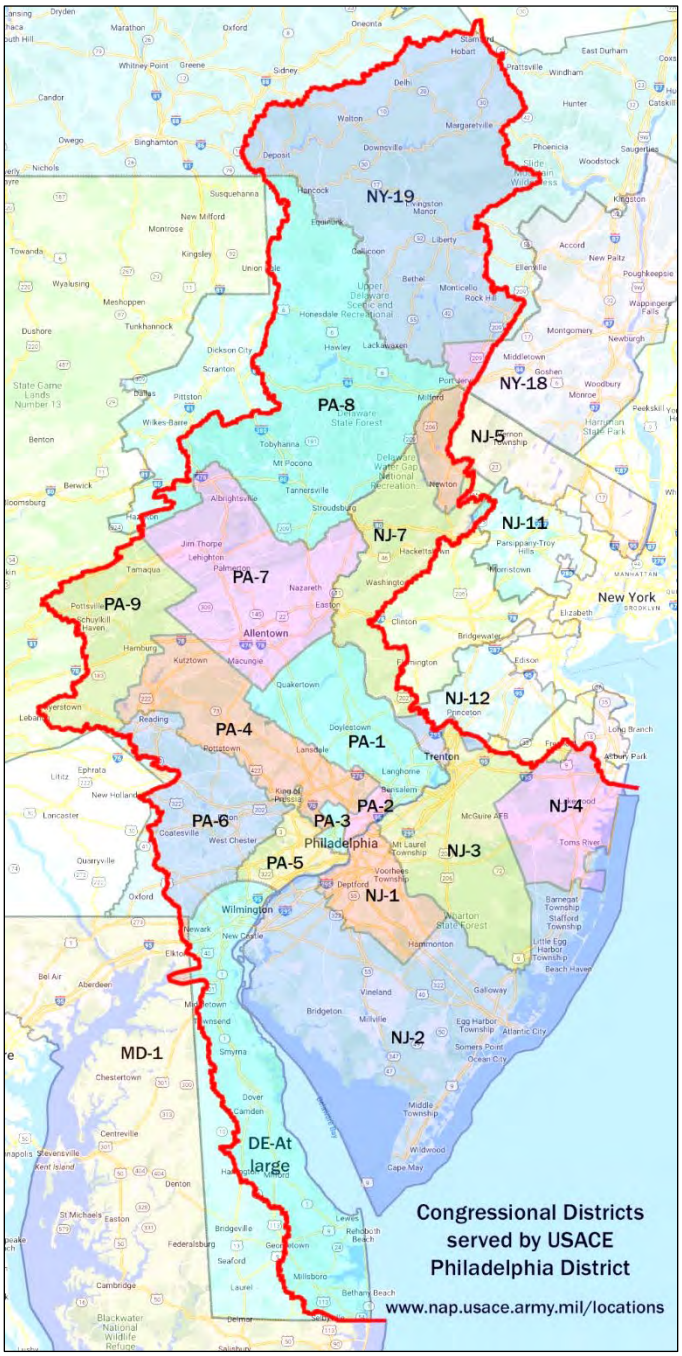
404(b)(1) – Water quality permit per CWA 77
902 limit – Maximum project cost per WRDA 86
905(b) – Reconnaissance Report per WRDA 86
AAA – Army Audit Agency
AAE – Average Annual Equivalent
AAR – After Action Review
ABC – Army Benefits Center
ACTEDS – Army Civilian Training, Evaluation and Development 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) – Assistance 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 Relationship
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
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
CSRM – Coastal Storm Risk Management
CSRS – Civilian Service Retirement System
CW – Civil Works
CWA – Clean Water Act, 1977
CWCCIS – Civil Work 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
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 & Design
E&PW – Energy & 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
EFH – Essential Fish Habitat
EFT – Electronic Funds Transfer
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 & Accounting
FID – Federal Interest Determination
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 Employee
FUDS – Formerly Used Defense Site
FUSRAP – Formerly Utilized Sites Remedial Action Program
FWCA – Fish and Wildlife Coordination Act
FY – Fiscal Year
FYI – For Your Information
FYSA – For Your Situational Awareness
G&A – General & 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 & Hydraulics
HAC – Hydropower Analysis Center
HAZMAT – Hazardous Materials
HD – House Document
HEC – Hydrologic Engineering Center
HEP – Habitat Evaluation Procedures
HES – Habitat Evaluation System
HIS – Habitat Suitability Index
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 Waste
HU – Habitat Unit
HUD – Housing and Urban Development
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
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 & Dam
LCC – Life Cycle Cost
LERRD – Lands, Easements, Rights-of-Way, Relocations, and Disposal
LOI – Letter of Intent
LPP – Locally Preferred Plan

LRB – Buffalo District
LRC – Chicago District
LRD – Great Lakes & Ohio River Division
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 & Industrial
M&IE – Meals & Incidental Expenses
MACOM – Major Army Command
MARAD – Maritime – Administration
MCASES – 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 & Tributaries
MRC – Mississippi River Commission
MSC – Major Subordinate Command
MVD – Mississippi Valley Division
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
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 – Net Economic Development
NER – National Ecosystem Restoration
NEPA – Nation 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 Oceanic and Atmospheric Administration
NPS – National Park Service
NRHP – National Register of Historic Places
NTE – Not to Exceed
NTP – Notice to Proceed
NWD – Northwestern Division
NWK – Kansas City District
NWO – Omaha District
NWP – Portland District
NWS – Seattle District/National Weather Service
NWW – Walla Walla District
O&M – Operations & Maintenance
OBE – Overcome by Events
OMB – Office of Management and Budget
OMRR&R – Operations, Maintenance, Repair, Replacement, & 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 & Design
P&G – Principles & Guidelines
P&S – Plans & Specifications/Principles & Standards
PA – Per Annum
PAB – Planning Advisory Board
PAC – Post-authorization Change Report
PAS – Planning Assistance to States
PCoP – Planning Community of Practice
PCA – Project Cooperation Agreement
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
POH – Honolulu District
POTUS – President of the United States
POV – Privately Owned Vehicle
PPA – Project Partnership Agreement
PR&C – Purchase Request & Commitment
PRB – Project Review Board

PROSPECT – Proponent Sponsored Engineer Corps Training
PTL – Planning Technical Lead
Q&A – Question & 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 & Development
R&H – River & Harbor
R&U – Risk and Uncertainty
RBRCR – Remaining Benefits Remaining Costs Ratio
RCRA – Resource Conservation and Recovery Act
REC – Recreation
RED – Regional Economic Development
REP – Real Estate Plan
RIT – Regional Integration Team
RFP – Request for Proposal
RP – Review Plan/Resource Provider
RMB – Regional Management Board
RMC – Risk Management Center
RMO – 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 & Agency
S&I – Supervision & Inspection
S&S – Savings & Slippage
SAC – Charleston District
SAD – South Atlantic Division
SADBU – Small and Disadvantaged Business Utilization
SAJ – Jacksonville District
SAM – Mobile District
SAR – Safety Assurance Review
SAS – Savannah District
SAV – Submerged Aquatic Vegetation
SAW – Wilmington District
SBH – Small Boar Harbor
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 Schedule
SFO – Support for Others
SHPO – State Historic Preservation Office
SITREP – Situational Report
SMART – Specific, Measurable, Attainable, Risk-Informed, Timely
SME – Subject Matter Expert
SOF – Statement of Findings
SOP – Standard Operating Procedure
SOS – Scope of Services/Scope of Studies
SOW – Scope of Work
SPA – Albuquerque District
SPD – South Pacific Division
SPF – Standard Project Flood
SPK – Sacramento District
SPL – Los Angeles District
SPN – San Francisco District
SR – Senate Resolution
SWD – Southwester Division
SWF – Fort Worth District
SWG – Galveston District
SWL – Little Rock District
SWT – Tulsa District
T&A – Time & Attendance
T&ES – Threatened & Endangered Species
T&I – Transportation & Infrastructure
TAD – Transatlantic Division
TAPES – Total Army Performance Evaluation System
TBA – To Be Announced
TBD – To Be Determined
TDY – Temporary Duty
TMDL – Total Maximum Daily Load
TRC – Technical Review Conference
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 Stated Environmental Protection Agency
USFWS – United States Fish and Wildlife Service
USGS – United States Geological Survey
VE – Value Engineering
VT – Vertical Team
WMP – Watershed Management Plan
WBS – Work Breakdown Structure
WCSC – Waterborne Commerce Statistics Center
WFO – Work for Others
WMA – Wildlife Management Area
WQC – Water Quality Certification
WRC – Water Resources Council
WRDA – Water Resources Development Act
WS – Water Supply
WTA – Willingness to Accept
WTP – Willingness to Pay

The 118th Congress and the USACE Philadelphia District

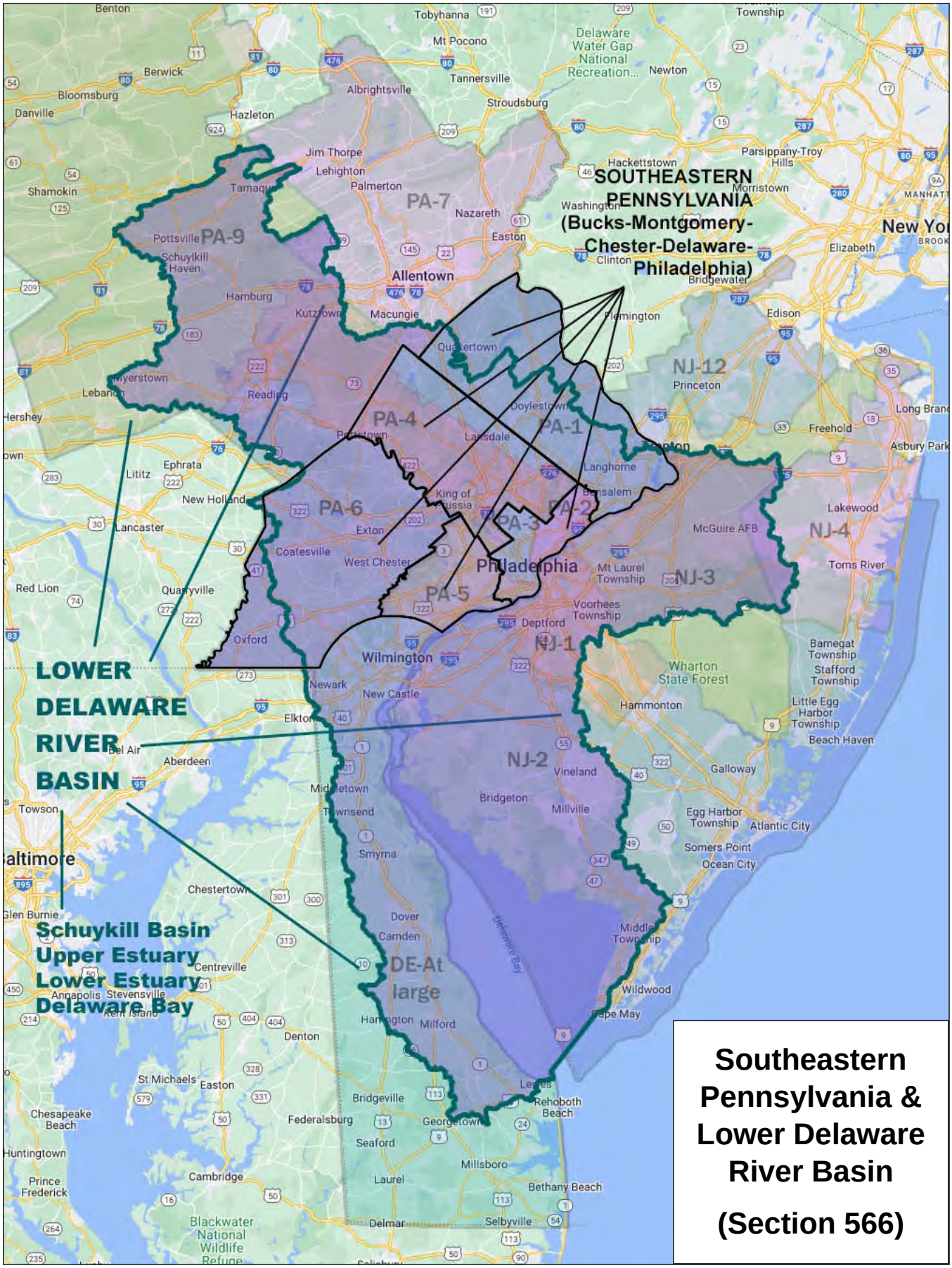


UNITED STATES SENATE

Delaware	Tom Carper	D
	Chris Coons	D
New Jersey	Bob Menendez	D
	Cory Booker	D
Pennsylvania	Bob Casey	D
	John Fetterman	D
Maryland	Chris Van Hollen	D
	Ben Cardin	D
New York	Chuck Schumer	D
	Kirsten Gillibrand	D

HOUSE OF REPRESENTATIVES

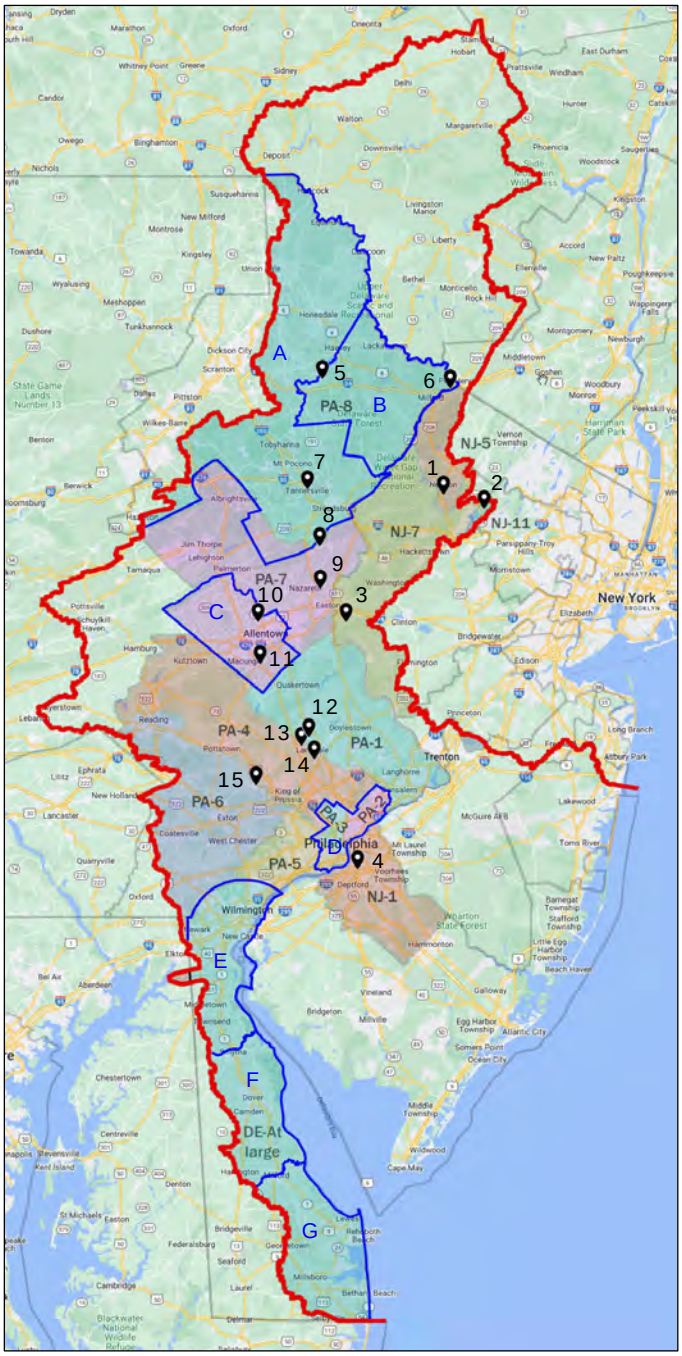
DE-At large	Lisa Blunt Rochester	D
MD-1	Andy Harris	R
NJ-1	Don Norcross	D
NJ-2	Jeff Van Drew	R
NJ-3	Andy Kim	D
NJ-4	Chris Smith	R
NJ-5	Josh Gottheimer	D
NJ-7	Tom Kean	R
NJ-11	Mikey Sherrill	D
NJ-12	Bonnie Watson Coleman	D
NY-18	Pat Ryan	D
NY-19	Marc Molinaro	R
PA-1	Brian Fitzpatrick	R
PA-2	Brendan Boyle	D
PA-3	Dwight Evans	D
PA-4	Madeleine Dean	D
PA-5	Mary Gay Scanlon	D
PA-6	Chrissy Houlahan	D
PA-7	Susan Wild	D
PA-8	Matt Cartwright	D
PA-9	Dan Meuser	R



Southeastern Pennsylvania & Lower Delaware River Basin

(Section 566)

Environmental Infrastructure Project Authorities (Sec. 219)



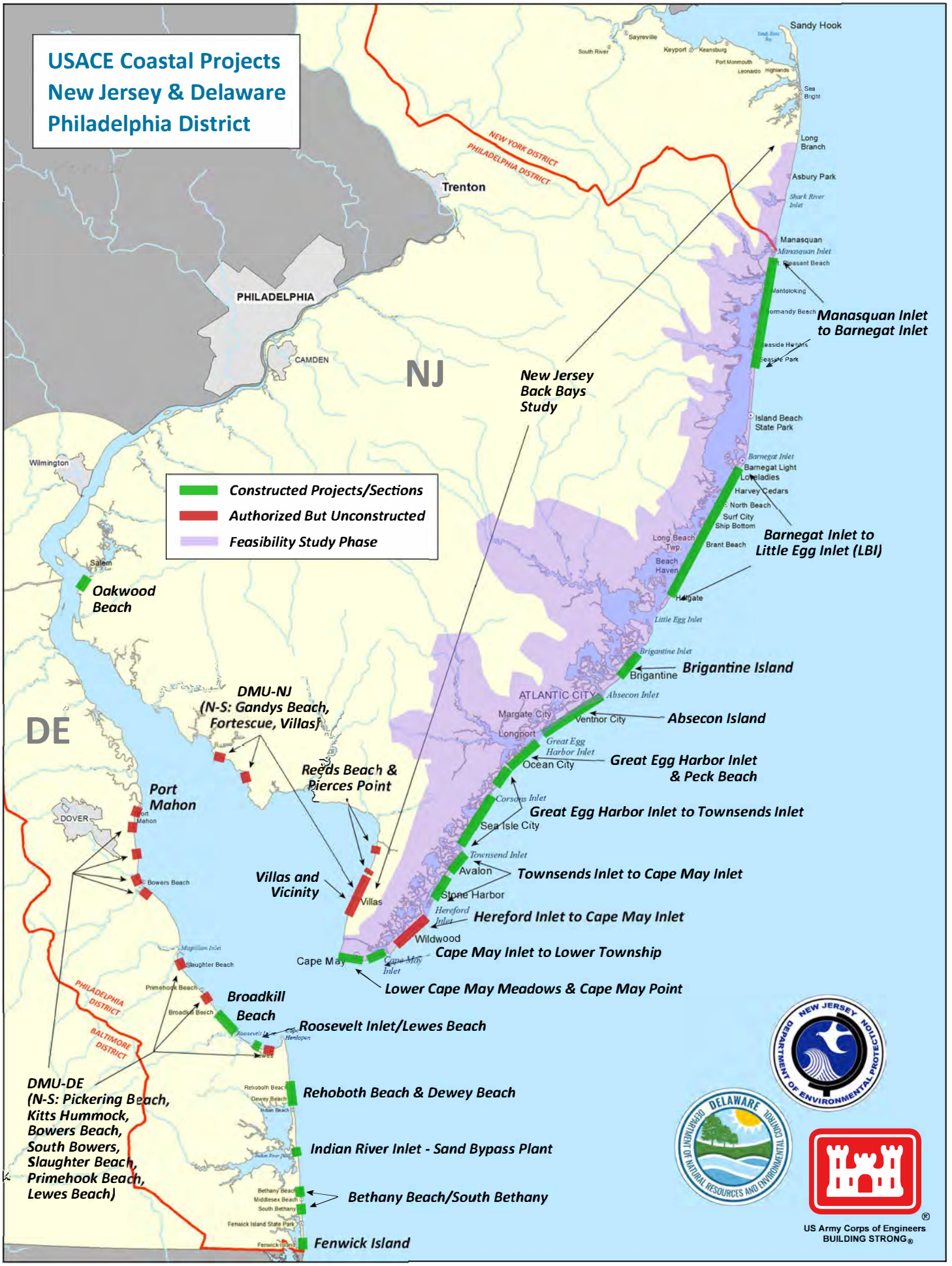
COUNTIES

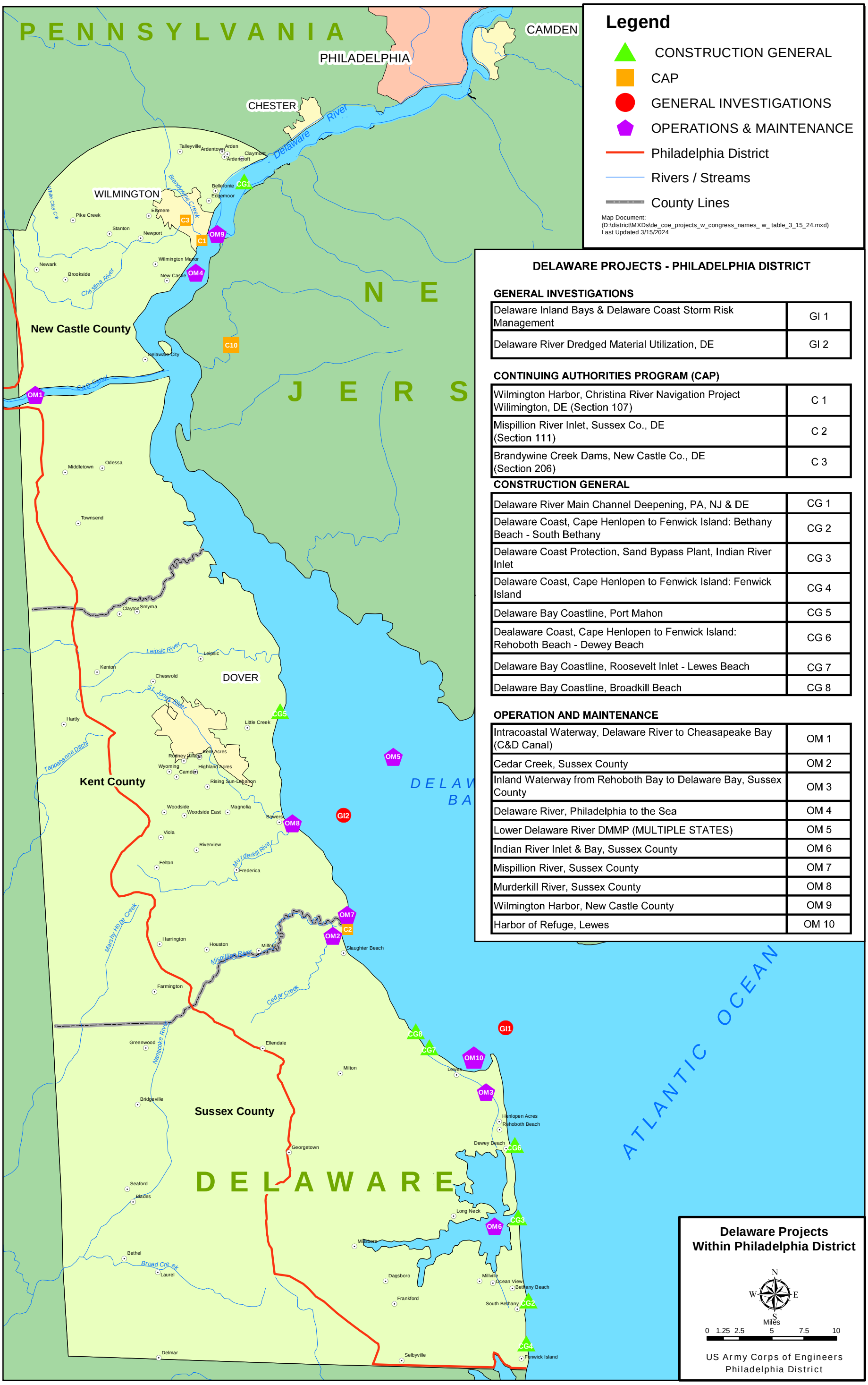
A	Northeast Pennsylvania (Wayne, Luzerne & Monroe Cos), PA
B	**Pike County, PA**
C	Lehigh County, PA
D	City of Philadelphia, PA
E	**New Castle County, DE (Little Mill Creek)**
F	Kent County, DE
G	**Sussex County, DE (Dewey Beach, Oak Orchard)**

MUNICIPALITIES

1	Newton, NJ
2	**Jefferson Twp, NJ**
3	Phillipsburg, NJ
4	**City of Camden, NJ (2 projects)**
5	Palmyra Twp, PA
6	Westfall Twp, PA
7	**Pocono Twp, PA**
8	Pen Argyl Boro, PA
9	Stockerton Boro, Tatamy Boro, & Palmer Twp, PA
10	Whitehall & S Whitehall Twps, PA
11	Vera Cruz, PA
12	Hatfield Boro, PA
13	Towamencin Twp, PA
14	North Wales Boro, PA
15	Phoenixville Boro, PA

(**Bold text** shows where projects received FY24 funding)


USACE Coastal Projects
New Jersey & Delaware
Philadelphia District
NEW YORK DISTRICT
PHILADELPHIA DISTRICT
Trenton
PHILADELPHIA
CAMDEN
NJ
DE
Wilmington
Salem
Sandy Hook
Sayreville
South River
Keyport
Keansburg
Port Monmouth
Leonardo
Highlands
Sea Bright
Long Branch
Asbury Park
Shark River Inlet
Manasquan
Manasquan Inlet
Pt. Pleasant Beach
Mantoloking
Normandy Beach
Seaside Heights
Seaside Park
Island Beach State Park
Barnegat Inlet
Barnegat Light
Loveladies
Harvey Cedars
North Beach
Surf City
Ship Bottom
Long Beach Twp.
Brant Beach
Beach Haven
Holgate
Little Egg Inlet
Brigantine Inlet
Brigantine
ATLANTIC CITY
Absecon Inlet
Margate City
Ventnor City
Longport
Great Egg Harbor Inlet
Ocean City
Corsons Inlet
Sea Isle City
Townsend Inlet
Avalon
Stone Harbor
Hereford Inlet
Wildwood
Cape May
Cape May Inlet
Delaware Bay
DOVER
Port Mahon
Bowers Beach
Mispillion Inlet
Slaughter Beach
Primehook Beach
Broadkill Beach
Roosevelt Inlet
Cape Henlopen
Lewes
Rehoboth Beach
Dewey Beach
Indian River Inlet
Bethany Beach
Middlesex Beach
South Bethany
Fenwick Island State Park
Fenwick Island
Constructed Projects/Sections
Authorized But Unconstructed
Feasibility Study Phase
Oakwood Beach
DMU-NJ
(N-S: Gandys Beach, Fortescue, Villas)
Reeds Beach & Pierces Point
Port Mahon
Villas and Vicinity
Broadkill Beach
DMU-DE
(N-S: Pickering Beach, Kitts Hummock, Bowers Beach, South Bowers, Slaughter Beach, Primehook Beach, Lewes Beach)
New Jersey Back Bays Study
Manasquan Inlet to Barnegat Inlet
Barnegat Inlet to Little Egg Inlet (LBI)
Brigantine Island
Absecon Island
Great Egg Harbor Inlet & Peck Beach
Great Egg Harbor Inlet to Townsends Inlet
Townsends Inlet to Cape May Inlet
Hereford Inlet to Cape May Inlet
Cape May Inlet to Lower Township
Lower Cape May Meadows & Cape May Point
Roosevelt Inlet/Lewes Beach
Rehoboth Beach & Dewey Beach
Indian River Inlet - Sand Bypass Plant
Bethany Beach/South Bethany
Fenwick Island
PHILADELPHIA DISTRICT
BALTIMORE DISTRICT
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL
US Army Corps of Engineers
BUILDING STRONG®



Legend

- CONSTRUCTION GENERAL
- CAP
- GENERAL INVESTIGATIONS
- OPERATIONS & MAINTENANCE
- Philadelphia District
- Rivers / Streams
- County Lines

Map Document:
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Last Updated 3/15/2024

DELAWARE PROJECTS - PHILADELPHIA DISTRICT

GENERAL INVESTIGATIONS

Delaware Inland Bays & Delaware Coast Storm Risk Management	GI 1
Delaware River Dredged Material Utilization, DE	GI 2

CONTINUING AUTHORITIES PROGRAM (CAP)

Wilmington Harbor, Christina River Navigation Project Wilimington, DE (Section 107)	C 1
Mispillion River Inlet, Sussex Co., DE (Section 111)	C 2
Brandywine Creek Dams, New Castle Co., DE (Section 206)	C 3

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

Intracoastal 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
Lower Delaware River DMMP (MULTIPLE STATES)	OM 5
Indian River Inlet & Bay, Sussex County	OM 6
Mispillion River, Sussex County	OM 7
Murderkill River, Sussex County	OM 8
Wilmington Harbor, New Castle County	OM 9
Harbor of Refuge, Lewes	OM 10

Delaware Projects Within Philadelphia District

N W E S

0 1.25 2.5 5 7.5 10
Miles

US Army Corps of Engineers
Philadelphia District