

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

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Navigation

1. AUNT LYDIA'S COVE, CHATHAM, MA

Location. Aunt Lydia's Cove is located in Chatham Harbor, Chatham, Massachusetts. The cove is located on the "elbow" of Cape Cod approximately 90 miles southeast of Boston, Massachusetts. (See National Ocean Service Coast Survey Chart 13248.)

Existing project. Project provides for an entrance channel 8 feet deep and 100 feet wide for a length of 900 feet and a 9.5-acre anchorage also to a depth of 8 feet. Project was completed in June 1995. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. The Chatham Municipal Fish Pier is the only terminal facility in Aunt Lydia's Cove. Initially constructed in 1945, the pier is used to offload catch, access boats, load supplies and perform some repairs. Two independent fish companies lease space at the pier's main packing facility where fish are offloaded, packed in ice and shipped to various distributors. The pier provides diesel fuel, gasoline, parking, and restroom facilities. Transient and recreational boaters use the pier for loading, offloading, and refueling. Facility is adequate for existing commerce.

Operations during fiscal year. Maintenance: Dredging of the Federal channel was performed by the Government-owned dredge CURRITUCK from June 26, 2009 to July 1, 2009. About 11,745 cubic yards of sand were removed and placed in two near shore disposal areas; one southeast of the dredging area and outside the outer bar, and the other off Andrews Harding Beach. Plant rental cost was \$46,800. Hired labor costs were \$12,954 for performing and plotting surveys.

2. BLOCK ISLAND HARBOR OF REFUGE, RI

Location. Block Island Harbor of Refuge is located on the east side of Block Island, 13 miles southwest of Point Judith Harbor, Rhode Island, and about 25 miles southeasterly of Stonington Harbor, Connecticut. (See National Ocean Service Coast Survey Charts 13215 and 13217.)

Existing project. Project provides for two rubble-mound breakwaters inclosing an area of about 800 square feet, the east breakwater extending northerly about 1,950 feet from the shore and the west breakwater extending northeasterly about 1,100 feet; a "T" shaped stone jetty, 140 feet long and 100 feet wide, located about 600 feet southeast of the east

breakwater; masonry walls in the southeast corner of the inner harbor inclosing an area of about 300 square feet designated as the basin; and steel sheet pile bulkhead, 225 feet long, constructed on the east side of the 15-foot basin. The project includes a 15-foot entrance channel, anchorage and basin area. The project was completed in 1916 except for dredging of two 15-foot anchorages in the outer harbor west of the entrance channel, which were deauthorized in November 1986. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. Block Island Harbor of Refuge contains the ferry terminal receiving goods and passengers from Point Judith, Rhode Island and subsequently serves as the only subsistence harbor for the island. There is also a small fleet of commercial and charter fishing vessels berthed in this harbor. The project serves as a Harbor of Refuge for vessels navigating Block Island Sound during severe storms.

Operations during fiscal year. Maintenance: Continued environmental coordination and preparation of contract plans and specifications to repair the bulkhead and wharf located along the east side of the 15-foot basin. Hired labor costs included \$40,447 for developing plans and specifications, \$6,000 for environmental coordination and \$19,150 for project management. In addition, maintenance dredging of the Federal channel was performed by the Government-owned dredge CURRITUCK from June 17 to 24, 2009. About 7,674 cubic yards of sand were removed and placed in a near shore disposal site off of Crescent Beach. Dredging plant rental cost was \$65,520. Hired labor costs associated with dredging included \$45,951 for surveys and \$23,996 for project management and environmental coordination.

3. BOSTON HARBOR, MA

Location. Boston Harbor includes all expanse of tidewater lying within a line from Point Allerton to Point Shirley and extending from that line westward to the mainland. This comprises an area of about 47 square miles, exclusive of the islands. (See National Ocean Service Coast Survey Charts 13270 and 13272.)

Existing project. Completed work at Boston Harbor, adopted in 1825 and supplemented by enactments through 1962, provides for the improvement of the harbor proper and its approaches - Fort Point Channel, Reserved Channel, Chelsea River and Weir River. For a more detailed description see page 3 of the Annual Report for 1974. These improvements were completed in May 1966 with the

construction of the Chelsea River 35-foot channel and maneuvering basin. Work adopted in 1990 involves deepening the Mystic River and Reserved Channels from 35 to 40 feet and the Chelsea River Channel from 35 to 38 feet; widening and deepening to 40 feet the Inner Confluence Area which provides access to the Mystic and Chelsea River Channels; and widening at the entrance to the Reserved Channel. This work was completed in December 2001. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work. A Project Cooperation Agreement was signed on May 29, 2007 between the Corps and the Massachusetts Port Authority for cost sharing the construction of the first confined aquatic disposal (CAD) cell necessary for project maintenance. Consistent with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986 and amended by the Water Resources Development Act of 1996, the non-Federal sponsor must pay 25 percent of the cost to construct any new dredged material disposal facilities necessary for project maintenance, and to reimburse an additional 10 percent of the cost to construct dredged material disposal facilities (partially offset by a credit allowed for the value of lands, easements, rights-of-way, and relocations) within a period of 30 years following completion of construction.

Terminal facilities. There are 156 wharves and piers in the harbor, not including Mystic, Weymouth-Fore, and Town Rivers which are reported elsewhere. Of the terminals, 28 are publicly owned, 13 are open to public use, 70 have railroad connections and 73 have mechanical-handling facilities. Facilities are considered adequate for existing commerce. For a full description of channel facilities in Chelsea River, refer to House Document 350, 87th Congress, 2nd session. (See Port Series No. 3, Part 2, Port of Boston, MA dated 1967.)

Operations during fiscal year. New work: Preliminary lands, easements, rights-of-way, and utility relocations (LERR) costs were identified; however, the sponsor had asked to delay finalizing LERR costs until the Keyspan gas line was removed and those costs included in the final cost sharing calculations. An option for removal of the Keyspan gas line was included in the contract awarded September 28, 2007 for maintenance dredging of the Inner Harbor. The option was exercised at sponsor cost and the Keyspan gas line was removed in December 2008. Final LERR costs were identified, the sponsor provided all required funds including the additional 10 percent reimbursement and the project was financially closed.

Maintenance: A contract for maintenance dredging of the Inner Harbor was awarded on September 28, 2007 to Great Lakes Dredge and Dock Company. The base contract included dredging portions of the Main Ship Channel, the

upper Reserved Channel and the approach channel to the Navy Dry Dock along with construction of a Confined Aquatic Disposal (CAD) cell. Dredging work began in April 2008 and was completed in December 2008, with the exception of capping the CAD cells. Contractor earnings total \$16,283,059, of which \$4,380,403 was earned this FY. Approximately 322,970 cubic yards of material were removed to construct the first CAD cell and 393,330 cubic yards to construct a supplemental CAD cell in the Main Ship Channel. A total of 319,880 cubic yards of material was dredged this FY from the Inner Harbor, of which 156,925 was placed in the CAD cell and 162,955 was suitable for ocean disposal. Capping of the CAD cells is scheduled to be completed in January 2010.

4. BRIDGEPORT HARBOR, CT

Location. Bridgeport Harbor is located on the north shore of Long Island Sound, about 51 miles east of New York City. (See National Ocean Service Coast Survey Chart 12369.)

Existing project. For a description of the completed improvements see the Annual Report for 1968. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work. There is no reasonable prospect that required cooperation will be forthcoming from local interests for the breakwaters at Black Rock Harbor and the Burr and Cedar Creek anchorages. For further details see the Annual Report for 1968.

Terminal facilities. There are 35 waterfront facilities serving the port of Bridgeport. Three wharves are owned by the City of Bridgeport. (See Port and Terminal Facilities of Southern New England No. 4, revised in 1952.) Facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: The draft Dredged Material Management Plan (DMMP) and Environmental Assessment were submitted to North Atlantic Division in January 2009 for review and approval for public release. The DMMP and Environmental Assessment were approved for public release on 15 September 2009. The DMMP identifies and evaluates suitable placement alternatives for dredged material from the Federal project.

5. BULLOCKS POINT COVE, RI

Location. Bullocks Point Cove is located along the east shore of the Providence River about three-quarters of a mile above the head of Narragansett Bay and 4.5 miles south of Providence Harbor. The lower one-half mile of the cove, covering approximately 100 acres, is separated from the

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Providence River by a small peninsula extending southeasterly from the mainland to Bullocks Point. (See National Ocean Service Coast Survey Chart 13224.)

Existing project. For a description of the existing project see the Annual Report for 1974. Construction of the project was completed in May 1959. Dike and jetty construction was initiated in June 1958 and completed in September 1958. Improvement dredging of the 8-foot channel, 6-foot anchorage and 6-foot turning basin was initiated in January 1959 and completed in May 1959. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. There are three boatyards and one marina that offer supply, repair and service facilities to the general public. These private interests offer cove moorings, berthing areas and spaces for land storage during winter months. Additional moorings are available for the general public in the anchorage areas controlled and supervised by the harbormaster. A public landing ramp was constructed in the Cove for use by the general public as a condition of local cooperation in conjunction with project authorization.

Operations during fiscal year. Maintenance: A contract to dredge Bullocks Point Cove was awarded to Village Dock Incorporated of Port Jefferson, New York on September 25, 2009, in the amount of \$837,000. Work had not begun by FY end. Hired labor costs included \$13,145 for surveys.

6. CAPE COD CANAL, MA

Location. This waterway is a sea level canal; extending from the head of Buzzards Bay, Massachusetts, easterly to a point on Cape Cod Bay about 15 miles southeast of Plymouth Harbor, Massachusetts. (See National Ocean Service Coast Survey Charts 13236 and 13246.)

Existing project. For a description of existing project see the Annual Report for 1975. Navigational improvements were completed in April 1963, with completion of the East Boat Basin extension. Initial recreational development consists of public use facilities at various locations, which were completed in February 1965. Improvements to public use facilities at the East Boat Basin were completed in May 1974. Construction of public use facilities at Bourne Scenic Park were completed in May 1976. Two high-level highway bridges and a vertical-lift railroad bridge cross Cape Cod Canal. Major rehabilitation of the Bourne Highway Bridge was completed in December 1965 and major rehabilitation of the Sagamore Highway Bridge was completed in 1980. Minor rehabilitation of the stone breakwater was completed in October 1963. Major rehabilitation of the vertical-lift

railroad bridge was completed in November 2004. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work. Local interests must also bear 50 percent of future recreational development in accordance with the 1965 Federal Water Project Recreation Act.

Terminal facilities. There are seven terminals on the canal, three of which are privately owned. Four are used for receipt and freezing of fish and two for receipt and storage of oil. The seventh terminal is the State pier, which is owned by the Commonwealth of Massachusetts and is located on the north bank of the canal at Bourne Neck. Terminals are adequate for existing commerce.

Operations during fiscal year. Maintenance: The cost of operation and maintenance work at the Cape Cod Canal totaled \$9,584,230, including \$4,898,833 for navigation and \$1,651,961 for recreation facilities. Total costs included \$72,742 for real estate activities, \$621,164 for periodic inspections, \$607,458 for engineering and design, \$155,178 for environmental compliance and \$71,773 for supervision and inspection of contracts including those described below. A contract to replace the railroad signal system was awarded on June 4, 2008. Work began in October 2008 and was about 70 percent complete at FY end. Contractor earnings total \$760,612, of which \$732,333 was earned this FY. A contract to furnish and install a new marine fueling system was awarded September 27, 2008. Work began in November 2008 and was completed in April 2009. Final contract amount was \$155,160. A contract for deck repairs and paving of the Bourne and Sagamore Highway Bridges was awarded on July 22, 2009. Work began the following month and was about 10 percent complete at FY end with contractor earnings of \$617,630. A contract to dredge the canal was awarded to Great Lakes Dock and Dredge on April 20, 2009. A contract to construct an addition to the boat shop and replace fencing along the canal was awarded on September 25, 2008. A contract to repair the tug, MANAMET, was awarded on September 29, 2009. Work on these three contracts had not begun by FY end.

7. CARVERS HARBOR, VINALHAVEN, ME

Location. Carvers Harbor is located at the southeastern end of Vinalhaven Island, at the mouth of Penobscot Bay, about 15 miles east of Rockland, Maine. (See National Ocean Service Coast Survey Chart 13305.)

Existing project. The project provides for a 16-foot anchorage of about 23 acres; two 10-foot anchorage areas totaling about 7 acres located along the south side of the harbor, a 10-foot anchorage of about 3-acres located

adjacent to the main waterfront along the north side of the harbor and a 6-foot access channel and turning basin at the inner end of the harbor. The project was completed in May 1964. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. The area depends on ferry service which carries cargo, automobiles and passengers to and from Rockland, Maine. This service is run by the Maine Port Authority out of a terminal located along the west side of the inner harbor. A large fleet of lobster fishermen and numerous transient recreational boats operate out of Carvers Harbor. There are 23 wharves in the harbor, four of which have marine railways. Two wharves are publicly owned and open to the public. These facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: Work in anticipation of maintenance dredging continued with hired labor costs of \$11,100 incurred for project management and environmental coordination.

8. CHATHAM (STAGE) HARBOR, MA

Location. Chatham Harbor is located at the northeastern corner of Nantucket Sound about 16 miles east of Hyannis Harbor, Massachusetts and 66 miles south of Providence Harbor, Rhode Island. The harbor lies at the southeastern extremity of Cape Cod. (See National Ocean Service Coast Survey Charts 13237 and 13248.)

Previous project. For details see the Annual Report for 1942.

Existing project. Project provides for an entrance channel 10 feet deep and 150 feet wide from Chatham Roads to the upper harbor. Construction of the existing project was completed in October 1957. By 1961, a break in the barrier beach connecting Morris and Monomoy Islands caused the Federal channel to fill in completely. Local interests dredged an emergency channel to obtain an 8-foot depth in June 1962 and performed additional dredging in 1963. Minimal maintenance dredging by the Federal Government in April and May 1964 provided access to the inner harbor for the 1964 boating season. A new 10-foot channel through Harding Beach to Morris Island was completed in July 1965. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. The town operates a wharf on the north side of the inner harbor which is leased out to commercial users. Facilities are considered adequate for existing commerce.

Operations during fiscal year. Maintenance: Dredging of the entrance channel was performed by the Government owned dredge CURRITUCK from July 2 to July 10, 2009. About 28,330 cubic yards of sand were removed and placed in a near shore disposal area off Harding Beach. Plant rental cost was \$101,400. Hired labor costs included \$15,198 for performing and plotting surveys.

9. CLINTON HARBOR, CT

Location. Clinton Harbor is located along the north shore of Long Island Sound, about 10 miles west of the mouth of the Connecticut River and about 20 miles east of New Haven Harbor, Connecticut. (See National Ocean Service Coast Survey Charts 12374 and 12354.)

Existing project. Project provides for an 8-foot channel from deep water in Long Island Sound to the upper end of the wharves at Clinton Harbor, and an anchorage area of the same depth opposite the wharves. The project also provides for the maintenance of a stone dike closing a breach in the sandy peninsula which separates the river from the outer harbor. Project was completed in 1950. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. There are several small private wharves, some of which are open to the public. These facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: Work in anticipation of maintenance dredging continued with hired labor costs of \$4,700 incurred for project management and environmental coordination.

10. COCHECO RIVER, NH

Location. The Cocheco River is located about 9 miles northwest of Portsmouth, New Hampshire. (See National Ocean Service Coast Survey Chart 13285.)

Existing project. Provides for a 7-foot tidewater channel 60 to 75 feet wide (7.5 feet deep and 30 feet wide in rock), extending from the confluence of the Cocheco and Piscataqua Rivers to the head of navigation in Dover, New Hampshire. Work was completed in 1906. (See Table 1-B for Acts authorizing the existing project.)

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Local cooperation. Fully complied with for completed work. The City of Dover constructed the Dredged Material Disposal Facility (DMDF) necessary for maintenance of the project at an estimated cost of \$3,900,000. A Memorandum of Agreement was signed with the City of Dover on July 19, 2004 for payment of a tipping fee for use of the City's DMDF. The fee will be based on 80 percent of the City's cost to construct that portion of the facility used for disposal of material dredged from the Federal navigation project.

Terminal facilities. The channel is used primarily by recreational craft based at a marina located near the head of the waterway.

Operations during fiscal year. Maintenance: It was agreed, in coordination with project stakeholders, to maintain the remainder of the Federal channel to a depth of 6 feet instead of the authorized 7 feet. The reduced depth would adequately serve all current and potential future users of the channel. Insufficient funds were available to award a contract to complete dredging of the Federal channel. Available funds were used to maintain coordination with project stakeholders and various resource agencies. Hiring labor costs associated with project coordination and management totaled \$23,015.

11. CONNECTICUT RIVER BELOW HARTFORD, CT

Location. The Connecticut River has its source at Connecticut Lake in northern New Hampshire, then flows southerly about 380 miles to Long Island Sound. Navigation extends about 52 miles upstream from the mouth of the river in Saybrook to Hartford, Connecticut. (See National Ocean Service Coast Survey Charts 12375, 12377 and 12378.)

Existing project. For a description of the existing project and authorizing legislation, see the Annual Report for 1995.

Local cooperation. Fully complied with for completed work.

Terminal facilities. Along both the Connecticut and Eightmile Rivers there are two to three wharves at each riverside town, one or more of which are open to public use. Facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: A contract for dredging of North Cove was awarded on September 15, 2008 to Burnham Associates of Salem, Massachusetts. Maintenance dredging began on November 5, 2008 and was completed on May 11, 2009. There was a temporary shut-down during the winter to coordinate this dredging effort with work at Norwalk Harbor. A total of 172,785 cubic

yards of material were dredged from North Cove, of which 97,785 cubic yards were placed at the Cornfield Shoals Disposal Site and the balance was brought to the Central Long Island Sound Disposal Site and used to cap dredged material from Norwalk Harbor. Capping of the Norwalk Harbor material was a State of Connecticut requirement and the additional cost to bring the North Cove material to the Central Long Island Sound Disposal Site was paid for by the City of Norwalk. Final contract amount was \$4,026,842, of which \$954,000 was associated with capping efforts and paid for by the city. Hiring labor costs included \$45,000 to perform contract supervision and project management.

12. GREAT SALT POND, BLOCK ISLAND, RI

Location. Great Salt Pond is located on the west shore of Block Island, about 11 miles southwest from Point Judith Harbor, Rhode Island and 18 miles southeasterly from Stonington Harbor, Connecticut. (See National Ocean Service Coast Survey Charts 13215 and 13217.)

Existing project. The project provides for an entrance channel 18 to 25 feet deep and 150 to 300 feet wide from the Atlantic Ocean to Block Island Pond; a riprap jetty extending 1,691 feet along the southerly side of the entrance channel; and a stone revetment and sand fences to protect the shoreline and beaches. The south jetty was completed in 1905. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. None required for completed work.

Operations during fiscal year. Maintenance: Dredging of the Federal channel was performed by the Government-owned dredge CURRITUCK from May 26 to June 16, 2009. About 30,316 cubic yards of sand were removed and placed at a near shore disposal site adjacent to Sachem Pond on the west side of the island. Dredging plant rental cost was \$213,330. Hiring labor costs included \$8,953 for project management and coordination.

13. GREEN HARBOR, MA

Location. Green Harbor is located within the town of Marshfield on the west side of Massachusetts Bay, about 30 miles southeast of Boston, Massachusetts, and 9 miles north of Plymouth Harbor, Massachusetts. (See National Ocean Service Coast Survey Chart 13253.)

Existing project. For a description of the existing project see the Annual Report for 1995. Construction was completed in October 1969. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. The major terminal facility is the Town Pier in the village of Brant Rock. The facility is an earth-filled bulkhead with landing and parking area about 290 feet wide, extending 210 feet into harbor. A marina service is south of the Town Pier; and a facility for recreational craft has been developed on the south side of the harbor near the head of navigation.

Operations during fiscal year. Maintenance: A contract for maintenance dredging of the 8 foot deep and 6 foot deep entrance channel as well as the 6 foot deep anchorage area was awarded on September 30, 2009. The contract was awarded to Cashman Dredging and Marine Contracting of Quincy, Massachusetts in the amount of \$1,635,625. Work is scheduled to begin early next FY. Hired labor costs included \$28,840 for surveys.

14. MERRIMACK RIVER, MA

Location. The Merrimack River originates at the confluence of the Pemigewasset and Winnepesaukee Rivers in Franklin, New Hampshire. The river flows southerly through Concord, Manchester and Nashua, New Hampshire; then northeasterly through Lowell, Lawrence and Haverhill, Massachusetts; and enters the Atlantic Ocean at Newburyport Harbor, about 35 miles northeast of Boston, Massachusetts. (See National Ocean Service Coast Survey Chart 13274.)

Existing project. The project provides for channel 7 feet deep and 150 feet wide extending upstream a distance of about 16.5 miles from the Newburyport Highway Bridge at the head of Newburyport Harbor to the railroad bridge in Haverhill. The project was completed in 1907. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. Recreational boat facilities are located along the lower river, primarily in the communities of Amesbury and Newburyport, Massachusetts.

Operations during fiscal year. Maintenance: A small population of short nosed sturgeon, a federally endangered species, was found in the river. The estimated population of 33 adults is one of the smallest identified and thus vulnerable to extirpation. Further efforts to perform maintenance dredging of the federal navigation project were put on hold indefinitely.

15. MYSTIC RIVER, CT

Location. The Mystic River is a 6-mile long tidal inlet, which forms the boundary between the towns of Stonington and Groton, Connecticut. It then flows southerly through the villages of Mystic and West Mystic, Connecticut where it broadens into Mystic Harbor. The Mystic River is located about 6 miles east of New London, Connecticut. (See National Ocean Service Coast Survey Chart 13214)

Existing project. The project consists of a 15-foot channel, 125 feet wide, from Fishers Island Sound to Murphy Point, located approximately 600 feet below the railroad bridge; then, 100 feet wide to the highway bridge; then a 12-foot channel, 100 feet wide, to a point 700 feet above the Marine Historical Association Wharf. The project includes a 9-foot anchorage basin situated southwest of Murphy Point and a 9-foot turning basin situated northwest of the railroad bridge. The upper 0.75 mile of the channel, which was not constructed to full project width, was deauthorized in November 1986. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. Facilities include a town wharf at Noank, along with numerous small private wharves, some of which are open to the public. A small public boat terminal near the shopping center of Mystic was provided under the terms of required local cooperation. The project also serves the Mystic Historic Seaport.

Operations during fiscal year. Maintenance: Sediment sampling and testing was performed to characterize material to be dredged. Contract costs of \$115,678 were incurred for sediment sampling and testing. Hired labor costs of \$4,997 were incurred for environmental coordination and \$8,697 for project management and contract administration.

16. NARRAGUAGUS RIVER, ME

Location. The Narraguagus River originates in Eagle Lake and flows southeasterly about 49 miles to Narraguagus Bay and the Atlantic Ocean. (See National Ocean Service Coast Survey Chart 13324.)

Existing project. The project provides for a channel 11 feet deep and 150 feet wide from deep water in Narraguagus Bay to Wyman, then 9 feet deep and 100 feet wide to Milbridge, and then 6 feet deep and 100 feet wide to the landing downstream from the Route 1A Highway Bridge. The project includes three 6-foot anchorage areas adjacent to the 6-foot channel in Milbridge, two 9-foot anchorages and an 11-foot anchorage adjacent to the 11-foot channel

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between Wyman and Jordan Pier, and a 6-foot turning basin near the landing in Milbridge. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. There are four major wharves along the Narraguagus River. One is on the east bank, a short distance downstream of the Route 1A Highway Bridge, two are on the west bank in Milbridge, and the fourth is near the mouth of the river at Wyman. The upper and lower piers are municipally owned. The others are privately owned. All are in fair condition. Facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: A contract for maintenance dredging of the 11-foot west anchorage, 6-foot southwest anchorage, and a portion of the 11-foot channel adjacent to the 11-foot anchorage was awarded on September 29, 2009 to Prock Marine Company of Rockland, Maine for \$1,369,100. Work had not begun by FY end. Hired labor costs associated with the project were \$18,573 for preparation of contract plans and specifications, \$19,992 for surveys and \$919 for contract processing.

17. NEW BEDFORD AND FAIRHAVEN HARBOR, MA

Location. New Bedford Harbor is a tidal estuary located on the western side of Buzzards Bay, about 27 miles northwesterly from the harbor at Vineyard Haven, Massachusetts and about 37 miles east of Point Judith Harbor, Rhode Island. (See National Ocean Service Coast Survey Chart 13232.)

Existing project. The project provides for a channel 30 feet deep and 350 feet wide from deep water in Buzzards Bay to just above the New Bedford-Fairhaven Bridge, nearly 5 miles, with increased widths for anchorage and maneuvering purposes in the area northwest of Palmer Island and above the bridge; a channel 25 feet deep and 200 to 250 feet wide along the New Bedford wharf front near the bridge, about 0.2 miles; a channel 15 feet deep and 150 to 400 feet wide from Pierce and Kilburn Wharf to the Old South Wharf, then 10 feet deep and 150 feet wide to a point 1,000 feet south of the old causeway pier, about 0.7 miles; and for the maintenance of the 25-foot anchorage area east of the channel north of Palmer Island. The project was completed in 1939. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. There are 31 wharves in the harbor with a total berthing space of about 19,000 feet. Seven are publicly owned, five have railroad connections and seven have mechanical handling facilities. These facilities are considered adequate for existing commerce.

Operations during fiscal year. Maintenance: Initiated preparation of an Environmental Assessment for proposed maintenance dredging of the Federal channel.

18. NEWBURYPORT HARBOR, MA

Location. Newburyport Harbor is located at the mouth of the Merrimack River, about 4 miles south of the Massachusetts and New Hampshire state line and about 48 miles north of Boston, Massachusetts. (See National Ocean Service Coast Survey Chart 13282.)

Existing project. See the Annual Report for 1994 for a description of the existing project. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. Facilities extending along the south bank of the Merrimack River below the Route 1 highway bridge include several marinas, a yacht club, public landing and a commercial fish pier. There are four marinas and one town pier located along the north side of the river. Terminal facilities are considered adequate for existing commerce.

Operations during fiscal year. Maintenance: Work consisted of investigations for proposed maintenance dredging of the 15-foot entrance channel. Hired labor costs associated with this work included \$4,334 for project management, \$13,644 for environmental coordination and \$39,474 for surveys and plotting. In addition, hired labor costs of \$17,376 were incurred for initial coordination and design efforts associated with the proposed maintenance of the south jetty.

19. NORWALK HARBOR, CT

Location. Norwalk Harbor is located on the north shore of Long Island Sound, about 10 miles east of New York City. (See National Ocean Service Coast Survey Chart 12368.)

Existing project. For a description of the existing project and authorizing legislation, see the Annual Report for 1973. The project was completed in 1950.

Local cooperation. Fully complied with for completed work. A Project Cooperation Agreement was signed on June 28, 2005 between the Corps and the City of Norwalk for cost sharing the construction of confined aquatic disposal (CAD)

cells necessary for project maintenance. Consistent with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must pay 10 percent of the cost to construct any new dredged material disposal facilities necessary for project maintenance, and to reimburse an additional 10 percent of the cost to construct dredged material disposal facilities within a period of 30 years following completion of construction.

Operations during fiscal year. Maintenance: A base bid contract, along with two optional items, for maintenance dredging of Norwalk Harbor was awarded to Cashman Dredging and Marine Contracting on September 29, 2008. Work involved dredging the 6-foot east channel and turning basin, the 10-foot south anchorage to 6 feet, and portions of the 12-foot channel. Work began on October 25, 2008 and was completed on January 31, 2009. Final contract amount was \$4,983,111. A total of 195,042 cubic yards of primarily silt was removed by mechanical dredge and placed at the Central Long Island Sound Disposal Site located about 35 miles away. As a condition of the Water Quality Certificate, this material was required to be capped with 75,000 cubic yards of dredged material from North Cove. Capping was completed on May 15, 2009 at a total cost of \$954,000. Because the state requirement for capping was more stringent than Federal requirements, the City of Norwalk was responsible for all capping costs. Hired labor costs associated with maintenance dredging were \$97,334 for surveys, \$158,090 for construction supervision including travel, \$7,190 for project management and \$2,688 for contract administration.

20. PATCHOGUE RIVER, CT

Location. Patchogue River is a small tidal stream about 3 miles long located in the town of Westbrook, Connecticut. The mouth of the river is located along the north shore of Long Island Sound, about 7 miles west of the Connecticut River. (See National Ocean Service Coast Survey Charts 12374 and 12354.)

Existing project. See the Annual Report for 1984 for a description of the existing project. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. See the Annual Report for 1984 for a description of terminal facilities.

Operations during fiscal year. Maintenance: Initiated preparation of contract plans and specifications for proposed maintenance dredging of the project.

21. POINT JUDITH POND AND HARBOR OF REFUGE, RI

Location. Point Judith marks the southwestern entrance to Narragansett Bay. The harbor lies in a shallow bight west of the point, about 14 miles southwest of Newport Harbor, Rhode Island, and 33 miles east of New London Harbor, Connecticut. Point Judith Pond is a shallow salt pond, lying inland of the beach, with a length north and south of about four miles. A small artificial opening through the beach and sand dunes connects this pond to the ocean. (See National Ocean Surveys Charts 13218 and 13219.)

Previous project. For details see Annual Report for 1948.

Existing project. See the Annual Report for 1977 for a description of the existing project and list of authorizing legislation. All work for the project authorized prior to 1949 was completed in 1950. Breakwaters were completed in 1914 and dredging of shoals in project area was done in 1921. Major reconstruction of the east arm breakwater and main breakwater dock facilities were completed in 1962. Rehabilitation required for remainder of breakwater restoration was completed in October 1963. The extension of the 15-foot channel was completed in April 1977.

Local cooperation. Fully complied with for completed work.

Terminal facilities. Facilities consist of one town wharf of steel sheet pile bulkhead construction, which comprises the southern and eastern limits of the basin. Total docking space amounts to 500 feet. No mechanical handling facilities are available. The wharf is owned by the town and is open to the public. The State of Rhode Island maintains two piers, one in Galilee and one in Jerusalem, each having about 500 feet of berthing space. A facility comprising a bulkhead with 15 finger piers provides berthing space of about 4,000 linear feet. This facility is used for receipt of fish and fish products. Mechanical handling facilities, including fish pumps, are available for discharge of cargo. In addition, there are approximately ten small privately owned wharves used in the fishing business and passenger traffic. Facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: A contract for maintenance dredging of the 15-foot entrance channel and a small portion of the 6-foot channel in Point Judith Pond was awarded on September 25, 2009 to Village Dock Incorporated of Port Jefferson, New York for \$978,000. Dredging is expected to commence early in FY 2010. Hired labor costs associated with this work included \$25,143 for preparation of plans and specifications, \$5,202 for surveys, \$4,429 for contract administration and \$29,532 for project management. Additionally, hired labor costs of \$108,233

were incurred to continue a study of the main breakwater comprising the outer Harbor of Refuge to evaluate its effectiveness and to make recommendations whether the structure requires major rehabilitation.

22. PORTLAND HARBOR, ME

Location. Portland Harbor is located on the southwestern coast of Maine, about 100 miles northeast of Boston, Massachusetts. (See National Ocean Service Coast Survey Chart 13292.)

Existing project. For a description of the existing project and authorizing legislation, see the Annual Report for 1978. The project was completed in 1966, except for ledge removal that was completed in 1968.

Local cooperation. Fully complied with for completed work.

Terminal facilities. There are 37 waterfront facilities, seven of these facilities are publicly owned; the U.S. Government owns four, the State of Maine owns two, and the City of South Portland owns one. Mechanical-handling facilities are available at 24 wharves and railroad connections have been made to 27 wharves. The facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: Hired labor costs associated with proposed maintenance dredging of the 35-foot entrance channel were \$10,981 for environmental coordination with resource agencies, \$8,800 for surveys and \$679 for project management.

23. PROVIDENCE RIVER AND HARBOR, RI

Location. The Providence River originates in Providence, Rhode Island at the junction of the Woonasquatucket and Moshassuck Rivers. It then flows southerly about a mile to the head of Providence Harbor at Fox Point where it is joined by the Seekonk River and continues southerly another 8 miles to Narragansett Bay. (See National Ocean Service Coast Survey Charts 13224 and 13225.)

Existing project. The project provides for a channel 16.8 miles long and 40 feet deep, generally 600 feet wide from deep water in Narragansett Bay just south of Prudence Island Light to the turn below Field Point at Providence, thence up to 1,700 feet wide to Fox Point. The existing 40-foot channel was completed in January 1976. Dredging of a 30-foot channel, 150 feet wide from the upper end of the existing project to India Point at the mouth of the Seekonk River was deauthorized in November 1986. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work. A Project Cooperation Agreement was signed on November 26, 2002 between the Corps and the Governor of Rhode Island for cost sharing the construction of confined aquatic disposal (CAD) cells necessary for project maintenance. The State of Rhode Island is required to provide all lands, easements, rights-of-way and relocations (LERR) necessary for project maintenance; pay 25 percent, during construction, of the total cost to construct those portions of the CAD cells used for the disposal of material dredged from the Federal navigation project; and reimburse an additional 10 percent of the total cost to construct those portions of the CAD cells used for the disposal of material dredged from the Federal navigation project, partially offset by a credit allowed for the value of LERR, within the 30-year period following completion of construction.

Terminal facilities. There are 27 water terminal facilities serving the port of Providence, Rhode Island. Three-fourths of all facilities have railway connections. The City of Providence owns four of these facilities and the State of Rhode Island owns two others. Facilities are adequate for existing commerce.

Operations during fiscal year. Maintenance: A contract for removal of rock areas from the Federal project was awarded on March 15, 2007 to RDA Construction. Work was initiated on June 20, 2007 and completed in October 2008. The contractor removed a total of 454 cubic yards of rock, including a 254 cubic yard overrun. Final contract amount was \$1,914,144, of which \$858,592 was paid this FY. The Water Resources Development Act of 1996 authorized maintenance dredging of the shallow upper reach of the Providence River extending from the Fox Point Hurricane Barrier upstream about 1.3 miles to the vicinity of the Francis Street Bridge, subject to economic and environmental justification. Costs of \$69,991 were incurred to initiate sampling and testing of the proposed dredged material, the results of which will be used to develop disposal alternatives and conduct environmental and economic analysis as required by the authorization.

24. SESUIT HARBOR, MA

Location. Sesuit Harbor is located on the north shore of Dennis in Barnstable County, about 85 miles southeast of Boston, Massachusetts. (See National Ocean Service Coast Survey Chart 13250.)

Existing project. The project provides for a channel 6 feet deep and 100 feet wide from deep water in Cape Cod Bay to a point opposite the Dennis Yacht Club, thence reducing in width to 80 feet at the entrance to the inner harbor basin, for a total channel length of 2,400 feet. Project was completed in August 1982. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Operations during fiscal year. Maintenance: Dredging of the entrance channel was performed by the Government-owned dredge CURRITUCK from July 11 to July 26, 2009. About 23,170 cubic yards of sand were removed and placed in a near shore area off Cold Storage Beach. Plant rental cost was \$159,120.

25. WARWICK COVE, RI

Location. Warwick Cove is located on the northeast shore of Greenwich Bay, about 10 miles south of Providence, Rhode Island. (See National Ocean Service Coast Survey Chart 13224.)

Existing project. Project provides for an entrance channel 6 feet deep and 150 feet wide from deep water in Greenwich Bay into and through the lower portion of the cove, then 100 feet wide to the head of navigation. Project also includes four anchorage areas, 6 feet deep and totaling 13 acres. Two acres are in the vicinity of Oakland Beach Park, five acres are on each side of the lower channel and one acre is at the head of the cove. Project was completed in August 1966. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Operations during fiscal year. Maintenance: Continuing efforts to determine the feasibility of realigning the entrance channel were delayed awaiting stakeholder information regarding current project use and alignment concerns.

26. WESTPORT RIVER, MA

Location. The Town of Westport is located in Bristol County in southeastern Massachusetts along the Rhode Island state line, about 30 miles southeast of Providence, Rhode Island. The Westport River flows through the Town of Westport and empties into the Atlantic Ocean just west of Horseneck Beach. (See National Ocean Service Coast Survey Chart 13228.)

Previous projects. The previous project provides for the removal of obstructions in the East and West Branches of the Westport River to a depth of 7 feet and construction of a stone jetty on the west end of Horseneck Beach. For additional details see the Annual Report of 1942.

Existing project. The existing project provides for an entrance channel, 9 feet deep and 150 to 200 feet wide, extending from deep water in the Atlantic Ocean up the Westport River a distance of about 9,700 feet to deep water

in Westport Harbor. Project was completed in December 2007. (See Table 1-B for Acts authorizing the project.)

Local cooperation. A Project Cooperation Agreement was signed on August 30, 2007 between the Corps and the Massachusetts Department of Conservation and Recreation. The project sponsor must provide all lands, easements, rights-of-way, and perform all relocations determined by the Government to be necessary for project construction; provide 10 percent of total General Navigation Feature (GNF) costs during construction; reimburse an additional 10 percent of total GNF costs within a period not to exceed 30 years following completion of construction (partially offset by a credit allowed for the value of lands, easements, rights-of-way, and relocations); and shall operate and maintain the local service facilities in a manner compatible with the authorized purposes of the project.

Terminal facilities. Facilities located around the harbor include the Westport Town pier and docks, a marina, two yacht clubs and a boat yard. The harbor also contains three boat launch ramps and smaller boating facilities. During the summer boating season, the harbor contains about 1,300 recreational vessels which are docked evenly at slips and moorings. The harbor has a full-time commercial fishing fleet of about 36 vessels. Facilities are considered adequate for present harbor activities.

Operations during fiscal year. New Work: Final costs were apportioned between the Federal and non-Federal accounts and the project was financially closed.

27. WEYMOUTH-FORE AND TOWN RIVER, MA

Location. The project is located along the southeastern limit of Boston Harbor. (See National Ocean Service Coast Survey Chart 13270.)

Existing project. The project provides for a 35-foot channel extending from deep water in Nantasket Roads through Hingham Bay and up the Weymouth Fore River to about 3,000 feet upstream of the Fore River Bridge. The 35-foot channel also extends up the Town River from its confluence with the Weymouth Fore River to the head of Town River Bay. The project also includes a 35-foot turning basin in Town River Bay, a 35-foot turning and maneuvering basin at the confluence of the two rivers and King Cove, an 8-foot anchorage area in Town River Bay, a 15-foot channel extending from the turning basin in Town River Bay to just below the Quincy Electric Light and Power substation, and a 6-foot channel extending from the 35-foot channel in Weymouth Fore River 8,000 feet upstream to the Quincy Avenue Bridge. The project was completed in July 1983. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Terminal facilities. Weymouth-Fore River has nine wharves all grouped near the head of Federal improvements. Construction consists mainly of pile and timber piers extending from timber or concrete bulkheads. There are 6,092 feet of berthing space available. Six of the wharves have railroad connections and seven mechanical handling facilities. Five of the wharves are used in connection with a large shipyard, two with oil terminals, one with an electric generating plant, one with a large soap manufacturing plant and two with yacht clubs. On the south bank of the Town River are 9 wharves, 4 of which are used for boat building and repair work, 3 are used for receipt of petroleum products and one for receiving scrap materials. On the north bank of the river is a yacht building and repair yard. There are no publicly owned wharves. Facilities are considered adequate for the present needs of commerce.

Operations during fiscal year. Maintenance: Project condition surveys were performed at a total cost of \$14,200.

28. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation activities pursuant to Section 107, Public Law 86-645, as amended (preauthorization).

(See Table 1-I)

Mitigation of damages caused by Federal navigation projects pursuant to Section 111, Public Law 90-483 as amended (preauthorization).

(See Table 1-J)

Beach Erosion Control

29. SEABROOK HARBOR, NH

Location. The town of Seabrook is located along the coast of New Hampshire on the state border with Massachusetts. Seabrook Harbor is located at the mouth of the Blackwater River just south of Hampton Harbor. The two harbors share a common inlet to the ocean. (See National Ocean Service Coast Survey Charts 13274 and 13278.)

Existing project. See the Annual Report for 2007 for a description of the existing project. Construction of the project was completed in April 2005. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Operations during fiscal year. New work: Funds to complete as-built drawings were not received. Further efforts are on hold.

30. INSPECTION OF COMPLETED BEACH EROSION CONTROL PROJECTS

No beach inspections were conducted in FY 2009.

31. BEACH EROSION CONTROL WORK UNDER SPECIAL AUTHORIZATION

Beach erosion control activities pursuant to Section 103, Public Law 87-874, as amended (preauthorization).

(See Table 1-K)

Flood Control

32. BLACKSTONE RIVER BASIN, MA AND RI

Works covered by this plan include a dam and reservoir on the West River and local protection works at three sites along the Blackstone River. The Flood Control Act of 1944 authorized the plan for construction of a reservoir on the West River and local protection works at Worcester, Massachusetts, and Woonsocket and Pawtucket, Rhode Island, substantially in accordance with House Document 624, 78th Congress, 2nd session. The Flood Control Act of 1960 authorized a local flood protection project at lower Woonsocket, Rhode Island, substantially in accordance with Senate Document 87, 85th Congress, 2nd Session. A nonstructural local protection project was authorized in 1982 for the Belmont Park section of Warwick, Rhode Island, along the Pawtuxet River. Stream bank protection projects on the Blackstone River in Millbury, Massachusetts, and on the Clear River in Burrillville, Rhode Island, were authorized and constructed in accordance with Section 14 of the 1946 Flood Control Act. (See Table 1-Q for projects comprising the authorized plan.)

32A. WEST HILL DAM, MA

Location. West Hill Dam is located on the West River in Massachusetts, about three miles above its confluence with Blackstone River and 2.5 miles northeast of Uxbridge, Massachusetts. (See Geological Survey maps Blackstone, MA and RI, Milford, MA, and Grafton, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant structures was initiated in June 1959 and completed in June

1961. Construction of recreational facilities was completed in June 1967. Major rehabilitation of the dam was completed in July 2003.

Local cooperation. Section 3, Flood Control Act of 1944 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract for an intensive cultural resource survey was awarded on June 19, 2009. Work began in August 2009 and was about 60 percent complete at FY end with contractor earnings of \$103,849.

33. BLACKWATER RIVER, SALISBURY, MA

Location. The town of Salisbury is located along the Atlantic coastline about 45 miles northeast of Boston, Massachusetts. The Blackwater River is a 3.1 mile long tidal inlet that forms a salt marsh in the northeastern corner of Salisbury, Massachusetts.

Existing project. Project involves the construction of about 2,765 feet of concrete floodwall with an average height of 2-3 feet. Most sections of the wall would have a landside berm. The project includes construction of two pumping stations to discharge interior run-off. The project will reduce the risk of frequent flooding of several low lying areas along the Blackwater River in Salisbury, Massachusetts. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Partnership Agreement was signed on May 21, 2009 between the Corps and the Massachusetts Department of Conservation and Recreation. The sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for construction of the project; pay a cash contribution in the amount necessary to bring the non-Federal share of project costs to 35 percent; assume all costs in excess of the Federal statutory limitation of \$7,000,000; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: Efforts included negotiation of a Project Partnership Agreement and initiation of project design.

34. CHARLES RIVER (NATURAL VALLEY STORAGE AREAS), MA

Location. The Charles River extends inland from Boston Harbor southwesterly toward the Massachusetts-Rhode

Island border and is some 80 miles long with a watershed covering 307 square miles.

Existing project. For a description of the existing project and authorizing legislation, see the Annual Report for 1995. Land acquisition was completed in 1990.

Local cooperation. Local interests are required to prevent modifications or alteration of existing roadways, utilities, bridges, culverts, and any other improvements that might affect the drainage characteristics of the natural storage areas; adopt and enforce regulations to restrict development of flood plain lands; and operate and maintain the existing dams along the Charles River. Local assurances were provided by the Commonwealth of Massachusetts.

Operations during fiscal year. Maintenance: Hired labor costs for ordinary maintenance activities, project surveillance and inspection, and land use administration were \$348,775. A contract for an intensive cultural resource survey was awarded on June 19, 2009. Work began in August 2009 and was about 15 percent complete at FY end with contractor earnings of \$69,990.

35. CONNECTICUT RIVER BASIN, VT, NH, MA AND CT

The Flood Control Act of 1936, as amended by Act of May 25, 1937, authorized construction of ten reservoirs on tributaries of Connecticut River in accordance with plans in House Document 412, 74th Congress, 2nd session, as the same may be revised upon further investigation of 1936 flood. Flood Control Act of 1938 approved a general comprehensive plan for control of floods and other purposes in Connecticut River Valley, as set forth in House Document 455, 75th Congress, 2nd session, and authorized \$11,524,000 for construction of local flood protection projects in the plan. Act of October 15, 1940, modified Act of June 18, 1938, to provide additional protection at East Hartford, Connecticut, as set forth in House Document 653, 76th Congress, 3rd session. Act of August 18, 1941, modified comprehensive plan approved in 1938 to include improvements recommended in House Document 653, 76th Congress, 3rd session, and House Document 724, 76th Congress, 3rd session, with such further modifications as may be found justifiable in discretion of Secretary of the Army and Chief of Engineers. Latter Act also authorized to be appropriated additional \$6 million for local protection works and \$10 million for reservoirs. Act of October 26, 1942, further modified plan by including construction of Gully Brook conduit at Hartford, Connecticut. Flood Control Act of 1944 authorized expenditure of \$30 million in addition to previous authorization for comprehensive plan approved in 1938 and modified plan by directing specific consideration of an alternative plan of Vermont State Water Conservation Board instead of Williamsville Reservoir in

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West River Basin, Vermont; directing consultation with affected States during the course of the investigations and transmission of proposal and plans to each affected State for written views and recommendations for reservoir projects heretofore authorized for construction at Cambridgeport, Ludlow, South Tunbridge, and Gaysville, and resubmission of projects or modifications for construction of Sugar Hill site. Flood Control Act of 1950 modified project for flood control at Hartford, Connecticut, authorized by Flood Control Act of 1938, as amended to include Folly Brook dike and conduit. Flood Control Act of 1954 modified plan for flood control in Connecticut River Basin to provide for construction of a reservoir on Otter Brook at South Keene, New Hampshire in lieu of any reservoir or reservoirs heretofore authorized. This Act further modified plan for West River Basin of Connecticut River in Vermont to consist of three reservoirs at Ball Mountain, The Island, and Townshend sites, in lieu of plan of eight reservoirs authorized in Flood Control Act of 1944. The Flood Control Act of 1958 modified the plan for flood control in the Connecticut River Basin to include construction of Littleville Reservoir on the Middle Branch of the Westfield River in Massachusetts, and the Mad River Reservoir on the Mad River above Winsted, Connecticut. The Flood Control Act of 1960 included authorization in the Connecticut River Basin of a plan for flood protection on the Chicopee River in Massachusetts, substantially in accordance with House Document 434, 86th Congress; plan for flood protection on the Westfield River in Massachusetts, substantially in accordance with Senate Document 109, 86th Congress; and a plan for flood control and related purposes on the Farmington River in Connecticut, substantially in accordance with House Document 443, 86th Congress. The Flood Control Act of 1968 included authorization in the Connecticut River Basin of a plan for construction of Beaver Brook Reservoir on Beaver Brook in Keene, New Hampshire, substantially in accordance with Senate Document 60, 90th Congress; and a plan for protection on the Park River in Connecticut, substantially in accordance with Senate Document 43, 90th Congress. The Flood Control Act of 1970 deauthorized the construction of a reservoir at Claremont, New Hampshire. The Water Resources Development Act of 1976 deauthorized the construction of Gaysville Lake in Vermont. Flood control projects at Cambridgeport Lake, Brockway Lake, Victory Lake, South Tunbridge Lake, Ludlow Lake and The Island Lake, Vermont; Honey Hill Lake, West Canaan Lake, and the Alternative to Sugar Hill Reservoir, New Hampshire were deauthorized in August 1977 in accordance with Section 12 of the Water Resources Development Act of 1974. The authorization for the Beaver Brook Lake, New Hampshire project expired in April 1978 due to lack of local cooperation. Local protection projects at Wethersfield, and Haddam and East Haddam, Connecticut; Gardner and West Springfield, Massachusetts; Hartford, Vermont; and Keene, New Hampshire were authorized and constructed in

accordance with Section 205 of 1948 Flood Control Act. Emergency stream bank erosion control projects at Colchester, Middletown, Milford, and Simsbury, Connecticut; Conway, and Huntington, Massachusetts; Charleston, North Stratford, and Westmoreland, New Hampshire; and Brownsville, Vermont; were authorized and constructed in accordance with Section 14 of the 1946 Flood Control Act. The Water Resources Development Act of 1986 modified the comprehensive plan for the control of flood-waters in the Connecticut River Basin, Vermont, New Hampshire, Massachusetts, and Connecticut, authorized by Section 5 of the Act of June 22, 1936 (49 Stat. 1572) by authorizing the design, construction, operation, and maintenance of facilities at Townshend Dam on the West River in Vermont to enable upstream migrant adult Atlantic salmon to bypass that dam and Ball Mountain Dam, Vermont, and to provide at both Townshend and Ball Mountain Dams facilities as necessary for the downstream passage of juvenile Atlantic salmon. This work was completed in February 1993. (See Table 1-R at end of chapter for reservoirs and local protection works for Connecticut River Basin.)

35A. BALL MOUNTAIN LAKE, VT

Location. The Dam is on West River, 29 miles above its junction with Connecticut River at Brattleboro, Vermont. It is two miles north of Jamaica, VT. (See Geological Survey map for Londonderry, VT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1994. Construction of the dam and appurtenant works was initiated in May 1957 and completed in November 1961. Cost of work was \$10,448,000 for construction and \$350,000 for lands and damages, a total of \$10,798,000. Construction of recreation facilities was initiated in June 1975 and completed in June 1977. Fish passage facility work began in June 1992 and was completed in February 1993. The project is a unit of comprehensive plan for flood control and other purposes in Connecticut River Basin.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Major rehabilitation: Efforts continued on a dam safety and assurance study to investigate embankment settlement, slope movement and seepage conditions. Subsurface explorations of the lower rockfill zone and abutments, along with surveys of the downstream embankment, toe and access areas were performed to develop a plan of remedial repairs. Additional crest settlement points have been established and several slope inclinometers have been automated to adequately monitor embankment performance during high pools.

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Maintenance: Ordinary operation and maintenance activities were conducted.

35B. BARRE FALLS DAM, MA

Location. Barre Falls Dam is located on the Ware River in the Town of Barre, Massachusetts, about 32 miles above the confluence of the Ware and Swift Rivers, and 13 miles northwest of Worcester, Massachusetts. (See Geological Survey maps for Barre, MA and Wachusett Mountain, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in May 1956 and completed in May 1958.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to replace the toe drains along dikes two and three was awarded on June 5, 2008. Work began later that month and was about 90 percent complete at FY end. Contractor earnings totaled \$162,473, of which \$28,894 was earned this FY. Contracts to repair and paint the spillway and service bridges and to repair Pine Plains Bridge were awarded on September 29, 2009. Work on these two contracts had not begun by FY end.

35C. BIRCH HILL DAM, MA

Location. Birch Hill Dam is located on the Millers River, 27.3 miles above its junction with the Connecticut River. The dam is 1.3 miles east of South Royalston, Massachusetts and 7.5 miles northwest of Gardner, Massachusetts. (See Geological Survey maps for Royalston and Winchendon, MA-NH and Templeton, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in June 1940 and completed in February 1942.

Local cooperation. Section 2, Flood Control Act of 1938 applies. Local interests have contributed \$32,000 as their required 50 percent cost sharing of recreational development in accordance with 1965 Federal Water Project Recreation Act.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to cap and close the former Royalston Dump was awarded on August 29, 2008. Work began in October 2008

and was completed in May 2009. Final contract amount was \$149,044, all of which was earned this FY. A contract to replace the gatehouse roof was awarded on September 28, 2009. A contract to repair the service gate guides and rollers was awarded on September 29, 2009. Work under these two contracts had not begun by FY end.

35D. COLEBROOK RIVER LAKE, CT

Location. Colebrook River Dam is located in the Town of Colebrook, Connecticut, in Litchfield County on the West Branch of the Farmington River about 3.9 miles upstream from its confluence with the Still River in Riverton, Connecticut, and about 1.5 miles upstream from Goodwin (Hogback) Dam. (See Geological Survey map for Winsted, CT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in May 1965 and completed in June 1969. Construction of recreation facilities was initiated in August 1969 and completed in June 1970.

Local cooperation. A water supply contract was signed by the Hartford Connecticut Metropolitan Water District. Repayment is being made in accordance with provisions of the 1958 Water Supply Act.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to repair and paint the Old Route 8 Bridge was awarded on June 23, 2009. Work began in July 2009 and was about 30 percent complete at FY end with contractor earnings of \$119,907.

35E. CONANT BROOK DAM, MA

Location. Conant Brook Dam is located in south central Massachusetts in the Town of Monson. The dam is located across Conant Brook about two miles southeast of the community of Monson, Massachusetts. (See Geological Survey map for Monson, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam, highway relocations, and appurtenant works was initiated in June 1964 and completed in December 1966.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

35F. KNIGHTVILLE DAM, MA

Location. Knightville Dam is located on the Westfield River, 27.5 miles above its confluence with the Connecticut River. The dam is four miles north of Huntington, Massachusetts, and about 12 miles west of Northampton, Massachusetts. (See Geological Survey map for Westhampton, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in August 1939 and completed in December 1941.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to replace the gatehouse roof was awarded on September 28, 2009. A contract to replace the gate roller chains was awarded on September 30, 2009. Work on these two contracts had not begun by FY end.

35G. LITTLEVILLE LAKE, MA

Location. Littleville Dam is located in Chester, Massachusetts, on the Middle Branch of the Westfield River, one mile above its confluence with the main stem of the Westfield River and 25.2 miles above the confluence of the Westfield and Connecticut Rivers. (See Geological Survey map for Chester, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated under a multi-component contract in June 1962 and completed in September 1965.

Local cooperation. Section 2, Flood Control Act of June 28, 1938, and Title III, Water Supply Act of 1958 apply and were fully complied with.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to replace the gatehouse and intake tower roofs was awarded on September 28, 2009. Work had not begun by FY end.

35H. NORTH HARTLAND LAKE, VT

Location. North Hartland Dam is located on the Ottauquechee River, about 1.5 miles above its junction with the Connecticut River, and one-mile northwest of North

Hartland, Vermont. The reservoir extends upstream 5.5 miles. (See Geological Survey map for Hanover NH-VT.)

Existing project. For a description of completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam was initiated in June 1958 and completed in June 1961.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to pave portions of the access road was awarded on September 26, 2007. Work began in November 2007 and was completed in June 2008. Final contract amount was \$265,949, of which \$6,188 was paid this FY.

35I. NORTH SPRINGFIELD LAKE, VT

Location. North Springfield Dam is located on the Black River in the Town of Springfield, Vermont, about 8.7 miles above its junction with the Connecticut River, and about three miles northwest of Springfield, Vermont. (See Geological Survey maps for Ludlow, VT, and Claremont, NH.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam was initiated in May 1958 and completed in November 1960.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

35J. OTTER BROOK LAKE, NH

Location. Otter Brook Dam is located on Otter Brook, about 2.4 miles upstream from its junction with the Branch, which flows about 2.5 miles to the Ashuelot River at Keene, New Hampshire. (See Geological Survey maps for Keene, NH-VT, and Monadnock, NH.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in September 1956 and completed in August 1958. Major rehabilitation involving construction of a new concrete weir using mechanical fuseplugs was completed in June 2006.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to install erosion control measures along the borrow area was awarded on September 23, 2009. Work had not begun by FY end.

35K. PARTRIDGE BROOK, WESTMORELAND, NH

Location. The project is located along the east bank of the Connecticut River at its confluence with Partridge Brook in the Town of Westmoreland, New Hampshire. The Cheshire County municipal wastewater treatment lagoon is located adjacent to the erosion site.

Existing project. Project provides for the construction of approximately 180 linear feet of concrete block and stone slope protection along the east bank of the Connecticut River, and 160 linear feet of steel sheeting along the south bank of Partridge Brook adjacent to the municipal wastewater treatment lagoon. The project prevents further undermining and possible collapse of the lagoon embankment. Construction of the project was completed in June 2008. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on May 16, 2007 between the Corps and the County of Cheshire, New Hampshire. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction. The project sponsor must also pay a minimum cash contribution of 5 percent of total project costs during construction; pay an additional cash contribution during construction so that the total contribution including lands equals 35 percent of total project costs; assume all costs in excess of the Federal statutory cost limitation of \$1,000,000; and bear all costs for maintenance and repair of the project after completion.

Operations during fiscal year. New work: A contract for construction of emergency stream bank protection measures was awarded on July 6, 2007. Work began in August 2007 and was completed in June 2008. Final contract amount was \$712,153, of which \$5,165 was earned this FY.

35L. SALMON RIVER, HADDAM AND EAST HADDAM, CT

Location. The Salmon River is located in south central Connecticut. The river originates in the town of Hebron and flows southwesterly about 20 miles to its confluence with the Connecticut River. Leesville Dam is located on the Salmon River about 4 miles upstream from the Connecticut

River along the town line between Haddam and East Haddam, Connecticut.

Existing project. Project provides for the construction of a pier-type ice control structure across the Salmon River about 200 feet upstream of Leesville Dam. The structure retains ice breakup and reduces downstream flooding. Construction of the project was completed in July 2008. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on February 18, 2005 between the Corps and the Connecticut Department of Environmental Protection. The sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for construction of the project; pay a cash contribution in the amount necessary to bring the non-Federal share of project costs to 35 percent; assume all costs in excess of the Federal statutory limitation of \$7,000,000; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: Initiated financial close-out of project.

35M. SURRY MOUNTAIN LAKE, NH

Location. Dam is on Ashuelot River, 34.6 miles above its junction with Connecticut River and five miles north of Keene, New Hampshire. (See Geological Survey maps for Keene and Bellows Falls, NH-VT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in August 1939 and completed in June 1942. Additional recreational facilities were completed in September 1969 and 1980.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to resurface the access road and parking areas was awarded on July 8, 2008. Work began the following month and was completed in September 2008. Final contract amount was \$418,841, of which \$39,189 was paid this FY.

35N. TOWNSHEND LAKE, VT

Location. Townshend Lake Dam is located on the West River, 19.1 miles above its junction with the Connecticut River at Brattleboro, Vermont, and about two miles west of

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Townshend, Vermont. The reservoir extends upstream about four miles. (See Geological Survey maps for Saxtons River, VT, and Londonderry, VT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1994. Townshend Lake Reservoir is operated as a unit of a coordinated system for flood control in Connecticut River Basin. Construction of the dam and appurtenant works was initiated in November 1958 and completed in June 1961. Additional recreational facilities were completed in October 1969 and September 1971. Fish passage facility work began in June 1992 and was completed in February 1993.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

350. TULLY LAKE, MA

Location. Tully Lake Dam is located on the East Branch of Tully River, about 3.9 miles above its junction with the Millers River. The dam lies about one mile north of Fryville, Massachusetts, and 3.5 miles north of Athol, Massachusetts. (See Geological Survey map for Royalston, MA-NH.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam was initiated in March 1947 and completed in September 1949.

Local cooperation. Section 2, Flood Control Act of 1938 applies. Local interests must also bear 50 percent of future recreational development, in accordance with 1965 Federal Water Project Recreational Act.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract to repair the spillway bridge and Doane Hill Road Bridge was awarded on June 5, 2008. Work began later that month and was completed in October 2008. Final contract amount was \$182,684, of which \$22,504 was earned this FY. A contract to repair the service gates was awarded on September 29, 2009. Work under this contract had not begun by FY end.

35P. UNION VILLAGE DAM, VT

Location. Union Village Dam is located on the Ompompanoosuc River, about four miles above its junction with the Connecticut River. The dam lies about one-fourth mile north of Union Village, Vermont, and 11 miles north of

White River Junction, Vermont. (See Geological Survey maps for Strafford, VT and Mount Cube, NH-VT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam was initiated in March 1947 and completed in June 1950.

Local Cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

36. FOX POINT BARRIER, RI

Location. The Fox Point Barrier is located on the Providence River at Fox Point, in the City of Providence, Rhode Island.

Existing project. For description of completed project see the Annual Report for 1974. Construction of the barrier was completed in January 1966. The Water Resources Development Act of 1999 directs the Secretary to undertake necessary repairs to the barrier as identified in the Condition Survey and Technical Assessment dated April 1998, with Supplemental dated August 1998. Necessary repairs include overhauling pumps, replacing tainter gate roller chains, cleaning and painting tainter gates and repairing lower guide bearing diffuser cracks. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work. A Project Cooperation Agreement was signed on April 8, 2002 between the Corps and the City of Providence. The City must provide 35 percent of eligible repair costs and assume all costs in excess of Federal appropriations.

Operations during fiscal year. Major rehabilitation: The City of Providence initiated repair work in January 1998. Work completed to date includes rehabilitation of the 5 pumps, canal gates, emergency gates and taintor gate chains. Reimbursements by the Corps to the City of Providence for eligible repair work total \$2,104,791, none of which was paid this FY. Remaining work includes miscellaneous concrete repairs, replacing the pumping station roof, painting the taintor gates and replacing the electrical mechanical system. Further work by the city is on hold pending transfer of operation and maintenance of the project to the Corps in accordance with Section 2866 of the National Defense Authorization Act of 2007.

Maintenance: Worked with the City of Providence to identify all lands and structures necessary to operate and maintain the project. The city plans to transfer ownership of the project to the Corps in FY 2010.

37. HOLMES BAY (CUTLER ROAD), WHITING, ME

Location. Whiting is located in eastern Maine about 10 miles south of the Canadian border. The project site is located along Cutler Road (Route 191), which connects the coastal Towns of Machiasport, Whiting and Cutler, Maine.

Existing project. Project provides for the construction of approximately 500 linear feet of stone slope protection along the shoreline of Holmes Bay adjacent to Cutler Road (Route 191). The project protects against further undermining and possible collapse of Cutler Road. Construction of the project was completed in May 2009. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed September 26, 2007 between the Corps and the Maine Department of Transportation. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction. The project sponsor must also pay a minimum cash contribution of 5 percent of total project costs during construction; pay an additional cash contribution during construction so that the total contribution including lands equals 35 percent of total project costs; assume all costs in excess of the Federal statutory cost limitation of \$1,000,000; and bear all costs for maintenance and repair of the project after completion.

Operations during fiscal year. New Work: A contract for construction of emergency shoreline protection measures along Holmes Bay was awarded on September 15, 2008. Work began in October 2008 and was completed in May 2009. Final contract amount was \$497,821.

38. HOUSATONIC RIVER BASIN, CT AND MA

Seven flood control reservoirs and three local protection projects have been specifically authorized as part of an overall plan for flood control in the Housatonic River Basin. The Naugatuck and Housatonic Rivers converge 12 miles above the mouth of the Housatonic River. A project for emergency snagging and clearing along the Blackberry River, a tributary of the Housatonic River, was authorized under authority contained in Section 208 of the 1954 Flood Control Act. Six emergency stream bank protection projects were authorized and constructed under authority provided by Section 14 of the 1946 Flood Control Act. Five projects for local flood protection were authorized and constructed under authority provided by Section 205 of the 1948 Flood Control Act. (See Table 1-S at end of chapter on dams, reservoirs, and local protection projects for Housatonic River Basin.)

38A. BLACK ROCK LAKE, CT

Location. Black Rock Dam is located on Branch Brook, about two miles upstream from its confluence with the Naugatuck River, in the Towns of Thomaston and Watertown, Connecticut. (See Geological Survey map for Thomaston, CT.)

Existing project. See the Annual Report for 1975 for a description of completed improvements and authorizing legislation. Road relocation was completed in November 1967. Construction of the dam and appurtenant works was initiated in July 1967 and completed in July 1971.

Local cooperation. Section 2, Flood Control Act of 1938 applies. State legislation requires local interests to establish encroachment lines downstream of dam to permit efficient reservoir operation.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted

38B. HANCOCK BROOK LAKE, CT

Location. Dam is on Hancock Brook, in the Town of Plymouth, Connecticut, about 3.4 miles above its confluence with Naugatuck River. (See Geological Survey map for Waterbury, CT.)

Existing project. See the Annual Report for 1975 for a description of the completed improvements and authorizing legislation. Construction of the dam and appurtenant structures was initiated in July 1963 and completed in August 1966.

Local cooperation. Section 2, Flood Control Act of 1938 applies. State legislation requires local interests to establish encroachment lines downstream of dam to permit efficient reservoir operation.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract for miscellaneous concrete repairs was awarded on May 23, 2006. Work began in July 2006 and was completed in December 2006. Final contract amount was \$379,432, of which \$2,712 was paid this FY.

38C. HOP BROOK LAKE, CT

Location. Dam site is located on Hop Brook about 1.4 miles upstream of the confluence of Naugatuck River and Hop Brook, in the city of Waterbury and towns of Middlebury and Naugatuck, Connecticut. (See Geological Survey map for Waterbury, CT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant structures was initiated in December 1965 and completed in December 1968. Construction of a public use facility was completed in November 1973. Construction of an additional restroom was completed in 1980.

Local cooperation. Section 2, Flood Control Act of 1938 applies. State legislation requires local interests to establish encroachment lines downstream of dam to permit efficient reservoir operation.

Operations during fiscal year. Major rehabilitation: A contract for remedial seepage repairs was awarded on September 29, 2009. Work had not begun by FY end.

Maintenance: Ordinary operation and maintenance activities were conducted.

38D. NORTHFIELD BROOK LAKE, CT

Location. Dam is on Northfield Brook, about 1.3 miles upstream from its confluence with Naugatuck River, in town of Thomaston, Connecticut. (See Geological Survey map for Thomaston, CT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of dam and appurtenances was initiated in May 1963 and completed in October 1965. Construction of recreation facilities was initiated in November 1966 and completed in August 1967.

Local cooperation. Section 2, Flood Control Act of 1938 applies. State legislation requires local interests to establish encroachment lines downstream of dam to permit efficient reservoir operation.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

38E. THOMASTON DAM, CT

Location. Thomaston Dam is located on the Naugatuck River, 30.4 miles above its junction with the Housatonic River, and about 1.6 miles north of Thomaston, Connecticut. Reservoir extends upstream about 6.4 miles. (See Geological Survey map for Thomaston, CT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in May 1958 and completed in November 1960.

Local cooperation. Section 3, Flood Control Act of 1944 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

39. MERRIMACK RIVER BASIN, NH AND MA

The Flood Control Act of 1936 authorized construction of a system of flood control reservoirs in the Merrimack River Basin to reduce flood heights. The Flood Control Act of 1938 approved a general comprehensive plan for flood control and other purposes as approved by Chief of Engineers, and modified the original project to include related flood control works which may be found justified by the Chief of Engineers. All operations pertaining to flood control in the Merrimack River Basin are now carried on under and reported under projects for individual units of the comprehensive plan referred to above. For a final cost and financial summary of the comprehensive plan, see The Annual Report for 1946.

A comprehensive plan for development of water resources of the North Nashua River Basin, a principal tributary of the Merrimack River, was authorized by the 1966 Flood Control Act substantially in accordance with Senate Document 113, 89th Congress. Plan provides for construction of coordinated system of four reservoirs and three local protection projects for flood protection, water supply, recreation and allied purposes. Water Resources Development Act of 1986 deauthorized two of the reservoirs and one of the local protection projects.

The 1966 Flood Control Act also authorized construction of the Saxonville local protection project substantially in accordance with Senate Document 61, 89th Congress. Five emergency stream bank protection projects have been authorized and constructed under authority provided by Section 14 of the 1946 Flood Control Act. (See Table 1-T at end of chapter for reservoirs and related flood control works for Merrimack River Basin.)

39A. BLACKWATER DAM, NH

Location. Dam is located on the Blackwater River, about 8.2 miles above its confluence with Contoocook River, and 118.8 miles above the mouth of Merrimack River. The dam is located in the town of Webster, New Hampshire, just above the village of Swetts Mills, New Hampshire and 18 miles northwest of Concord, New Hampshire. (See Geological Survey maps for Penacook and Mount Kearsarge, NH.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual

Report for 1975. Project is complete except for construction of public facilities. Construction of the dam and appurtenant works was initiated in May 1940 and completed in November 1941.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

39B. EDWARD MACDOWELL LAKE, NH

Location. Edward MacDowell Dam is located on Nubanusit Brook, a tributary of the Contoocook River, about one-half mile upstream from the village of West Peterborough, New Hampshire, and about 14 miles east of Keene, New Hampshire. (See Geological Survey map for Peterborough and Monadnock, NH.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in March 1948 and completed in March 1950.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

39C. FRANKLIN FALLS DAM, NH

Location. Franklin Falls Dam is located on the Pemigewasset River, a main tributary of the Merrimack River, about 2.5 miles upstream of Franklin, New Hampshire. (See Geological Survey maps for Penacook and Holderness, NH.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in November 1939 and completed in October 1943.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

39D. HOPKINTON-EVERETT LAKES, NH

Location. Hopkinton Dam is on Contoocook River, 17.3 miles above its junction with Merrimack River and about

one-half mile upstream from village of West Hopkinton, New Hampshire. Everett Dam is on Piscataquog River, 16 miles above its junction with Merrimack River, and about 1.3 miles southeast of village of East Weare, NH. Two interconnecting canals were provided to enable the two reservoir areas to function as one. (See Geological Survey map for Hillsboro, NH, and Concord, NH.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of two dams and appurtenant works was initiated in November 1959 and completed in December 1962. Construction of recreation facilities was initiated in November 1974 and completed in September 1975.

Local cooperation. Section 2, Flood Control Act of 1938 applies. Local interests must also bear 50 percent of future recreational development in accordance with 1965 Federal Water Project Recreation Act.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

40. NEW BEDFORD, FAIRHAVEN AND ACUSHNET, MA

Location. Main harbor barrier is across New Bedford and Fairhaven Harbor in vicinity of Palmer Island. Supplemental dikes and walls are provided in Clark Cove area of New Bedford and Fairhaven. (See Geological survey maps for New Bedford North, New Bedford South, Marion, and Sciticut Neck, MA and National Ocean Service Coast Survey Charts 13230 and 13218.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the barrier and appurtenances was initiated in October 1962 and completed in January 1966. Construction of the pumping station was initiated in October 1962 and completed in June 1964.

Local cooperation. Fully complied with for completed work.

Operations during fiscal year. Maintenance: The cost to operation and maintain the New Bedford Hurricane Barrier totaled \$1,758,199. Costs included \$195,858 for normal operation and maintenance; \$44,593 for design of the stop log structure repairs, replacement of sector gate wheels and roof repairs; \$81,917 to purchase bearings; \$82,744 for contract supervision and administration; and \$8,100 for Reservoir Control Center support. A contract to upgrade the electrical control system to the barrier gate was awarded on July 2, 2008. Work began in late September 2008 and was about 98 percent complete at FY end. Contractor earnings

totaled \$1,048,836, of which \$1,032,037 was earned this FY. A contract to repair the reduction gears was awarded on February 11, 2009. Work began in April 2009 and was completed in July 2009. Final contract amount was \$312,950. A contract to fabricate sector gate wheels was awarded on June 30, 2009. Work had not begun by FY end.

41. PLEASANT POINT, PERRY, ME

Location. The Town of Perry is located in Washington County along the coast of northeastern Maine about 126 miles east of Bangor, Maine and 20 miles south of Calais, Maine.

Existing project. Provides for the construction of approximately 800 linear feet of stone slope protection along an eroding section of shoreline on Pleasant Point. Project was completed in June 1987. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. Fully complied with for completed work. For a description of items of local cooperation see the Annual Report for 1987.

Operations during fiscal year. New work: Periodic inspection revealed that some of the stone slope protection has been displaced. The rate of displacement is greater than expected because much of the stone used in construction was not in accordance with specifications in terms of weight and configuration. Although the Construction Deficiency Report recommended repair, it was decided that this work did not qualify because the project is over twenty years old and total costs are already at the Federal statutory funding limit.

42. STAMFORD, CT

Location. The Stamford Hurricane Barrier is located in Fairfield County on the north shore of Long Island Sound, about 30 miles east of New York City and 20 miles southwest of Bridgeport, Connecticut. (See Geological Survey map for Stamford, CT and National Ocean Service Coast Survey Chart 12368.)

Existing project. For a description of the completed improvements and authorizing legislation, see the Annual Report for 1974. Project was completed in 1969. Local interests still owe a substantial amount based on claims settlements, including interest payment under the Contract Disputes Act.

Local cooperation. Fully complied with for completed work.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted.

43. THAMES RIVER BASIN, CT, RI, AND MA

Works covered by this plan are a series of dams and reservoirs on tributaries of Thames River in Massachusetts and Connecticut, within a radius of 45 miles from Norwich, Connecticut, and a channel enlargement on Shetucket River where it discharges into the Thames River at Norwich. The Flood Control Act of August 18, 1941, approved a plan for a system of reservoirs and channel improvements in the Thames River Basin in accordance with House Document 885, 76th Congress, 3rd session, and authorized \$6 million for initiation and partial accomplishment of project. The Flood Control Act of December 22, 1944, authorized completion of the approved plan. Flood Control Act of July 14, 1960, authorized project for West Thompson Reservoir, substantially as recommended in Senate Document 41, 86th Congress, 2nd session. Local flood protection projects at New Haven and Norwich, Connecticut were authorized and constructed under authority provided by Section 205 of the 1948 Flood Control Act. (See Table 1-U on reservoirs and local protection projects, Thames River Basin, for projects comprising approved plan.)

43A. BUFFUMVILLE LAKE, MA

Location. Buffumville Dam is located on the Little River, 1.3 miles above its junction with the French River, and eight miles northeast of Southbridge, Massachusetts. Reservoir extends upstream about 1.7 miles northerly and 1.9 miles southerly. (See Geological Survey maps for Webster, MA and CT, and Leicester, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in September 1956 and completed in June 1958.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract for a historical and archeological evaluation was awarded on September 30, 2009. Work had not begun by FY end.

43B. EAST BRIMFIELD LAKE, MA

Location. East Brimfield Dam is located on the Quinebaug River, 64.5 miles above its confluence with the Shetucket River, and one-mile southwest of the village of Fiskdale, Massachusetts. (See Geological Survey maps for Whales, MA and CT, Southbridge, MA and CT, East Brookfield, MA, and Warren, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see Annual Report for 1975. Construction of the dam and appurtenant works was initiated in May 1958 and completed in June 1960.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract for an intensive cultural resource survey was awarded on June 19, 2009. Work began in August 2009 and was about 25 percent complete at FY end with contractor earnings of \$85,371.

43C. HODGES VILLAGE DAM, MA

Location. Dam is on French River, 15 miles above its confluence with Quinebaug River, at Hodges Village in the Town of Oxford, Massachusetts, about five miles north of Webster, Massachusetts. (See Geological Survey maps for Webster, MA, and CT, Leicester, MA, Worcester South, MA, and Oxford, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works, initiated in March 1958, was completed in December 1959. Major rehabilitation of the dam was initiated in October 1997 and completed in July 2000.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract for a historical and archeological evaluation was awarded on September 30, 2009. Work had not begun by FY end.

43D. MANSFIELD HOLLOW LAKE, CT

Location. Mansfield Dam is located at Mansfield Hollow, Connecticut, on the Natchaug River, 5.3 miles above its confluence with the Willimantic River. It is four miles northeast of the City of Willimantic, CT. (See Geological Survey maps for Spring Hill and Willimantic, CT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of dam, initiated in 1949, was completed in May 1952.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Major rehabilitation: A dam safety and assurance investigation was initiated to investigate seepage problems during high pool events and to develop remedial repairs.

Maintenance: Ordinary operation and maintenance activities were conducted. A contract for an intensive cultural resource survey was awarded on June 19, 2009. Work began in August 2009 and was about 15 percent complete at FY end with contractor earnings of \$64,834.

43E. WEST THOMPSON LAKE, CT

Location. West Thompson Dam is located on the Quinebaug River, in the Town of Thompson, Connecticut. Site is in the village of West Thompson, two miles upstream from the City of Putnam, Connecticut. (See Geological Survey map, for Putnam, CT.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of dam, road relocation, and appurtenances was initiated in August 1963 and completed in October 1965. Initial phase of recreation facilities was completed in May 1976.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract for an intensive cultural resource survey was awarded on June 19, 2009. Work began in August 2009 and was about 10 percent complete at FY end with contractor earnings of \$33,583.

43F. WESTVILLE LAKE, MA

Location. Dam is on Quinebaug River, 56.7 miles above its confluence with Shetucket River, in the Towns of Sturbridge and Southbridge, Massachusetts, and 1.3 miles west of center of Southbridge. (See Geological Survey maps for Southbridge, MA and RI, and East Brookfield, MA.)

Existing project. For a description of the completed improvements and authorizing legislation see the Annual Report for 1975. Construction of the dam and appurtenant works was initiated in April 1960 and completed in August 1962.

Local cooperation. Section 2, Flood Control Act of 1938 applies.

Operations during fiscal year. Maintenance: Ordinary operation and maintenance activities were conducted. A contract for an intensive cultural resource survey was

awarded on June 19, 2009. Work began in August 2009 and was about 15 percent complete at FY end with contractor earnings of \$21,672.

44. TOWN BROOK, QUINCY AND BRAINTREE, MA

Location. The project is located in the City of Quincy and Town of Braintree on the south side of Massachusetts Bay, along the eastern shore of Massachusetts, seven miles south of Boston in Norfolk County. The watershed is approximately 4.5 square miles.

Existing project. Project provides for the construction of a 12-foot diameter, 4,060-foot long, concrete lined tunnel in bedrock approximately 140 to 180 feet below ground, intake and outlet structures, and improvements to the Town River downstream of the outlet shaft. The tunnel and its appurtenances will be supplemented by reconstruction of the Old Quincy Reservoir Dam, located at the headwaters of Town Brook. Reconstruction work includes a new spillway and outlet structure. The project includes \$6,100,000 in approved credit for compatible work that has been accomplished by the project sponsor. Dam safety measures at Old Quincy Dam, which are estimated at \$9,000,000, are a non-Federal responsibility. Construction of the project was completed under three separate contracts. Town River improvements were completed in December 1994, the tunnel was completed in January 1997, and reconstruction of Old Quincy Reservoir Dam was completed in December 2002. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Local Cooperation Agreement (LCA) was signed on July 7, 1992 between the Corps and the Metropolitan District Commission (MDC). The MDC is required to provide all lands, easements, and rights-of-way; pay all cost for dam safety measures at Old Quincy Dam to insure its structural integrity; pay a cash contribution for the costs allocated to flood control so that the total contribution of local interests is equal to 25 percent of costs allocated to flood control; and bear all costs of operation, maintenance, and replacements. In addition, local interests must do the following: prescribe and enforce regulations to prevent encroachment on both the improvements and unimproved channels, and manage all project-related channels to preserve capacities for local drainage as well as for project functions.

Operations during fiscal year. New work: Continued efforts to financially close-out the project.

45. VERMONT DAMS REMEDIATION, VT

Location. The twenty dams to be evaluated are located throughout the State of Vermont.

Existing project. Authorizes the Corps to evaluate the structural integrity of twenty priority dams in the State of Vermont and to carry out measures to modify, repair, restore or remove dams determined to pose an imminent and substantial risk to public safety. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. A Design Agreement was signed on November 4, 2002 between the Corps and the State of Vermont Department of Environmental Conservation, Agency of Natural Resources. The non-Federal sponsor must contribute 35 percent of the cost for design of dam remediation work.

Operations during fiscal year. New work: Design efforts are on hold pending appropriation of additional funds.

46. WOONSOCKET, RI

Location. The Woonsocket Local Protection Project is located along the Blackstone River in north central Rhode Island, extending about 8,300 feet downstream from the Massachusetts state line to Woonsocket Falls Dam in the center of Woonsocket.

Existing project. Project consists of widening, deepening and straightening of the river channel for a distance of 8,300 feet upstream of Woonsocket Falls Dam, along with construction of a pumping station, 1,115 feet of earth dike and 316 feet of concrete floodwall. The project included replacement of the Woonsocket Falls Dam with a concrete overflow structure 266 feet wide, equipped with four tainter gates. Construction of the project was completed in April 1960. (See Table 1-B for Acts authorizing the existing project.)

Local cooperation. Fully complied with for completed work.

Operations during fiscal year. Maintenance: In accordance with the National Defense Authorization Act of 2008, operation and maintenance responsibility of the project was transferred to the Corps in January 2009.

47. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

A total of \$648,160 was expended in FY 2009 under the Inspection of Completed Works program. Activities consisted of routine and periodic inspection of Federal and non-Federal projects that are active in the Rehabilitation and Inspection Program (RIP) and review of non-Federal sponsor requests for project modifications. Routine inspections were conducted along 37 of the 61 levee systems in New England. A periodic inspection was conducted along

one system, 12 others will be inspected next FY using American Recovery and Reinvestment Act funds, and the remaining 12 systems are inactive under PL 84-99 and were not inspected.

Although the deadline of January 31, 2008 for corrections under the Maintenance Deficiency Correction Period (MDCP) has passed, New England District continued limited coordination with MDCP project sponsors during FY 2009. Following is the current status of the ten MDCP projects in New England:

Chicopee, MA – Active in PL 84-99. Initially, corrective measures could not be completed by the January 31, 2008 deadline and the project was placed in an inactive status. The sponsor has since issued a contract to correct the MDCP deficiencies and completed construction in June 2009. A routine inspection was conducted in August 2009 and the project was moved back to active status. The Sponsor is currently in a Provisionally Accredited Levees (PAL) Agreement with FEMA and is undergoing AE certification of the project.

East Hartford, CT – Active in PL 84-99. Sponsor requested and received approval from ASA(CW) for a 12-month extension to the MDCP. The Sponsor completed final design of the selected correction plan and construction commenced in June 2008. Work to rectify deficiencies was completed in September 2009. Sponsor is currently in a PAL Agreement with FEMA and is undergoing AE certification of the project.

Springfield, MA – Active in PL 84-99.

West Springfield, MA – Active in PL 84-99.

Canton, MA - Inactive in PL 84-99 as of 7 May 2007.

Lincoln, NH – Inactive in PL84-99 as of 7 May 2007.

Lowell, MA - Inactive in PL 84-99 as of 7 May 2007. Sponsor is still working to correct deficiencies.

Torrington, East and West Branches, CT – Inactive in PL 84-99. Sponsor is still working to correct deficiencies.

Waterbury-Watertown, CT – Active in PL 84-99

Woonsocket, RI - Inactive in PL 84-99 as of 27 April 2007.

48. FLOOD CONTROL RESERVOIR OPERATIONS

A coordinated system of flood control dams, all of which have flood control as primary storage available with

recreation and/or water supply as secondary storage in most of the projects, has been established in five major flood producing basins in New England. During periods of flood flows, regulation of reservoirs is fully coordinated within each basin dependent upon its location in the watershed, its available storage capacity and origin of the flood. In addition to flood control releases; water supply, flow augmentation and hydropower releases were made from selected reservoirs. Winter pools are maintained at many projects to submerge the flood control gates and keep them from freezing.

During FY 2009, the New England region experienced a relatively wet weather pattern with annual precipitation recorded at our dams ranging from 10 to 20 percent above normal. The summer weather pattern was characterized with frequent rainstorms on almost a daily basis from May through July. Some storms were intense with rainfall rates upwards of 3 to 5 inches in less than 24-hours producing urban flash-flood conditions. December 2008 was a very wet month experiencing over double the normal monthly rainfall in southern New England, which caused the only regional flood event of the year. Winter was characterized by a relatively normal snowfall weather pattern. Maximum snow water equivalent content ranged from 4 to 7 inches within the watersheds of New Hampshire and Vermont, and 3 to 5 inches in the watersheds of Massachusetts and Connecticut. By mid-March, most of the snowpack was depleted due to moderating temperatures. Flooding due to snowmelt did not occur. In northern Maine, the Aroostook River watershed experienced flooding as a result of moderate temperatures in combination with rainfall and ice jams in April 2009. Cumulative damages prevented by Corps dams and local flood protection projects during these two events were approximately \$83 million, of which approximately \$44 million was attributed to NAE dams and \$39 million to local flood protection projects.

CONNECTICUT RIVER BASIN

Regulation for canoe and kayak activities occurred during FY 2009 at Otter Brook in March, April and May; Surry Mountain in April and May; Knightville in March and April; Birch Hill, Littleville and Tully in April; and Ball Mountain and Townshend in September. The Hartford MDC controlled releases for hydropower from Colebrook Lake during non-flood periods of FY 2009.

MERRIMACK RIVER BASIN

No whitewater releases were requested from Blackwater Dam during FY 2009.

THAMES RIVER BASIN

Regulation for canoe and kayak activities occurred during April 2009 at East Brimfield. East Brimfield also supplied small releases for low flow augmentation to the American Optical Company during the summer months.

49. HURRICANE BARRIER OPERATIONS

Five hurricane barriers are situated along the southern coast of New England, protecting coastal communities from tidal flooding associated with hurricanes and severe coastal storms. The Corps operates the navigational elements of the Stamford, Connecticut and the New Bedford/Fairhaven, Massachusetts's barriers. The local communities operate the hurricane barriers at Fox Point, Rhode Island; Pawcatuck, Connecticut; and New London, Connecticut. A brief resume of operations for the FY follows:

STAMFORD BARRIER. During FY 2009, the Stamford Hurricane Barrier was operated on twelve occasions resulting in a total of \$396,000 in damages prevented.

NEW BEDFORD BARRIER. The New Bedford Barrier was operated on fourteen different occasions during FY 2009, resulting in a total of \$506,000 in damages prevented.

FOX POINT HURRICANE BARRIER. The Fox Point Hurricane Barrier did not experience any damaging tide levels during FY 2009, and no damages prevented computations were needed.

PAWCATUCK HURRICANE BARRIER. The Pawcatuck Hurricane Barrier did not experience any damaging tide levels in FY 2009 and no damages prevented computations were needed.

NEW LONDON HURRICANE BARRIER. The New London Hurricane Barrier did not experience and damaging tide levels in FY 2009 and no damages prevented computations were needed.

50. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Flood control activities pursuant to Section 205.Public Law 80-858, as amended (preauthorization).

(See Table 1-L)

Snagging and clearing activities pursuant to Section 208 of the 1954 Flood Control Act.

(None)

Emergency Bank Protection activities pursuant to Section 14 of the 1946 Flood Control Act (preauthorization).

(See Table 1-M)

Emergency flood control activities--repair, flood fighting, and rescue work (Public Law 99, 84th Cong., and antecedent legislation.)

Federal costs for FY 2009 for disaster preparedness and emergency operations were as follows:

Disaster Preparedness Program	\$ 436,549
Emergency Operations	30,745
Rehabilitation and Inspection Program	
Fort Kent, ME	<u>408,347</u>
Total Flood Control & Coastal Emergencies	\$ 875,641

Environmental

51. ALLIN'S COVE, BARRINGTON, RI

Location. Allin's Cove is a 21 acre coastal embayment located in the Town of Barrington, Rhode Island along the east side of the Providence River just south of Bullocks Point Cove. In 1959, the Corps of Engineers used the mouth of Allin's Cove as a dredged material disposal site during improvement dredging of Bullocks Point Cove.

Existing project. The project provides for the excavation of dredged material, realignment of the inlet and construction of two sand spits to restore approximately 3.6 acres of salt marsh and protect an additional 0.7 acres of salt marsh at the mouth of the cove. The project also stabilizes the shoreline along Byway Road. Restoration work was completed in May 2006. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on March 8, 2004 between the Corps and the Rhode Island Coastal Resources Management Council. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction; pay a cash contribution in the amount necessary to bring the non-Federal share of study and project costs including lands to 25 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: A contract to restore Allin's Cove was awarded on July 27, 2005. Work began in October 2005 and was substantially complete in May 2006. Contractor returned in the spring of 2007 to re-seed upland areas as grass growth did not meet performance evaluation criteria, and again in the summer of 2008 to install sand envelopes above mean high water to repair storm damage. Project was officially turned over to the state on December 17, 2008. The contractor returned in the spring of 2009 to do some minor seeding and planting. Final contract

amount was \$803,064, of which \$55,184 was paid this FY. Project included a 3-year monitoring program which was completed in July 2009.

52. BROAD MEADOWS MARSH, QUINCY, MA

Location. Broad Meadows Marsh is located south of Boston Harbor in the city of Quincy, Massachusetts.

Existing project. The project provides for the excavation of dredged material to improve tidal exchange and restore approximately 37 acres of salt marsh habitat and 12 acres of saltwater channels and pools. The saltwater pools would provide a refuge for marine life during periods of low tide. Excavated material would be used to create a coastal grassland area. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on August 5, 2008 between the Corps and the City of Quincy, Massachusetts. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction; pay a cash contribution in the amount necessary to bring the non-Federal share of study and project costs including lands to 25 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: Bids were opened on September 14, 2008 for restoration of Broad Meadows Marsh. Contract was not awarded by FY end.

53. MILL RIVER, STAMFORD, CT

Location. The project is located along the Mill River in the City of Stamford, Connecticut.

Existing project. Restoration measures involve the removal of the Main Street Dam, accumulated sediment and adjoining retaining walls to restore riverine and riparian habitats. The partially breached dam at Pulaski Street will also be removed to restore an area of inter-tidal habitat. The project includes a 3-year monitoring period to ensure establishment of uplands and wetlands vegetation. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on June 23, 2008 between the Corps and the City of Stamford, Connecticut. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary

for project construction; pay a cash contribution in the amount necessary to bring the non-Federal share of study and project costs including lands to 35 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: A contract to restore the Mill River was awarded on 30 September 2008. Work began in February 2009 and was about 50 percent complete by FY end with contractor earnings of \$3,069,734.

54. NASHAWANNUCK POND, EASTHAMPTON, MA

Location. Nashawannuck Pond is located in the City of Easthampton, in west central Massachusetts. The pond has an area of about 31 acres and is located in the downtown section of Easthampton.

Existing project. The project provides for dredging about 8 acres of Nashawannuck Pond to a maximum depth of 12 feet to restore open water habitat. Work would include the disposal of approximately 54,000 cubic yards of dredged material at an upland site owned by the city. Dredging would be prohibited from a 50-foot buffer zone around the perimeter of the pond to protect shallow submerged aquatic vegetation and waterfowl habitat. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on September 25, 2007 between the Corps and the City of Easthampton, Massachusetts. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction; pay a cash contribution in the amount necessary to bring the non-Federal share of study and project costs including lands to 35 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: A contract to restore Nashawannuck Pond was awarded on June 25, 2009. Work began in July 2009 and was about 7 percent complete by FY end with contractor earnings of \$105,043.

55. NINIGRET AND CROSS MILLS PONDS, CHARLESTOWN, RI

Location. The Town of Charlestown is located along the south coast of Rhode Island in Washington County. The specific areas of restoration are located in and adjacent to the breachway in Ninigret Pond and at the junction of Cross Mills Pond with an unnamed outlet stream that discharges into Ninigret Pond.

Existing project. Project provides for dredging about 40 acres of tidal shoal area in Ninigret Pond and planting eelgrass to restore aquatic habitat. A 3.5-acre sediment basin was dredged to prevent future shoaling of restored aquatic habitat. The original project included construction of a concrete lined bypass channel with two fish ladders from Ninigret Pond to Cross Mills Pond; however, this work was never completed because of land issues. Except for some additional eel grass planting, the project was completed in February 2008. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on May 28, 2003 between the Corps and the State of Rhode Island, Coastal Resources Management Council. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction; pay a cash contribution in the amount necessary to bring the non-Federal share of study and project costs including lands to 35 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: The second year of a three-year monitoring program was completed. Further eelgrass restoration efforts may be limited as observations have shown significant natural succession of eelgrass in dredged areas.

56. STEWART'S CREEK, BARNSTABLE, MA

Location. Stewart's Creek is a small tidal estuary located along the southern coast of Cape Cod in the Town of Barnstable, Massachusetts.

Existing project. Project provides for dredging and redistribution of sediments along with construction of a new, larger culvert beneath Ocean Avenue to improve tidal flow and restore the degraded salt marsh, including estuarine open water habitat. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Partnership Agreement was signed on November 12, 2008 between the Corps and the Town of Barnstable, Massachusetts. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction; pay a cash contribution in the amount necessary so that the Federal share of project costs does not exceed 65 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: Continued preparation of project plans and specifications.

57. TEN MILE RIVER, RI

Location. The project is located along the Ten Mile River in East Providence, Rhode Island at the head of Narragansett Bay directly to the east of Providence, Rhode Island.

Existing project. Project provides for construction of fish passage facilities at the three lowest dams on the Ten Mile River; Omega Pond Dam, Hunts Mill Dam and Turner Reservoir Dam. The project includes construction of a fish trap at Hunts Mill Dam to relocate excess fish to other watersheds as anadromous fish returns are likely to exceed available upstream spawning grounds. The project will restore anadromous fish to the lower Ten Mile River. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on May 27, 2008 between the Corps and State of Rhode Island Department of Environmental Management. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction; pay a cash contribution in the amount necessary to bring the non-Federal share of study and project costs including lands to 35 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: Negotiated amended to the Project Cooperation Agreement to include construction of fish passage facilities at Omega Pond Dam in the total project cost and to reflect contributed funds from other Federal agencies. Amendment was not fully executed by FY end.

58. TOWN POND (BOYD'S MARSH), PORTSMOUTH, RI

Location. Town Pond is located along the south shore of Mount Hope Bay in Portsmouth, Rhode Island. In 1950 and 1951, the Corps of Engineers used this pond as a dredged material disposal site during construction of the deep draft navigation project at Fall River Harbor, Massachusetts.

Existing project. The project provides for the excavation of dredged material to improve tidal flushing and restore 20 acres of salt marsh. The project began functioning on September 21, 2007 as tidal flows were allowed to enter the salt marsh. (See Table 1-B for Act authorizing the existing project.)

Local cooperation. A Project Cooperation Agreement was signed on August 23, 2004 between the Corps and the State of Rhode Island and Providence Plantations. The project sponsor must provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all relocations determined by the Government to be necessary for project construction; pay a cash contribution in the amount necessary to bring the non-Federal share of study and project costs including lands to 25 percent; and bear all operation, maintenance and repair costs of the project after completion.

Operations during fiscal year. New work: A contract to restore Town Pond was awarded on July 25, 2005. Work began in September 2005 and was completed in December 2008. Final contract amount was \$4,213,934, of which \$10,000 was paid this FY. The project includes a five-year monitoring program, which began in January 2009 and continued through the FY.

59. ENVIRONMENTAL RESTORATION WORK UNDER SPECIAL AUTHORIZATION

Project modifications for the improvement of the environment pursuant to Section 1135, Public Law 99-662, as amended (preauthorization).

(See Table 1-N)

Aquatic ecosystem restoration activities pursuant to Section 206, Public Law 99-662, as amended (preauthorization).

(See Table 1 - O)

Beneficial use of dredged material activities pursuant to Section 204, Public Law 102-580, as amended (preauthorization).

(See Table 1 - P)

General Investigations

60. SURVEYS

Total costs during the FY for surveys were \$701,449, of which \$678,242 was from regular funds and \$23,207 were from American Recovery and Reinvestment Act funds. Within total survey costs, \$300,164 was used for three navigation studies; \$135,165 for three ecosystem restoration studies; \$53,105 for one comprehensive study; \$69,159 for seven special studies under the Planning Assistance to the States program; and \$143,856 for coordination studies.

61. COLLECTION AND STUDY OF BASIC DATA

The District Engineer is the U.S. member on the Saint Croix River Board of Control. Annual site visits are made of conditions on the Saint Croix River and basic hydrologic information is compiled. A report of operations and development in the basin was prepared in cooperation with Canadian counterparts. The Board's efforts have been expanded in recent years to improve exchange of watershed information between countries and to monitor the ecological health of the watershed's aquatic ecosystem. Total costs for the FY were \$61,431. Total costs to September 30, 2009 are \$936,603.

The Gulf of Maine Council on the Marine Environment was established in 1989 under an agreement signed by the Governors of Maine, New Hampshire and Massachusetts, and the Premiers of Nova Scotia and New Brunswick. The Council was tasked under this agreement to develop consistent policies, initiatives and programs designed to protect and conserve the shared natural resources of the Gulf of Maine. In April 1993, the Council requested the New England District Engineer to participate in this international program as an "observer" to the Council. In this capacity, the District Engineer is expected to attend Council meetings and support their initiatives to the extent possible. In addition to the District Engineer's direct participation, a representative of the Corps is a member of the Working Group to the Council, which implements directives of the Council. The Corps representative on the Working Group is assisting the Habitat Sub-Group to establish policies, set priorities and identify lead agencies for implementing habitat restoration projects in the Gulf of Maine. This effort includes investigating potential habitat restoration sites eligible for Corps participation under Sections 1135 and 206, and for coordination of input from other Federal agencies. Total costs for the FY were \$1,911. Total costs to September 30, 2009 are \$144,896.

Flood plain management studies comprise compilation and dissemination, upon requests by responsible local interests, of information on floods and potential flood damages. Studies identify areas subject to inundation by floods of various magnitudes and frequencies, and provide general criteria for guidance in the conservation and limited use of these areas, along with engineering advice in planning to ameliorate the flood hazard. Total costs for the FY were \$23,308. Total costs to September 30, 2009 are \$11,545,420.

62. PLANNING, ENGINEERING AND DESIGN

(None.)

**63. PRECONSTRUCTION
ENGINEERING AND DESIGN**

Pre-construction Engineering and Design costs were \$167,466 to continue design efforts on the Muddy River flood control and ecosystem restoration project in Boston and Brookline, Massachusetts. Work included incorporation of review comments on 90 percent project design.

Regulatory Program

64. REGULATORY PROGRAM

Permit Evaluation	\$ 6,777,195
Enforcement	105,078
Compliance	103,879
American Recovery and Reinvestment Act	<u>82,715</u>
Total Regulatory Program	\$ 7,068,867

Formally Utilized Sites Remedial Action Program (FUSRAP)

**65. COMBUSTION ENGINEERING,
WINDSOR, CT**

Location. The Town of Windsor is located in north-central Connecticut about 10 miles north of Hartford, Connecticut. The Combustion Engineering (CE) site is a 600-acre area located along the Farmington River in Windsor, Connecticut.

Existing project. CE, under contract to the Atomic Energy Commission (AEC), fabricated nuclear fuel assemblies using highly enriched uranium (HEU) from 1958 to 1961. CE also conducted licensed commercial nuclear activities on the site from the early 1960's to 1993. Although the commercial nuclear fuel fabrication ceased in 1993, CE is still licensed by the Nuclear Regulatory Commission (NRC) for commercial nuclear activities and the facility is still operating today. HEU is the primary radiological contaminant of concern at the site.

Local cooperation. Not applicable.

Operations during fiscal year. New work: Costs of \$12,102 were incurred for continued work on the draft feasibility report and Record of Decision.

**66. SHPACK LANDFILL, NORTON AND
ATTLEBORO, MA**

Location. The Towns of Norton and Attleboro are located in southeastern Massachusetts about 25 miles southwest of Boston, Massachusetts. Shpack Landfill is located along the

town boundary line with about 5.5 acres in Norton and 2.5 acres in Attleboro.

Existing project. The Shpack site is an 8-acre abandoned domestic and industrial landfill, which operated from 1946 to 1965. Radioactive contamination is believed to have come from Metals and Controls Incorporated, now Texas Instruments, which had used the landfill to dispose of trash and other materials from 1957 to 1965. The General Plate Division of Metals and Controls Incorporated began to fabricate enriched uranium foils at their Attleboro plant in 1952. In 1959 it merged with Texas instruments, which continued the operations until 1981, using enriched and natural uranium for the fabrication of nuclear fuel for the U.S. Navy and commercial customers. The site was listed on the National Priority List (NPL) in 1986, primarily to address other contaminants on site.

Local cooperation. Not applicable.

Operations during fiscal year. New work: A task order for remedial action was issued to Conti Environmental and Infrastructure Incorporated on 18 August 2005. The contractor began remedial action in September 2005 and was forced to stop work in August 2006 because of funding constraints. The contractor resumed work in June 2007 and was about 75 percent complete at FY end. Costs totaled \$12,624,083 during FY 2009.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-A COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
1.	Aunt Lydia's Cove Chatham, MA	New Work:					
		Approp.	-	-	-	-	1,110,048
		Cost	-	-	-	-	1,110,048
		Maint:					
		Approp.	230,900	348,600	402,300	224,560	3,082,560
		Cost	210,405	357,963	218,856	87,909	2,649,897
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	102,206
		Cost	-	-	-	-	102,206
	(Contributed Funds, Other)	New Work:					
		Contrib.	-	-	-	-	62,292
		Cost	-	-	-	-	62,292
2.	Block Island Harbor of Refuge, RI	New Work:					
		Approp.	-	-	-	-	576,856
		Cost	-	-	-	-	576,856
		Maint:					
		Approp.	179,500	231,000	159,500	410,200	4,442,624
		Cost	173,738	74,216	105,050	219,263	4,040,672
3.	Boston Harbor, MA	New Work:					
		Approp.	-	-	-	-	40,371,307 ³
		Cost	-	-	-	-	40,371,307 ³
		Maint:					
		Approp.	7,002,000	4,862,300	7,095,500	5,547,620	66,468,869
		Cost	1,021,002	481,317	11,167,939	6,226,778	60,735,884
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	5,340,310
		Cost	-	-	-	-	5,340,310
		Maint:					
		Contrib.	-	-	3,000,000	-	3,017,767
		Cost	-	-	153,260	846,740	1,017,767
	(Contributed Funds, Other)	New Work:					
		Contrib.	-	-	-	-139,239	6,188,226
		Cost	-	-	-	-	6,188,226
4.	Bridgeport Harbor, CT	New Work:					
		Contrib.	-	-	-	-	4,491,119
		Cost	-	-	-	-	4,491,119
		Maint:					
		Approp.	1,335,300	80,500	741,600	75,500	5,589,666
		Cost	331,045	170,448	412,558	352,862	4,587,596
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	147,887
		Cost	-	-	-	-	147,887
		Maint:					
		Contrib.	-	400,000	-	100,000	500,000
		Cost	-	-	18,619	160,953	179,572
5.	Bullocks Point Cove, RI	New Work:					
		Contrib.	-	-	-	-	170,902
		Cost	-	-	-	-	170,902
		Maint:					
		Approp.	623,400	597,000	150,700	81,000	2,027,930
		Cost	21,495	49,323	9,565	94,186	742,184
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	123,757
		Cost	-	-	-	-	123,757
		Maint:					
		Contrib.	-	-	-	115,000	115,000
		Cost	-	-	-	-	-

NEW ENGLAND DISTRICT

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
6.	Cape Cod Canal, MA	New Work:					
		Approp.	-	-	-	-	21,798,322 ^{1,2}
		Cost	-	-	-	-	21,798,322 ^{1,2}
		Maint:					
		Approp.	7,870,000	9,596,400	10,716,500	9,962,393	270,842,722
		Cost	7,881,293	7,975,580	9,133,656	8,831,678	265,910,545
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	4,269,950	4,269,950
		Cost	-	-	-	752,552	752,552
		Minor Rehab:					
		Approp.	-	-	-	-	390,677
		Cost	-	-	-	-	390,677
		Major Rehab:					
		Approp.	-	-	-	-	57,152,000
		Cost	8,900	102	-	861	57,151,663
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	115,432
		Cost	-	-	-	-	115,432
7.	Carvers Harbor, Vinalhaven, ME	New Work:					
		Approp.	-	-	-	-	190,438
		Cost	-	-	-	-	190,438
		Maint:					
		Approp.	240,000	-	229,000	7,100	536,827
		Cost	31,615	85,257	335,458	18,213	531,270
8.	Chatham (Stage) Harbor, MA	New Work:					
		Approp.	-	-	-	-	266,705
		Cost	-	-	-	-	266,705
		Maint:					
		Approp.	100	24,400	223,200	177,900	4,991,463
		Cost	100	24,400	223,200	144,498	4,958,061
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	43,500
		Cost	-	-	-	-	43,500
	(Contributed Funds, Other)	Maint:					
		Contrib.	-	-	188,000	-	188,000
		Cost	-	-	79,594	103,920	183,514
9.	Clinton Harbor, CT	New Work:					
		Approp.	-	-	-	-	104,957
		Cost	-	-	-	-	104,957
		Maint:					
		Approp.	243,000	38,100	1,300	26,900	1,833,584
		Cost	45,927	81,368	14,387	31,649	1,696,315
10.	Cochecho River, NH	New York:					
		Approp.	-	-	-	-	119,089
		Cost	-	-	-	-	119,089
		Maint:					
		Approp.	2,482,900	450,300	2,826,000	1,100	9,139,289
		Cost	90,692	2,875,429	1,002,793	24,115	7,316,370
	(Contributed Funds, Other)	Maint:					
		Contrib.	830,000	-	-	-	830,000
		Cost	663,778	166,222	-	-	830,000
11.	Connecticut River Below Hartford, CT	New York:					
		Approp.	-	-	-	-	1,550,185
		Cost	-	-	-	-	1,550,185
		Maint:					
		Approp.	75,900	98,500	4,376,400	-277,000	23,588,752
		Cost	18,483	132,261	89,134	3,343,684	22,745,547

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TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
		Major Rehab:					
		Approp.	-	-	-	-	60,000
		Cost	-	-	-	-	60,000
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	130,410
		Cost	-	-	-	-	130,410
12.	Great Salt Pond, Block Island, RI	New Work:					
		Approp.	-	-	-	-	189,037
		Cost	-	-	-	-	189,037
		Maint:					
		Approp.	10,400	4,600	15,000	275,160	1,282,981
		Cost	10,400	4,600	15,000	272,783	1,280,533
13.	Green Harbor, MA	New Work:					
		Approp.	-	-	-	-	254,512
		Cost	-	-	-	-	254,512
		Maint:					
		Approp.	316,000	588,200	1,986,100	6,000	9,505,104
		Cost	30,020	418,862	20,266	107,047	7,163,773
	(Contributed Funds)	New Work:					
		Contrib.	-	565,000	-	-65,000	658,341
		Cost	-	500,000	-	-	658,341
14.	Merrimack River, MA	New Work:					
		Approp.	-	-	-	-	369,891
		Cost	-	-	-	-	369,891
		Maint:					
		Approp.	319,100	8,000	11,900	-	1,347,400
		Cost	175,977	85,553	14,102	1,850	1,285,882
15.	Mystic River, CT	New Work:					
		Approp.	-	-	-	-	197,491
		Cost	-	-	-	-	197,491
		Maint:					
		Approp.	90,800	69,600	263,500	320,900	1,127,985
		Cost	90,800	69,600	90,715	450,273	1,084,573
16.	Narraguagus River, ME	New Work:					
		Approp.	-	-	-	-	821,144
		Cost	-	-	-	-	821,144
		Maint:					
		Approp.	1,777,900	700	935,000	589,900	4,668,679
		Cost	36,766	1,684,721	1,841	60,984	3,131,933
17.	New Bedford and Fairhaven Harbor, MA	New Work:					
		Approp.	-	-	-	-	1,857,618
		Cost	-	-	-	-	1,857,618
		Maint:					
		Approp.	97,500	92,500	86,500	491,500	1,993,748
		Cost	100,992	92,500	86,500	26,780	1,519,294
	(Contributed Funds, Other)	New Work:					
		Contrib.	-	-	-	-	20,385
		Cost	-	-	-	-	20,385
18.	Newburyport Harbor, MA	New Work:					
		Approp.	-	-	-	-	565,224
		Cost	-	-	-	-	565,224
		Maint:					
		Approp.	8,300	77,700	656,000	604,580	8,387,110
		Cost	8,300	77,700	3,918	90,526	7,220,974
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	1,000,000	1,000,000
		Cost	-	-	-	-	-

NEW ENGLAND DISTRICT

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
		Major Rehab:					
		Approp.	-	-	-	-	1,415,524
		Cost	-	-	-	-	1,415,524
	(Contributed Funds, Other)	New Work:					
		Contrib.	-	-	-	-	80,357
		Cost	-	-	-	-	80,357
19.	Norwalk Harbor, CT	New Work:					
		Approp.	-	-	-	-	531,129
		Cost	-	-	-	-	531,129
		Maint:					
		Approp.	2,362,300	-74,500	5,736,200	1,491,120	16,323,247
		Cost	4,259,996	5,066	205,510	5,132,184	14,361,859
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	34,500
		Cost	-	-	-	-	34,500
		Maint:					
		Contrib.	-	-	-	60,710	160,710
		Cost	-	-	-	160,710	160,710
	(Contributed Funds, Other)	New Work:					
		Contrib.	76,903	-	1,500,000	-243,449	1,333,454
		Cost	-	-	-	1,008,875	1,008,875
20.	Patchogue River, CT	New Work:					
		Approp.	-	-	-	-	355,445
		Cost	-	-	-	-	355,445
		Maint:					
		Approp.	2,600	5,900	131,800	751,420	2,607,509
		Cost	2,600	5,900	38,800	78,886	1,841,975
21.	Point Judith Pond and Harbor of Refuge, RI	New Work:					
		Approp.	-	-	-	-	2,714,510
		Cost	-	-	-	-	2,714,510
		Maint:					
		Approp.	218,600	1,788,400	312,500	1,302,880	12,050,414
		Cost	218,600	1,185,122	832,694	187,639	10,851,837
		Major Rehab:					
		Approp.	-	-	-	-	1,926,000
		Cost	-	-	-	-	1,926,000
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	17,587
		Cost	-	-	-	-	17,587
22.	Portland Harbor, ME	New Work:					
		Approp.	-	-	-	-	9,588,710
		Cost	-	-	-	-	9,588,710
		Maint:					
		Approp.	527,400	214,500	6,200	99,940	12,533,379
		Cost	467,694	88,177	22,592	20,460	12,284,262
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	54,353
		Cost	-	-	-	-	54,353
23.	Providence River and Harbor, RI	New Work:					
		Approp.	-	-	-	-	25,417,022
		Cost	-	-	-	-	25,417,022
		Maint:					
		Approp.	16,900	182,700	-92,500	277,240	51,060,168
		Cost	-7,740	-222,677	-518,756	933,417	50,825,932
	(Contributed Funds)	Maint:					
		Contrib.	-	-	-966,108	-	4,242,002
		Cost	100,000	300,000	-900,000	-	4,213,805

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
	(Contributed Funds, Other)	Maint:					
		Contrib.	-	-	2,590,590	-	6,590,083
24.	Sesuit Harbor, MA	Cost	-	700,000	2,000,000	-	5,996,836
		New Work:					
		Approp.	-	-	-	-	226,306
		Cost	-	-	-	-	226,306
		Maint:					
		Approp.	4,700	12,800	151,200	264,000	2,251,606
25.	Warwick Cove, RI	Cost	4,700	13,509	139,412	273,120	2,248,666
		New Work:					
		Approp.	-	-	-	-	155,430
		Cost	-	-	-	-	155,430
		Maint:					
		Approp.	-	102,600	206,400	46,000	549,149
		Cost	-	102,600	21,137	62,218	380,104
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	133,985
		Cost	-	-	-	-	133,985
	(Contributed Funds, Other)	New Work:					
		Contrib.	-	-	-	-	10,000
		Cost	-	-	-	-	10,000
26.	Westport River, MA	New Work:					
		Approp.	69,000	724,000	192,000	-	988,000
		Cost	47,315	34,436	900,286	991	986,029
		Maint:					
		Approp.	-	1,400	119,100	10,537	143,737
		Cost	-	1,400	116,100	13,537	143,737
	(Contributed Funds)	New Work:					
		Contrib.	-	77,000	119,150	-86,925	109,225
		Cost	-	-	92,378	16,848	109,225
27.	Weymouth-Fore and Town River, MA	New Work:					
		Approp.	-	-	-	-	30,194,613
		Cost	-	-	-	-	30,194,613
		Maint:					
		Approp.	4,759,100	225,100	-86,100	14,200	7,153,921
		Cost	118,066	4,560,751	63,900	14,200	6,962,987
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	630,133
		Cost	-	-	-	-	630,133
29.	Seabrook Harbor, NH	New Work:					
		Approp.	-	-	-	-	3,703,411
		Cost	811	-	-	-	3,702,460
32A.	West Hill Dam, MA	New Work:					
		Approp.	-	-	-	-	2,306,902 ⁴
		Cost	-	-	-	-	2,306,902 ⁴
		Maint:					
		Approp.	706,000	723,000	719,000	618,500	16,647,393
		Cost	735,983	708,082	713,372	635,558	16,626,558
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	443,050	443,050
		Cost	-	-	-	137,718	137,718
		Major Rehab:					
		Approp.	-	-	-	-	13,267,000
		Cost	-	-	-	-	13,267,000
33.	Blackwater River, Salisbury, MA	New Work:					
		Approp.	1,000	-	50,000	40,000	91,000
		Cost	-	-	12,671	26,067	38,738

NEW ENGLAND DISTRICT

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	87,500	87,500
		Cost	-	-	-	28,780	28,780
34.	Charles River (Natural Valley Storage Areas), MA	New Work:					
		Approp.	-	-	-	-	8,606,000
		Cost	-	-	-	-	8,606,000
		Maint:					
		Approp.	276,000	310,000	332,000	264,600	5,302,985
		Cost	291,496	308,525	329,968	263,320	5,271,795
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	714,050	714,050
		Cost	-	-	-	85,455	85,455
35A.	Ball Mountain Lake, VT	New Work:					
		Approp.	-	-	-	-	11,107,842 ⁵
		Cost	-	-	-	-	11,107,842 ⁵
		Maint:					
		Approp.	708,000	1,283,000	918,200	863,660	23,436,522
		Cost	726,902	1,167,247	1,043,810	742,704	23,247,709
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	275,000	275,000
		Cost	-	-	-	-	-
		Major Rehab:					
		Approp.	-	-	550,000	1,800,000	2,350,000
		Cost	-	-	522,441	617,077	1,139,519
35B.	Barre Falls Dam, MA	New Work:					
		Approp.	-	-	-	-	1,967,819
		Cost	-	-	-	-	1,967,819
		Maint:					
		Approp.	568,000	1,035,000	791,000	626,099	15,605,659
		Cost	569,967	817,109	946,916	661,967	15,573,423
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	689,750	689,750
		Cost	-	-	-	23,319	23,319
35C.	Birch Hill Dam, MA	New Work:					
		Approp.	-	-	-	-	4,815,679 ⁶
		Cost	-	-	-	-	4,815,679 ⁶
		Maint:					
		Approp.	572,000	544,017	805,000	555,793	16,314,526
		Cost	592,893	556,321	571,462	735,651	16,234,325
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	453,250	453,250
		Cost	-	-	-	38,773	38,773
	(Contributed Funds- Recreational)	New Work:					
		Contrib.	-	-	-	-	32,000
		Cost	-	-	-	-	32,000
35D.	Colebrook River Lake, CT	New Work:					
		Approp.	-	-	-	-	14,263,971
		Cost	-	-	-	-	14,263,971
		Maint:					
		Approp.	542,000	579,000	946,000	500,340	12,566,919
		Cost	532,188	517,323	588,782	596,321	12,221,744
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	303,200	303,200
		Cost	-	-	-	35,761	35,761
35E.	Conant Brook Dam, MA	New Work:					
		Approp.	-	-	-	-	2,950,530
		Cost	-	-	-	-	2,950,530

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
		Maint:					
		Approp.	321,000	259,000	259,000	215,700	4,931,645
		Cost	322,835	255,178	258,148	218,224	4,919,868
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	64,250	64,250
		Cost	-	-	-	4,337	4,337
35F.	Knightville Dam, MA	New Work:					
		Approp.	-	-	-	-	3,415,640 ⁷
		Cost	-	-	-	-	3,415,640 ⁷
		Maint:					
		Approp.	571,000	538,500	667,400	478,240	17,280,410
		Cost	550,000	524,199	679,344	495,517	17,258,120
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	569,050	569,050
		Cost	-	-	-	34,505	34,505
35G.	Littleville Lake, MA	New Work:					
		Approp.	-	-	-	-	7,013,412
		Cost	-	-	-	-	7,013,412
		Maint:					
		Approp.	501,000	610,000	651,000	504,920	13,138,567
		Cost	495,099	609,079	615,921	478,679	13,062,416
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	288,100	288,100
		Cost	-	-	-	28,059	28,059
35H.	North Hartland Lake, VT	New Work:					
		Approp.	-	-	-	-	7,312,225 ⁸
		Cost	-	-	-	-	7,312,225 ⁸
		Maint:					
		Approp.	610,000	942,000	931,000	600,220	17,513,436
		Cost	506,699	685,488	1,050,794	766,591	17,424,284
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	256,450	256,450
		Cost	-	-	-	26,349	26,349
35I.	North Springfield Lake, VT	New Work:					
		Approp.	-	-	-	-	6,831,526 ⁹
		Cost	-	-	-	-	6,831,526 ⁹
		Maint:					
		Approp.	785,000	938,000	830,000	728,120	22,159,671
		Cost	729,256	866,750	915,061	672,024	22,059,344
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	100,950	100,950
		Cost	-	-	-	40,643	40,643
35J.	Otter Brook Lake, NH	New Work:					
		Approp.	-	-	-	-	4,360,448 ¹⁰
		Cost	-	-	-	-	4,360,448 ¹⁰
		Maint:					
		Approp.	798,000	648,000	802,000	555,900	16,335,195
		Cost	766,754	673,870	717,375	636,517	16,314,263
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	991,200	991,200
		Cost	-	-	-	29,610	29,610
		Major Rehab:					
		Approp.	1,416,000	-240,250	-	-	2,859,750
		Cost	964,090	137,886	100,371	15,577	2,859,633
35K.	Partridge Brook, Westmoreland, NH	New Work:					
		Approp.	48,000	480,000	-	-501	679,499
		Cost	49,601	127,972	346,658	8,218	679,499

NEW ENGLAND DISTRICT

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
	(Contributed Funds)	New Work:					
		Contrib.	-	344,400	-	-54	344,346
		Cost	-	-	336,331	8,015	344,346
35L.	Salmon River, Haddam and East Haddam, CT	New Work:					
		Approp.	650,000	244,000	-	-	1,540,000
		Cost	355,364	523,368	103,908	7,567	1,537,403
	(Contributed Funds)	New Work:					
		Contrib.	12,102	249,500	-	-	956,602
		Cost	222,528	466,934	79,875	2,831	856,216
35M.	Surry Mountain Lake, NH	New Work:					
		Approp.	-	-	-	-	2,833,610 ¹¹
		Cost	-	-	-	-	2,833,610 ¹¹
		Maint:					
		Approp.	644,000	653,000	1,145,000	541,940	17,125,255
		Cost	603,862	674,383	1,113,875	577,098	17,097,386
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	67,000	67,000
		Cost	-	-	-	830	830
35N.	Townshend Lake, VT	New Work:					
		Approp.	-	-	-	-	8,540,545 ¹²
		Cost	-	-	-	-	8,540,545 ¹²
		Maint:					
		Approp.	695,000	865,000	892,000	731,360	20,816,861
		Cost	846,042	834,598	871,613	754,269	20,720,479
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	108,000	108,000
		Cost	-	-	-	13,303	13,303
35O.	Tully Lake, MA	New Work:					
		Approp.	-	-	-	-	1,666,752 ¹³
		Cost	-	-	-	-	1,666,752 ¹³
		Maint:					
		Approp.	516,000	709,000	916,000	518,920	15,005,639
		Cost	516,559	685,589	867,495	586,496	14,990,959
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	212,100	212,100
		Cost	-	-	-	13,175	13,175
	(Contributed Funds - Recreational)	New Work:					
		Contrib.	-	-	-	-	40,000
		Cost	-	-	-	-	40,000
35P.	Union Village Dam, VT	New Work:					
		Approp.	-	-	-	-	4,095,160 ¹⁴
		Cost	-	-	-	-	4,095,160 ¹⁴
		Maint:					
		Approp.	563,000	647,000	643,000	525,280	14,653,249
		Cost	537,175	628,437	554,899	630,588	14,617,133
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	127,750	127,750
		Cost	-	-	-	14,532	14,532
36.	Fox Point Barrier, RI	New Work:					
		Approp.	-	-	-	-	11,112,801
		Cost	-	-	-	-	11,112,801
		Maint:					
		Approp.	-	-	-	532,000	532,000
		Cost	-	-	-	137,138	137,138
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	3,761,200	3,761,200
		Cost	-	-	-	18,162	18,162

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
		Major Rehab:					
		Approp.	520,000	1,100,000	-	-170,000	3,255,000
		Cost	457,809	71,657	44,819	8,456	2,387,393
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	3,679,500 ¹⁵
		Cost	-	-	-	-	3,679,500 ¹⁵
37.	Holmes Bay (Cutler Road), Whiting, ME	New Work:					
		Approp.	26,100	668,000	-	-	944,100
		Cost	24,437	20,491	46,456	482,486	818,957
	(Contributed Funds)	New Work:					
		Contrib.	-	-	468,000	-	468,000
		Cost	-	-	-	164,963	164,963
38A.	Black Rock Lake, CT	New Work:					
		Approp.	-	-	-	-	8,182,300
		Cost	-	-	-	-	8,182,300
		Maint:					
		Approp.	537,000	484,000	535,000	378,280	10,648,272
		Cost	554,252	418,276	513,952	438,344	10,610,405
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	475,200	475,200
		Cost	-	-	-	98,822	98,822
38B.	Hancock Brook Lake, CT	New Work:					
		Approp.	-	-	-	-	4,178,911
		Cost	-	-	-	-	4,178,911
		Maint:					
		Approp.	480,000	340,000	359,000	307,720	5,928,586
		Cost	460,618	335,210	330,378	311,134	5,869,050
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	112,650	112,650
		Cost	-	-	-	16,634	16,634
38C.	Hop Brook Lake, CT	New Work:					
		Approp.	-	-	-	-	6,151,562 ¹⁶
		Cost	-	-	-	-	6,151,562 ¹⁶
		Maint:					
		Approp.	802,000	1,435,000	901,000	835,940	25,018,210
		Cost	846,980	1,320,342	959,792	842,661	24,903,421
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	345,850	345,850
		Cost	-	-	-	37,420	37,420
		Major Rehab:					
		Approp.	-	-	950,000	-	950,000
		Cost	-	-	176,213	139,215	315,428
		Major Rehab: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	4,564,000	4,564,000
		Cost	-	-	-	-	-
38D.	Northfield Brook Lake, CT	New Work:					
		Approp.	-	-	-	-	2,850,512 ¹⁷
		Cost	-	-	-	-	2,850,512 ¹⁷
		Maint:					
		Approp.	440,000	389,500	421,600	349,860	9,318,988
		Cost	420,953	389,999	357,457	390,451	9,247,603
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	144,450	144,450
		Cost	-	-	-	6,518	6,518
38E.	Thomaston Dam, CT	New Work:					
		Approp.	-	-	-	-	14,282,112
		Cost	-	-	-	-	14,282,112

NEW ENGLAND DISTRICT

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
		Maint:					
		Approp.	848,000	689,000	761,000	559,580	18,218,208
		Cost	857,639	676,042	693,408	597,737	18,142,346
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	253,100	253,100
		Cost	-	-	-	6,067	6,067
39A.	Blackwater Dam, NH	New Work:					
		Approp.	-	-	-	-	1,319,746 ¹⁸
		Cost	-	-	-	-	1,319,746 ¹⁸
		Maint:					
		Approp.	596,000	653,000	720,000	485,480	13,335,266
		Cost	643,339	596,330	709,979	528,363	13,310,870
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	118,850	118,850
		Cost	-	-	-	26,393	26,393
39B.	Edward MacDowell Lake, NH	New Work:					
		Approp.	-	-	-	-	2,014,253 ¹⁹
		Cost	-	-	-	-	2,014,253 ¹⁹
		Maint:					
		Approp.	492,000	566,500	618,600	632,460	13,544,042
		Cost	497,075	528,205	611,091	490,979	13,352,741
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	74,350	74,350
		Cost	-	-	-	3,583	3,583
39C.	Franklin Falls Dam, NH	New Work:					
		Approp.	-	-	-	-	7,950,487 ²⁰
		Cost	-	-	-	-	7,950,487 ²⁰
		Maint:					
		Approp.	785,000	721,000	693,000	533,500	20,486,830
		Cost	800,615	660,534	708,757	540,318	20,439,733
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	252,950	252,950
		Cost	-	-	-	54,293	54,293
39D.	Hopkinton-Everett Lakes, NH	New Work:					
		Approp.	-	-	-	-	21,452,440 ²¹
		Cost	-	-	-	-	21,452,440 ²¹
		Maint:					
		Approp.	1,199,000	1,535,000	1,190,700	982,940	32,559,146
		Cost	1,222,092	1,429,149	1,206,252	1,066,554	32,538,733
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	418,000	418,000
		Cost	-	-	-	128,117	128,117
40.	New Bedford, Fairhaven, and Acushnet, MA	New Work:					
		Approp.	-	-	-	-	11,510,088
		Cost	-	-	-	-	11,510,088
		Maint:					
		Approp.	330,000	996,000	656,000	764,560	13,314,659
		Cost	288,193	383,248	335,529	1,513,991	13,068,769
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	1,789,950	1,789,950
		Cost	-	-	-	244,208	244,208
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	6,513,763 ²²
		Cost	-	-	-	-	6,513,763 ²²
41.	Pleasant Point, Perry, ME	New Work:					
		Approp.	-	-	-	-	244,000
		Cost	1,135	-	-	-	238,714

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
42.	Stamford, CT	New Work:					
		Approp.	-	-	-	-	9,901,300
		Cost	-	-	-	-	9,900,639
		Maint:					
		Approp.	396,000	372,000	592,000	340,060	11,777,581
		Cost	290,443	463,020	350,844	504,478	11,666,441
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	503,000	503,000
		Cost	-	-	-	14,957	14,957
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	3,367,970 ²³
		Cost	-	-	-	-	3,367,453 ²³
	(Contributed Funds - Other)	New Work:					
		Contrib.	-	-	-	-	210,000
		Cost	-	-	-	-	209,969
43A.	Buffumville Lake, MA	New Work:					
		Approp.	-	-	-	-	2,998,603 ²⁴
		Cost	-	-	-	-	2,998,603 ²⁴
		Maint:					
		Approp.	525,000	573,500	590,600	478,440	13,582,538
		Cost	525,275	564,797	569,034	506,975	13,554,472
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	251,700	251,700
		Cost	-	-	-	29,651	29,651
43B.	East Brimfield Lake, MA	New Work:					
		Approp.	-	-	-	-	7,057,043 ²⁵
		Cost	-	-	-	-	7,057,043 ²⁵
		Maint:					
		Approp.	405,000	448,000	501,000	388,620	10,995,067
		Cost	417,808	443,285	481,624	420,325	11,985,175
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	648,200	648,200
		Cost	-	-	-	108,914	108,914
43C.	Hodges Village Dam, MA	New Work:					
		Approp.	-	-	-	-	4,461,268 ²⁶
		Cost	-	-	-	-	4,461,268 ²⁶
		Maint:					
		Approp.	524,000	541,000	584,000	457,660	16,260,272
		Cost	501,330	541,943	566,817	506,131	16,245,635
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	230,550	230,550
		Cost	-	-	-	20,422	20,422
		Major Rehab:					
		Approp.	-	-	-	-	18,416,000
		Cost	-	-	-	-	18,416,000
43D.	Mansfield Hollow Lake, CT	New Work:					
		Approp.	-	-	-	-	6,447,164 ²⁷
		Cost	-	-	-	-	6,447,164 ²⁷
		Maint:					
		Approp.	489,000	786,000	583,000	447,860	13,514,632
		Cost	528,704	601,209	774,304	477,647	13,503,859
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	671,400	671,400
		Cost	-	-	-	97,259	97,259
		Major Rehab:					
		Approp.	-	-	250,000	500,000	750,000
		Cost	-	-	142,879	488,545	631,424

NEW ENGLAND DISTRICT

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009
43E.	West Thompson Lake, CT	New Work:					
		Approp.	-	-	-	-	7,001,220 ²⁸
		Cost	-	-	-	-	7,001,220 ²⁸
		Maint:					
		Approp.	641,000	691,500	632,400	536,460	15,713,626
		Cost	633,404	616,524	664,431	591,659	15,696,641
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	605,200	605,200
		Cost	-	-	-	74,186	74,186
43F.	Westville Lake, MA	New Work:					
		Approp.	-	-	-	-	5,684,683 ²⁹
		Cost	-	-	-	-	5,684,683 ²⁹
		Maint:					
		Approp.	635,000	573,000	790,000	656,780	13,454,755
		Cost	637,926	528,818	792,336	694,091	13,440,490
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	892,000	892,000
		Cost	-	-	-	144,900	144,900
		Major Rehab:					
		Approp.	-	-	-	753,000	753,000
		Cost	-	-	-	218,090	218,090
44.	Town Brook, Quincy and Braintree, MA	New Work:					
		Approp.	-	-	-	-	33,188,740
		Cost	-	-	-	-	33,187,328
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	4,129,785
		Cost	9,100	2,856	2,170	-	4,120,722
	(Contributed Funds - Other)	New Work:					
		Contrib.	-	-	-	-	9,411,889
		Cost	4,553	-	-	-	9,290,683
45.	Vermont Dams Remediation, VT	New Work:					
		Approp.	-	-	-	-	159,667
		Cost	9,177	-1,894	-	-	153,214
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	82,500
		Cost	2,130	1,989	-	-	82,500
46.	Woonsocket, RI	New Work:					
		Approp.	-	-	-	-	4,033,100
		Cost	-	-	-	-	4,033,100
		Maint:					
		Approp.	-	-	-	294,000	294,000
		Cost	-	-	-	49,098	49,098
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	3,545,300	3,545,300
		Cost	-	-	-	17,852	17,852
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	224,476
		Cost	-	-	-	-	224,476
51.	Allin's Cove, Barrington, RI	New Work:					
		Approp.	520,000	20,000	31,000	5,000	1,040,000
		Cost	559,457	6,541	10,903	51,597	1,035,956
	(Contributed Funds)	New Work:					
		Contrib.	44,500	-	9,000	-	284,466
		Cost	234,002	16,801	6,852	8,298	275,831
52.	Broad Meadows Marsh, Quincy, MA	New Work:					
		Approp.	86,000	50,000	3,260,000	200,000	4,120,300
		Cost	74,151	60,007	94,772	173,944	926,109

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total Cost to Sep. 30, 2009	
	(Contributed Funds)	New Work:						
		Contrib.	-	-	-	1,300,000	1,300,000	
		Cost	-	-	-	-	-	
53.	Mill River, Stamford, CT	New Work:						
		Approp.	151,000	158,000	4,020,000	-	4,935,000	
		Cost	155,228	133,758	166,282	2,351,336	3,408,371	
	(Contributed Funds)	New Work:						
		Contrib.	-	-	2,420,000	-	2,420,000	
		Cost	-	-	-	678,355	678,355	
54.	Nashawannuck Pond, Easthampton, MA	New Work:						
		Approp.	41,000	1,345,000	-	-	1,624,700	
		Cost	40,767	60,977	114,060	124,302	578,502	
	(Contributed Funds)	New Work:						
		Contrib.	-	-	815,000	-	815,000	
		Cost	-	-	6,528	85,780	92,308	
55.	Ninigret and Cross Mills Ponds, Charlestown, RI	New Work:						
		Approp.	742,000	650,000	-	10,000	2,921,000	
		Cost	1,110,688	91,198	613,612	11,134	2,909,984	
	(Contributed Funds)	New Work:						
		Contrib.	450,573	-	-	-	1,529,000	
		Cost	631,393	15,656	308,323	1,259	1,315,050	
56.	Stewart's Creek, Barnstable, MA	New Work:						
		Approp.	15,000	15,000	-	77,000	107,000	
		Cost	8,020	14,308	2,152	46,448	46,448	
	(Contributed Funds)	New Work:						
		Contrib.	-	-	-	58,000	58,000	
		Cost	-	-	-	14,810	14,810	
57.	Ten Mile River, RI	New Work:						
		Approp.	248,000	52,000	1,240,000	-	1,540,000	
		Cost	90,240	182,333	147,654	140,973	561,200	
		New Work: (American Recovery and Reinvestment Act)						
		Approp.	-	-	-	410,000	410,000	
		Cost	-	-	-	-	-	
	(Contributed Funds)	New Work:						
		Contrib.	-	-	1,197,450	13	1,197,463	
		Cost	-	-	-	-	-	
58.	Town Pond (Boyd's Marsh), Portsmouth, RI	New Work:						
		Approp.	1,200,000	2,021,000	50,000	-	4,141,000	
		Cost	1,270,660	1,779,789	113,891	65,332	4,017,778	
	(Contributed Funds)	New Work:						
		Contrib.	391,399	547,560	-	-	1,237,459	
		Cost	607,032	499,745	52,992	-	1,172,486	
66.	Shpack Landfill, Norton and Attleboro, MA	New Work:						
		Approp.	5,759,000	6,000,000	10,000,000	10,000,000	42,019,000	
		Cost	7,419,106	2,527,060	8,493,995	11,124,083	36,912,972	
		New Work: (American Recovery and Reinvestment Act)						
		Approp.	-	-	-	5,000,000	5,000,000	
		Cost	-	-	-	1,500,000	1,500,000	

NEW ENGLAND DISTRICT

TABLE 1-A (Continued) COST AND FINANCIAL STATEMENT

- ¹ Excludes \$ 6,138,157 from Public Works Funds and \$4,849,740 from Emergency Relief Funds.
- ² Includes \$389,929 Code 711 funds and \$511,089 Code 713 funds.
- ³ Excludes \$935,303 Emergency Relief Funds and \$1,030,806 Public Works Funds.
- ⁴ Includes \$18,310 Code 711 funds.
- ⁵ Includes \$504,062 Code 711 funds and \$67,066 for fish passage facility.
- ⁶ Includes \$618,469 Code 711 funds and \$32,000 Code 713 Funds.
- ⁷ Includes \$199,303 Code 711 funds.
- ⁸ Includes \$229,436 Code 711 funds.
- ⁹ Includes \$59,536 Code 711 funds.
- ¹⁰ Includes \$364,688 Code 711 funds.
- ¹¹ Includes \$470,077 Code 711 funds.
- ¹² Includes \$245,168 Code 711 funds and \$1,117,494 for fish passage facility.
- ¹³ Includes \$3,695 Code 711 funds and \$115,138 Code 713 funds.
- ¹⁴ Includes \$88,931 Code 711 funds.
- ¹⁵ Excludes \$245,000 expended for land condemnation.
- ¹⁶ Includes \$143,538 Code 711 funds.
- ¹⁷ Includes \$20,000 Code 711 funds.
- ¹⁸ Includes \$2,881 Code 711 funds.
- ¹⁹ Includes \$6,432 Code 711 funds.
- ²⁰ Includes \$4,671 Code 711 funds.
- ²¹ Includes \$179,727 Code 711 funds.
- ²² Excludes \$146,020 expended to date for land condemnation.
- ²³ Excludes \$199,410 expended to date for land condemnations.
- ²⁴ Includes \$71,943 Code 711 funds.
- ²⁵ Includes \$207,700 Code 711 funds.
- ²⁶ Includes \$6,255 Code 711 funds and \$40,353 Code 713 funds.
- ²⁷ Includes \$68,717 Code 711 funds.
- ²⁸ Includes \$315,420 Code 711 funds.
- ²⁹ Includes \$67,667 Code 711 funds.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-B **AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
July 14, 1960 as amended	AUNT LYDIA'S COVE, CHATHAM, MA (See Section 1 of Text) Entrance channel 100 feet wide by 900 feet long and 9.5 acre anchorage area, both 8 feet deep.	P.L. 86-645, Section 107, Authorized by the Chief of Engineers August 31, 1994.
July 11, 1870	BLOCK ISLAND HARBOR OF REFUGE, RI (See Section 2 of Text) Main breakwater.	Annual report 1868, p. 785 and S. Misc. Doc. 81, 40 th Cong., 2 nd sess.
August 2, 1882 August 5, 1886	Repairs to basin walls and cliff protection east of harbor. Breakwater enclosing inner harbor.	S. Ex. Doc.26, 47 th Cong., 1 st sess. S. Doc. 27, 48 th Cong., 2 nd sess. and Annual Report 1885, p. 610
June 3, 1896 July 25, 1912	Raising crest of main breakwater and making it sand tight. Rebuilding basin walls and present project dimensions of dredged area.	H. Doc. 83, 54 th Cong., 1 st sess. H. Doc. 828, 60 th Cong., 1 st sess.
November 17, 1986	Deauthorizes two 15-foot anchorages in the outer harbor authorized by the River and Harbor Act of 1912. Inner Harbor.	Section 1002, P.L. 99-662
March 2, 1825 June 14, 1880	BOSTON HARBOR, MA (See Section 3 of Text) Preservation of islands and seawalls. Weir River (Nantucket Beach Channel) 9.5 ft. deep. 100 ft. wide to Steamboat Wharf at Nantasket.	Annual Report, 1881, p. 518
August 5, 1886	Fort Point Channel. ¹	H. Ex. Doc. 206,48 th Cong., 2 nd sess., Annual Report, 1885, p. 543
September 19, 1890	Weir River (Nantucket Beach Channel) 9.5 ft. deep. 150 ft. wide to Steamboat Wharf at Nantasket.	Annual Report, 1890, p. 503
July 25, 1892	Weir River (Nantucket Beach Channel) from mouth of Weir River to Steamboat Wharf at Nantasket Beach 12 ft. deep, 150 ft. wide. Channel 15 feet deep from Long Island to Nixes Mate Shoal (Nixes Mate to Nubble Channel).	Annual Report, 1893, p. 769
July 13, 1892 June 3, 1896	Channel 27 feet from Nantasket Roads to President Roads. Dredge Chelsea River Channel to 18 feet.	Annual Report, 1893, p. 766 H. Ex. Doc. No. 162,53 rd Cong., 3 rd sess., Annual Report, 1895, p. 648
March 3, 1899	For 30-foot channel from sea to President Roads through Broad Sound by less direct route than 35 and 40-foot channels.	H. Doc. 133, 55 th Cong., 2 nd sess. Annual Report, 1898, p. 886
June 13, 1902	For 35-foot channel from sea to Boston Naval Shipyard. Chelsea and Charles River Bridges. Elimination from project of removal of Finns Ledge at outer entrance.	H. Doc. 119, 56 th Cong., 2 nd sess. Annual Report, 1901, p. 1096 Authorized by Chief of Engineers March 11, 1913.
July 25, 1912 August 8, 1917 August 30, 1935 ³	Dredge Chelsea River channel 25 ft. Depth of 40 feet (45 feet in rock) in Broad Sound Channel. Present project dimensions of channel from President Roads to Commonwealth pier No. 1, East Boston and anchorage area north side of President Roads.	H. Doc. 272, 62 nd Cong., 2 nd sess. ² H. Doc. 931, 63 rd Cong., 2 nd sess. ² H. Doc. 244, 72 nd Cong., 1 st sess. ²
Do.	Present project dimensions of that part of approach channel to U.S. Navy dry-dock No.3 at South Boston between Main Ship Channel and U.S. harbor line.	Rivers and Harbors Committee Doc. 29, 74 th Cong., 1st sess. ²
August 26, 1937	Chelsea River, channel 30 feet deep.	Rivers and Harbors Committee Doc. 24, 75 th Cong., 1 st sess. ²
October 17, 1940 September 7, 1940	Reserved channel 30 feet deep. Abandons seaplane channel authorized in 1940 River and Harbor Act (H.Doc.262,76th Cong., 1st sess.)	H. Doc. 225, 76 th Cong., 1 st sess. ² Public Law 420,78 th Cong.
March 2, 1945	Extension of 40-foot channel.	H. Doc. 733, 79 th Cong., 2 nd sess.

NEW ENGLAND DISTRICT

TABLE 1-B (Continued) AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
July 24, 1946	Extension of President Roads anchorage.	H. Doc. 244, 80 th Cong., 1 st sess. ²
July 3, 1958	Reserved channel 35 feet deep, 430 feet wide, extending one	H. Doc. 349, 84 th Cong., 2 nd sess. ²
October 23, 1962	Chelsea River Channel and Maneuvering Basin 35 feet deep.	H. Doc. 350, 87 th Cong., 2 nd sess. ²
January 1, 1990	Deauthorizes 1945 Act.	Federal Register Volume 55, No. 194, October 5, 1990
November 28, 1990	Deepen Mystic River and Reserved Channels to 40 feet; Chelsea River Channel to 38 feet; widen and deepen Inner Confluence Area to 40 feet; mark Presidents Roads Channel and expand Presidents Roads Anchorage from 353 to 420 acres.	Section 101, Public Law 101-640
October 31, 1992	Deauthorizes portion of the 35-foot channel in Boston Inner Harbor lying easterly of the Charlestown waterfront authorized in 1902 River and Harbor Act.	Section 116(2), P.L. 102-580
October 12, 1996	Deauthorizes portion of the 35-foot Chelsea River Channel authorized in the 1962 Act.	Section 364(12), P.L. 104-303
October 12, 1996	Deauthorizes portion of the 40-foot Reserved Channel authorized in the 1990 Act.	Section 364(16), P.L. 104-303
BRIDGEPORT HARBOR, CT (See Section 4 of Text)		
July 4, 1836	Fayerweather Island seawall.	
March 3, 1899	Shore protection of Fayerweather Island.	Annual Report, 1899, page 1173
March 2, 1907	West breakwater and present project dimensions of east breakwater.	H. Docs. 275 and 521, 59 th Cong., 2 nd sess.
March 2, 1919	Present project depths of 18-and 12-foot anchorage basins.	H. Doc. 898, 63 rd Cong., 2 nd sess.
July 3, 1930	25-foot entrance channel, 25-foot anchorage and an 18-foot channel through Johnsons River, present project dimensions of channels through Poquonock River, Yellow Mill Pond, Black Rock Harbor and Cedar Creek.	H. Doc. 281, 71 st Cong., 2 nd sess.
August 26, 1937	25-foot channel through main harbor, and present Project location and extent of 18- and 12-foot anchorage basins.	H. Doc. 232, 75 th Cong., 1 st sess.
March 2, 1945	30-foot channel; elimination of 12-foot anchorage.	H. Doc. 819, 76 th Cong., 3 rd sess.
July 24, 1946	30-foot turning basin and 15- and 9-foot channels in Johnsons River	H. Doc. 680, 79 th Cong., 2 nd sess. ⁴
July 3, 1958	Present depth and extent of main channel, and turning Basin south and southeast of Cilco Terminal; Black Rock Harbor breakwater; Burr and Cedar Creek anchorage. Upper Johnsons River anchorage; lower Johnsons River anchorage.	H. Doc. 136, 85 th Cong.
November 2, 1979	Deauthorizes the removal of rock in Yellow Mill Pond authorized in the 1930 Act.	H. Doc. 157, 96 th Cong., 1 st sess.
November 17, 1986	Deauthorizes construction of two rubble-mound breakwaters at the entrance to Black Rock Harbor and dredging a 28-acre anchorage 6 feet deep in Burr and Cedar Creeks at the head of Black Rock Harbor authorized In the 1958 Act.	Sec, 1002, P. L. 99-662
October 12, 1996	Deauthorizes two-acre anchorage area at the head of the Johnsons River authorized in the 1958 Act, and portion of the Johnsons River navigation channel authorized in the 1946 Act.	Section 364 (2) (A) & (B), P.L. 104-303
August 17, 1999	Deauthorizes a 2.4-acre anchorage area, 9 feet deep , and an adjacent 0.6-acre anchorage area, 6 feet deep, located on the west side of the Johnsons River authorized in the 1958 Act.	Section 365 (a) (1), P.L. 106-53

TABLE 1-B (Continued) AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
September 3, 1954	BULLOCKS POINT COVE, RI (See Section 5 of Text) Provides for an 8-foot channel, 6-foot turning basin, 6-foot anchorage, and breakwater.	H. Doc. 242, 83 rd Cong., 2 nd sess.
January 21, 1927 (Section 2)	CAPE COD CANAL, MA (See Section 6 of Text) Purchase canal from Boston, Cape Cod & New York Canal Co., in accordance with contract dated July 29, 1921, executed by that company.	H. Doc. 139, 67 th Cong., 2 nd sess.
Included in Public Works Administration program, September 6, 1933	Construct three bridges and widen canal to 250 feet.	H. Doc. 795, 71 st Cong., 3 rd sess.
June 26, 1934 (Permanent Appropriations Repeal Act)	Operation and care of works of improvement provided for the funds from War Department appropriations for rivers and harbors.	Do.
Included in Public Works Administration program, April 29, 1935	Construct a mooring basin.	Do.
Included in Emergency Relief Program, May 28, 1935.	Dredging and bank protection.	Do.
August 30, 1935	Existing project for main canal adopted.	Rivers and Harbor Committee Doc. 15, 74 th Cong., 1 st sess.
March 2, 1945	Channel and turning basin 15-foot deep in Onset Bay.	H. Doc. 431, 77 th Cong., 1 st sess.
July 3, 1958	Extend East Boat Basin for an area of about 4.3 acres to a depth of eight feet.	H. Doc. 168, 85 th Cong., 1 st sess.
August 17, 1999	Authorizes Secretary to pay up to \$300,000 for alternate transportation during rehabilitation of the Railroad Bridge.	Section 536, P.L. 106-53
June 3, 1896	CARVERS HARBOR, VINALHAVEN, ME (See Section 7 of Text) Provides for 16-foot anchorage area.	H. Doc. 624, 62 nd Cong., 2 nd sess.
March 4, 1913	Provides for two 10-foot anchorage areas along south side of harbor.	S. Doc. 118, 87 th Cong., 2 nd sess.
October 23, 1962	Provides for 10-foot anchorage area adjacent to main waterfront and 6-foot access channel.	
August 17, 1999	Deauthorizes a portion of the 16-foot anchorage area authorized by the River and Harbor Act of 1896.	Section 365 (a) (6), P.L. 106-53
March 12, 1945	CHATHAM (STAGE) HARBOR, MA (See Section 8 of Text) Entrance Channel 10 feet deep, 150 feet wide from Chatham Roads into upper harbor.	H. Doc. 456, 77 th Cong., 1 st sess. Annual Report 1942
August 2, 1882	CLINTON HARBOR, CT (See Section 9 of Text) Maintenance of a stone dike closing a breach of sandy peninsula which separates river from outer harbor.	S. Ex. Doc. 84, 47 th Cong., 1 st sess.
March 2, 1945	8-foot channel and anchorage	H. Doc. 240, 76 th Cong., 1 st sess.
August 17, 1999	Deauthorizes the upstream portion of project authorized by the River and Harbor Act of 1945.	Section 365 (a) (2), P.L. 106-53
September 19, 1890	COCHECO RIVER, NH (See Section 10 of Text) Provides for a 3-mile long tidewater channel 7 feet deep and 60 to 70 feet wide.	H. Doc. 74, 51 st Cong. 1 st sess.
October 12, 1996	Deauthorizes portion of 1890 Act and directs maintenance dredging of the remaining project.	Section 365(18), P.L. 104-303

NEW ENGLAND DISTRICT

TABLE 1-B (Continued) AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
June 3, 1896 June 13, 1902	GREAT SALT POND, BLOCK ISLAND, RI (See Section 12 of Text) Channel and jetties. Extension of south jetty and dredging.	H. Doc. 57, 54 th Cong., 1 st sess. Specified in Act. Annual Report for 1900, p. 1276.
March 2, 1945 November 17, 1986	Channel and basin in inner harbor. Deauthorizes the north jetty at the entrance to Great Salt Pond authorized in the 1896 Act, and the 12-foot access channel and basin in the inner harbor authorized in the 1945 Act.	H. Doc. 330, 77 th Cong., 1 st sess. Sec. 1002, P.L. 99-662.
July 14, 1960 as amended	GREEN HARBOR, MA (See Section 13 of Text) Channel six feet deep, 100 feet wide from deep water to head of navigation; anchorage near town pier; sealing, rebuilding in part and extension of existing west jetty.	Section 107, P.L. 86-645, Authorized by the Chief of Engineers December 15, 1965
August 17, 1999	Deauthorizes portion of the 6-foot channel and turning basin, and re-designates portion of 6-foot channel as an anchorage area.	Section 365 (a)(11) & (d), P.L. 106-53
March 3, 1899	MERRIMACK RIVER, MA (See Section 14 of Text) Channel 7 feet deep and 150 feet wide extending from deep water in Newburyport Harbor to the railroad bridge in Haverhill, along with removal of a sand bar at the mouth of the river and rock removal in Merrimack.	River and Harbor Act of 1899
September 19, 1890 July 25, 1912 March 4, 1913 March 2, 1945 November 17, 1986 October 12, 1996 November 8, 2007	MYSTIC RIVER, CT (See Section 15 of Text) Channel from Fishers Island Sound to highway bridge. Restoration and maintenance of original project. Channel above highway bridge. Channel widening to Murphy Point, anchorage and turning basin. Deauthorizes uncompleted portion of 1945 Act. Deauthorizes small portion of 1913 Act. Deauthorizes small portion of 1890 Act.	Annual Report for 1890, p. 746 H. Doc. 858, 61 st Cong., 2 nd sess. H. Doc. 637, 77 th Cong., 1 st sess. H. Doc. 349, 77 th Cong., 1 st sess. Section 1002, P. L. 99-662 Section 364(4), P.L. 104-303 Section 3181, P.L. 110-114
October 23, 1962	NARRAGUAGUS RIVER, ME (See Section 16 of Text) Channel 11 feet deep and 150 feet wide from deep water to Wyman, thence 9 feet deep and 100 feet wide to Milbridge with widening opposite Milbridge for an anchorage, and thence 6 feet deep and 100 feet wide to proposed town landing with widening near landing for an anchorage.	H. Doc. 530, 87 th Cong., 2 nd sess.
March 2, 1907 March 3, 1909 July 25, 1912	NEW BEDFORD AND FAIRHAVEN HARBOR, MA (See Section 17 of Text) The 25-foot anchorage area north of Palmer Island Extension of the 25-foot channel along New Bedford wharf front. The 18-foot channel in Acushnet River to Belleville (project feature was abandoned by Congress in 1955).	H. Doc. 271, 59 th Cong., 2 nd sess. Specified in act. H. Doc. 442, 62 nd Cong., 2 nd sess.
July 3, 1930	The 30-foot channel, anchorage, and maneuvering area (channel limited to width of 350 feet).	H. Doc. 348, 71 st Cong., 2 nd sess.
August 30, 1935	Present project dimensions of the anchorage area north of Palmer Island and maintenance of the 25-foot anchorage. Elimination from the project of the prior authorization for enlarging and deepening the maneuvering area 30-feet deep east of the harbor channel.	Rivers and Harbors Committee Doc. 16, 74 th Cong., 1 st sess.
August 26, 1937	The 15-foot and 10-foot channels along Fairhaven wharf.	Rivers and Harbors Committee Doc. 25, 75 th Cong., 1 st sess.
November 17, 1986	Deauthorizes the 18-foot channel in Acushnet River to Bellville authorized in the 1912 Act.	Section 1002, P. L. 99-662
August 17, 1999	Deauthorizes portion of the 25-foot spur channel leading to the west of Fish Island authorized in the 1909 Act, and portion of the 30-foot maneuvering area authorized in the 1930 Act.	Section 365 (a) (10), P. L. 99-662

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-B (Continued) AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
June 14, 1880	NEWBURYPORT HARBOR, MA (See Section 18 of Text)	
June 25, 1910	Construction of rubble stone jetties.	Annual Report for 1910, p. 59
March 2, 1945	Dredging the bar at the entrance to harbor.	H. Doc. 703, 76 th Cong., 3 rd sess.
November 17, 1986	Channel from deep water to wharves and widened turning basin.	Section 1002, P. L. 99-662
October 31, 1992	Deauthorizes uncompleted portions of the 1945 Act.	Section 116(3), P.L. 102-580
	PATCHOGUE RIVER, CT (See Section 20 of Text)	
September 3, 1954	Channel 8 feet deep from Duck Island Roads to U.S. Route 1 Bridge, 600-foot jetty, and anchorage and maneuvering area.	H. Doc. 164, 83 rd Cong., 1 st sess.
July 14, 1960	Widen existing channel to 125 feet in Long Island Sound to confluence of the Patchogue and Menunketesuck Rivers.	Section 107, P.L. 86-645, Authorized by the Chief of Engineers April 12, 1983
as amended		
	PROVIDENCE RIVER AND HARBOR, RI (See Section 23 of Text)	
August 26, 1937	Channel 35 feet deep from deep water in Narragansett Bay to Fox Point.	H. Doc. 173, 75 th Cong., 1 st sess.
October 27, 1965	Deepen 35-foot channel to 40 feet, and provide a 30-foot channel from the upper end of the existing project to India Point at the mouth of the Seekonk River. (The India Point channel was deauthorized in November 1986.)	S. Doc. 93, 88 th Cong., 2 nd sess.
November 17, 1986	Deauthorizes uncompleted portions of the 1965 Act consisting of the India Point channel.	Section 1002, P. L. 99-662
	SESUIT HARBOR, MA (See Section 24 of Text)	
July 14, 1960	Channel 6 feet deep and 100 feet wide.	Section 107, P.L. 86-645,
as amended		Authorized by the Chief of Engineers February 6, 1980
	WARWICK COVE, RI (See Section 25 of Text)	
July 14, 1960	Entrance channel 6 feet deep and 150 feet wide into the through lower portion of cove, then 100 feet wide to head of navigation; and four anchorage areas 6 feet deep and totaling 13 acres.	Section 107, P.L. 86-645, Authorized by the Chief of Engineers May 21, 1965
as amended		
	WESTPORT RIVER, MA (See Section 26 of Text)	
August 5, 1886	Provides for removal of obstructions in the east and west channels to a depth of 7 feet and construction of wooden jetties.	Annual Report, 1885, p.
September 19, 1890	Provides for the construction of a 150 foot-long jetty.	Annual Report, 1890, p.
June 20, 1938	Provides for an entrance channel 12 feet deep, 200 feet wide and 1,200 feet long; an inner channel 9 feet deep, 100 feet wide and 8,500 feet long; and a training dike.	
January 1, 1990	Deauthorizes 1938 Act.	Federal Register Volume 55, No. 194, October 5, 1990
July 14, 1960	Provides for an entrance channel 9 feet deep and 150 to 200 feet wide extending from deep water in the Atlantic Ocean up the Westport River 9,700 feet to Westport Harbor.	P.L. 86-645, Section 107, Authorized by the Chief of Engineers June 19, 2007
	WEYMOUTH-FORE AND TOWN RIVER, MA	
	(See Section 27 of Text)	
October 27, 1965	Combines Weymouth-Fore and Town Rivers into single project and modifies construction of 35-foot channel and anchorage.	H. Doc. 247, 88 th Cong., 2 nd sess.
October 12, 1996	Deauthorizes portions of the 15 and 35-foot channels near the southern limit of the project authorized in the 1965 Act.	Section 364 (17) (A) & (B), P.L. 104-303
	SEABROOK HARBOR, NH (See Section 29 of Text)	
October 12, 1996	Construct shoreline erosion control and demonstration project involving dredging of the Blackwater River and closure of breach.	Section 227(e) P.L. 104-303, Authorized by the Chief of Engineers May 10, 2004

NEW ENGLAND DISTRICT

TABLE 1-B (Continued) AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
June 30, 1948, as amended	BLACKWATER RIVER, SALISBURY, MA (See Section 33 of Text) Construct 2,765 feet of concrete floodwall and two pumping stations to control interior runoff.	Section 205, P.L. 80-858, Authorized by the Chief of Engineers August 20, 2008
July 24, 1946, as amended	PARTRIDGE BROOK, WESTMORELAND, NH (See Section 35K of Text) Construct 180 linear feet of stone slope protection along the east bank of the Connecticut River and 160 linear feet of steel sheeting along the south bank of Partridge Brook adjacent to municipal wastewater treatment lagoon.	Section 14, P.L. 79-526, Authorized by the Chief of Engineers May 9, 2007
June 30, 1948, as amended	SALMON RIVER, HADDAM AND EAST HADDAM, CT (See Section 35L of Text) Construct a pier-type ice control structure across the Salmon River about 200 feet upstream of Leesville Dam to retain ice breakup and reduce downstream flooding.	Section 205, P.L. 80-858, Authorized by the Chief of Engineers September 9, 2004
July 3, 1958	FOX POINT BARRIER, RI (See Section 36 of Text) Construction of concrete hurricane barrier across Providence River at Fox Point in the City of Providence.	H. Doc. 230, 85 th Cong., 1st Sess.
August 17, 1999	Directs Secretary to undertake repairs of the barrier as identified in Condition Survey and Technical Assessment dated April 1998, with Supplemental dated August 1998.	Section 352, P.L. 106-53
October 17, 2006	Transfers, no later than October 17, 2008, operation and maintenance responsibility to the Corps of Engineers.	Section 2866, National Defense Authorization Act for FY 2007, P.L. 109-364
July 24, 1946, as amended	HOLMES BAY (CUTLER ROAD), WHITING, ME (See Section 37 of Text) Construct 500 linear feet of stone slope protection along the shoreline of Holmes Bay adjacent to Cutler Road (Route 191).	Section 14, P.L. 79-526, Authorized by the Chief of Engineers August 6, 2007
July 24, 1946, as amended	PLEASANT POINT, PERRY, ME (See Section 41 of Text) Construct 800 linear feet of stone slope protection along the shoreline of Pleasant Point.	Section 14, P.L. 79-526, Authorized by the Chief of Engineers July 31, 1986
November 17, 1986	TOWN BROOK, QUINCY AND BRAINTREE, MA (See Section 44 of Text) Construct 12-foot diameter, 4,060-foot long, concrete lined tunnel in bedrock about 140 to 180 feet below ground; channel improvements downstream of the tunnel outlet; and reconstruction of Old Quincy Reservoir Dam located at the headwaters of Town Brook.	H. Doc. 39, 99 th Cong., 1 st sess.
December 11, 2000	VERMONT DAMS REMEDIATION, VT (See Section 45 of Text) Evaluate the structural integrity of ten priority dams in Vermont and carry out measures to modify, repair, restore or remove if the dam poses an imminent and substantial risk to public safety.	Section 543, P.L. 106-541
November 8, 2007	Identifies ten additional priority dams in Vermont and includes measures to restore, protect and preserve ecosystems affected by these dams.	Section 3156, P.L. 110-114
December 22, 1944	WOONSOCKET, RI (See Section 46 of Text) Construction of 8,300 feet of channel widening and deepening, 1,115 feet of earth dike, 316 feet of concrete floodwall, and pumping station; along with reconstruction of Woonsocket Falls Dam.	H. Doc. 624, 78 th Cong., 2nd Sess.
January 28, 2008	Transfers operation and maintenance responsibility of the project to the Corps of Engineers.	Section 2875, National Defense Authorization Act for FY 2008, P.L. 110-181

TABLE 1-B (Continued) AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
November 17, 1986	ALLIN'S COVE, BARRINGTON, RI (See Section 51 of Text) Restoration of 3.6 acres and protection of 0.7 acres of salt marsh by excavating material, realigning the inlet of the cove and constructing two sand spits.	Section 1135, P.L. 99-662, Authorized by the Chief of Engineers June 10, 2004
November 17, 1986	BROAD MEADOWS MARSH, QUINCY, MA (See Section 52 of Text) Restoration of 37 acres of salt marsh habitat and 12 acres of saltwater channels and pools by excavating and grading dredged material.	Section 1135, P.L. 99-662, Authorized by the Chief of Engineers August 3, 2004
October 12, 1996	MILL RIVER, STAMFORD, CT (See Section 53 of Text) Restoration of acres of open water and acres of upland habitat	Section 206, P. L. 104-303, Authorized by the Chief of Engineers September 20, 2004
October 12, 1996	NASHAWANNUCK POND, EASTHAMPTON, MA (See Section 54 of Text) Restoration of 8 acres of open water by removal of approximately 54,000 cubic yards of accumulated sediments.	Section 206, P. L. 104-303, Authorized by the Chief of Engineers August 29, 2007
October 12, 1996	NINIGRET AND CROSS MILLS PONDS, CHARLESTOWN, RI (See Section 55 of Text) Dredging 40 acres of tidal shoal area and planting eelgrass, dredging 3.5-acre sediment basin and construction of fish passage facilities at Ninigret Pond and Cross Mills Pond dams.	Section 206, P. L. 104-303, Authorized by the Chief of Engineers September 4, 2002
November 7, 2000	STEWART'S CREEK, BARNSTABLE, MA (See Section 56 of Text) Restoration of 35 acres of salt marsh habitat and 20 acres of coastal salt pond by excavating and grading dredged material along with construction of a larger culvert.	Section 106, P.L. 106-457, Approved by the Estuary Habitat Restoration Council on December 3, 2002
November 17, 1986	TEN MILE RIVER, RI (See Section 57 of Text) Construction of fish passage facilities at the three lowest dams along the Ten Mile River.	Section 1135, P.L. 99-662, Authorized by the Chief of Engineers December 1, 2005
November 17, 1986	TOWN POND (BOYD'S MARSH), PORTSMOUTH, RI (See Section 58 of Text) Restoration of 20 acres of salt marsh by excavating material to create channels and improve tidal flushing.	Section 1135, P.L. 99-662, Authorized by the Chief of Engineers May 17, 2002

¹ A portion has been abandoned pursuant to P.L. 624, December 31, 1970.

² Contains latest published maps. See also Annual Report, 1911, p. 1178 (seawalls and Nixes Mate Channel) and Annual Report, 1903, p. 770 (Fort Point Channel.)

³ Authorized in part by Public Works Administration, Sept. 6, 1933.

⁴ Contains latest maps.

NEW ENGLAND DISTRICT

TABLE 1-C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	For Last Full Report See Annual Report for	Cost to September 30, 2009		
		Construction	Operation and Maintenance	Contributed Funds Expended (Construction)
Andrews River, MA	2002	219,042	1,118,423	187,500
Apponaug Cove, RI	1964	156,874	79,169	104,583 ⁷
Bagaduce River, ME ^{3,4}	1912	28,000	1,839	-
Bar Harbor, ME	1932	406,591	2,187	-
Bass Harbor, ME ⁶	1965	188,859	120,172	-
Bass Harbor Bar, ME	1920	4,076	20,382	-
Beals Harbor, ME	1959	184,880	212,077	-
Belfast Harbor, ME	2003	61,561	1,905,757	-
Bellamy River, NH ^{3,4}	1897	34,643	112,200	-
Beverly Harbor, MA	1951	246,048	54,727	100,000
Black Rock Harbor, CT	1988	-	1,763,393	-
Branford Harbor, CT	1990	9,537	1,986,907	-
Bucks Harbor, Machiasport, ME ⁶	1976	277,420	152,992	-
Bucksport Harbor, ME	1907	18,421	22,233	-
Bunker Harbor, ME ⁶	1969	95,372	33,406	-
Buttermilk Bay Channel, MA ⁶	1985	163,855	347,838	69,323
Camden Harbor, ME	2003	102,400	745,989	-
Canapitsit Channel, MA ⁴	1899	9,113	26,579	-
Cape Porpoise Harbor, ME	1977	175,037	377,364	20,000
Cathance River, ME ³	1884	21,000	-	-
Coasters Island Harbor, RI ⁴	1911	5,500	13,361	-
Cobscook Bay, ME ^{3,4}	1866	4,173	-	-
Cohasset Harbor, MA	2000	267,737	2,012,842 ³¹	43,500
Corea Harbor, Gouldsboro, ME ⁶	1984	797,954	146,669	-
Criehaven Harbor, ME	1997	40,776	517,617	-
Cross Rip Shoals Nantucket Sound, MA	1954	24,200	59,728	-
Cuttyhunk Harbor, MA	2000	27,168	1,827,247 ³²	11,643
Damariscotta River, ME ⁴	1906	5,000	905	-
Deer Island Thoroughfare, ME ⁴	1916	40,000	5,792	-
Dorchester Bay and Neponset River, MA	1968	94,584	524,724	-
Duck Island Harbor, CT	1953	482,166	426,964	-
Duxbury Harbor, MA	1997	421,297	3,110,740 ²⁷	35,000 ²⁶
Edgartown Harbor, MA	1978	65,614	130,080	10,000
Essex River, MA	1948	21,759	257,181 ⁸	-
Exeter River, NH ⁴	1913	62,454	250,032	-
Fall River Harbor, MA ¹	1984	6,164,757 ⁹	2,336,067	-
Falmouth Harbor, MA	1978	123,763	378,749	35,000
Fivemile River Harbor, CT	2000	35,490	1,312,121	-
Frenchboro Harbor, ME	1978	657,345	103,416	-
Georges River, ME	1978	25,788	331,414	-
Gloucester Harbor and Annisquam River, MA	2000	1,296,934	2,297,848	25,000
Greenwich Bay, RI	1893	2,000	61,619	-
Greenwich Harbor, CT	1969	198,758	317,272	100,000
Guilford Harbor, CT	1995	137,222	2,119,177	25,500
Hampton Harbor, NH	1996	200,000	2,535,307	193,761
Harraseeket River, ME ⁴	1896	30,963	41,769	-
Hay (West Harbor), Fisher's Island, NY	1931	8,401	82,862	-
Hendrick's Harbor, ME	1957	28,204	27,325	-
Hingham Harbor, MA	1954	28,316	208,420	-
Housatonic River, CT	1983	859,691	2,986,028	222,010
Hyannis Harbor, MA	2001	4,113,358 ²⁴	2,544,663 ³⁰	772,918

TABLE 1-C (Continued) OTHER AUTHORIZED NAVIGATION PROJECTS

Project	For Last Full Report See Annual Report for	Cost to September 30, 2009		
		Construction	Operation and Maintenance	Contributed Funds Expended (Construction)
Ipswich River, MA	1969	5,618	146,234	-
Island End River, Chelsea, MA ⁶	1983	311,850	15,518	192,336 ¹⁰
Isle Au Haut Thoroughfare, ME	1980	137,653	230,786	-
Isle of Shoals Harbor, ME and NH	1977	80,691	651,644	-
Jonesport Harbor, ME	1992	7,489,073	88,128	832,119
Josias River, ME ⁵	1995	621,186	496,902	79,668 ²²
Kennebec River, ME	2004	1,599,940	6,987,593	-
Kennebunk River, ME	2005	261,417	2,780,957	88,917
Kingston Harbor (North Plymouth), MA	1895	8,940	32,500	-
Lagoon Pond, Martha's Vineyard, MA ⁶	1976	99,098	57,786	80,990
Lamprey River, NH ⁴	1913	19,980	94,123	-
Little Harbor, NH	2003	133,227	2,179,236	-
Little Harbor, Woods Hole, MA ⁴	1906	18,000	40,473	-
Lubec Channel, ME	1956	380,322	103,789	-
Lynn Harbor, MA	2002	755,576	886,734	-
Machias River, ME	1972	32,000	301,367	-
Malden River, MA ¹⁹	1922	104,853	120,797	62,000
Matinicus Harbor, ME	1962	14,000 ¹¹	8,989	-
Medomak River, ME	1953	17,000	175,859	-
Menemsha Creek, MA	1981	56,926	804,359	12,500
Mianus River, CT	1985	132,435	1,229,612	46,500
Milford Harbor, CT ⁵	1989	90,506	1,590,802	11,380 ¹²
Moosabec Bar, ME	1930	11,400	25,327	-
Mystic River, MA	1986	3,222,777	2,102,078	-
Nantucket (Harbor of Refuge), MA	1989	502,661 ¹³	835,400	-
New Harbor, ME ⁵	1966	118,620	134,091	7,015 ¹⁴
New Haven Breakwater, CT	1950	1,242,246	40,273	-
New Haven Harbor, CT	2004	4,773,246 ²¹	21,540,558	-
New London Harbor, CT	1986	638,774	2,233,100	-
Newport Harbor, RI	1953	733,524	264,478	-
Niantic Bay and Harbor, CT ⁶	1972	66,464	215,003	65,139
Owl's Head Harbor, ME ^{3,5}	1968	124,158	72,924	4,383
Pawcatuck River, Little Narragansett Bay and Watch Hill Cove, RI and CT	1997	318,787	2,041,160	20,000
Pawtuxet Cove, RI	2008	295,356	1,732,946 ²⁰	295,356
Penobscot River, ME	2003	501,020	1,559,975	-
Pepperell Cove, ME	1969	171,351	59,856	-
Pig Island Gut, ME ⁶	1966	191,753	210,956	-
Pleasant River, ME	1892	3,500	217	-
Plymouth Harbor, MA	2005	2,127,218 ³⁷	2,150,276 ³⁸	541,611
Pollock Rip Shoals, Nantucket Sound, MA	1956	1,083,504	852,490	-
Portsmouth Harbor and Piscataqua River, NH & ME	2001	18,360,800	3,751,428	4,437,665
Potowomut River, RI	1882	5,000	37,450	-
Provincetown Harbor, MA ⁵	1997	3,889,577	1,059,666	797,847
Richmond Harbor, ME ⁴	1883	20,000	2,100	-
Richmond's Island Harbor, ME ⁴	1882	119,844	2,308	-
Rockland Harbor, ME	2003	1,948,462 ²⁵	1,712,578	-
Rockport Harbor, MA	1996	1,808,745	412,678	51,430
Rockport Harbor, ME ³	1989	32,000	325,766	-
Royal River, ME ⁵	1997	336,704	1,962,055 ²⁸	49,562 ²⁹
Rye Harbor, NH	1991	130,342	859,918	61,338 ¹⁶
Saco River, ME ⁵	1995	1,064,983	3,097,655	74,996
St. Croix River, ME	1950	179,550	64,685	19,892

NEW ENGLAND DISTRICT

TABLE 1-C (Continued) OTHER AUTHORIZED NAVIGATION PROJECTS

Project	For Last Full Report See Annual Report for	<u>Cost to September 30, 2009</u>		
		Construction	Operation and Maintenance	Contributed Funds Expended (Construction)
Sakonnet Harbor, RI	2001	764,651	481,404	21,928
Sakonnet River, RI	1909	38,427	51,478	-
Salem Harbor, MA	2008	1,693,202	3,574,843	-
Sandy Bay (Harbor of Refuge), Cape Ann, MA ¹⁷	1922	1,925,553	16,060	-
Sasanoa River, ME ^{3,4}	1915	35,000	624	-
Saugus River, MA ⁶	2004	3,879,853	125,300	289,725 ³³
Scarborough River, ME	2005	392,635	4,193,588	10,000
Scituate Harbor, MA	2003	379,851	5,640,529	69,976
Searsport Harbor, ME	1966	572,568 ¹⁵	192,570	-
Seekonk River, Providence, RI	2004	818,837	-	788,173 ³⁴
Seekonk River, RI	1954	672,214	1,167,373	67,792
South Bristol Harbor, ME	1971	89,593	81,723	2,567
Southport Harbor, CT	2005	59,213 ¹⁸	1,553,335	18,285
Southwest Harbor, ME	1962	180,042	90,085	7,501
Stamford Harbor, CT	1980	892,824	2,000,447	169,636
Stockton Harbor, ME ^{3,4}	1915	33,000	95,776	-
Stonington Harbor, CT	1959	377,328	168,673	-
Stonington Harbor, ME ⁶	1985	898,500	45,258	-
Stony Creek, Branford, CT ⁶	1995	112,487	877,197	85,176
Sullivan Falls Harbor, ME	1914	19,871	-	-
Taunton River, MA	1948	442,895	152,217	-
Thames River, CT	1967	1,471,919	2,104,140	-
Union River, ME	2003	146,855	3,293,555	-
Vineyard Haven, MA	1943	27,186	74,706	-
Wareham Harbor, MA	1896	95,997	146,591	-
Warren River, RI	1890	5,000	1,300	-
Wellfleet Harbor, MA	1995	157,634	2,019,513	32,000
Wells Harbor, ME	2004	360,973	4,770,405 ³⁵	212,000 ³⁶
Westcott Cove, CT	1978	55,960	362,248	21,000
Westport Harbor and Saugatuck River, CT	1972	19,308	695,944	-
Weymouth Back River, MA	1944	48,740	27,353	20,000
Wickford Harbor, RI ⁵	1973	233,410	258,850	49,094 ²³
Wilson Point Harbor, CT ⁴	1895	54,177	21,000	-
Winnepesaukee Lake, NH	1952	7,500	29,870	-
Winter Harbor, ME ⁶	1976	162,937	45,438	-
Winthrop Harbor, MA	1895	8,992	79,915	-
Wood Island Harbor and the Pool at Biddeford, ME ⁵	1995	733,272	678,195	43,660
Woods Hole Channel, MA	1940	230,000	74,714	-
York Harbor, ME	1997	239,654	1,157,248	32,161

TABLE 1-C (Continued) OTHER AUTHORIZED NAVIGATION PROJECTS

Projects are complete unless otherwise noted.

- ¹ Complete except for inactive portion.
 - ² Inactive.
 - ³ Abandonment recommended in H. Doc. 467, 69th Congress, 1st session.
 - ⁴ No commerce reported.
 - ⁵ Portion of project authorized by Chief of Engineers (Public Law 86-645, Sec. 107).
 - ⁶ Authorized by the Chief of Engineers (Public Law 86-645, Sec. 107).
 - ⁷ Construction of a public landing by local interests has not been completed.
 - ⁸ Excludes \$5,000 Contributed Funds.
 - ⁹ Excludes \$37,200 Contributed Funds, Other.
 - ¹⁰ Excludes \$582,188 Contributed Funds, Other.
 - ¹¹ Excludes \$114,327 expended for rehabilitation; breakwater repaired in 1962.
 - ¹² Excludes \$173,425 Contributed Funds, Other.
 - ¹³ Excludes \$211,649 expended for minor rehabilitation; jetty repaired in 1963.
 - ¹⁴ Public landing at Black Cove has not been constructed.
 - ¹⁵ Costs to local interests for berth improvements are estimated to be \$60,000.
 - ¹⁶ Excludes \$81,548 Contributed Funds, Other.
 - ¹⁷ Abandonment recommended in H. Doc. 411, 64th Congress, 1st session, and in River and Harbor Committee Doc. 3, 65th Congress, 1st session.
 - ¹⁸ Excludes \$37,714 Emergency Relief Funds.
 - ¹⁹ Under State maintenance.
 - ²⁰ Excludes \$108,054 Contributed Funds expended for cost sharing construction of an aquatic confined disposal cell in the Providence River for placement of maintenance material.
 - ²¹ Includes \$290,877 National Industrial Recovery Funds and \$59,207 Public Works Funds.
 - ²² Excludes \$17,495 non-project cost for removal of mooring chains, of which the project sponsor still owes \$12,198.
 - ²³ Excludes \$10,000 Contributed Funds.
 - ²⁴ Excludes \$129,757 expended for minor rehabilitation work.
 - ²⁵ Excludes about \$225,000 expended by local interest in terminal and transfer facilities.
 - ²⁶ Excludes \$65,000 consisting of \$13,000 for public wharf and \$52,000 for additional construction.
 - ²⁷ Excludes \$571,401 Contributed Funds.
 - ²⁸ Excludes \$20,000 Contributed Funds, Other.
 - ²⁹ Excludes \$18,000 Contributed Funds, Other.
 - ³⁰ Excludes \$476,782 Contributed Funds, Other.
 - ³¹ Excludes \$83,476 Contributed Funds, Other.
 - ³² Excludes \$50,000 Contributed Funds.
 - ³³ Excludes \$96,730 expended by the Town of Saugus for divers to assist in the location and removal of channel obstructions and \$132,559 contributed funds other.
 - ³⁴ Excludes \$104,550 for LERRD and \$5,000 credit for the value of scrape metal, and includes \$87,886 expended by the City of Providence for asbestos removal.
 - ³⁵ Excludes \$417,757 Contributed Funds, Other for dredging municipal berthing areas.
 - ³⁶ Excludes \$5,000 Contributed Funds, Other.
 - ³⁷ Excludes \$894,475 expended for major rehabilitation.
 - ³⁸ Excludes \$400 Contributed Funds.
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NEW ENGLAND DISTRICT

TABLE 1-D OTHER AUTHORIZED BEACH EROSION CONTROL PROJECTS

Project	For Last Full Report See Annual Report For	Cost to Sep. 30, 2009 Construction	Amount Expended by Local Interest
Burial Hill Beach, Westport, CT	1958	5,810	11,612
Calf Pasture Beach Park, Norwalk, CT	1964	56,386	120,179
Clark Point Beach, New Bedford, MA ⁵	1982	228,081	228,080
Cliff Walk, Newport, RI ¹	1995	1,155,491	955,237
Compo Beach, Westport, CT	1962	84,544	169,089
Cove Island, Stamford, CT	1961	47,131	94,262
Cummings Park, Stamford, CT	1963	26,886	53,771
Guilford Point Beach (Jacobs Beach), Guilford, CT	1961	15,620	31,241
Gulf Beach, Milford, CT	1958	21,303	42,606
Hammonasset Beach, Madison, CT	1956	163,183	326,366
Hampton Beach, Hampton, NH	1966	260,868	385,641
Jennings Beach, Fairfield, CT	1956	14,401	28,802
Lighthouse Point Park (Area 9), CT	1961	3,930	7,859
Middle Beach, CT	1958	8,810	17,620
Misquamicut Beach, Westerly, RI ²	1963	14,512	29,024
North Scituate Beach, Scituate, MA	1969	106,552	106,552
Oak Bluffs Town Beach, Martha's Vineyard, MA ⁵	1976	273,334	198,583
Oakland Beach, Warwick, RI ⁴	1982	559,200	181,175
Plum Island, MA ⁵	1977	118,882	104,875
Point Beach, Milford, CT	2006	2,454,787	1,277,095
Prospect Beach, West Haven, CT ⁴	1995	1,870,407	1,089,351
Quincy Shore Beach, Quincy, MA	1962	621,464	1,242,880
Revere Beach, MA	1994	3,889,016	2,197,312
Roosevelt Campobello International Park, Lubec, ME	1993	233,260	-
Sand Hill Cove Beach, RI	1959	40,143	82,000
Sandy Point Outfall, West Haven, CT ⁵	1996	889,634	457,495
Sasco Hill Beach, Fairfield, CT	1961	23,759	47,518
Sea Bluff Beach, West Haven, CT ⁵	1995	677,170	237,628
Seaside Park, CT	1958	150,000	329,921
Sherwood Island State Park, Westport, CT ⁴	1983	1,186,830	889,330
Short Beach, CT ³	1956	-	-
Silver Beach to Cedar Beach, CT	1964	62,560	270,695
Southeast Lighthouse, Block Island, RI	1995	1,648,249	970,000
Southport Beach, CT	1960	17,631	35,263
Town Beach, Plymouth, MA	1964	5,490	10,981
Wallis Sands State Beach, Rye, NH	1966	65,131	435,942
Wessagusset Beach, Weymouth, MA	1971	180,944	200,208
Winthrop Beach, MA	1960	176,567	353,134
Woodmont Beach, Milford, CT ⁴	2001	2,043,765	1,089,515 ⁶

Projects are completed unless otherwise noted.

¹ Complete except inactive portion.

² Additional Federal participation will be required based on Public Law 87-874, Sec. 103.

³ Project completed at no cost to Federal Government by using fill from Federal navigation improvement at Housatonic River. (See page 88 of the 1956 Annual Report.)

⁴ Portion authorized by Chief of Engineers (Public Law 87-874, Sec. 103.)

⁵ Authorized by Chief of Engineers (Public Law 87-874, Sec. 103.)

⁶ Excludes \$118,215 expended for work beyond scope of project.

TABLE 1-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Project	For Last Full Report See Annual Report for	Cost to September 30, 2009	
		Construction	Contributed Funds
Alford, Green River, MA ³	1977	41,419	-
Allendale Dam, North Providence, RI ²⁶	2001	109,500	-
Alley Bay, Beals, ME ³	1979	190,500	-
Amesbury, Powwow River, MA ³	1978	132,113	-
Ansonia - Derby, CT	1977	18,266,040	- ⁸
Aroostook River, Fort Fairfield, ME ²	2002	4,849,991	941,580
Bagaduce River, ME ³	1985	129,500	-
Beaver Brook, Keene, NH ²	1989	2,591,000	-
Blackstone River, Millbury, MA ³	1986	249,999	4,576
Bluffs Community Center, Swansea, MA ³	1995	189,131	54,447
Bound Brook, Scituate, MA ⁴	1974	47,300	-
Canton, MA ²	1964	156,568	92,981
Charles River Dam, MA	1981	41,170,921	5,554,088 ⁹
Charlestown, NH ³	1976	113,330	-
Cherryfield, ME ²	1963	191,095	-
Chicopee, MA	1954	1,433,600	385
Chicopee Falls, MA	1978	2,183,912	411,292 ¹⁰
Clear River, Burrillville, RI ³	1987	168,000	-
Cochecho River, Farmington, NH ²	1963	183,100	-
Connecticut River, Middletown, CT ³	1996	262,046	69,121 ²³
Connecticut River, North Stratford, NH ³	1982	180,000	-
Connecticut River, W. Stewartstown, NH ³	1976	54,703	-
Danbury, CT	1978	13,143,000	- ¹¹
Derby, CT	1977	7,582,642	- ¹²
East Branch Dam, CT	1973	1,959,836	-
East Hartford, CT	1951	2,135,447	7,637
Farmington River, Simsbury, CT ³	1996	500,000	257,720 ²²
Faulkners Island, CT	2003	3,168,000	-
Fitchburg, MA (See No. Nashua River)	-	-	-
Folly Brook, Wethersfield, CT ²	1979	220,284	-
Fort Kent, ME ²	1979	1,997,820	-
Gardner, MA ²	1970	495,691	15,000
Gulf Street, Milford, CT ³	1991	365,000	21,000
Hall Meadow Brook Dam, CT	1970	2,572,357	-
Hartford, CT	1960	6,929,100	2,781,100
Hartford, White River, VT ²	1973	332,236	-
Haverhill, MA	1940	1,743,485	120,000
Hayward Creek, Braintree-Quincy, MA ²	1979	2,325,470	-
Holmes Bay, Whiting, ME ³	1980	207,390	-
Holyoke, MA	1953	3,418,000	24,447
Hoosic River, Syndicate Road, Williamstown, MA ³	2004	318,525	137,796 ²⁷
Housatonic River, Covered Bridge, Sheffield, MA ³	1988	250,000	180,000
Housatonic River, Lee, MA ³	1976	37,852	-
Housatonic River, Pittsfield, MA ²	1985	739,003	-
Housatonic River, Salisbury, CT ³	1982	102,800	-
Housatonic River, Sheffield, MA ³	1981	202,608	-
Huntington, MA ³	1960	3,900	-
Island Avenue, Quincy, MA ³	1983	172,000	-
Islesboro (The Narrows), ME ³	1985	165,500	-
Johnson Bay, Lubec, ME ³	1985	163,082	-
Keene, NH ⁴	1955	44,100	-
Lancaster, Israel River, NH ²	1997	595,878	-
Little River, Belfast, ME ³	1990	166,682	43,000
Lowell, MA	1945	1,284,974	-

NEW ENGLAND DISTRICT

TABLE 1-E (Continued) OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Project	For Last Full Report See Annual Report for	Cost to September 30, 2009	
		Construction	Contributed Funds
Lower Woonsocket, RI	1977	6,600,681	1,266,638 ¹⁴
Machias River, Machias, ME ³	1987	152,000	-
Machias Bay, Machiasport, ME ³	1995	133,473	32,733 ¹⁵
Mad River Lake, CT	1973	4,773,020	-
Mad River, Waterbury (Woodtick Area), CT ²	1998	1,177,905	270,183 ¹³
Marginal Way, Ogunquit, ME ³	1987	243,000	-
Merriconeag Sound, Harpswell, ME ³	1980	107,682	-
Mill Brook, Brownsville, VT ³	1988	110,000	-
Narraguagus River, Milbridge, ME ³	1995	132,967	24,893 ¹⁶
Nashua, NH	1950	270,000 ⁶	327
New London Hurricane Barrier, CT	1992	8,504,919 ⁷	2,015,709 ²¹
Nonewaug River, Woodbury, CT ³	1985	222,500	-
Northampton, MA	1950	960,000	-
North Canaan, Blackberry River, CT ⁴	1977	73,865	-
North Nashua River, Fitchburg, MA	1981	4,605,000	-
North Nashua River, Lancaster, MA ³	1979	81,671	-
North Nashua River, Lancaster (Route 70), MA ³	2003	253,751	115,097
North Nashua River, Leominster, MA ³	1997	152,756	50,919
North Nashua River, Leominster (Sewer Line), MA ³	1997	221,455	73,818
Norwalk, CT ²	1952	52,150	-
Norwich, CT	1960	1,209,000	-
Park River, Hartford, CT	1986	60,176,919	- ¹⁷
Pawcatuck, CT	1966	644,311	214,106
Pawtuxet River, Warwick, RI ²	1986	3,174,260	-
Penobscot River, Old Town, ME ²	1986	178,045	-
Perley Brook, Fort Kent, ME ³	1994	70,990	20,554 ¹⁸
Point Shirley, Winthrop, MA ³	1995	500,000	182,419
Port 5 Facility, Bridgeport, CT ³	1986	227,500	-
Prestile Stream, Blaine, ME ³	1980	73,674	-
Quonset Point, Davisville, RI	2006	2,221,150	1,109,496
Riverdale, West Springfield, MA ⁵	1996	1,905,261	221,614 ²⁴
Roughans Point, Revere, MA	2008	7,726,967	3,644,558 ²⁸
Saint John River Basin, ME	2004	511,822	275,596
Salmon River, Colchester, CT ³	1983	247,100	-
Sand Cove, Gouldsboro, ME ³	1984	127,500	-
Saugus River & Tributaries, MA ¹	1997	5,525,000	-
Saxtons River, Rockingham, VT ³	1985	140,500	-
Sudbury River, Saxonville, MA	1980	4,218,700	- ¹⁹
Sebago Lake, Standish, ME ³	1998	500,000	346,009
Sebasticook River, Hartland, ME ²	1985	1,857,475	-
Shelburne, Androscoggin River, NH ³	1977	37,657	-
Smelt Brook, Weymouth-Braintree, MA ²	1978	1,803,738	-
South River, Conway, MA ³	1987	133,500	-
Springdale, MA	1952	700,000	-
Springfield, MA	1950	932,000	5,350
Squantz Pond, New Fairfield, CT ³	1983	116,296	-
Stony Brook, Wilton, NH ⁴	1973	19,500	-
Sucker Brook Dam, CT	1976	2,227,792	58,800
Three Rivers, MA	1970	1,577,189	- ²⁰
Torrington, East Branch, CT ²	1963	389,237	-
Torrington, West Branch, CT ²	1963	228,237	-
Town River Bay, Quincy, MA ³	1993	55,228	18,409
Ware, MA ²	1963	400,000	-
Waterbury-Watertown, CT ²	1963	265,300	-

TABLE 1-E (Continued) OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Project	For Last Full Report See Annual Report for	Cost to September 30, 2009	
		Construction	Contributed Funds
Weston, VT ⁴	1957	13,000	-
West Branch, Westfield River, Huntington, MA ³	1983	119,433	-
West River, New Haven, CT ²	1996	3,883,293	748,840 ²⁵
West Springfield, MA ⁵	1992	2,043,728	14,343
West Warren, MA ²	1964	389,200	41,000
Winsted, CT	1954	245,500	-
Worcester Diversion, MA	1978	5,086,896	70,161

Projects are complete unless otherwise noted.

¹ Inactive.

² Authorized by Chief of Engineers (Public Law 80-858, Sec. 205).

³ Authorized by Chief of Engineers (Public Law 79-526, Sec. 14)

⁴ Authorized by Chief of Engineers (Public Law 83-780, Sec. 208)

⁵ Portion Authorized by Chief of Engineers (Public Law 80-858, Sec. 205).

⁶ Excludes \$147,366 Flood Control and Coastal Emergency funds expended.

⁷ Excludes \$852,127 non-project cost per 1976 WRDA.

⁸ Excludes \$727,460 Contributed Funds, Other.

⁹ Excludes \$1,674,567 Contributed Funds, Other.

¹⁰ Excludes \$12,000 expended for land condemnations and \$25,184 Contributed Funds, Other for relocations.

¹¹ Excludes \$1,146,828 Contributed Funds, Other.

¹² Excludes \$406,653 Contributed Funds, Other.

¹³ Excludes \$122,452 for lands.

¹⁴ Excludes \$488,920 Contributed Funds, Other.

¹⁵ Excludes \$11,758 for lands.

¹⁶ Excludes \$6,120 for lands.

¹⁷ Excludes \$259,408 Contributed Funds, Other.

¹⁸ Excludes \$3,109 for lands.

¹⁹ Excludes \$8,503 Contributed Funds, Other.

²⁰ Excludes \$565,168 Contributed Funds, Other.

²¹ Excludes \$1,629,256 for lands and \$303,251 Contributed Funds, Other.

²² Excludes \$10,195 for lands.

²³ Excludes \$24,134 Contributed Funds, Other.

²⁴ Excludes \$109,140 for land and \$46,929 Contributed Funds, Other.

²⁵ Excludes \$554,638 for lands and \$71,650 Contributed Funds, Other.

²⁶ Design only, project constructed under EPA Superfund Program.

²⁷ Excludes \$12,179 for lands.

²⁸ Excludes \$516,117 for lands.

NEW ENGLAND DISTRICT

TABLE 1-F OTHER AUTHORIZED MULTI-PURPOSE PROJECTS INCLUDING POWER

Project	For Last Full Report See Annual Report for	Cost to September 30, 2009	
		Construction	Contributed Funds
Passamaquoddy Tidal Power Project, ME ¹	1935	6,384,394	-

¹ Work discontinued in 1937. Facilities transferred to War Assets Administration.

TABLE 1-G OTHER AUTHORIZED ENVIRONMENTAL PROJECTS

Project	For Last Full Report See Annual Report for	Cost to September 30, 2009	
		Construction	Contributed Funds
Galilee Salt Marsh, RI ¹	2000	1,274,979	424,993 ³
Lebanon, NH	2008	4,836,163	5,074,525
Lonsdale Drive-In, Lincoln, RI ²	2007	1,646,546	381,159 ⁴
Nashua, NH ⁷	2008	147,000	-
Naugatuck River, Torrington, CT ¹	2001	96,327	32,109
Presumpscot River (Smelt Hill Dam), Falmouth, ME ²	2004	653,239 ⁵	- ⁶
Sagamore Marsh, Cape Cod Canal, MA ¹	2008	1,856,206	617,902

¹ Authorized by Chief of Engineers (Public Law 99-662, Sec. 1135).

² Authorized by Chief of Engineers (Public Law 104-303, Sec. 206).

³ Excludes \$836,381 Contributed Funds, Other.

⁴ Excludes \$505,443 for lands and \$33,776 for asbestos abatement and local betterment.

⁵ Excludes \$12,759 for historical costs not included in total project costs.

⁶ Excludes \$366,184 for lands partially offset by a Federal reimbursement of \$14,440.

⁷ Work discontinued in 2006 because of uncertainty of future appropriations.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-H DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for	Date Deauthorized	Funds Expended	
			Federal	Contributed Funds
Alternative for Sugar Hill Reservoir	-	Aug 1977	-	-
Andover Lake, CT	-	Aug 1977	-	-
Apponaug Cove, RI (portion of 1960 Act)	1964	Aug 1999	-	-
Bagaduce River, ME (uncompleted portion)	-	Oct 1978	-	-
Baker Brook, MA	1972	Nov 1979	94,000	-
Bar Harbor, ME (uncompleted portion of 1888 & 1890 Acts)	1932	Nov 1986	-	-
Bass Harbor, ME (portions of Section 107 project)	1965	Aug 1999	-	-
Beards Brook Reservoir, NH	1949	Aug 1977	78,000	-
Beaver Brook Lake, NH	1973	Apr 1978	378,300	-
Bennington Reservoir, NH	1949	Aug 1977	205,000	-
Big River Reservoir, RI (portion of 1986 Act)	1987	Nov 1990	-	-
Black Rock Harbor, CT (uncompleted portion of 1958 Act)	1988	Nov 1986	-	-
Block Island Harbor of Refuge, RI (uncompleted portion of 1912 Act)	2009	Nov 1986	-	-
Boothbay Harbor, ME (Portion of 1912 Act)	1953	Oct 1992	-	-
Boothbay Harbor, ME	1953	Aug 1999	18,000	-
Boston Harbor, MA (1945 Act)	2009	Jan 1990	-	-
Boston Harbor, MA (portion of 1902 Act)	2009	Oct 1992	-	-
Boston Harbor, MA (portion of Chelsea River 1962 Act)	2009	Oct 1996	-	-
Boston Harbor, MA (portion of Reserved Channel 1990 Act)	2009	Oct 1996	-	-
Brant Rock Beach, Marshfield, MA	1961	Nov 1979	-	-
Branford Harbor, CT (portion of 1902 of Act)	1990	Oct 1990	-	-
Bridgeport Harbor, CT (portions of 1958 Act)	2009	Nov 1986	-	-
Bridgeport Harbor, CT (uncompleted portion of 1930 Act)	2009	Nov 1979	-	-
Bridgeport Harbor, CT (portion of 1946 Act)	2009	Oct 1996	-	-
Bridgeport Harbor, CT (portion of 1958 Act)	2009	Oct 1996	-	-
Bridgeport Harbor, CT (portion of 1958 Act)	2009	Aug 1999	-	-
Bridgeport Harbor, CT (portion of 1930 Act)	2009	Nov 2007	-	-
Bristol Harbor, RI	1987	Apr 2002	316,288	-
Brockway Lake, VT	1946	Aug 1977	-	-
Bucksport Harbor, ME (portion of 1902 Act)	1907	Aug 1999	-	-
Cambridgeport Lake, VT	-	Aug 1977	-	-
Carvers Harbor, Vinalhaven, ME (portion of 1896 Act)	2009	Aug 1999	-	-
Chicopee, MA (uncompleted portion)	1954	Aug 1977	-	-
Claremont Lake, NH	1968	Dec 1970	242,700	-
Clinton Harbor, CT (portion of 1945 Act)	2009	Aug 1999	-	-
Clyde, RI	1948	Apr 1951	8,800	-
Cochecho River, NH (portion of 1890 Act)	2009	Oct 1996	-	-
Cohasset Harbor, MA (portion of 1945 Act)	2000	Oct 1996	-	-
Cohasset Harbor, MA (portion of Section 107 project)	2000	Oct 1996	-	-
Connecticut River (above Hartford), CT	1932	Jan 1990	132,146	-
Connecticut River below Hartford, CT (uncompleted portion)	2009	Oct 1978	-	-
Connecticut River below Hartford, CT (1950 Act)	2009	Nov 1986	-	-
Cotuit Harbor, MA	1962	Oct 1978	8,541	-
Dickey - Lincoln School Lakes, ME (portion of 1965 Act)	1984	Nov 1986	26,285,298	-
Dorchester Bay and Neponset River, MA (uncompleted portion)	1968	Jan 1990	-	-
East Boothbay Harbor, ME (portion of 1910 Act)	1953	Oct 1996	-	-
East Boothbay Harbor, ME	1953	Aug 1999	6,500	-
Eastport Harbor, ME	1984	Nov 1983	638,675	141,530
Edgartown Harbor, MA (uncompleted portion of 1965 Act)	1978	Nov 1986	-	-
Fall River Harbor, MA (uncompleted portion of 1930 Act)	1984	Nov 1986	-	-
Falmouth Harbor, MA (portion of 1948 Act)	1978	Oct 1996	-	-

NEW ENGLAND DISTRICT

TABLE 1-H (Continued)

DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for	Date Deauthorized	Funds Expended	
			Federal	Contributed Funds
Falmouth Harbor, MA (portion of 1948 Act)	1978	Aug 1999	-	-
Falmouth Harbor, MA (portion of 1948 Act)	1978	Nov 2007	-	-
Fivemile River Harbor, CT (uncompleted portion)	2000	Oct 1978	-	-
Gaysville Lake, VT	1970	Oct 1976	206,600	-
Gorton's Pond, Warwick, RI	-	Nov 1991	-	-
Great Salt Pond, Block Island, RI (uncompleted portion of 1945 Act)	2009	Nov 1986	-	-
Greenwich Harbor, CT (portion of 1919 Act)	-	Nov 1990	-	-
Greenwich Point Beach, CT	1969	Oct 1978	-	-
Green Harbor, MA (portion of Sec 107 project)	2009	Aug 1999	-	-
Guilford Harbor, CT (portion of 1945 Act)	1995	Oct 1996	-	-
Housatonic River, CT (uncompleted portion of 1888 Act)	1983	Nov 1979	-	-
Honey Hill Lake, NH	1949	Aug 1977	92,000	-
Ipswich River, MA (uncompleted portion of 1968 Act)	1969	Nov 1986	-	-
Island End River, Chelsea, MA (portion of 1960 Act)	1983	Nov 2007	-	-
Kennebec River, ME (uncompleted portion of 1902 Act)	2004	Nov 1986	-	-
Kennebunk River, ME (portion of 1962 Act)	2005	Oct 1996	-	-
Ludlow Lake, VT	-	Aug 1977	-	-
Lynn Harbor, MA (uncompleted portions of 1954 & 1935 Acts)	2002	Nov 1986	-	-
Lynn-Nahant Beach, MA	1986	Apr 1999	50,000	-
Manchester Harbor, MA	1949	Nov 1979	23,986	-
Marblehead Harbor, MA	1968	Oct 1978	43,711	-
Mattapoissett Harbor, MA	1950	Oct 1978	-	-
Merrimack River, Lowell to Lawrence, MA	-	Nov 1991	-	-
Mianus River, CT (portion of 1945 Act)	1985	Nov 1986	-	-
Milford Harbor, CT (uncompleted portion of 1902 & 1937 Acts)	1989	Nov 1986	-	-
Monoosnoc Brook, MA	1967	Nov 1986	-	-
Monoosnoc Lake, MA	1967	Nov 1986	-	-
Mountain Brook Dam, NH	1949	Aug 1977	57,000	-
Mystic, CT	1968	Aug 1972	67,700	-
Mystic River, CT (uncompleted portion of 1913 Act)	2009	Nov 1986	-	-
Mystic River, CT (portion of 1913 Act)	2009	Oct 1996	-	-
Mystic River, CT (portion of 1890 Act)	2009	Nov 2007	-	-
Mystic River, MA (portion of 1950 Act)	1986	Oct 1996	-	-
Nantasket Beach, MA	1971	Jan 1990	-	-
Nantucket Harbor of Refuge, MA (uncompleted portion of 1945 Act)	1989	Nov 1986	-	-
Nantucket Harbor of Refuge, MA (uncompleted portion of 1880 Act)	1989	Jan 1990	-	-
Napatree Beach, RI	-	Nov 1979	-	-
Narragansett Pier, RI	1966	Nov 1970	115,590	-
Narragansett Town Beach, RI	-	Nov 2007	27,398	-
Neponset River, Milton Town Landing to Port Norfolk, MA	-	Nov 1991	-	-
New Bedford and Fairhaven Harbor, MA (uncompleted portion of 1912 Act)	2009	Nov 1986	-	-
New Bedford and Fairhaven Harbor, MA (portion of 1909 & 1930 Acts)	2009	Aug 1999	-	-
Newburyport Harbor, MA (uncompleted portion of 1945 Act)	2009	Nov 1986	-	-
Newburyport Harbor, MA (portion of 1910 Act)	2009	Oct 1992	-	-
Newport Harbor, RI (portion of 1907 Act)	1953	Nov 1999	-	-
New Haven Harbor, CT (uncompleted portion of 1946 & 1910 Acts)	2004	Nov 1986	-	-
New Haven Harbor, CT (1986 Act)	2004	Apr 2002	-	-
Nookagee Lake, MA	1976	Nov 1986	563,677	-

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 1-H (Continued)

DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for	Date Deauthorized	Funds Expended	
			Federal	Contributed Funds
North Andover and Lawrence, MA	1949	Aug 1977	20,000	-
North Hampton Beach, North Hampton, NH	1963	Nov 1981	-	-
Northeast Harbor, ME	1954	Jan 2009	138,942	-
Norwalk Harbor, CT (portion of 1919 Act)	2009	Oct 1996	-	-
Norwalk Harbor, CT (portion of 1919 Act)	2009	Nov 2008	-	-
Norwalk-Wilton, CT	1973	Nov 1979	-	-
Patchogue River, CT (portion of 1954 Act)	2009	Oct 1996	-	-
Pawcatuck River, Little Narragansett Bay, RI & CT (uncompleted portions of 1896 Act)	1997	Nov 1986	-	-
Pawcatuck River, Little Narragansett Bay, RI and CT (1960 Act)	1997	Nov 1979	-	-
Pawtucket, RI	1949	Nov 1977	-	-
Pepperell Cove, ME (uncompleted portion)	1969	Nov 1981	-	-
Phillips Lake, MA	1982	May 1997	300,000	-
Pleasant Bay, MA	1971	Nov 1986	-	-
Point Judith, RI	1968	Nov 1977	198,477	-
Pontiac Diversion, RI	1948	Apr 1951	24,200	-
Providence River and Harbor, RI (uncompleted portion)	2009	Nov 1986	-	-
Provincetown Beach (Herring Cove), MA	1961	Oct 1978	-	-
Provincetown Harbor, MA (uncompleted portion)	1997	Oct 1978	-	-
Quonset Point-Davisville, RI	-	Nov 2007	-	-
Rockland Harbor, ME (uncompleted portion of 1956 Act)	2003	Nov 1986	-	-
Rockland Harbor, ME (uncompleted portion of 1896 Act)	2003	Nov 2007	-	-
Rockport Harbor, ME (portion of 1888 Act)	2003	Nov 2007	-	-
Saco River, ME (uncompleted portion)	1995	Oct 1979	-	-
Sakonnet Harbor, RI (uncompleted portion)	2001	Jun 1982	176,000	-
Salem Harbor, MA (inactive portion of 1905 Act)	2008	Jul 1995	-	-
Salem Harbor, MA (uncompleted portion of 1945 Act)	2008	Nov 1986	-	-
Sandy Bay, Cape Ann, MA (uncompleted portion)	1922	Oct 1978	-	-
Searsport Harbor, ME (portion of 1962 Act)	1966	Aug 1999	-	-
Silver Beach to Cedar Beach, CT (uncompleted portion of 1954 Act)	1964	Nov 1986	-	-
South Coventry Lake, CT	1951	Aug 1977	96,000	-
Southport Harbor, CT (portion of 1935 Act)	2005	Oct 1996	-	-
South Tunbridge Lake, VT	-	Aug 1977	-	-
Stamford Harbor, CT (2 projects uncompleted portions)	1980	Oct 1978	-	-
Stamford Harbor, CT (inactive portion)	1980	Jan 1990	-	-
Stonington Harbor, CT (uncompleted portion of 1950 Act)	1959	Nov 1986	-	-
Stonington Harbor, ME (1960 Act)	1985	Nov 1979	2,543	-
Stony Creek, CT (portion of 1960 Act)	1995	Oct 1996	-	-
Stratford, CT	1973	Mar 1977	934,500	-
Sugar Hill Reservoir, NH	1946	Dec 1944	-	-
Taunton River, MA (inactive portion)	1948	Jan 1990	-	-
Tenants Harbor, ME	1920	Jan 2009	18,750	-
Thames River, CT (uncompleted portion of 1945 Act)	1967	Nov 1986	-	-
The Island Lake, VT	-	Aug 1977	-	-
Thumperton Beach, Eastham, MA	1961	Nov 1979	-	-
Town Beach, Plymouth, MA (inactive portion)	1964	Jan 1990	-	-
Town Neck Beach, Sandwich, MA (portion of 1960 Act)	1961	Nov 1986	-	-
Trumbull Lake, CT	1983	May 1997	1,498,800	-
Victory Lake, VT	1967	Aug 1977	168,400	-
Wareham Harbor, MA (inactive portion)	1896	Jan 1990	-	-
Wareham-Marion, MA	1965	Aug 1977	81,715	-
Wells Harbor, ME (portion of 1960 Act)	2004	Aug 1999	-	-
West Brookfield Reservoir, MA	1965	Aug 1977	67,000	-

NEW ENGLAND DISTRICT

TABLE 1-H (Continued) DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report for	Date Deauthorized	Funds Expended	
			Federal	Contributed Funds
West Canaan Lake, NH	1948	Aug 1977	92,000	-
Westerly, RI	1966	Nov 1986	-	-
Westfield, MA	1967	Sep 1969	507,200	-
Westport, CT	1965	Feb 1970	29,634	-
Westport Harbor and Saugatuck River, CT (uncompleted portion of 1892 & 1954 Acts)	1972	Nov 1979	-	-
Westport River, MA (1938 Act)	2009	Jan 1990	-	-
Weymouth-Fore and Town River, MA (portion of 1965 Act)	2009	Oct 1996	-	-
Whitmanville Lake, MA	1979	Jul 1995	605,023	-

TABLE 1-I NAVIGATION ACTIVITIES PURSUANT TO SECTION 107, PUBLIC LAW 86-645 (PREAUTHORIZATION)

Study Identification	Fiscal Year Costs	Contributed Funds Expended
Bass Harbor, Tremont, ME	23,385	-
Bass Harbor, Tremont, ME (American Recovery and Reinvestment Act)	43,154	-
Blackwater River, Hampton Harbor, NH	10,234	1,327
Bucks Harbor, Machiasport, ME	10,891	14,289
Bucks Harbor, Machiasport, ME (American Recovery and Reinvestment Act)	47,731	-
Coordination	5,618	-
Charlestown Breachway & Ninigret Pond, Charlestown, RI	5,679	-
East Boat Basin, Sandwich, MA	42,445	47,171
Oaks Bluff Harbor, Martha's Vineyard, MA	18,157	-
Round Pond Harbor, Bristol, ME	-	-
Woods Hole Great Harbor, Falmouth, MA	2,071	-

TABLE 1-J MITIGATION OF FEDERAL NAVIGATION PROJECTS PURSUANT TO SECTION 111, PUBLIC LAW 90-483 (PREAUTHORIZATION)

Study Identification	Fiscal Year Costs	Contributed Funds Expended
Camp Ellis, Saco, ME	125,446	-
Coordination	2,853	-

**TABLE 1-K BEACH EROSION ACTIVITIES PURSUANT TO SECTION 103,
PUBLIC LAW 87-874 (PREAUTHORIZATION)**

Study Identification	Fiscal Year Costs	Contributed Funds Expended
Coastal Areas, Marshfield, MA	-	-
Coordination	6,966	-
Nantasket Beach, Hull, MA	3,667	55,383

**TABLE 1-L FLOOD CONTROL ACTIVITIES PURSUANT TO SECTION 205
PUBLIC LAW 80-858 (PREAUTHORIZATION)**

Study Identification	Fiscal Year Costs	Contributed Funds Expend
Aberjona River, Winchester, MA	995	-
Coordination	16,012	-
Jewett Brook, Laconia, NH	-	-
North River, Peabody, MA	63,450	25,751
Salisbury River, Brockton, MA	6,432	-
Saugatuck River, Westport, CT	-	-

**TABLE 1-M EMERGENCY BANK PROTECTION ACTIVITIES PURSUANT
TO SECTION 14, PUBLIC LAW 79-526 (PREAUTHORIZATION)**

Study Identification	Fiscal Year Costs	Contributed Funds Expended
Aroostook River, Mapleton, ME	18,999	-
Coordination	5,886	-
Quoddy Narrows, South Lubec Road, Lubec, ME	3,440	-
Quoddy Narrows, South Lubec Road, Lubec, ME (American Recovery and Reinvestment Act)	3,051	-
Westfield River, Agawam, MA	5,759	-
Westfield River, Old Route 9, Cummington, MA	4,885	-

**TABLE 1-N ENVIRONMENTAL IMPROVEMENT ACTIVITIES PURSUANT
TO SECTION 1135, PUBLIC LAW 99-662 (PREAUTHORIZATION)**

Study Identification	Fiscal Year Costs	Contributed Funds Expended
Coordination	8,362	-
Half-Moon Cove, Perry, ME	4,194	-
NMLC, Buzzards Bay, MA	-	-
North Nashua River, Fitchburg, MA	27,734	-

NEW ENGLAND DISTRICT

TABLE 1-O AQUATIC ECOSYSTEM RESTORATION ACTIVITIES PURSUANT TO SECTION 206, PUBLIC LAW 99-662 (PREAUTHORIZATION)

Study Identification	Fiscal Year Costs	Contributed Funds Expended
Assabet River, MA	-	-
Bass River Salt Marsh Restoration, Yarmouth, MA	-	-
Bird Island Restoration, Marion, MA	111,112	-
Brush Neck Cove, Warwick, RI	57,499	-
Coordination	9,197	-
Lower Blackstone River, RI	-	-
Manhan Dam, Easthampton, MA	-	-
Milford Pond, Milford, MA	222,690	-
Mill Pond, Littleton, MA	35,749	-
Mill Pond Restoration, Nashua, NH	-	-
Narrows River, Narragansett, RI	26,369	-
Neponset River, Boston, MA	61,260	-
Osgood Pond Restoration, Milford, NH	14,921	-
Pleasant River Salt Marsh Restoration, Addison, ME	-	-
Reedy Meadow Marsh Restoration, Saugus, MA	-	-
Run Pond Coastal Ecosystem Restoration, MA	10,117	-
Treat's Pond, Cohasset, MA	13,971	-
Winnapaug Pond, Westerly, RI	1,748	-
Wiswall Dam, Durham, NH	-	-

TABLE 1-P BENEFICIAL USE OF DREDGED MATERIAL ACTIVITIES PURSUANT TO SECTION 204, PUBLIC LAW 102-580 (PREAUTHORIZATION)

Study Identification	Fiscal Year Costs	Contributed Funds Expended
Cape Cod Canal, Sandwich, MA	32,965	-
Chatham Stage Harbor, Chatham, MA	64,442	-
Coordination	5,839	-
Newburyport Harbor, MA	108,538	-

**TABLE 1-Q BLACKSTONE RIVER BASIN, MA AND RI
(See Section 32 of Text)
RESERVOIR**

Name	Nearest City	Miles Above Mouth of Blackstone River	Height (feet)	Type	Reservoir Capacity (acre-feet)	<u>Estimated Federal Cost</u>		
						Construction	Lands and Damages ¹	Total
West Hill ²	Worcester, MA	25.8	51	Earth fill	12,400	\$ 1,366,922	\$ 940,000	\$ 2,306,902

¹ Includes highway, railroad, and utility relocations.

² See individual report for details.

LOCAL PROTECTION PROJECTS

Location	Miles Above Mouth of Connecticut River	Type of Structure	<u>Estimated Cost</u>		
			Construction	Lands and Damages ¹	Total
Worcester, MA	48	Diversion tunnel and channel	\$ 4,923,500	\$ 1,179,000 ²	\$ 6,102,500
Woonsocket, RI	15	Channel improvement	3,733,100	1,069,000 ³	4,802,100
Lower Woonsocket, RI	13	Flood wall, conduits and channel improvement	8,356,239	435,000	8,791,239
Blackstone River, Millbury, MA	32	Slope protection	256,619	-	256,619 ⁵
Clear River, Burrillville, RI	23	Retaining wall	168,000	-	168,000
Pawtuxet River, Warwick, RI	-	Land acquisition	4,125,000	-	4,125,000 ⁴

¹ Includes highway, railroad, and utility relocations.

² \$158,000 Federal; \$1,021,000 non-Federal.

³ \$300,000 Federal; \$769,000 non-Federal.

⁴ \$3,300,000 Federal; \$825,000 non-Federal.

⁵ \$250,000 Federal; \$6,619 non-Federal.

NEW ENGLAND DISTRICT

**TABLE 1-R CONNECTICUT RIVER BASIN, VT, NH, MA AND CT
(See Section 35 of Text)
DAMS AND RESERVOIRS**

Name	Nearest City	Miles Above Mouth of Connecticut River	Height (feet)	Type	Reservoir Capacity (acre-feet)	<u>Estimated Federal Cost</u>		
						Construction	Lands and Damages ¹	Total
Vermont:								
Union Village ²	White River Jct.	228.4	170	Earth fill	38,000	\$ 3,186,860	\$ 908,300	\$ 4,095,160
North Hartland ²	White River Jct.	211.7	185	Earth fill	71,400	6,349,225	963,000	7,312,225
North Springfield ²	Springfield	191.3	120	Earth fill	50,600	4,781,526	2,050,000	6,831,526
Ball Mountain ²	Brattleboro	178.2	265	Rock and earth fill	54,600	10,757,842	350,000	11,107,842
Townshend ²	Brattleboro	168.3	133	Earth fill	33,200	6,662,545	1,878,000	8,540,545
New Hampshire:								
Surry Mountain ²	Keene	174.4	86	Earth fill	32,500	2,448,610	385,000	2,833,610
Otter Brook ²	Keene	171.2	133	Earth fill	18,300	2,982,048	1,378,400	4,360,448
Massachusetts:								
Birch Hill ²	Gardner	153.3	56	Earth fill	49,900	1,740,679	3,075,000	4,815,679
Tully ²	Athol	148.7	62	Earth fill	22,000	1,298,752	368,000	1,666,752
Barre Falls ²	Worcester	130.2	62	Rock and earth fill	24,000	1,928,819	39,000	1,967,819
Knightville ²	Northampton	102.8	160	Earth fill	49,000	2,594,440	821,200	3,415,640
Littleville ²	Northampton	102.0	150	Earth fill	32,400	5,863,412	1,150,000	7,013,412
Conant Brook ²	Springfield	122.0	85	Rock and earth fill	3,740	1,935,530	1,015,000	2,950,530
Connecticut:								
Colebrook River ²	Winsted	116.0	223	Rock and earth fill	98,500	8,341,971	5,922,000	14,263,971
Mad River	Winsted	120.0	178	Earth fill	9,700	4,773,020	2,210,000 ⁴	6,983,020
Sucker Brook	Winsted	118.5	68	Earth fill	1,480	2,227,792	180,000 ³	2,407,792

¹ Includes highway, railroad, and utility relocations.

² For details, see individual report.

³ Non-Federal cost.

⁴ Non-Federal \$670,000; Federal \$1,540,000.

LOCAL PROTECTION PROJECTS

Location	Miles Above Mouth of Connecticut River	Type of Structure	<u>Estimated Cost</u>		
			Construction	Lands and Damages ¹	Total
Beaver Brook, Keene, NH	170.4	Channel improvement	\$ 2,591,000	-	\$ 2,591,000
Charlestown, NH	181	Riverbank protection	113,330	-	113,330
Chicopee, MA	80	Wall and levee	1,434,000	\$ 250,000	1,684,000
Chicopee Falls, MA	83	Wall and levee	2,600,000	70,000	2,670,000

**TABLE 1-R CONNECTICUT RIVER BASIN, VT, NH, MA AND CT
(Continued)
(See Section 35 of Text)
DAMS AND RESERVOIRS**

LOCAL PROTECTION PROJECTS					
Location	Miles Above Mouth of Connecticut River	Type of Structure	Construction	Estimated Cost	
				Lands and Damages ¹	Total
Connecticut River, Middletown, CT	31	Stream bank protection	\$ 331,167 ⁶	-	\$ 331,167
East Hartford, CT	52	Wall and levee	2,143,084	271,000	2,414,084
Farmington River, Simsbury, CT	60	Stream bank protection	757,720	10,195	767,915
Folly Brook, Wethersfield, CT	50	Channel improvement	220,284	-	220,284
Gardner, MA	163	Dam and levee	510,691	35,000	545,691
Gulf Street, Milford, CT	-	Slope protection	386,000	-	386,000
Hartford, CT	52	Wall and levee	9,710,200 ⁴	1,150,000	10,860,200
Hartford, White River, VT	216	Channel improvement	332,236	-	332,236
Holyoke, MA	85	Wall and levee	3,442,447	150,000	3,592,447
Huntington, MA	100	Riverbank protection	3,900	-	3,900
Israel R., Lancaster, NH	314	Gabion overflow weir	551,606	-	551,606
Keene, NH	167	Channel improvement	44,146	-	44,146
Mill Brook, Brownsville, VT	200	Stream bank stabilization	110,000	-	110,000
Northampton, MA	94	Wall and levee	960,000 ⁵	150,000	1,110,000
North Stratford, NH	345	Slope protection	180,000	-	180,000
Park River, CT	51	Conduit	58,876,919	1,300,000	60,176,919
Riverdale, MA	80	Wall and levee	2,126,875 ⁷	109,140	2,236,015
Partridge Brook, Westmoreland, NH	160	Slope protection	983,845	-	983,845
Salmon R., Haddam & E. Haddam, CT	18	Ice Control Structure	2,242,003 ⁸	20,000	2,262,003
Salmon R., Colchester, CT	38	Slope protection	247,100	-	247,100
South River, Conway, MA	107	Slope protection	133,500	-	133,500
Springdale, MA	84	Wall and levee	700,000	57,000	757,000
Springfield, MA	76	Wall and levee	937,350 ²	272,000	1,209,350
Three Rivers, MA	98	Wall and levee	1,577,189	700,000	2,277,189
Ware, MA	110	Channel improvement	400,000	85,000	485,000
Weston, VT	195	Channel improvement	13,079	2,000	15,079
West Springfield, MA	76	Wall and levee	2,043,452 ³	30,000	2,073,452
West Warren, MA	111	Wall and levee	430,176	64,000	494,176
Winsted, CT	115	Channel improvement	245,500	30,000	275,500

¹ To be borne by local interests. Also includes local interest's portion of relocation.

² Includes \$355,000 Public Works Administration funds.

³ Includes \$245,000 Public Works Administration funds.

⁴ Includes \$835,000 Public Works Administration funds.

⁵ Includes \$280,000 Public Works Administration funds.

⁶ Excludes \$24,134 Contributed Funds, Other.

⁷ Excludes \$46,929 Contributed Funds, Other.

⁸ Excludes \$154,116 Contributed Funds, Other.

NEW ENGLAND DISTRICT

TABLE 1-S **HOUSATONIC RIVER BASIN, CT AND MA**
(See Section 38 of Text)
DAMS AND RESERVOIRS

Name	Nearest City	Miles Above Mouth of Naugatuck River	Height (feet)	Type	Reservoir Capacity (acre-feet)	Estimated Federal Cost		
						Construction	Lands and Damages ¹	Total
Hall Meadow	Torrington, CT	41.0	73	Rock and earth fill	8,620	\$ 2,572,357	\$ 1,290,000 ³	\$ 3,862,357
East Branch	Torrington, CT	43.7	92	Earth fill	4,350	1,959,836	1,290,000 ³	3,249,836
Thomaston ²	Torrington, CT	30.5	142	Rock and earth fill	42,000	6,382,112	7,900,000	14,282,112
Northfield Brook ²	Torrington, CT	30.6	118	Earth fill	2,432	1,875,512	975,000	2,850,512
Black Rock ²	Waterbury, CT	29.0	154	Earth fill	8,700	5,223,700	2,958,600	8,182,300
Hancock Brook ²	Waterbury, CT	25.0	57	Earth fill	4,030	1,593,911	2,585,000	4,178,911
Hop Brook ²	Waterbury, CT	15.9	97	Earth fill	6,970	2,701,562	3,450,000	6,151,562

¹ Includes highway, railroad, and utility relocations.

² For details of projects, see individual reports.

³ Includes costs of lands borne by local interests.

LOCAL PROTECTION PROJECTS

Location	Miles Above Mouth of Housatonic River	Type of Structure	Estimated Cost		
			Construction	Lands and Damages ¹	Total
Alford, Green River, MA	111.0	Earth dike and stone slope protection	\$ 41,419	-	\$ 41,419
Ansonia-Derby, CT	13.0	Wall, levee, channel improve- ment and pumping station	18,266,040	1,178,000	19,444,040
Covered Bridge, Sheffield, MA	96.0	Stone slope protection	430,000	-	430,000
Danbury, CT	56.0	Walls, channel improvement and bridge replacement	13,143,000	1,862,000	15,005,000
Derby, CT	12.0	Walls, levees and pumping Station	7,582,642	647,000	8,229,642
Hoosic River, Williamstown, MA	155.0	Stone slope protection	456,322	12,179	468,501
Mad River, Waterbury (Woodtick Area), CT	35.0	Channel improvements	1,448,087	122,452	1,570,539
North Canaan, Blackberry River, CT	83.0	Snagging and clearing project	73,865	-	73,865
Pittsfield, MA	133.0	Stone arch culvert	739,003	85,000	824,003
Salisbury, CT	76.0	Gabionade with slope protection	102,800	-	102,800
Sheffield, MA	96.0	Stone slope protection	202,608	-	202,608
Squantz Pond, New Fairfield, CT	43.0	Timber Bulkhead	116,296	-	116,296
Torrington, East Branch, CT	51.0	Dike and channel improvement	389,237	-	389,237
Torrington, West Branch, CT	52.0	Walls, dikes and channel	228,237	-	228,237
Waterbury- Watertown, CT	32.0	Wall, dike and channel	263,300	-	263,300

¹ To be borne by local interests and includes relocations.

NEW ENGLAND DISTRICT

**TABLE 1-U THAMES RIVER BASIN, CT, RI AND MA
(See Section 43 of Text)
RESERVOIRS**

Name	Nearest City	Miles Above Mouth of Thames River	Height (feet)	Type	Reservoir Capacity (acre-feet)	Estimated Federal Cost		
						Construction	Lands and Damages ¹	Total
Hodges Village ²	Webster, MA	74.5	55	Earth fill	13,000	\$ 1,317,268	\$ 3,144,000	\$ 4,461,268
Buffumville ²	Webster, MA	74.4	66	Earth fill	12,700	2,157,603	841,000	2,998,603
East Brimfield ²	Southbridge, MA	82.8	55	Earth fill	30,000	1,337,043	5,720,000	7,057,043
Westville ²	Southbridge, MA	75.2	80	Earth fill	11,000	2,284,683	3,400,000	5,684,683
West Thompson ²	Putman, CT	59.3	70	Earth fill	25,600	5,036,220	1,965,000	7,001,220
Mansfield Hollow ²	Willimantic, CT	40.0	70	Earth fill	52,000	4,107,164	2,340,000	6,447,164

¹ Includes highway, railroad, and utility relocations.

² For details, see individual report.

LOCAL PROTECTION PROJECTS

Location	Miles Above Mouth of Thames River	Type of Structure	Estimated Cost		
			Construction	Lands and Damages ¹	Total
Norwich, CT	15.0	Channel improvements	\$ 1,209,000	\$ 72,000	\$ 1,281,000
West River, New Haven, CT	-	Channel improvements	4,619,543 ²	554,638	5,174,181

¹ Borne by local interests.

² Excludes \$12,590 for revisions to flood insurance rate map and \$71,650 Contributed funds not required.

TABLE 1-V RECONNAISSANCE AND CONDITION SURVEYS

Project	Date Survey Conducted	Project	Date Survey Conducted
MASSACHUSETTS		Mianus Harbor	Jul-Aug 2009
Andrews River,	Feb/Apr-Jun/Aug 2009	Milford Harbor	Nov 08/Jan-May 2009
Annisquam River	Oct-Dec 08/Jan-Jun/Aug 2009	Mystic River	Feb/Sep 2009
Aunt Lydia's Cove	Oct-Dec 08/Feb/Aug 2009	New Haven Harbor	Oct/Dec 08/Apr 2009
Beverly Harbor	Feb 2009	North Cove	Jun-Jul 2009
Boston Harbor	Oct-Dec 08/Jan-May/Sep 2009	Norwalk Harbor	Jan-Feb/Aug 2009
Buttermilk Bay	Sep 2009	Patchogue River	Dec 08/Jan-Apr/Jul 2009
Cape Cod Canal	Oct-Nov 08/Apr-May/Sep 2009	Stamford Harbor	Oct 08/Feb-Mar 2009
Chatham (Stage) Harbor	Oct-Nov 08/May-Jun/Sep 2009	Stony Creek	Apr/Jul 2009
Cross Rip Shoals Nantucket Sound	Feb 2009	Thames River	Feb-Apr/Sep 2009
Dorchester Bay & Neponset River	Dec 08/Feb/May-Jun/Sep 2009	Wilson Point Harbor	Jul 2009
Duxbury Harbor	Apr/Jul 2009	MAINE	
Edgartown Harbor	Jan-Feb/Apr/Aug-Sep 2009	Bagaduce River	Nov 2008
Essex River	Sep 2009	Bass Harbor	Jun-Sep 2009
Falmouth Harbor	Nov-Dec 08/Apr 2009	Bucks Harbor	Jun-Jul/Sep 2009
Green Harbor	Dec 08/Feb 2009	Cape Porpoise Harbor	Sep 2009
Hyannis Harbor	Oct-Dec 08/Feb-Apr 2009	Corea Harbor	Aug-Sep 2009
Ipswich Harbor	Jan-May/Sep 2009	Georges River	Apr 2009
Island End	Jun 2009	Kennebec River	Nov-Dec 08/Jul/Aug-Sep 2009
Kingston Harbor	Sep 2009	Kennebunk River	Sep 2009
Lagoon Pond	Jan-Feb 2009	Narraguagus River	Apr 2009
Little Harbor Woods Hole	Aug-Sep 2009	Northeast Harbor	Dec 2008
Lynn Harbor	Feb 2009	Owls Head Harbor	Nov 2008
Malden River	Jun 2009	Penobscot River	Oct/Dec 08/Feb/Aug-Sep 2009
Menemsha Creek (Martha's Vineyard)	Jan-Apr 2009	Pepperell Cove	Jan/Aug 2009
Mystic River	Apr-May/Aug-Sep 2009	Portland Harbor	Oct/Dec 2008
New Bedford & Fairhaven Harbor	Jan-Feb/Apr/Aug-Sep 2009	Royal Harbor	Dec 08/Jan/May 2009
Oak Bluffs (Martha's Vineyard)	Jan-Feb 2009	Saco River	Dec 08/Jan/Apr-Jun 2009
Plymouth Harbor	Mar-Apr 2009	Scarborough River	Apr 2009
Rockport Harbor	Jul 2009	Stonington Harbor	Dec 2008
Salisbury River	Feb/Aug 2009	Union River	Oct-Dec 08/Sep 2009
Scituate Harbor	Aug-Sep 2009	Wells Harbor	Apr 2009
Sesuit Harbor	Oct-Nov 08/Jan/May-Jun/Aug-Sep 2009	NEW HAMPSHIRE	
Vineyard Haven	Nov 08/Jan/Apr-Jun 2009	Bellamy River	Apr 2009
Wareham Harbor	Feb-May 2009	Cocheco River	Dec 08/Jan/Apr 2009
Westport River	Jun-Aug 2009	Exeter River	Nov 08/Jan/Apr/Jul-Sep 2009
Weymouth Fore River & Town River	Mar-Jun/Sep 2009	Hampton Harbor	Jul-Sep 2009
Woods Hole Channel	Nov-Dec 08/Sep 2009	Little Harbor	Oct 08/Feb 2009
CONNECTICUT		Portsmouth Harbor and Piscataqua River	Oct 07/Jan/Apr/Jul-Sep 2008
Branford Harbor	May 2009	Rye Harbor	Feb 2009
Bridgeport Harbor	Nov-Dec 08/Jan-Mar/May-Jul 2009	Sagamore Creek	Apr/Aug 2009
Clinton Harbor	Jan/Apr 2009		
Connecticut River Below Hartford	Jan/Jul-Aug 2009		
Eightmile River	Dec 08/Jan-Feb/Aug 2009		
Greenwich Harbor	Oct-Nov 08/Jul 2009		
Guilford Harbor	Feb 2009		
Housatonic River	Feb 2009		

TABLE 1-V (Continued) RECONNAISSANCE AND CONDITION SURVEYS

Project	Date Survey Conducted	Project	Date Survey Conducted
RHODE ISLAND			
Block Island Harbor of Refuge	Nov-Dec 08/Jan-Mar/Jul-Aug 2009		
Bullocks Point Cove	Mar-Jun/Aug 2009		
Greenwich Bay	Jul 2009		
Great Salt Pond, Block Island	Nov-Dec 08/Mar/Jul-Aug 2009		
Little Narragansett Bay	Nov 08/Feb 2009		
Newport Harbor	Apr-May/Jul-Sep 2009		
Pawtuxet Cove	Jun/Aug 2009		
Point Judith Harbor of Refuge	Feb/Sep 2009		
Providence River & Harbor	Jun/Aug 2009		
Sakonnet River	Dec 2008		
Warwick Cove	Nov 08/Apr-Sep 2009		

TABLE 1-V (Continued) RECONNAISSANCE AND CONDITION SURVEYS

Dredged Material Management Program

Major activities for FY 2009 were (1) monitoring surveys in association with a capping demonstration project at the Massachusetts Bay disposal site; (2) performing surveys at the Rhode Island Sound, Central Long Island Sound and historic Brenton Reef disposal sites; (3) finalizing two site monitoring reports and distributing to the public and regional resource agencies; (4) maintenance, replacement, and repositioning of disposal site buoys; and (5) conducting a day-long public symposium with about 100 attendees. Total costs for the FY using regular funds were \$943,278. American Recovery and Reinvestment Act funds of \$1,018 were used to award a contract in September 2009 to conduct additional sediment sampling and testing. Work had not begun under this contract by FY end.

Innovative Treatment of Dredged Material from Long Island Sound

The purpose of this project is to conduct a demonstration effort of various innovative treatment processes for dredged material to determine if treated material will meet non-restricted uses as a beneficial material. A portion of the maintenance material that needs to be periodically removed from the channels and anchorages of Federal navigation projects is unsuitable for ocean disposal. Upland placement and construction of confined aquatic disposal cells are two of the methods used for disposal of unsuitable material, both of which are extremely costly. In addition, there will be limited availability of these methods in the future when current sites reach capacity. Innovative treatment may be possible so that the “treated dredged material” may be re-used in a beneficial manner, which would reduce disposal/placement costs. In FY 2009, costs of \$12,537 were incurred to continue work on Phase 1 Demonstration efforts. Dredge Material that had undergone innovative treatment was sampled and tested and found to have reduced chemical levels for most parameters. However, arsenic levels were still high enough that the material could only be used in a restrictive manner. A blending demonstration was developed and performed. Sampling and analysis results of the blending operation resulted in lower arsenic levels but caused an increase in PAH levels. Additional blending and testing of small batches was performed to identify a “recipe” utilizing sand, compost and dredged material that would correct the problems. Preliminary testing has proved successful. Work is underway to develop a scope of work for blending of the remaining material. Brookhaven National Laboratory have been assisting (under contract) on providing data and documentation.

Long Island Sound Regional Dredged Material Management Plan (DMMP)

A US Environmental Protection Agency (EPA) final rule making in June 2005, designated open-water disposal sites in central and western Long Island Sound. During FY 2009, costs of \$513,008 were incurred to continue preparation of a DMMP for Long Island Sound. Efforts included completion of the dredging needs survey and inventory of upland and beneficial use sites as well as possible de-watering sites. Work was initiated on environmental data updates, economic analysis, cultural site inventories and identification of Federal and State programs for beneficial use and possible site restrictions.

NEW YORK, NY DISTRICT

This District comprises western Vermont, small portions of western Massachusetts and Connecticut, eastern New York including Long Island, and northeastern New Jersey, embraced in the drainage basins tributary to Lake Champlain and St. Lawrence River system east thereof and to the Atlantic Ocean from New York – Connecticut State Line to, but not including Manasquan Inlet, NJ. In addition it exercises jurisdiction over matters pertaining to improvement of Great Lakes to Hudson River waterway. Under the direction of the Secretary of Army, the District Engineer, as Supervisor of New York Harbor, also exercises jurisdiction under the laws enacted for the preservation of the tidal waters of New York Harbor, its adjacent or tributary waters, and the waters of Long Island Sound.

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Navigation

1. AQUATIC PLANT CONTROL

Location. Navigable waters, tributary streams, connecting channels, and other allied waters in New York District.

Existing Project. Provides for control and progressive eradication of water chestnut. Eurasian water milfoil, and other obnoxious aquatic plant growths from the navigable waters, tributary streams, connecting channels, and other allied waters of the United States, in the combined interest of navigation, flood control, drainage, agriculture, fish and wildlife conservation, public health and related purposes, including continued research for development of the most effective and economic control measures. (See Table 2-B for Authorizing Legislation.)

Local cooperation. Local interests were required to provide 30 percent of the cost of the program except as modified by 1962 River and Harbor Act and agree to hold the United States free from damages. The Water Resources Development Act of 1986 changed the local responsibility from 30% to 50%. In FY 87 the States involved in the program were permitted to keep the cost sharing at 30% by order of the Secretary of the Army. Starting FY 88, Local sponsors contributed 50% of the costs. The FY 2009 APC Project Cooperation Agreement was executed in July 2009.

Operations and results during period. The purpose of the control program, started in FY 1982, is for the removal of nuisance aquatic plants in the Lake Champlain Basin, Vermont. Recent work continued the removal of water chestnut and Eurasian milfoil from portions of the basin.

Condition as of September 30. Reconnaissance report covering the aquatic plant problems of the North Atlantic Division areas was complete in August 1967. The General Design Memorandum for this program was completed in March 1982 by the State of Vermont. The total Federal cost of this control program to date is \$5,764,005 in FY 2009, the New York District did cost-share a FY 2003 program with the State Vermont, as Federal funds were available. In October 1991, Waterways Experiment Station was directed to conduct a multi-year study which would identify and test potential biocontrol agents of water chestnuts. No successful biocontrol agents of water chestnut were identified. FY 2008 funds in the amount of \$200,000 were used by New York District to continue the Aquatic Plant Control Program with the State of Vermont.

2. ARTHUR KILL CHANNEL, HOWLAND HOOK MARINE TERMINAL, NY & NJ

Location. The project includes the Arthur Kill Channel from its confluence with the Kill Van Kull and Newark Bay Channels westerly for about 2.2 miles to the New York Container Terminal (NYCT) in Staten Island, NY, and thence southwesterly for about 1.1 miles to the Conoco Phillips (Tosco) Oil Refining Company in NJ (See National Ocean Survey Chart 12333.)

Existing Project. Deepening the existing 35 foot Arthur Kill Channel to 41 feet MLW from its confluence with the Kill Van Kull and Newark Bay Channels to the New York Container Terminal in Staten Island, New York and to 40 feet MLW from New York Container Terminal to the Conoco Phillips (Tosco) Oil Refining Company NJ. Also included are selected widenings in and realignments of the channel, as well as the removal of the U.S. dike north of Shooters Island. Project also provides for mitigation consisting of restoration and enhancement of approximately 23 acres of intertidal salt marsh. The current estimate of the total project cost at Oct.08 P.L.S is \$287,340,000 of which the Federal cost is estimated at \$168,285,000 and the non-Federal cost is estimated at \$56,090,000, for a total cost of \$224,375,000 for the cost shared project general navigation features, plus other non-Federal costs estimated at \$62,965,000 for berth dredging, bulkhead renovations and utility relocations

Local Cooperation. The Port Authority of New York and New Jersey is the non-Federal sponsor for the project, A Project Cooperation Agreement (PCA) for the project was executed on 25 July 2002.

Terminal Facilities. See Port Series No.5

Operations and results during period, and conditions as of Sept. 30. The existing Arthur Kill Channel had a channel depth of 35 feet MLW, before initiation of the current project.. The current project will deepen the channel from its confluence with the Kill Van Kull and Newark Bay Channels to New York to 41 feet MLW, and from New York Container Terminal to the Conoco Phillips (Tosco) Oil Refining Company to 40 feet MLW. The first construction contract was awarded on 9 May 2003, and work was initiated on 20 July 2003. The cost of the construction contract, including the base bid and options, is

approximately \$43,500,000. Approximately 651,000 cubic yards of upland material and 510,000 cys of HARS/rock material was dredged for the first contract. The first contract was completed on 24 February 2006. The second construction contract was awarded on 29 December 2004, and work was initiated on 22 March 2005. The cost of the second contract, including the base bid and options, is approximately \$77,300,000. Approximately 629,000 cubic yards of upland material and 1,327,000 cys of HARS/rock material was dredged for the second contract. The second contract was completed on 5 January 2007. With the completion of the second contract, the 41-foot MLW deepening portion of the project from the confluence of the Arthur Kill Channel with the Kill Van Kull and Newark Bay Channels to the New York Container Terminal has been completed. One construction contract remains to complete the 40ft.

Two mitigation contracts, consisting of restoration and enhancement of approximately 23 acres of intertidal salt marsh in the amount of approximately \$8,500,000, were accepted as substantially complete in 2007.

3. BRONX RIVER NY.

Location. Empties into a shallow bay in the north shore of East River, 11 miles by water northeast of the Battery, New York City. (See National Ocean Survey Charts 12339)

Previous Projects. For details see, Annual Report for 1915, page 1762, and Annual Report for 1938, page 166

Existing project. A channel 10 feet deep at mean low and 100 feet wide to extend from deep water in East River to head of navigation at the dam at East 172nd Street, involving the first dredging from East River at Randall Avenue to a width of 200 feet; thence to Spofford Avenue, 150 feet; thence to Watson Avenue, 125 feet; thence to railroad bridge near Westchester Avenue, 100 feet, except in southern approach to bridge, where it is to be 140 feet. Section included in project is about 2.4 miles long. Mean tidal range is 6.9 feet in the estuary; mean range of spring tides, 8.2 feet; irregular Fluctuations due to wind and barometric pressure vary from 4 feet below mean low water up to 8.5 feet above high water. New work for completed active portion of project as described above cost \$1,080,910, exclusive of amounts expended under previous projects, and exclusive of \$10,000 contributed by local interests. Channel widening from Westchester Avenue to East 172nd Street is considered inactive and excluded from foregoing description of existing project and cost estimate. (See Table 2-B for Authorizing Legislation.)

Local cooperation. River and Harbor Act of, 1913, provides that any right-of-way that may be necessary for the execution of the project shall be furnish free of cost to

the United States. Right-of-way within bulkhead lines below Westchester Avenue Bridge was accepted by Chief of Engineers June 1920, and above the Westchester Avenue Bridge October 28. On September 10, 1940, the Chief of Engineers approved releases from damages furnished by adjoining property owners between Westchester Avenue and East 172nd Street. On November 12, 1940, Chief of Engineers approved an agreement under which the City of New York would reimburse the United States for cost of a retaining wall to protect adjoining property in reach of river between Westchester Avenue and New York, New Haven and Hartford Railroad bridge in lieu of furnishing additional right-of-way. On October 28, 1940, the Secretary of War authorized the acceptance of \$10,000 from the city of New York to defray the cost of retaining wall. Additional right-of-way required in the section below East 172nd Street has not been furnished. City of New York indicated it does not feel justified in acquiring any additional land along the river.

Terminal facilities. See Port Series No. 5, revised 1988, Vol. 2..

Operations and results during the period. A contract for the removal of all material except ledge rock lying above the plane of 10 feet below mean low water in specified sections of Bronx River, NY with satisfactory disposal of the dredged material at the EPA approved Mud Dump site in the Atlantic Ocean, was awarded on 28 June 1991. The dredging work commenced on 22 July 1991 and was substantially completed on 4 September 1991. Approximately 55,000 c.y. of material was removed. Operations and maintenance funds in the amount of \$919,886 was expended on this project during FY 91 for the subject project. Funds in the amount of \$69,059 was expended in FY 09 to continue environmental coordination with stakeholders for possible future maintenance.

Condition as of September 30. Work under existing project is about 82 percent complete. Active portion of existing project was commenced in 1914 and completed in 1941. Work remaining under existing project consists of widening reach between Westchester Avenue and East 172nd Street. Channel between 172ND Street and the upper limit of authorized project was filled in by City of New York under a Department of the Army permit and is no longer a waterway.

4. BUTTERMILK CHANNEL NY.

Location. Connects deep water in Upper Bay, New York Harbor, southwest of Governors Island, with deep water in East River northeast of Governors Island, and, with Bay Ridge and Red Hook Channels, forms an easterly channel along Brooklyn waterfront from Narrows to East River. It lies between Governors

and Borough of Brooklyn , New York City. (See Coastal and Geodactic Survey Charts 12334 and 12335), New York District.

Previous Projects. For details see page 205, Annual Report for 1932.

Existing project. A channel 1,000 feet wide, 40 feet deep at mean low water for the width of existing 500-foot width of existing channel. Suitable widening at junctions with East River and Anchorage Channel to 35 feet and with Red Hook Channel to 40 feet deep and for an additional widening with Anchorage and Red Hook Channel to provide a minimum clear channel width of 2,100 feet deep to 35 feet deep. Section included in project is 2.25 miles long, mean tidal range 4.4 feet: mean range of spring tides, 5.3 feet, irregular fluctuations due to wind and atmospheric pressure vary from 3.8 feet mean low water up to 5.2 feet mean high water, new work completed projected cost \$4,093,951, exclusive of amounts expended on previous projects.(See Table 2-b for Authorizing Legislation.)

Terminal facilities. See Port Series No. 5, revised 1978.

Local cooperation. None required.

Operations and results during the period. Dredging was performed between 19 June and 23 July of 2005 for removal of all material except ledge rock lying above the plane of 35 feet below MLW with 2 feet allowable overdepth, and 40 feet below MLW with 2 feet allowable overdepth, from specified areas of Buttermilk Channel placement of the dredged material at the Historic Area Remediation Site (HARS). Approximately 57,745 cubic yard of material was dredged from Buttermilk Channel. Operations and maintenance funds in the amount of \$1,594,814 were expended on this project during FY 2005. In FY 2006, the project was closed out using \$37,000 funds. No appropriation was received in FY 07.FY 08 funds will be used to sample test for possible HARS placement. The sediments are not suitable for HARS. Upland placement will be required. Funding of \$179,127 was needed to perform upland testing in FY 2009.

Condition as of September 30. Work under existing project commenced October 1903 and was completed March 1965. Easterly 500-foot width of channel, from the Anchorage Channel to East River, was completed to a 40-foot depth in May 1935. Westerly 500-foot channel, including widening the junction with East River was completed to a 35-foot depth in July 1961. Widening the junction with Anchorage and Red Hook Channels was completed in March 1965. Total cost of existing project to September 30,1982 was \$8,971,475,\$122,051 public works

funds and \$971,900 regular funds, a total of \$4,093,051 for the new work and \$4,877,524 for maintenance.

5. EAST CHESTER CREEK NY.

Location. This creek also known as Hutchinson River, is a small tidal stream emptying into East Chester Bay, an indentation in north shore of Long Island Sound immediately north of Throgs Neck, 12 miles southwest of Connecticut State line and 21 miles by water northeast of the Battery, New York City. (See Coast and Geodactic Survey Chart 12366)

Previous Projects. For details see Annual Report for 1915,1929,1938 and 1949,pages 1761,167,163, and 208.respectively.

Existing project. A channel 8 feet deep at mean low water and generally 150 feet wide from Long Island Sound through East Chester Bay to a point 700 feet below Boston Post Road Bridge, and thence 70 feet wide 300 feet past Fulton Avenue Bridge; a passing basin south of Boston Post Road Bridge; widening channel.at Boston Post Road Bridge and construction of a check dam at head of navigation. Section included in project is 5 miles. Mean tidal range, 7.3 feet in the estuary; mean range of spring tides, 8.6 feet irregular fluctuations due to wind and atmospheric pressure vary from 3.9 feet below mean low water up to 8.1 feet above mean high water.(Table 2-B for Authorizing Legislation.)

Note: The 10-foot project has been deauthorized. The 8-foot project, with same widths as above, authorized in 1930, remains as the existing project.

Terminal facilities. See Port Series No. 5, revised 1965, Vol.2, Part2.

Local cooperation. River and Harbor Act of May 17,1950, provides that local interests furnish lands, rights Of -way, and suitable areas for disposal of dredged material during construction and future maintenance, and hold the United States free from damages. City of New York has complied with requirements. Assurances are yet to be received from other local interests concerned with improvement.

Operations and results during the period. Preliminary engineering and design for East Chester Creek, NY was conducted including and specification survey during this period to determine the critical areas to be dredged .The creek was last dredged in 1989. Preliminary E&D was performed for the next maintenance cycle. O&M funds in the amount of \$139,396 were expended in FY 2009.

Condition as of September 30. No work has been accomplished under the existing project adopted 17 May 1950.. Work under the 1930 authorized project was completed in August 1941.

6. EAST RIVER, NY

Location. A tidal strait about 16 miles long and 600 to 4,000 feet wide, connecting Hudson River and the Upper Bay at the Battery, New York City, with Long Island Sound at Throgs Neck, New York City, and separating Long Island from Manhattan Island and the mainland. (See National Ocean Survey Chart 12335, 12339, and 12366.)

Previous Project. For details see page 210 of Annual Report for 1932.

Existing Project. Channels of following dimensions (depths refer to mean low water): From deep water in Upper New York Bay to Wallabout Channel, 40 feet deep and 1,000 feet wide: from Wallabout Channel to Throgs Neck, 35 feet deep, with widths varying from about 550 to 1,000 feet according to locality: east of F.D. Roosevelt Island up to English Place (43d Dr.), Long Island City, 30 feet deep and varying in width from 500 to 900 feet, with widening in approach from main channel: between South Brother and Berrian Island, 20 feet and 300 feet wide, with widening in approach from main channel: from East River channel to Astoria waterfront, a flared 0.31 mile entrance channel 1,600 to 400 feet wide, a 0.64 mile channel 400 feet wide, and a turning basin 1,000 feet wide and 1,600 feet long, all 37 feet deep in rock and 35 feet in soft material (South Brother Island Channel); removal of Coenties Reef to a depth of 40 feet, also removal of following rocks and reefs lying outside of limiting lines of main channels to give access to wharves: Along Brooklyn shore, Brooklyn Bridge to Manhattan Bridge (Fulton Ferry Reef), to a depth of 25 feet: Jay Street Reef, 25 feet; Corlears Reef, 35 feet; Shell Reef, 25 feet; Horns Hook, 40 feet; Rhineland Reef, 26 feet; and reef off Oak Point, 30 feet; and construction of a dike in Pot Cove in Hell Gate. Section included in improvement is about 17.8 miles long. Mean range of tide varies according to locality from 4 feet at North Third Street, Brooklyn, and 4.4 feet at the Battery to 4.9 feet at Halletts Point, 6.3 feet at Port Morris, and 7.1 feet at eastern entrance at Throgs Neck; mean range of spring tides 4.8, 5.3, 5.9, 7.6 and 8.5 feet respectively; irregular fluctuations due to wind and atmospheric pressure vary according to locality from 3.8 feet below mean low water at the Battery, 2.4 feet at North Third Street, Brooklyn, and 3.8 feet at Throgs Neck up to about 5.2 feet above mean high water at the Battery and 8.4 feet above mean high water at Throgs Neck; extreme fluctuations do not seriously affect navigations.

Local Cooperation. Resolutions of 1970 require local interests to furnish lands, easements and rights-of-way for construction and maintenance; hold the United States free from damages; provide and maintain depths in berthing areas and local access channels serving the terminals commensurate with project depth; provide upon transfer to the United States, a depth in the existing South Brother Island Channel and turning basin of not less than 30 feet; and establish regulations prohibiting discharge of untreated sewage, garbage, and other pollutants in the waters of the harbor, which shall be in accordance with regulations of Federal State and local authorities responsible for pollution control. Assurances of local cooperation were furnished by the Port Authority of New York and New Jersey under the date of April 9, 1974.

Terminal Facilities. See Port Series No. 5. revised 1999.

Operations and results during the period. Preliminary E&D for the East River, NY was performed. This included a conditions survey and testing for potential Historic Area Remediation Site (HARS) placement. The maintenance dredging for South Brother Island Channel was last completed in January 2007. O&M funds in the amount of \$102,267 were expended in FY 2009.

Conditions as of September 30. Work under existing project was commenced June 1916 and was essentially completed. Construction of dike at Pot Cove in Hell Gate and a part widening near pierhead line in Jay Street Reef are considered unnecessary for the needs of current navigation.

7. EAST ROCKAWAY INLET, NY

Location. On the south shore of Long Island between main body of island and western end of Long Beach. It is 10 miles east of Rockaway Inlet and about 27 miles by water south and east from the Battery, New York City. (See National Ocean Survey Chart 12353.)

Existing Project. A channel 12 feet deep at mean low water and 250 feet wide from 12 foot contour in Long Beach Channel protected by a jetty. Mean tidal range, 4.3 feet: mean range of spring tides. 5.2 feet above mean high water. New work for completed project cost \$603,969, including \$100,000 contributed funds. (See Table 2-B for Authorization Legislation.)

Local Cooperation. Complied with

Terminal Facilities. There are numerous terminals in Oceanside, Island Park, Long Beach, and East Rockaway, including oil terminals. Other terminals are repair and

mooring docks with mechanical handling facilities. There are public wharves at East Rockaway and Woodmere. Waterfront on north side of Long Beach has bulkheaded. Facilities are considered adequate for existing commerce. Sprague Energy is a major supplier of home heating oil to surrounding region, including to Key Span Power Plant, the LIRR, and to homes and businesses in Queens, Nassau, and Suffolk Counties.

Operations and results during the period. In FY 06, approximately \$126,000 was used to initiate E&D for FY 07 dredging of East Rockaway Inlet .In FY 07, \$3,204,569 was used to dredge approximately 220,000 cys of sand with placement on Rockaway Beach 27th to 37th streets. In FY 08, E&D was performed to prepare for the FY 09 maintenance dredging and \$3,297,048 an used in FY 09 to maintain dredge approximately 150,000 cy work placement at Beach 27th to 37th streets .

Conditions as of September 30. During FY2008 \$145,312 in operations and maintenance funds were expended to prepare plans & for the future dredging of the federal navigation channel with beach placement of the material.

8. FIRE ISLAND TO JONES INLET, NY

Location. On south shore of Long Island, about 50 miles by water south and east of Battery, New York City. Fire Island Inlet is the main entrance into Great South Bay from the Atlantic Ocean. (See National Ocean Survey Chart 12352.)

Existing Project. A jetty at Fire Island Inlet extending generally southwest and south for 5,000 feet from high ground on Democrat Point at the west end of Fire Island and a channel 14 feet deep and 450 feet wide along the northern edge of the Inlet's shoaling area connecting the ocean to the deep water in the Inlet. Mean tidal ranges at the ocean and inlet ends of Democrat Point are 4.1 feet and 2.4 feet respectively. Irregular fluctuations due to wind and atmospheric pressure vary from 2.5 feet below mean low water up to 6.2 feet above mean high water on the ocean side. (See Table 2-B for Authorizing Legislation.)

Local Cooperation. Requires cost sharing and lands, easements and rights-of-way.

Terminal Facilities. Great South Bay has extensive public and private facilities for mooring and servicing recreational boats. Much of this traffic uses the inlet during the boating season and some traffic (Coast Guard craft and party head fishing boats) continues throughout the year.

Operations and results during the period. Engineering and Design for the next scheduled maintenance dredging nourishment cycle. The maintenance dredging and beach nourishment project involves the dredging of Fire Island Inlet Channel and deposition basin with placement of sand as nourishment along the designated feeder beach (Gilgo). Environmental coordination for periodic maintenance dredging of the federal navigation project was performed. Operations and maintenance funds in the amount of \$43,652 and Construction General in the amount of \$45,655 were expended on this project during FY 2009.

Condition as of September 30. The jetty completed in 1941 surpassed its capacity as a sand entrapping agent in a little over a decade. Since then, extensive sand bars and shoals continued to form west of the jetty and in the inlet throat. Hydraulic dredging in the inlet was undertaken in 1959 and again in 1969 under a combined beach erosion control and navigation authorization (1958 Act). Since then 3 more hydraulic dredging operations were conducted starting 1973 and completed in 1977 under provision of the 1962 Act (See Table 2B). Maintenance dredging using a small hopper dredges has also been done from time to time. Due to local concerns about inlet dredging and consequent erosion at Oak Beach maintenance had been deferred since 1979 which allowed the complete shoaling of the authorized project channel. To facilitate the navigation in this period the existing natural channel was dredged in FY 1985 and in FY 1987. In FY 1987 sand was deposited offshore of Gilgo Beach by hopperdredge using operations and maintenance funds. O&M funds were also used during FY 1987 and 1988 to make repairs to the inner portion of the jetty.In March 1988 the District recommended to plan to maintain a realigned channel in the vicinity of the natural channel to a depth of 14 feet (plus 2 feet of allowable overdepth) and a width of 450 feet. The plan also recommended placement of the dredged material along Gilgo Beach for shore protection purposes. The recommended plan was approved by the Assistant Secretary of the Army for Civil Works on 2 August 1988.Since FY 1990, the realigned channel was dredged to project depth every two years with placement of material along Gilgo Beach for shore protection purpose. The project was last dredged in Winter 2007-2008, Due to lack of funding only 619,000 cy were maintenance dredged..

9. FLUSHING BAY & CREEK, NY

Location. On the north shore of Long Island, the project channel flows from Flushing Bay of Queens, NY and merges with East River near LaGuardia Airport.

Existing Project. A bay channel with a depth of 15 feet for a width of 300 feet, from deep water in the East River to the maneuvering area, a distance of 1.8 miles; a creek channel with a depth of 15 feet, for a width of 200 feet to Northern Boulevard Bridge from which point, the decreases uniformly to 170 feet at a point 50 feet downstream of the Van Wyck Expressway Bridge, a distance of 1.1 miles; a branch channel with a depth of 15 feet for a width of 200 feet, from the bay channel to the maneuvering area, a distance of about 0.1 miles; an irregularly shaped maneuvering area 15 feet deep except the approach to the west side of the municipal boat basin which remains at 12 feet; an anchorage basin about 100 feet by 1,800 feet encompassing about 84 acres with a depth of 6 feet; and riprap revetment of 1,400 feet extension of earth dike.

Local Cooperation. Fully Complied with in that local interests have dredged berthing spaces and have provided waterfront terminals, parking facilities, and municipal boat basin. Projects included enlarged marina facilities, filling of marginal areas, bank protection, promenades, and additional parking facilities.. Construction of the World's Fair complex and the Municipal Stadium, adjacent to the bay, was completed in 1964. Additionally, local interests must furnish all lands, easements and rights-of-way required for construction and subsequent maintenance of the project; hold the United States free from damages; provide without costs to the United States adequate approach channels and berths and modify existing facilities; accomplish without costs to the United States removal or relocation of pipelines, cable or other utilities; provide and maintain necessary mooring facilities and utilities for recreational boating; regulate the use, growth and free development of the waterway facilities with the understanding that said facilities will be open to all on equal terms. Local interests are not required to provide spoil-disposal areas because at the time of authorization, it was determined that it is least costly to use clamshell dredge with disposal in Long Island Sound.

Terminal Facilities. See Port Series No. 5. revised 1999.

Operations and results during the period. Preliminary E&D was performed for the next maintenance dredging cycle. O&M funds in the amount of \$195,225 were expended during FY 2009.

Condition as of September 30. Work under the existing project commenced in April of 1963 and is 100 percent complete. Project channel was completed in March 1964.

10. GREAT KILLS HARBOR, NY

Location. Great Kills is a small harbor contiguous to lower New York Bay, located on the southeasterly shore of Staten Island NY, about 8 miles northwest of Sandy Hook, NJ AND 16 ½ miles southwest of the Battery, New York City. (See U.S. Coast and Geodetic Survey Charts 369)

Existing projects. This provides for an entrance channel 10 feet wide and 150 feet wide from water in lower New York Bay through the entrance to the harbor in the vicinity of the present westerly end of Crooks Island, thence of same depth and width along the west side of the harbor and anchorage area of 138 acres and 8 foot depth. The length of the section included in the project is about 1.9 miles. The mean range of tide is 4.7 feet, mean range of spring tides, 5.6 feet; irregular fluctuations due to wind and barometric pressure vary from 3.9 feet below mean low water up to 5.2 feet above mean high.

Local cooperation. Fully complied with except that local interests are required to furnish suitable spoil-disposal areas for maintenance..

Terminal facilities. No terminals suitable for commercial purposes have been established. There are 11 small piers used for mooring and landing purposes. Six commercial boatyards and one public terminal are located at Great Kills. The terminals are considered adequate for present needs.

Operations and results during period. A continuing contract for maintenance dredging was awarded to Wicberg Marine Contracting Inc. on 3 September 2002 for maintenance dredging of the outer (entrance) channel to Great Kills Harbor for removal of all material except ledge rock lying above the plane of 10 feet below mean low water with placement of dredged material on the nearby beaches at Great Kills Park New York. Approximately 130,000 cys of material will be removed. The dredging was completed in May 2003. Total operations and maintenance funds in the amount of \$1,120,000 were expended maintenance dredging in FY 2002. Total operations and maintenance funds in the amount of \$434,751 were expended in FY 2003 to complete contract dredging in FY 2002.

Government and hired labor were employed through the fiscal year performing project condition surveys at a total cost including supervision and administration, of \$204,178 during FY 2001. \$9,288 was expended in FY 09 for condition survey, continuing disposal report & stakeholders coordination.

Condition as of September 30. Work under existing project commenced in December 1934 and completed September 1934. Under permit issued by the Secretary of the Army, the city of New York dredged a portion of the anchorage and channel along the west side of the harbor in order to obtain fill for park improvement purposes. When examined intermittently.

11. HUDSON RIVER, NY

Location. Originates in Adirondack Mountains, about 250 miles in a direct line and 315 miles along its course from the Battery, New York City, and flows generally southerly into New York Bay-Section under improvement extends from New York City about 156 miles to Waterford. (See National Ocean Survey Charts 12335, 12341, 12343, 12347, 12348, and 14786.)

Previous project. For details see Annual Reports for 1915 and 1938, pages 164 and 226, respectively.

Existing projects. A channel 600 feet wide from New York City to Kingston, and thence 400 feet wide to Albany, with widening at bends, a turning basin 700 feet wide and 1,200 feet long at Albany, and 2 anchorages, 1 near Hudson and 1 near Stuyvesant, each 400 feet wide and an average length of 2,400 feet; all with depth of 32 feet in soft material and 34 feet in rock to 2,200 feet south of the Mall Bridge; thence 27 feet deep and 400 feet wide to 900 feet south of Mall Bridge, thence 14 feet deep at lower low water and generally 400 feet wide to Federal lock at Troy; and thence of same depth and 200 feet wide to southern limit of State barge canal at Waterford; and removal of State dam at Troy and construction of a lock and dam about 2.5 miles below Waterford. Channel is to be formed by dredging and rock excavation, and maintained by dredging and constructing new and raising and repairing old, longitudinal dikes, built partly under previous projects and partly by the State of NY.

In the tidal section below the Federal dam at Troy, the assumed lowest low water plane downstream to Albany is 3 feet below mean sea level. Mean tidal range is about 5 feet below the dam and about 4.9 feet at Albany. The normal pool level above the dam from Troy to Waterford is 14.3 feet above mean sea level, with the mean range of pool level in seasons of moderate rains being 2.2 feet. (See Table 2-C for features of lock and dam included in existing project.) New work for completed project cost \$39,050,019 exclusive of amounts of expended on previous projects. Widening to form harbors at Albany and Troy, NY, to 12 feet deep at a cost of \$522,000 (1954) and completion of 27 foot channel at Albany at a cost of \$642,000 (1957) was placed in deferred for restudy category, and has since been deauthorized. All three features of work are excluded from

foregoing description of existing project and cost estimate. Construction of mooring facilities has been authorized (See Table 2-B for Authorizing Legislation.)

Local cooperation. Complied with except that local interests must furnish suitable soil disposal areas for future maintenance as required.

Terminal facilities. See Port Series No.6

Operations and results during period. Total operations and maintenance funds in the amount of \$248,793 were expended during FY 2009 to complete environmental coordination, engineering and design, and preparation of plans and specifications for the proposed FY 09 maintenance dredging of the Albany Turning Basin and Germantown reaches. Due to the high bid prices received, the contract solicitation was cancelled and a new re-scoped contract to perform maintenance dredging of only the Albany Turning Basin is proposed for FY 2010.

Government plant and hired labor were employed through the fiscal year performing project condition surveys at a total cost including supervision and administration of \$378,488 during FY 2009.

Government plant and hired labor were employed through the fiscal year performing removal of snags and other obstructions that constituted a potential hazard to navigation at a total cost including supervision and administration, of \$344,802 during FY 2009.

Government plant and hired labor were employed through the fiscal year performing operation and maintenance of the Troy Lock and Dam. Total funds in the amount of \$1,339,886 were expended during FY 2009 for operation and maintenance of the Troy Lock and Dam and associated buildings and grounds including supervision and administration.

American Recovery and Reinvestment Act (ARRA) funds were provided during FY 2009 to award contracts with a total value of \$1,363,266 for purchase of equipment (Crane and Sectional Barges) and for contracts to remove asbestos from Troy Lock facility buildings, demolish a deteriorated building, and install new Troy Lock area lighting. In addition, ARRA funds in the amount of \$575,000 were provided to perform work associated with increasing the placement capacity at the Government-owned Houghtaling Island upland dredged material placement site. Total ARRA funds in the amount of \$500,543 were expended during FY 2009 for preparation and award of contracts and for contract payments through the end FY 2009. Remaining ARRA expenditures for equipment and contract work is scheduled to be completed during FY 2010.

Condition as of September 30. Work under existing project began in July 1910 and was substantially completed in November 1965. New lock and dam at Troy, removal of dam at Troy and construction of 15,545 linear feet of dikes also are complete. In reconstruction of old dikes 39,676 linear feet are raised to adopted crest height. Channel from New York City to Albany is complete to a depth of 32 feet except for the 1,500 linear foot section at the northern end of the 32 foot project which has never been dredged to project depth. Channel from Albany to Waterford is complete to a depth of 14 feet.

12. HUDSON RIVER CHANNEL, NY&NJ

Location. Hudson River empties into Upper Bay of New York Harbor at the Battery, New York City. Section included under this title extends from deep water in the Upper New York Bay about 14.5 miles to just north of Harlem River (Spuyten Duyvil Creek)

Previous project. For details see Annual Reports for 1915 and 1938, pages 1765 and 213, respectively.

Existing projects. A channel 48 feet deep and 2,000 feet wide, suitably widened at bends from West 59th Street, Manhattan, to West 40th Street, thence 45 feet deep of same width of river extending from northline of 59th Street to south side of Little Basin, and thence a channel of same depth to deep water in Upper New York Bay of Ellis Island, substantially as shown on maps in H.Doc.309, 72nd Cong., 1st sess. subject to provision that no dredging be done under project within 50 feet of pierhead lines; a channel 750 feet wide and 30 feet deep along Weehawken-Edgewater waterfront, removal of an obstruction north of mouth of Spuyten Duyvil Creek to a depth surrounding river bottom. Channel included in project is about 11 miles long. Plane of reference is mean low water. Mean tidal range at the Battery, 4.4 feet, and West 129th Street, 4.1 feet; mean range of spring tides, 5.3 and 4.9 feet respectively; irregular fluctuations due to wind and atmospheric pressure vary from 3.8 feet below mean low water at the Battery up to 6.2 feet above mean high water and at West 129th Street from 3.6 feet below mean low up to 5.3 feet above mean high water. (See Table 2-B from Authorizing Legislation).

Local cooperation. None required

Operations and results during period. Previous years funds were used to prepare the Hudson River Channel and adjacent berthing areas for the return of the museum ship and regional operations center, USS Intrepid from its rehabilitation berth in Staten Island in accordance with

2008 Defense Appropriation Act. On October 2, 2008 this was accomplished. Operations and maintenance funds in the amount of \$1,431,324 were expended during FY 2009.

Condition as of September 30. Work under existing project commenced April 1913 and completed September 1952. Widening and Deepening Weehawken-Edgewater Channel to project dimensions was completed in August 1937. Widening 40-foot channel for full width of river from Ellis Island to West 59th Street, Manhattan, was completed in March 1939. Widening 48-foot project to full project width of 2,000 feet from West 40th Street to West 59th Street was completed in November 1950. Deepening 45-foot channel for a width of 2,000 feet Upper Bay to West 40th Street was completed to project dimensions in September 1952.

13. JAMAICA BAY, NY

Location. Inside south shore of Long Island, the entrance being about 17 miles by water south and east of the Battery, New York City. (See National Ocean Survey Chart No.12350).

Previous projects. For details see page 1770 of Annual Report for 1915, and page 185 of Annual Report for 1938

Existing Project. Provides for an interior channel extending from vicinity of Marine Parkway Bridge along west and north shores of the bay, 18 feet deep at mean low water and 300 feet wide to Mill Basin, with a swinging basin, 1,000 feet wide and 1,000 feet long at the point – thence 12 feet deep and 200 feet wide to Fresh Creek Basin; and interior channel extending from the same locality along south shore to Head of Bay, 15 feet deep and 200 feet wide, a channel in Mott Basin, 15 feet deep and 200 feet wide extending from the channel along the south shore, 3,000 feet to junction of the two branches, thence 200 feet in north branch (Inwood Creek) and 3,200 feet in south branch; and an entrance channel connecting the two interior channels with deep water in Atlantic Ocean, of suitable hydraulic dimensions to maintain present tidal prism in the bay, but not less than 18 feet deep and 500 feet wide from opposite Barren Island to Rockaway Point, Thence enlarging to not less than 20 feet deep and 1,000 feet wide to the sea, protected by one riprap jetty. Length of section included in project is 19.7 miles. Mean tidal range, 4.9 feet at Barren Island, and 5.1 feet at Head of Bay; mean range of spring tides, 5.9 and 6.1 feet, respectively; irregular fluctuations due to wind and atmospheric pressure vary from 4 feet below mean low water to 4.9 feet above mean high water.

Cost for new work for completed project is \$4,466,421 (July 1961), excluding amounts expended on previous projects.

Local cooperation. River and Harbor Act of 1945 provides that in lieu of conditions heretofore prescribed local interest furnish suitable areas for disposal of dredge materials for new work and subsequent maintenance, and hold the United States free from damages. City of New York was notified of conditions of local cooperation in letter dated January 15, 1946. In letter dated February 7, 1946, the Mayor of New York advised disposal areas are available and necessary document holding the United States free from claims for damages" would be executed.

River and Harbor Act of 1950 provides local interests furnish lands, easements, rights-of-way, and suitable areas for disposal of dredged material during construction and subsequent maintenance, hold the United States free from damages and perform all necessary alterations to existing terminals and bulkheads, and dredge adequate approaches thereto. These conditions have been fulfilled.

Terminal facilities. See Port Series No.5.

Operations and results during the period. In FY 06, funds in the amount of \$125,000.54 were used to initiate Engineering & Design work for the future dredging of the Federal Channel. In FY 07, \$199,780 was expended to complete environmental coordination and NEPA requirements and Plans and Specifications to bring the project to advertisement. In FY 08 \$236,361 were used to continue E&D and revise Plans and specifications for FY 09 maintenance of the federal channel. Funds of \$2,599,766 were used in FY 09 to remove approximately 150,000 cys with HARS placement.

Conditions as of September 30. Plans and Specifications are complete and will be advertised for FY 2009 maintenance dredging .

14. JONES INLET, NY

Location. The project is located in the Town of Hempstead, Nassau County, NY between Atlantic Ocean and Hempstead, Bay. It extends from outside of the jetty to the Loop Causeway Bridge over Long Creek.

Existing project. The project provides for an east jetty and a channel 12' deep 250' wide from deep water in Atlantic Ocean to the Loop Causeway Bridge. The length of the section is 2.3 miles. The mean range of tide is 3.9 feet, mean range of spring tides is 4.7 feet, irregular fluctuations due to wind and barometric pressure vary from

3.9 feet below mean low water up to 11.6 feet above mean high water.

Local cooperation. Fully complied with except that local interests are to pay 35% of the difference of the cost for placement of dredged material from the inlet on the beach if that is not the least cost placement site.

Terminal facilities. No terminals suitable for commercial purposes have been established. There are small piers used for mooring and landing purposes. Approximately 11 commercial boatyards are located in channel adjacent to Jones Inlet. The terminals are considered adequate for present needs.

Operations and results during period, and condition as of Sept. 30. In FY 07, \$68,041 in federal funds was used to perform a survey & continue environmental coordination for the eventual FY 08 maintenance dredging and beach placement at Point Lookout, Town of Hempstead, NY with non-Federal funds contributed by the NYSDEC. In FY 09, funds in the amount of \$318,500 were used for a site next to Jones Inlet.

Conditions as of September 30. Environmental coordination will be needed to advance the project in preparation for possible future maintenance dredging..

15. KILL VAN KULL – NEWARK BAYCHANNEL, NJ & NY

Location. The project includes Kill Van Kull connecting New York Bay with Newark Bay, and channels in lower Newark Bay serving Port Newark and Elizabeth Marine Terminal. These terminals are located on the west shore of Newark Bay. (See national Ocean Survey Chart 12333.)

Existing project. Deepening the existing Kill Van Kull channel and channels in lower Newark Bay, including turning and maneuvering areas, as well as deepening the Elizabeth and Port Newark channels. The deepening to be done from the existing 35 foot depth incrementally to 40 feet and then 45 feet. The Federal cost of construction is estimated at \$582,500,000 with an additional \$436,600,000 to be contributed by local interests.

Local cooperation. The Port Authority of New York and New Jersey, the local cooperating agency, has entered into a local cooperation agreement with the Government which was executed on 30 May 1986. A supplemental agreement was executed on 21 May 1987, for Phase I. A

project cooperating agreement was entered into on 30 January 1999 for Phase II (40 feet to 45 feet)..

Terminal facilities. See Port Series No. 5, Vol. 2.

Operations and results during period, and condition as of Sept. 30. Stage 1, channel deepening to 40 feet in seven contracts was completed. Stage II, channel deepening to 45 feet eight contracts was completed in November 2004. Financial completion is awaiting resolution of two claims in areas 8 and 6. The ninth contract for the Port Newark Channel remains deferred.

16. LAKE MONTAUK HARBOR, NY

Location. On east end of Long Island, about 3 miles by land west of Montauk Point and 125 miles by water east of New York City. It is land-locked on the east sides and is connected to the north with Block Island sound by an artificial inlet.

Existing projects. A channel 12 feet deep, at MLW and 150 feet wide, extending from the 12 foot contour in Block Island Sound to the same depth in the existing yacht basin east of Star Island; a boat basin 10 feet deep, 400 feet wide and 900 feet long, located northwest of Star Island; repair and extension shoreward of the east and west jetties; and additional sport fishing facilities on top of both jetties. Length is Approximately 0.7 miles.

Local cooperation. The Rivers and Harbors Act of 2 March 1945, House Document No. 369, 76th Congress, 1st Session provides that local interests must furnish, free of cost to the United States all lands,, easements, rights of way and spoil-disposal areas for the initial work and subsequent maintenance as required and hold and save the United States free from damages due to the construction works and subsequent maintenance. Local cooperation has been complied with.

Terminal facilities. A yacht club, marina, a United States Coast Guard Station.

Operations and results during period. No federal funds were available in FY 07. FY 08 funds of \$68,182 were used to prepare Plans & Specifications and award a contract for FY 09 maintenance dredging.

Conditions as of September 30. There has been additional shoaling in the federal channel and advance maintenance deposition basin. Plans & Specifications in FY 2009 for maintenance dredging will be advertised. FY 09 funds in the amount of \$522,868 were used to dredge

approximately 6,000 cy work placement at the West Jetty Beach.

17. LONG ISLAND INTRACOASTAL WATERWAY, NY

Location. A 33.6 mile long tidal channel opposite Patchogue to the south end of the Shinnecock Canal in the Town of Southampton.

Existing projects. A channel 6 feet deep, 100 feet wide from the Federally improved channel in Great South Bay opposite Patchogue, to the south end of the Shinnecock Canal.Length is about 33.6 mile.

Local cooperation. Fully complied with except that local interests are required to furnish suitable dredged material Placement areas for maintenance

Terminal facilities. No terminals suitable for commercial purposed have been eastab. There are many commercial boatyards along the length of the A yacht club, marina, a United States Coast Guard Station. Intracoastal Waterway as well as two US Coast Guard Stations from which search and rescue missions are launched. The terminals are considered adequate for present needs.

Operations and results during period, and condition as of Sept. 30. The dredging was last completed in January 2004.and approximately 26,000 cubic yards of material was removed from the Shinnecock Bay Reach. Prior to that Moriches Bay Reach was dredged in FY 2003 with the removal of approximately 53,000 cy with placement of dredged material on East Inlet Island. Total operations and maintenance funds in the amount of \$272,434 were expended in FY 09.

Condition as of September 30. Work under the existing project was commenced in October of 1939 and was completed in September of 1940.Due to extreme shoaling and numerous grounding the United State Coast Guard discussed the possibilliity of closing the Federal channel by pulling the buoys. Plans and Specifications were prepared to do critical maintenance dredging in the Moriches Bay area.

18. MATTITUCK HARBOR, NY

Location. A tidal inlet on the north shore of Long Island, about 85 miles east of the Battery, New York City and 24 miles southeast of New Haven Harbor, CT, extending southward about 2 ¼ miles to Village of Mattituck.

Existing project. A channel 7 feet deep at mean low water from Long Island Sound to the Village of Mattituck..., 100 feet wide at the entrance and 80 feet wide thereafter, and a 460 by 570 ft. anchorage area at the upper end.

Local cooperation. Fully complied with except that local interests are required to furnish suitable dredged material placement areas for maintenance.

Terminal facilities. Tilcon Minerals, Mattituck Inlet Wharfs: see Port Series No.5, revised 1999.

Operations and results during period, and condition as of Sept. 30. Total operations and maintenance funds in the amount of \$2,203 were expended in FY 09 for stakeholder coordination for possible future maintenance..

Condition as of September 30. Work under the existing project was commenced in June of 1921 and completed in November of 1921. Construction of West Jetty commenced in October of 1937 and was completed in August of 1938.

19. MORICHES INLET, NY

Location. On the south shore of Long Island, about 80 miles by water east of the Battery, New York City. It is an opening through the narrow sandy barrier beach on the south shore of Long Island which separates the Atlantic Ocean from a series of interconnected bays. (See National Ocean Survey Chart 12352).

Existing project. Provides for a channel, 10 feet deep at mean low water and 200 feet wide extending from that depth in the Atlantic Ocean to Moriches Bay, a distance of 0.7 miles; thence a channel 6 feet deep and 100 feet wide to the Long Island Intracoastal Waterway, a distance of 1.1 miles; rehabilitation of the existing jetties and revetments. Recent provisions include an outer channels deposition basin, a west jetty scour blanket, and habitat enhancement for shore birds. Estimate of cost of work is \$13,050,000 (October 1988P.L.) including \$50,000 from Coast Guard and \$4,550,000 to be contributed by local interests. (See Table 2-B for Authorizing Legislation).

Local cooperation. In accordance with the project authorization, local interests are required to furnish all easements, rights-of-way including relocations that are necessary for improvements at an overall 35% cost sharing basis. The annual Operations and Maintenance cost has recently increased to an estimated \$3,000,000 of which the local share is 50% or \$1500,000 per year. An agreement of Local Cooperation was executed on 30 June 1986. The New York State Department of Environmental Conservation is the local sponsor.

Terminal facilities. Several yacht clubs, boatyards, and public wharfs and landings and numerous private landings are located in Moriches Bay. There are boat basins open to the public. The facilities existing in the bay are considered adequate for present and probable future needs under present conditions of Moriches Inlet. There is room for expansion should future activity warrant.

Operations and results during period, and condition as of Sept. 30. Maintenance dredging of the Inlet was last performed in January 2009 by the Suffolk County Department of the Public Works 460,000 cys of sand was removed from the inlet and placed along the Atlantic Ocean Beaches at Cupsogue, Smith Point and into stockpile prior to that, shoreline west of the Jetty. Preliminary E&D was performed for the next maintenance cycle. Maintenance dredging of the Inlet was last completed February 04 and was completed 24 February 04 250,250 cys of material was removed from the inlet and placed along the shoreline west of the Jetty. Preliminary E&D was performed for the next maintenance cycle. O&M funds in the amount of \$17,181 were expended in FY 09.

Condition as of September 30. Maintenance last dredging was last performed in January 2009.

20. NARROWS OF LAKE CHAMPLAIN, NY & VT

Location. This waterway, 37 miles long, comprises southern end of Lake Champlain and extends from Whitehall to Crown Point, NY at southern extremity of lake, northerly to Benson Landing, VT. (See N.O.S Chart 14784).

Previous projects. For details, see Annual Reports for 1931, and 1963, pages 256 and 177 respectively.

Existing project. A channel extending from Whitehall, NY at head of Lake Champlain to Benson landing, 12 feet deep at low lake level and generally 150 feet wide, and installation of lender booms at Putts Rock, Putts Leap, Narrows near Dresden, Pulpit Point and, Cedar Mountain. Reference plan of low lake level is 93 feet above mean sea level. Section included in project is about 13.5 miles. Usual annual variation of lake level is 5.8 feet and extreme variation varies from 0.6 foot below up to 8.8 feet above low lake level.

Local cooperation. None required.

Operations and results during period, and condition as of Sept. 30. Total operations and maintenance funds in the amount of \$41,857 were expended performing surveys,

inspection and repairs to fender booms and channel maintenance activities during FY 2009.

Condition as of September 30. Work under the existing project was commenced June 1919 and is about 77 percent complete. A channel 12 feet deep at low lake level and least width of 150 feet has been excavated throughout the length of the improvement, except at the Elbow, where the width is 110 feet. Fender booms have placed at the elbow. (Putts Leap and Putts Rock.)

21. NEW YORK HARBOR AND ADJACENT CHANNELS, (PORT JERSEY CHANNEL), NJ

Location. The Port Jersey Channel is the navigation channel located in the Upper Bay of New York Harbor. The Channel runs from its confluence with Anchorage Channel to its head of navigation in Jersey City/Bayonne, where Global Terminal & Container Services, LLC. provides berthing facilities for container commerce within the Port of New York and New Jersey.

Existing Project. The Federal Port Jersey Channel Project deepened, widened and straightened the existing (non-Federal) Port Jersey Channel. The authorized project deepened the existing 35 to 38 foot deep channel and adjacent 12' deep water to a depth of 41 feet deep below mean low water and generally 450 feet wide with suitable bends to extend from deep water in the Anchorage Channel in the Upper Bay of New York Harbor, westward approximately 12,000 feet along the southern boundary of the Port Jersey peninsula, to the head of navigation in Jersey City/Bayonne, New Jersey. The Federal cost of construction is estimated at \$79,178,000 with an additional \$26,392,000 contributed by the primary non-Federal sponsor, the State of New Jersey Department of Transportation. This is subject to final accounting now that project construction is complete.

Local Cooperation. The State of New Jersey Department of Transportation is the primary non-Federal sponsor for the Port Jersey Channel Project. The Port Authority of New York and New Jersey also serves as a limited project sponsor for the single purpose of providing indemnification to the Federal government for the project.

Operations and results during period, and conditions as of September 30. On October 23, 2000, the Record of Decision for the Project was signed. On March 28, 2001, the Assistant Secretary of the Army for Civil Works submitted the Chief of Engineers report formally to Congress. The State of New Jersey and the Port Authority executed a Project Cooperation Agreement (PCA) with the Government on July 23, 2002. The first and second

construction contracts were constructed from 2002 to 2005, creating a partially useable Federal Channel. The PCA was modified on July 11, 2007 to facilitate the consolidated construction of the 41 foot to 50 foot Port Jersey Channel deepening. The third Port Jersey construction contract was awarded on October 19, 2007 has completed in March 2010. Constructed by the Corps, it completed the realigned 41 foot cost-shared Port Jersey Channel and advanced most of the construction of the 50 foot Port Jersey Channel segment of the NY/NJ Harbor Deepening Project. A fourth and final Port Jersey Channel contract is planned as part of the NY/NJ Harbor Deepening Project for solicitation in later 2010 with 100% State funding. It is needed to complete the 50 foot channel construction over the Passaic Valley Sewerage Commission outfall utility tunnel.

22. NEW YORK AND NEW JERSEY CHANNELS

Location. Extends from deep water northwest of Sandy Hook, through Lower New York Bay to the and Raritan Bay, to Perth Amboy, and thence through Arthur Kill Lower Newark Bay and Kill Van Kull to deep water in the Upper New York Bay. This is approximately along boundary line between States of New York and New Jersey. (See National Ocean Survey Charts 12333, 12331 and 12327.)

Previous projects. For details, see 1963 Annual Report, pages 184 and 185.

Existing project. A channel through Lower New York Bay, Raritan Bay Arthur Kill, Lower Newark Bay, Kill Van Kull to Upper New York Bay and Raritan Bay and in Arthur Kill to a point 1,000 feet north of Smith Creek, widened to 800 feet in vicinity of Segune Point and Wards Point, respectively, thence 500 wide to a point 1,000 feet south of Piles Creek; thence 500 to 600 feet wide and passing, north of Shooters Island and protected by a dike to it's northern side to junction of channel Newark Bay; thence 800 feet wide through Kill Van Kull to Constable Hook; thence 1,000 feet wide for a point near the intersection with the channel along New Jersey pierhead line; thence 1400 feet wide through Kill Van Kull to Upper New York Bay; with an anchorage 38 feet deep to accommodate five vessels south of Perth Amboy, all with suitable easing bends and junctions. Section included in project is 30.8 miles long. In addition, construction of a dike north of Shooters Island and two secondary channels 30 feet deep and 400 feet wide, one south of Shooters Island and the other in Raritan Bay connecting with Raritan River, were completed under previous projects and maintained under existing project. A triangular area at the eastern end of the 30 foot channel south of Shooters Island was deepened to 35 feet in order to provide additional

widening in vicinity of Bergen Point and is included in the Newark Bay project. All depths refer to plane of mean low water. Mean range of tides varies between 4.7 and 5.1 feet; mean range of spring tides 5.7 to 6.3 feet; irregular fluctuations due to wind and atmospheric pressure vary from 3.9 feet below mean high water. Anchorage at Sandy Hook and cutoff at junction of Main Ship Channel are deferred for restudy and excluded from foregoing description and cost estimate. (See Table 2-B for Authorizing Legislation.)

Local cooperation. Fully complied with except for the middle section of Arthur Kill where local interest must furnish soil disposal areas for maintenance.

Terminal facilities. See Port Series No.5, revised 1988, Vol.2.

Operations and results during the period. In FY 07, \$5,618,035 was used to dredge approximately 54,510 cys from Arthur Kill Reach with placement upland at Fresh Kills. In addition, preliminary E&D was performed for FY 08 Dredging of Arthur Kill Reach and Signic/WARD Pt revisited. In FY 08, Wards Point Reach,, Sequine Point and Arthur Kill Reach of NY & NJ Channel was dredged at a total project cost of \$3,287,257. In FY 09 funds of \$5,242,347 were used for maintenance dredging approximately 40,000 cy and upland placement.

Condition as of September 30. The FY 08 project is physically and fiscally closed. E&D contract for the preparation of Plans & Specifications for the FY 09 maintenance of Arthur Kill Reach

23. NEW YORK HARBOR-COLLECTION AND REMOVAL OF DRIFT

Location. Applies to Lower and Upper Bays, New York Harbor; East River, Harlem River, Lower Hudson River Channel, New York, NY and New Jersey Channels, Newark Bay, NJ, Passaic and Hackensack Rivers, NJ, Raritan and Sandy Hook Bays, NJ, Jamaica Bay, NY, the Western Portion of Long Island Sound, and their tributaries.

Existing project. Provides for collection, removal and disposal of drift, derelict vessels, deteriorated shore structures and debris along shores of New York Harbor and tributary waters, and for the repair of certain other in-use piers, wharves and shore structures. Work authorized before WRDA of 1974 was restricted solely to removal of drift from waterway and was funded as maintenance activity. Resolutions of the Committee on Public Works of the U.S. Senate and U.S. House of Representatives, as embodied in the Water Resources Development Act of 1974 (Public Law 93-251), 93rd Congress, HR

10203, adopted March 7, 1974, provided for the following in Section 91: The New York Harbor Collection and Removal of Drift Project is hereby modified in accordance with the recommendations contained in "Survey Report on Review of Project, New York Harbor Collection and Removal of Drift," dated June 1968, revised March 1969 and April 1971, on file in the Office, Chief of Engineers. The Survey Report recommended that the existing project be modified to provide, in addition to the existing activities, for the removal and disposal of derelict vessels, deteriorated shore structures and debris along shores of New York Harbor and tributary waters. Subsequent to passage of the Water Resources Development Act of 1974, a General Design Memorandum -Phase I(Plan Formulation) was prepared for the New York Harbor Collection and Removal of Drift Project. This report, dated December 1975, also recommended that the existing project be modified to provide for the collection and removal of sources of drift in New York Harbor and tributary waters, and further recommended that the work be accomplished incrementally. The Water Resources Development Act of 1990 modified the Water Resources Development Act of 1974(WDRA 1974) to authorize the Secretary to collect and remove floating material whenever the Secretary is collecting and removing debris which is an obstruction to navigation, and to continue engineering and design for the remaining unconstructed reaches. It also prohibited the burning of wood collected in carrying out the project on ocean waters, by December 31, 1993. The current estimate of first cost is \$292,000,000 (October 1997 P.L.) which includes \$135,000,000 for Federal removal of drift, derelict vessels, deteriorated shore structures and debris, and \$68,000,000, cash contribution from local interests for non-Federal removals, plus \$89,000,000 to be contributed from local interests for repair of deteriorated shore structures in use. (See Table 2-B for Authorizing Legislation.)

Local cooperation. Local cooperation conditions provide that local interests must furnish all lands, easements and rights-of-way required for the improvement; hold the United States free from damages; enact and enforce local legislation to prevent creation of sources of drift, contribute in cash one third of the first cost of the Federal drift removal work, and make necessary repairs to deteriorated structures in use so as to eliminate them as a source of drift. These conditions are subject to approval by the Secretary of the Army and the President, as stipulated in Section 113 of the authorizing law, Public Law 91-611.

Operations and results (New work-cumulative to date). A total of five Liberty State Park contracts have been completed at a cost of \$10,321,112. East River-Manhattan Waterfront contract was completed at a cost of \$1,477,806. A contract for the removal of pier 17 and 18 on the East River was completed at a cost of \$219,604. The City of

Elizabeth contract was completed at a cost of \$791,656. The Stapleton, Staten Island contract was completed at a cost of \$2,910,400. A contract for the city of Hoboken was completed at a cost of \$2,123,404. Work along the Jersey City South waterfront was completed at the cost of \$979,580. Contract Number One at Weehawken to Edgewater was completed at a cost of \$1,697,487. The Brooklyn Reach One contract was completed at a cost of \$5,057,920. Work was completed on the Weehawken to Edgewater Contract No. 2 at a cost of \$8,490,000, and Jersey City North Contract No. 2 at a cost of \$1,800,000. The Bayonne One contract has been completed at a cost of \$735,800. Hoboken Pier B was completed at a cost of \$973,590, and Jersey City North 1 was completed at a cost of \$2,358,000. Weehawken-Edgewater Contract 2A was completed at a cost of \$4,550,000. The Brooklyn 2A Reach removal contract was completed in October 1999 at a cost of \$4,878,022. The Passaic River, Newark, Kearney and Passaic, NJ Reach was completed in May 1999 at a cost of \$109,907.

Maintenance. U.S. Debris Boats Driftmaster, Gelberman and Hayward and auxiliary plant were assigned the task of removing and disposing of floating debris that is a hazard to navigation. Removal and disposal of 461,755 cubic feet (3,607.5 cords) of floating debris consisting mainly of driftwood, ranging in size from small blocks to large timbers, including pilings, pieces of wreckage, derelict vessels and sections of deteriorated pier structure was accomplished at a cost of \$6,390,000 during FY 2008.

Conditions as of September 30. For work authorized by Water Resources Development Act, removal of drift sources has been completed in New Jersey at Liberty State Park, the City of Elizabeth, Hoboken, and parts of Jersey City, Bayonne, Weehawken to Edgewater, and Passaic River in Newark, Kearney and Passaic. The New York City work has been completed along the Manhattan side of the East River (South Street Seaport), along part of the Brooklyn waterfront, and at Stapleton, Staten Island.

24. NEW YORK HARBOR-ENTRANCE CHANNELS AND ANCHORAGE AREA

Location. In Upper and Lower Bays, New York Harbor is 330 miles southwest by water of Boston Harbor. Mass., and 165 miles northwest of entrance to Delaware Bay, NJ. The Upper Bay extends about 5.5 miles southerly from junction of Hudson and East River opposite the Battery, New York City to the Narrows. The Lower Bay extends about 9 miles from the Narrows to the sea.. (See National Ocean Survey charts 12334,12335 and 12349.)

Existing project. Ambrose Channel 45 feet deep and 2,000 feet wide, extending about 10.2 miles from sea to

deep water in the Lower bay; Anchorage Channel, and extension of Ambrose Channel, with same depth and width, in the Upper bay opposite anchorage grounds, about 5.7 miles long; and southerly entrance channel. Sandy Hook Channel (East Section) 35 feet deep and generally 800 feet wide extending 3.4 miles from 35 foot ocean contour to Bayside Channel along an alignment generally west of the South Channel; and elimination from authorized project of that portion of Bayside-Gedney Channel east of junction with new southerly entrance Gedney Channel east of junction with new southerly entrance channel; for bayside Channel 35 deep and 800 feet wide, extending about 5.3 miles from Bayside Channel to deep water in Lower Bay; a channel along New Jersey pierhead line connecting Kill Van Kull with deep water in anchorage Channel, south of Liberty Island anchorage. 20 feet deep fro 500 feet wide with sidening at bends to 800 feet and bout 3 miles long; anchorage in vicinity of Liberty (Bedloes) Island (about 160 acres in extent) 20 feet deep; and for removal of craven shoal to 30 feet deep; for a channel 16 feet deep, 200 feet wide, and about 2.3 miles long, extending from bell buoy 23 to Hoffman and Swinburne Island; for an anchorage area in Red Hooks Flats to depths of 45, 40 and 35 feet and an anchorage area in Gravesand Bay to 47 feet deep. Project depths refer to mean low water. mean tidal range is 4.7 at Fort Hamilton; mean range of spring tides, 5.7 feet; irregular fluctuations due to wind and atmospheric pressure vary from 3.9 feet below mean low water up to 6.2 feet above mean high water. Dredged Material Management Plan.

Location cooperation Fully complied with .Port Authority , States of New York and New Jersey, New York City

Terminal facilities. Port of New York and New Jersey

Operations and results during the period. Monitoring and management of dredged material ocean placement sites as required by Federal and State regulations and interagency agreements are ongoing. The district continues to work with EPA Region II to develop criteria and defensible testing protocols for both upland disposal of contaminated dredged material and for dredged material used as remediation material at the Historic Area Remediation Site (HARS). Oversee all sampling, testing and review these results for all material proposed for ocean disposal as well as monitoring the effects of the HARS from projects deemed suitable for the HARS. Total operations and maintenance funds in the amount of \$1,910,639 were expended for this work during FY 2009.

Condition as of September 30. Work under existing projects began in 1885 and is 100 percent complete. Main Ship and Bayside- Gedney Channels were completed to 30 feet deep in February 1891. Deepening of Bayside-Gedney

Channel to 35 feet for a width of 800 feet was completed in June 1939. Ambrose Channel was completed to 40 feet deep for a width of 2,000 feet in April 1914 and substantially completed to 45 feet for a width of 2,000 feet in 1951. Relocation of Anchorage Channel was completed to 40 feet deep in October 1932. Center 800 feet was dredged to 45 feet in June 1947 and westerly 600 foot strip in April 1948. Easterly 600 foot strip was substantially completed in June 1953. Channel between Staten Island and Hoffman and Swinburne Islands was completed in December 1920 up to within 300 feet of southerly limits of the project. Channel along New Jersey pierhead line from Kill Van Kull to Anchorage Channel was completed in March 1939. Widening at bends nearly southerly and northerly ends authorized in 1948 was completed to depths of 45 and 35 feet in October 1976. Anchorage Channel was relocated to the westward in 1982. Red Hook Flats Anchorage was accordingly increased in area. No dredging was required. Liberty (Bedloes) Island anchorage was completed to 20 feet in Oct. 1944. Sandy Hook Channel (east section) was Gravesend Bay was completed to 47 Foot depth in November 1977. FY 2005 DMMP Implementation Report and Final PEIS released in FY 2006. During FY 2009 Sandy Hook Channel which was dredged using ARRA funding. Approximately 132,500 cy of sand was removed from the Federal channel. The HARS has received around 39.6 million cubic yards of material from Federal and private dredging projects within the N.Y. region as of September 2009.

25. NEW YORK AND NEW JERSEY HARBOR, NY & NJ

Location. Extends from deep water northwest of Sandy Hook, through Lower New York Bay to the Verrazano Bridge, then splits northeast along the Brooklyn waterfront, north in the Upper New York Bay to Port Jersey, and west along the Kill Van Kull and portions of the Newark Bay and Arthur Kill Channels. (See National Ocean Survey Charts 12333, 12331 and 12327.)

Previous projects. See New York and New Jersey Channels, Newark Bay Channels, Bay Ridge Channel.

Existing project. The plan requires deepening the entire 10.6 nautical miles of Ambrose Channel extending from deep water in the Atlantic Ocean to the Narrows to a depth of 53ft MLW and 2,000 feet wide. The Anchorage Channel will be dredged to 50ft MLW for 19,000 feet from Narrows to the point 1,000 feet north of the junction with Port Jersey Channel at a width of 2,000 feet. The Port Jersey Channel is to be deepened to 52ft MLW in the rock or otherwise hard material and maintained at a depth of 50ft MLW. The channel will be deepened for a distance of 10,000 feet from this juncture with Anchorage Channel. Through the

berthing areas at the Global Marine Terminal and the former MOTBY. Kill Van Kull is to be deepened to 52ft MLW in the rock or otherwise hard material and maintained at a depth of 50ft MLW, extending from its junction with Anchorage Channel to its junction with the Newark Bay Channel near Bergen Point, and will be 800 foot wide. The Newark Bay Channels are comprised of the Main Channel (South, Middle and North Reaches) plus numerous access channels (South Elizabeth Channel, Elizabeth Channel, Elizabeth Pierhead Channel, Port Newark Pierhead Channel and Port Newark Channel). The main Port Newark Channel will be dredged from its juncture with the Kill Van Kull near Bergen Point to a point located 1,500 feet north of the Elizabeth Channel. The channel will extend north of the Elizabeth Channel to aid vessels in turning and backing into berth. The 14,000 LF of improvement proposed for the main Newark Bay Channel will not change the present width, which varies from 2,200 feet at its northern terminus 800 feet near Bergen Point. Similarly, the 8,800 foot long Elizabeth Channel will also remain at its present width, which varies from 500 to 800 feet, and its present alignment. The 2,700 long South Elizabeth Channel will be significantly widened from its present 290 feet to 500 feet. Each of the aforementioned channels will be dredged to 52 ft MLW in rock or otherwise hard material and maintained at 50 ft MLW. The Arthur Kill Channel will be deepened from its juncture with the Kill Van Kull near Bergen Point to the Howland Hook Marine Terminal. This 2.4 nautical mile segment of channel will be dredged to a depth of 52 ft MLW in rock or otherwise hard material and maintained at 50 ft MLW. The existing channel varies in width from 500 feet to 800 feet, but will be widened to 800 feet as part of the 41 ft MLW project. This width will be maintained for this project. The nearly 3 nautical mile long Bay Ridge Channel will be improved and maintained to a depth of 50 ft MLW. The proposed channel will parallel the eastern side of current channel at a width of 600 feet, reduced from the current width of 1,200 to 1,750 feet. A proposed turning basin, with a diameter of 1,600 feet, is to be located at the north end of the channel.

Local cooperation. Fully complied with Design Phase. The Project Cooperation Agreement was executed on 28 May 2004.

Terminal facilities. See Port Series No.5, revised 1999

Operations and results during the period. Under the provisions of Section 101, WRDA 2000, the Port Authority of New York and New Jersey undertook the deepening of a portion of the project located near Bergen Point to its authorized depth. This area was primarily rock which was placed at artificial fishing reefs. The work continue on the S-KVK-1, S-NB-1 and PJ-3 contract areas, deepening those areas to 50 ft. Contract were awarded for the S-AM-

2a and S-AN-1b/ S-AM-2b contracts area to deepening those areas to 50 ft(Ambrose Channel to 53 ft) and also for the Elders West Beneficial Reuse of Dredged Material contract, which will utilize sand from the S-AN-1b/S-AM-2b contract to rebuild a salt marsh. **ARRA** funds in the amount of 3,872,950 were received in FY 09 and used to partially fund the Elders West contract. All ARRA funds will be expended by the end of FY 10.

Condition as of September 30. Work remains on all channels of the project. Ten of the eighteen planned deepening construction contracts are either completed(S-KVK-2, S-KVK-4, S-AM-1, S-AN-1b) or underway (S-KVK-1, S-NB-1, PJ-3, S-AM-2b, S-AN-1b/ S-AM-2b and S-E-1). The two mitigation contracts are completed and are being monitored.

26. NEWARK BAY, HACKENSACK AND PASSAIC RIVERS, NJ

Location. Newark Bay is an estuary about 1.25 miles wide and 6 miles long extending southerly from confluence of Hackensack and Passaic Rivers to New York and New Jersey Channels. Hackensack River rises near Haverstraw, Rockland County, NY and flows about 45 miles into Newark Bay. Passaic River rises in highlands of northeastern New Jersey and flows about 80 miles into Newark Bay. (See National Ocean Survey Charts 12333 and 12337)

Previous projects. For details, see 1926 Annual Report, pages 265 and 266; and Annual Reports for 1929, 1938, 1954, and 1976, pages 301, 244, 124, and 2-11 respectively.

Existing project. A main channel 700 feet wide to the branch channel to Port Newark, thence 500 feet wide to a turning basin 1,300 feet long and 900 feet wide at the junction of the Hackensack and Passaic River channels, length about 4.7 miles; a maneuvering area south of the removed Central Railroad of New Jersey Bridge 2,200 feet long and 300 feet wide with depths of 38 feet in the south half and 35 feet in the north half; a combined bend cutoff and maneuvering area at the south side of the junction with Elizabeth branch channel; and widening bends at the Kill Van Kull and Port Newark Bay Channels.(Authorized depth 40 feet except as noted above) including a triangular area east of Shooters Island with a depth of 40 feet.

At Port Newark-A branch channel 500 feet wide, leading to an inshore channel 400 feet wide 1.6 miles (adopted 1945). Authorized depth 40 feet in soft material; a pierhead channel 200 feet wide along the east bulkhead between Port Newark and Elizabeth branch channels; between 4,100 feet). Authorized depth 35 feet (adopted 1962).

At Elizabeth Marine Terminal-A branch channel 500 feet wide, length about 1.4 miles; a pierhead channel along the east bulkhead 290 feet wide, length about 2,600 feet, southern approach area just above former Central Railroad of New Jersey Bridge enlarged for turning and maneuvering, with a maximum length of about 2,700 feet and width (between the pierhead channel and Newark Bay channel) of about 800 feet. Authorized depth 45 feet (adopted 1962).

Local Cooperation. Rivers and Harbor Act of 1954 provides local interests, furnish lands, right-of-way, the suitable disposal areas for initial construction and future maintenance; provide depths commensurate with channel depth in approaches and berths at terminals of companies which would use improvement; and hold the United States free from damages. Rivers and Harbor Act of 1962, provides that local interests must provide lands, easements and rights-of-way for maintenance and construction , hold the United States free from damages, provide and maintain adequate public terminal and transfer facilities, and accomplish without cost to the United States, removal or relocation of pipelines, cable and other utilities. Assurances were furnished by Port of New York Authority and accepted June 12, 1964. Local cooperation required by previous modifications is fully complied with.

Terminal facilities. See Port Series No.5, revised 1999, Vol.2.

Operations and results during the period. Operations and maintenance funds in the amount of \$2,758,144 were expended during FY 2009 for dredging of the Federal channels.

Condition as of September 30. Work under the active portion of the original portion of the original project began June 1976 and is 100 percent complete. Approximately 600,000 cubic yards of maintenance material remain in the Port Newark Branch and Pierhead Channels. Work remaining to complete existing original project consists of deepening the Hackensack River channel to depths of 32 feet and 15 feet, except as noted above.

27. NEWTOWN CREEK, NY

Location. A tidal waterway entering East River, N.Y., and 4.5 miles by water northeast of the Battery, New York City, and forms a part of boundary between boroughs of Brooklyn and Queens, New York City.(See National Ocean Survey Charts 12335)

Previous projects. For details, see Annual Reports for 1915 and 1938, pages 1769 and 207 respectively.

Existing project. A channel 23 feet deep and 130 feet wide from East River to a point 150 feet north of Maspeth Avenue; a turning basin at a former location of Mussel Island and a triangular area lying on north side of entrance to creek of same depth; a channel 20 feet deep, 75 to 100 feet wide in Dutch Kills, 2,800 feet long; a channel in Maspeth Creek of same depth and 100 feet wide, for 2,000 feet; a channel in East Branch, 18 feet deep and 150 feet north of Maspeth Avenue to Grand Street Bridge and thence 125 feet wide, to Metropolitan Avenue Bridge; a channel in English Kills or West Branch, 16 feet deep and 150 feet wide to Metropolitan Avenue Bridge, including easing of bends. Section included in project is about 5.2 miles. Mean tidal range, 4.2 feet; mean range of spring tides, 5 feet; irregular fluctuations due to wind and barometric pressure vary from 3.8 feet below mean low water up to 4.2 feet above mean high water. New work for active portion of project consisting of channels described above, cost \$767,093, exclusive of amounts expended on previous projects. Deepening English Kills to 20 feet to Metropolitan Avenue Bridge and thence 12 feet deep, and 100 feet wide from Metropolitan Avenue to within 80 feet of Montrose Avenue Bridge, suitably widened by excavating upland at second bend above Metropolitan Avenue Bridge, and deepening East Branch to 20 feet are inactive and are excluded from foregoing description and cost estimate. (See Table 2-B for Authorizing Legislation)

Local cooperation. See page 160, 1964 Annual Report for requirements under acts of March 1919 and August 26, 1937..

Terminal Facilities. See Port Series No.5, revised 1965, Vol. 2, Part 2, pages 190-208.

Operations and results during period. Operations and maintenance funds in the amount of \$50,950 was expended on engineering and design surveys and environmental studies for future maintenance dredging of this project. In FY 09, \$6,871 funds were used to perform Engineering and Design, including stakeholder coordination, for possible future maintenance.

Condition as of September 30. Work under existing project is about 64 percent complete. Work under active portion of existing project was commenced May 1921 and was completed December 1932. Enlarging main channel to 23-foot depth and 130 foot width from entrance to 150 feet north of Maspeth Avenue, including triangular area at entrance, and a turning basin at former location of Mussel Island, is about 90 percent complete. Dutch Kills has been dredged to project depth, 20 feet, for a width of 75 to 100 feet except at a few places near head of improvement where unstable bulkheads restricted dredging operations.

Maspeth Creek dredged to project dimensions throughout. Work remaining consists of completing to project dimensions 23-foot main channel between Greenpoint and Meeker Avenue, and between 800 and 150 feet north of Maspeth Avenue; 20 foot channel in East Branch; and 20- and 12-foot channels in English Kills.

28. PLATTSBURGH, NY

Location. An area of about 25 miles along the westerly Shore of Cumberland Bay, an arm of Lake Champlain. The Harbor is that portion of the bay between wharf front of Plattsburgh, NY and breakwater constructed by the United States (See Lake Surveys Chart 172)

Existing Projects. Provides for breakwater 1,565 feet long built of timber cribs filled with rubble stone and capped with large stone and extending from a point 750 feet south of outer face of South dock generally northeasterly to a point about 1,400 feet from shore; and for dredging to a depth of 9 feet at low lake level between the breakwater and the wharves. Reference plane of low lake level is 93.0 feet above mean sea level at Sandy Hook, NJ. Usual variation of lake level is 5.8 feet, and extreme variation from 0.6 feet below up to 8.8 feet above low lake level.

Local cooperation. None required.

Terminal Facilities. Four timber wharves, aggregating 1,780 feet in length, 400 feet of which are open to the public; all are privately owned. The State of New York has constructed a barge canal terminal about 1 mile north of the breakwater. These appear adequate for the existing commerce.

Operations and results during period. American Recovery and Reinvestment Act (ARRA) funds were provided during FY 2009 to perform contract repairs to the Plattsburgh Harbor breakwater. A fully funded contract in the amount of \$1,987,000 was awarded on July 30, 2009 to J.E. Sheehan Contracting Corporation. ARRA funds in the amount of \$22,573 were expended for finalization of design documents and contracting activities for the project during FY 2009. Construction activities are scheduled to commence and be completed during FY 2010.

Condition as of September 30. Work under existing project commenced 1836 and was completed in 1913. Breakwater was completed in 1893 and dredging in 1913.

29. PORT CHESTER HARBOR, NY

Location. At boundary between States of New York and Connecticut, comprises the tidal mouth, about 1.7 miles long, of Byram River whose source is in Byram Lake about 12 miles north of Port Chester. River empties into Long Island Sound about 32 miles by water east of the Battery, New York City. (See Coast and Survey Chart 12367)

Previous Projects. For Details see Annual Reports for 1915, page 1758 and Annual Report for 1938 page 157.

Existing Projects. An anchorage basin near breakwater constructed at Byram Point under a previous project, 12 feet deep, for fenders on east bank opposite southern end of Fox Island, and a channel 12 feet deep at mean low water and 150 feet wide from Long Island Sound to mouth of river at southerly point of Fox Island; thence 10 feet deep and 100 feet wide to 900 feet below fixed bridge at Mill Street in Portchester, including a turning basin opposite the town landing; thence 3 feet deep and 175 to 100 feet wide to 100 feet below bridge. Section included in project is about 1.7 miles long. Mean tidal range, 7.1 feet; mean range of spring tides, 8.5 feet; irregular fluctuations due to wind and barometric pressure vary from 4 feet below mean low water up to 8.6 feet above mean high water. Cost of new work for completed project was \$358,475, exclusive of amounts expended on previous projects, and \$5,500 to be contributed by local interests. Widening turning basin and construction of fenders on bank opposite southern end of Fox Island, at a cost of \$93,000, (1954) is inactive and excluded from foregoing description of existing project and cost estimate.

Local Cooperation. Rivers and Harbor Act of 1930 provides local interests contribute \$5,500 in cash towards widening channel at turning basin. This condition has not been fulfilled and there is no indication as to when compliance may be expected.

Terminal Facilities. There are 34 terminals in Port Chester between Fox Island and Mill Street Bridge, with a total berthage of about 5,300 feet, of which 3,120 feet are available for dockage. Village of Port Chester owns several bulkheads which are used as public landings for small pleasure craft. Several boatyards with storage space for 75 boats and equipped with a total of 3 marine railways are available to pleasure craft. Facilities are adequate for existing commerce.

Operations and results during period. A contract for the maintenance dredging of the Harbor was awarded on 28 March 1990. Work commenced on 23 April 1990 and was completed on 17 May 1990. A total of 40,797 cubic yards of material was removed at a project cost of \$580,000. In

FY 09, \$14,878 were used to continue stakeholder coordination for possible future maintenance.

Conditions as of September 30. Work on active portion of existing project was completed in October of 1938. Controlling mean low water depth (June 1952 and Nov. 1965) was 12 feet for a width of 140-50 feet from Long Island Sound to Fox Island, 8 feet in anchorage, thence 10 feet for a width of 90-40 to turning basin, 10 feet in turning basin, thence depths varying from 3 to zero feet for full width to upper limit of 3-foot project. Work remaining under existing project consists of turning basin and constructing fenders on bank opposite southern end of Fox Island (inactive)..

30. RARITAN RIVER, NJ

Location. Rises in northern-central part of New Jersey and flows generally southeasterly into Raritan Basin, between Perth Amboy and South Amboy, about 24 miles by water south of the Battery, New York City. (See National Ocean Surveys Chart 12332)

Previous Projects. For Details see Annual Reports for 1915, 1918, and 1938 pages 1777, 359 and 259 respectively

Existing Projects. A channel 25 feet deep and 300 feet wide extending 5.8 miles from turn in New York and New Jersey Channels near Great Beds Light to Government wharf on Main Channel, widened to 600 feet for 1,000 feet of long opposite to form a turning basin of same depth; thence a channel 150 feet deep and 200 feet wide 3 miles to Washington Canal, thence 10 feet deep in soft material, 11 feet deep in rock, and generally 100 feet wide with widening at bends 5 miles to site of former D&R Canal entrance at New Brunswick, and a South Channel 25 feet deep and 300 feet wide 0.8 mile from junction with Main Channel at Keasby to upper limit of Titanium Pigment Co. property; ; thence 15 feet deep and 150 feet wide 0/4 miles to dock of Middlesex County Sewerage Authority; thence 10 feet deep and 150 feet wide 2 miles to a point 1,300 feet below upper junction with Main Channel at Crab Island. Plane of reference is mean low water. Mean range of tides is 5.1 feet at mouth of river and is 5.6 feet at New Brunswick; mean range of spring tides, 6.1 and 6.6 feet respectively. Irregular fluctuations due to winds and atmospheric pressure vary from 3.6 feet below mean low water up to 6.9 feet above mean high water. New work for completed portion of project, consisting of channels described above cost \$1,237,000, exclusive of amounts expended on previous projects, including \$66,000 contributed by local interests. Dredging South Channel to 10 feet deep and 150 feet wide for 1,300 feet to upper junction with Main Channel at Crab Island is inactive and

excluded from foregoing description and cost estimate. (See Table 2-B for Authorizing Legislation)

Local Cooperation. Complied with except local interests. Must furnish spoil-disposal areas for maintenance to 25-foot channel from New York & Long Branch Railroad bridge to junction of Main and South Channels, and is South Channel to Titanium Pigment Co. Property. Rivers and Harbor Act of 1962, provides local interests furnish spoil-disposal areas and necessary retaining dikes, bulkheads and embankments therefore, required for maintenance of improvement, and hold the United States free from damages.

Terminal Facilities. See Port Series No., 5, revised 1988, Vol.2.

Operations and results during period. In FY 07, \$184,557 was expended to continue environmental coordination and ready the project for advertisement in FY 08 construction In FY 08, \$418,371 were expended to remove approximately 25,000 cy to upland placement, in conjunction with the Arthur Kill Reach dredging. In FY 09, \$2,419,037 were expended for the closeout of the FY 08 contract and conclude environmental coordination for the cycle.

Condition as of September 30. An after dredge survey has been completed. A condition surveys will be performed in FY 09/10.

31. RARITAN RIVER, TO ARTHUR KILL CUTOFF CHANNEL,NJ

Location. Channel is in western portion of Raritan Bay, off Perth Amboy and about 23 miles by water southwest of the Battery, New York City. (Chart 12331)

Existing Projects. A channel 1 mile long, 20 feet deep and at mean low water, and 800 feet wide, connecting Raritan River channel with southern end of Arthur Kill Channel, New York and New Jersey Channels project. Mean tidal range, 5.1 feet; mean range of spring tides, 6.1 feet; irregular fluctuations due to wind and barometric pressure vary from 3.6 feet below mean low water up to 6.9 feet above mean high water. New work completed project cost \$810,500. (See Table 2-B for Authorizing Legislation.)

Local Cooperation. None required.

Terminal Facilities. See Port Series No., 5, revised 1988, Vol.2.

Operations and results during period. Approximately 72,000 cy of material was removed by Corps' Hopper Dredge "McFarland" during FY 91, to restore project dimensions in Raritan River to Arthur Kill Cut-Off Channel, at a project cost of \$699,173. Preliminary E&D was performed for the next maintenance cycle. O&M funds in the amount of \$15,401 were expended during FY 2009.

Condition as of September 30. Existing project was completed in 1935.

32. SANDY HOOK BAY AT LEONARDO, NJ

Location. This bay, 17 miles south of the Battery, New York City, is the southern portion of Lower New York Bay, west of adjoining Sandy Hook, NJ. Leonardo is on south shore of Sandy Hook Bay about 4 miles west of Sandy Hook and 1.4 miles west of Atlantic Highlands anchorage.

Existing Projects. Provides for a channel 8 feet deep at mean low water and 150 feet wide extending from 8-foot contour in Sandy Hook Bay to entrance of small-boat harbor, about 2,500 feet. Mean tidal range, 4.7 feet; mean-range of spring tides, 5.7 feet; irregular fluctuations due to wind and barometric pressure vary from about 4 feet below mean low water to about 10.75 feet above mean low water.

New work for completed project cost \$56,470. Existing Project was adopted by 1950 River and Harbor Act(H.Doc.No.108,81stCong.,1st sess.). For latest published map see project document.

Local cooperation. Fully complied with except that local interest must furnish spoil-disposal areas for maintenance.

Terminal Facilities. The harbor, publicly operated and capable of berthing 80 vessels, is L-shaped with one side running north and south 790 feet and the other side running east and west 185 feet. A public landing is available on equal terms to all.

Operations and results during the period. Operations and maintenance funds in the amount of \$135,119 were expended during FY 2006 for E&D including sediment sampling and chemical testing. In FY 07, funds in the amount of \$48,736 were used to continue environmental coordination possible future dredging of the channel. No funding was received in FY 08. In FY 09, funds in the amount \$36,200 were used for labor related to stakeholder coordination for possible future E&D.

Condition as of September 30. Approximately 45,000 cy of shoals will need to be maintenance dredged. The

NJDEP is responsible for providing a disposal site which has not yet been furnished.

33. SHARK RIVER, NJ

Location. Shark River Channel begins at Shark River Inlet that connects with the Atlantic Ocean at a point 20 miles south of Sandy Hook, NJ. The channel extends 1.7 miles south east of the Inlet.

Existing project. A channel 18 feet deep, 150 feet wide; thence 12 feet deep and 100 feet wide to Rt. 35 bridge; 8 feet deep and 100 feet wide to the Boat Basin, anchorage area 7.3 acres.

Local cooperation. Fully complied with except that local interests are required to furnish suitable dredged material placement areas for maintenance.

Terminal Facilities. No terminals suitable for commercial purposed have been established. Approximately four commercial boatyards are located in Shark River. The terminals are considered adequate for present needs.

Operations and results during period. Operations and maintenance funds in the amount of \$640,896 were expended for engineering and design activities for the periodic maintenance dredging of the Shark River during FY 2009 and dredging the ocean bar shoal and spot shoal within the channel entrance with the government dredge, Currituck. ARRA funds were also used to award a contract for maintenance dredging of shoals at inlet entrance and to do advance maintenance.

Conditions as of September 30. Work under the existing project was commenced in June of 1947 and completed in October of 1947.

34. SHINNECOCK INLET, NY

Location. On the south shore of Long Island, 95 miles east of the Battery, New York City. It is an opening through the sandy barrier beach, connecting Shinnecock Bay with Atlantic Ocean. (See National Ocean Survey Chart 12352).

Existing Projects. Provides for a channel 10 feet deep at mean low water and 200 feet wide, thence extending through the inlet to Shinnecock Bay for a distance of about 0.7 mile thence a channel 6 feet deep and 100 feet wide to the Long Island Intracoastal Waterway, a distance of about 1 mile; and a deposition basin surrounding the outer channel to a depth of 20 feet, rehabilitation of the existing jetties and revetments.

Estimate of cost for the work is \$22,300,000 (October 91 P.L.) of which the Federal share is \$16,900,000 and non-Federal share is \$5,400,000.

Local cooperation. The navigation improvement will accrue both recreational and commercial benefits which result in a first cost allocation of 69 percent Federal and 31 percent non-Federal. The authorizing document also requires that local authorities; provide without cost to the United States, all lands easements, right-of-way, and suitable disposal areas for the initial work and for subsequent maintenance, when and as required; hold and save the United States free from damages. Due to the construction and maintenance of the project; maintain and operate the works after completion in accordance with regulations prescribed by the Secretary of the Army; provide and maintain suitable terminal facilities when and as required for the accommodation of vessels that would navigate the inlet and adjacent bays, open to all on equal terms maintain, for the duration of the economic life of the project, continued public ownership of the publicly owned shores, and their administration for public use, and continue availability for public use of the privately owned shores upon which a portion of the Federal share of the costs is based. A Local Cooperation Agreement for the dredging element of the project was executed with the New York State Department of Environmental Conservation on 7 June 90.

Terminal Facilities. Shinnecock Bay, and adjacent ocean area, constitute an important marine fishery. The public fishing facility includes three docks, one of which, stores and market the catch for the fishermen.

Operations and results during the period. Plans & Specifications were completed and a contract was awarded in July 2009 for the maintenance dredging of the Shinnecock Inlet. A combination of O&M funds, American Recovery and Reinvestment Act (ARRA) funds, and New York State (NOn-Federal) funds were used to award this contract. Prior to that, a continuing for rehabilitation/revetment of the Western Jetty at Shinnecock Inlet was awarded on 20 June 2001 to for \$3,599,565. Newborn Construction has completed 1200 feet of repairs to the jetty, initiated work on another 70 feet of the jetty, and removed the sheet piles driven by the previous contractor in the inlet. Work was completed by April 04. Maintenance dredging of the channel and disposition basin was completed in March 2004 with the removal of 302,590 cy .Preliminary E&D was performed for the next maintenance cycle. Operations and maintenance funds in the amount of \$168,194 were expended during FY 2009.

Condition as of September 30. Work under existing project commenced on September 23, 1957 and was completed on 1836 and was completed November 17, 1957.

35. SHREWSBURY RIVER, NJ

Location. Mainly a large tidal basin in eastern part of New Jersey, the outlet being at the southeastern end of Sandy Hook. (see National Ocean Survey Chart 12324).

Previous project. For details see Annual Reports for 1915, 1918 and 1938, pages 1778, 373, and 267, respectively.

Existing project. A channel 12 feet deep and 300 feet wide, following westerly shore, from deep water in Sandy Hook Bay 2.2 miles to a point 500 feet south of former location of railroad bridge at Highlands; then 9 feet deep and generally 150 feet wide, suitably widened at bends and turns, in south branch of river 6.8 miles to Branchport Avenue Bridge in city of Long Branch; and a channel in north branch (Navesink R.) 6 feet and 150 feet wide 6.1 miles from junction to Red Bank. Plane of reference is mean low water. Mean range of tide at Highlands, 3.8 feet; at Seabright, 1.7 feet; at Branchport, 1.7 feet; and at Red Bank, 3 feet. Mean range of spring tides is 4.7, 2.1, 2.2, and 3.6 feet respectively, irregular fluctuations due to wind and atmospheric pressure vary from 1.9 feet below mean low water up to 6.5 feet above mean high water. (See Table 2-B for Authorization Legislation).

Local cooperation. River and Harbor Act of 1950 provides local interests furnish lands, rights-of-way, and spoil-disposal areas for construction and future maintenance; hold the United States free from damages; provide and maintain a suitable public wharf on each of the creeks to be improved, which shall be open to all on equal terms; remove Locust Avenue bridge over Claypit Creek; and make cash contributions of \$25,000, \$33,000 and \$27,500 Claypit, Oceanport, and Little Silver Creeks, respectively. Provided that further construction of any unit of proposed improvement may be undertaken independently of the other units when the required local cooperation has been provided. These conditions have not been fulfilled. Requirements under prior acts have been fully complied with.

Terminal Facilities. There are numerous terminals along the waterway. Some of which are open to the public. In addition, many private pleasure boat landings have been constructed by owners of riverfront property. None of the terminals has directed rail connections. Facilities considered adequate for existing commerce.

Operations and results during period. In FY 06, Engineering and Design (E&D) work was performed at a cost of \$339,256 to prepare the project for the future possible dredging and placement of the material. Groin site analysis was performed for the entire Shrewsbury and Navesink Rivers, with the results coordinated with the NJDEP. Placement sites for the material have been discussed and will be prioritized when additional funds become available to complete Plans & Specs for possible future dredging. In FY 07, \$36,034 were used to continue environmental coordination and placement site determination. In FY 08, \$31,231 has been used to initiate E&D for possible FY 09 maintenance dredging. In FY 09, \$90,904 (ARRA) and \$121,788 (REGULAR) appropriation funds were used for P&S and surveys related to scheduled maintenance dredging in FY 10.

Conditions as of September 30. Engineering and Design (E&D) continues in FY 09 possible maintenance dredging under Recovery Act funds.

36. SHOAL HARBOR AND COMPTON CREEK, NJ

Location. Shoal Harbor is on the south shore of Sandy Hook Bay about 4 miles west of Sandy Hook. Compton Creek is a small stream rising on the west side of the Navesink Highlands and flowing north through meadows into Shoal Harbor. (See Coast Chart 12327).

Previous projects. For details, see Annual Reports for 1934 and 1938, pages 211, and 265 respectively.

Existing Location. A 1.8 mile channel to 12 feet deep at mean low water extending from deep water in Sandy Hook Bay to first bend in creek, thence 8 feet deep to the main Street Bridge Across Compton with a width of 150 feet in the bay and 75 feet inside the mouth of the creek, with widening at bends. Mean tidal range 4.7 feet; mean range of spring tides, 5.6 feet; irregular fluctuations due to wind and atmospheric pressure vary from 3.8 feet below mean low water up to 5.9 feet above mean high water. New work for the completed portion of the project of the project cost \$107,572 exclusive of amounts expended on previous projects and exclusive of \$77,247 expended from contributed funds. Dredging of channel in the creek to a depth of 8 feet to a point 1,000 feet upstream from Main Street Bridge is inactive and is excluded from foregoing description and cost estimate. (See table 2-B for Authorizing Legislation.)

Local cooperation. The Rivers and Harbor Act of September 3, 1954, provides that local interests contribute in cash 50 percent of first cost of work, and agree to : (a) furnish, without cost to the United States all lands,

easements, rights-of-way, and suitable spoil-disposal areas for initial work and for subsequent maintenance when and as required; (b) hold and save the United States free from damages due to the construction and maintenance of the project; and (c) deepen to 14 feet the berths at the terminals along the improved section of channel; and provided further that no work shall be undertaken until local interests have complied with the outstanding condition local cooperation required under existing project which pertains to construction of a public wharf. Assurances of compliance by local interests with requirements under Act of September 3, 1954, dated July 30, 1956, were accepted September 25, 1956 by the District Engineer for the United States of America.

Operations and results during the period. A contract was awarded on 31 July 1998 to Wickberg Marine Contracting Inc. for the removal and disposal of all material in Section I lying above the plane of 12 feet below mean low water, plus 2 foot allowable overdepth; and Section II all material lying above the plane of 8 feet below mean low water in Shoal Harbor & Compton Creek with disposal of the material at the upland site as shown on contract drawings. Operations and maintenance funds in the amount of \$239,088 was expended in FY '99. Funds in the amount of \$205,136 was expended in FY 09 to continue coordination along with stakeholders.

Condition as of September 30 Work under the entire existing project is 78 percent complete. Work under active portion of the existing project was commenced in August 1936 and completed in November 1956. Work remaining to be done under the project consists of extending the 8-foot channel 1,000 feet upstream from the Main Street Bridge.

37. SUPERVISOR OF NEW YORK HARBOR (PREVENTION OF OBSTRUCTION AND INJURIOUS DEPOSITS)

The District Engineer, New York District, was designated Supervisor of New York Harbor under the provisions of the River and Harbor Act of June 29, 1888 (33 U.S.C. 441-451), as amended July 12, 1952. Under this Act, the Supervisor of New York Harbor is charged with the mission of preventing the deposit of obstructive and injurious materials in New York Harbor and its adjacent and tributary waters, including Long Island Sound. The River and Harbor Act of August 18, 1894 (33 U.S.C. 452) makes it unlawful for any person or persons to engage in fishing or dredging for shellfish in any of the channels leading to and from New York Harbor, or to interfere in any way with the safe navigation of deep draft traffic; the River and Harbor Act of March 3, 1899 (33 U.S.C. 403, 407, 409) prohibits

obstructions to navigable waters such as unauthorized structures, unauthorized fill, deposit of refuse, and willful or negligent abandonment of vessels. Other laws relating to the supervision of New York Harbor and its tributary water are the Clean Water Act, the Marine Protection, Research and Sanctuaries Act of 1972, the Coastal Zone Management Act of 1969, the Fish and Wildlife Act of 1956, the Federal Power Act of 1920, the National Historic Preservation Act of 1966, the Endangered Species Act of 1973, the Deepwater Port Act of 1972, the Wild and Scenic Rivers Act and the Land and Water Conservation Fund Act.

Direct supervision of the waters under the jurisdiction of the New York District is accomplished by means of a patrol vessel whose scope of duty includes surveillance of the water front for unauthorized construction or fill, surveillance of tows enroute to dumping grounds in Atlantic Ocean to ensure that material is not illegally deposited in the waters of New York Harbor, and investigation of wrecks and abandoned vessels. The inspectors duties include inspection of authorized construction, fill or excavation in waterways, including wetland areas, to ensure that work is performed in accordance with the Corps permit, as well as investigation of unauthorized construction activities. The inspectors also patrol all waterways in their respective area and inform the public of the Corps' role and jurisdiction as well as assistance in the preparation of permit application, (See Table 2-E at end of chapter).

38. RECONNAISSAANCE AND CONDITION SURVEYS (See Table 2-F at end of chapter)

39. OTHER AUTHORIZED NAVIGATION PROJECTS (See Table 2-G at end of chapter)

40. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation Activities pursuant of Section 107, Public Law 645, 86th Congress as amended (Pre-Authorization). (See Table 2-N at end of chapter)

Beach Erosion Control

41. ATLANTIC COAST OF LONG ISLAND JONES INLET TO EAST ROCKAWAY INLET LONG BEACH ISLAND, NY

Location. Atlantic Coast of Long Island, in Nassau County, New York, between Jones Inlet and East Rockaway Inlet.

Existing project. The project feasibility study was conducted pursuant to a resolution by the Committee on Public Works and Transportation of the U.S. House of Representatives that was adopted October 1, 1986. Project construction was authorized by the Water Resources Development Act of 1996. The total Federal cost of the project is \$299,000,000 and total non-Federal cost is \$161,000,000. The authorized plan provides for storm damage protection for 7 miles of public shoreline against a 100 year storm event. Protection is provided by constructing a 110 foot wide protective beach berm at an elevation of 10 feet above sea level backed by a 25 foot wide dune system at an elevation 15 feet above sea level. The project also includes the rehabilitation of 16 existing groins and the construction of four new groins at the eastern end of the island. In addition, the project includes periodic nourishment of the restored beaches on a 5 year cycle for a period of 50 year following initial construction.

Local cooperation. The local sponsor is the New York State Department of Environmental Conservation, who funded 50 percent of the cost of the feasibility study. The Project Cooperation Agreement has not yet been negotiated, but the customary provisions are that local interests will provide, without cost to the United States, all lands, easements, and rights-of-way, including borrow areas, necessary for construction of the project, fund 35% of the total project cost, assure continued conditions of public ownership and use of the shore, maintain public use facilities open and available to all on equal terms, and maintain all improvements after completion of construction in accordance with Federal regulations for the economic life of the project.

Operations and results during the period and condition as of September 30. The Feasibility Report with Environmental Impact Statement (EIS) was completed in February 1995. The Pre-construction, Engineering and Design (PED) phase was completed in September 1997. The final EIS was released for public comment in May 1998 and the record of decision was signed in December 1998. Congress added \$2 million in FY 1998 and 7.5 million in FY 1999 to continue the design of the project and initiate construction. The local sponsors requested that the Corps of Engineers reanalyze the area between the proposed new groins and existing groin field in the City of Long Beach before starting construction. A study was conducted which utilized new modeling techniques that were unavailable during the feasibility study to finalize the groin field design. The final report summarizing the findings of the study was completed in March 2000. A reevaluation report that incorporates the design

modifications made since the completion of the feasibility study was completed in 2006 with the City of Long Beach to declining participation in the recommended project. The reevaluation report is currently being revised to reflect the City of Long Beach's renewed support. The reevaluation report will be used as a basis for a PPA.

42. EAST ROCKAWAY INLET TO ROCKAWAY INLET & JAMAICA BAY, NY

Location. Atlantic Coast of New York City, between East Rockaway and Rockaway Inlets, and the lands within and surrounding Jamaica Bay. The coastal area (about 10 miles long) is a peninsula in Queens County separating the ocean and the bay. (See National Ocean Survey Charts 12327, 12350 and 12326).

Existing project. The projects consists of nourishing 100 foot wide beach at an elevation of 10 feet above mean low water from Beach 149th Street to 19th Street. Initial beach replenishment (5 contracts) previously took place between 1979 and 1988. Construction of a stone groin at Beach 149th St. was completed in September 1982. A Section 934 Report approved in February 1994, recommended continued nourishment over a nine year period. The total Federal participation includes first cost and periodic beach nourishment, the total estimated at \$63,700,000 (Oct. 1996 P.L.) and non-Federal costs of \$45,900,000. The Section 934 Report also recommended a reformulation study to evaluate alternative methods of providing storm damage protection to the Rockaway area.

Local cooperation. Local interests have agreed to provide lands and rights-of-ways including borrow area: bear a portion of the total cost as a cash contribution; hold the United States freed from damages; maintain, during economic life of a project, continued public ownership and use of non-Federal publicly-owned shores upon which Federal participation in beach protection is based; maintain and operate all works after completion, control water pollution to the extent necessary to safeguard the health of bathers. The project cooperation agreement for additional renourishment over the nine year period was executed on 25 May 1995.

Operations and results during period and condition as of September 30. A final Environmental Impact Statement was filed with the Council of Environmental Quality on April 16, 1971. Initial beach restoration was completed in FY 1977. Contract for first increment of periodic nourishment was completed in August, 1982. Contract for construction of a stone groin at Beach 149th street was completed in September, 1982. Periodic nourishment contracts Nos. 3, 4, and 5 were completed

between 1978 and 1988. Contract NO.6 was completed in 1997. The contract included beachfill placement of approximately 3 million cubic yards of sand from Beach 19th to Beach 149th Street. Contract No.7 was completed by Weeks Marine Inc. in February 2001. The contract included beachfill placement of approximately 1.01 million cubic yards of sand from beach 119 to beach 66th street and beach 40th to beach 19th street. Contract No. 8 was awarded to Weeks Marine Inc. on September 29, 2003. The contract includes beachfill placement of 1.06 million cy of sand between Beach 26th and Beach 108th Streets. . Contract No. 8 was completed in 2004. A Design Agreement between the Corps and NYSDEC was executed on May 13, 2003 for a Reformulation Study. Work is proceeding on the Reformulation Study.

43. FIRE ISLAND INLET TO MONTAUK POINT, NY

Location. That portion of Atlantic Coast of Long Island in Suffolk County extending from Fire Island Inlet easterly to Montauk Point, NY about 83 miles long. This frontage comprises about 70 percent of total ocean frontage of Long Island. Fire Island Inlet is about 50 miles by water east of the Battery, New York. (See Coast and Geodetic Charts 13209, 12354 and 12353.)

Existing project. Provides for Federal participation in improvement to prevent beach erosion and hurricane damages by; widening beaches along developed areas between Kismet and Mecox Bay, to a minimum, width 100 feet at elevation 14 feet above mean sea level; raising dunes to an elevation of 20 feet above mean sea level from Fire Island Inlet to Hither Hills State Park, at Montauk and opposite Lake Montauk Harbor; planting grass on dunes; constructing gated interior drainage structures at Mecox Bay, Sagaponack Lake, and Georgica Pond; constructing up to 50 groins, if needed; and Federal participation in cost of beach nourishment.

Local cooperation. The New York State Department of Environmental Conservation is the local cooperating agency. The State agreed to provide necessary land, rights-of-way and borrow areas, and furnish 30 percent of the project costs for the Interim Project along the Moriches Inlet to Shinnecock Inlet reach of the authorized project. The State has also agreed to be the local sponsor for the comprehensive reformulation study of the authorized project and for interim project immediately west of Shinnecock Inlet.

Project history. On July 30, 1963, the State reflecting the desires of Suffolk County, requested the inclusion of a minimum of 13 groins in initial construction of Moriches-Shinnecock reach. Chief of Engineers concurred in

inclusion of up to 13 groins. Assurances were executed by Superintendent of Public Works, State of New York, on August 14, and accepted by the District Engineer August 20, 1963. On February 5, 1964, the State requested consideration of a plan, as proposed by Suffolk County, for initial construction of 13 groins of which 11 would be in the Moriches-Shinnecock reach, and 2 in the Southampton-Beach Hampton reach vicinity of Georgica Pond, and that sandfill and dune construction be withheld for the present except for 1 mile on each side of Shinnecock Inlet. On February 27, 1964, the Chief of Engineers accepted the proposals, in part, and supplemental assurances were executed by State of New York on April 20, 1964, and accepted by District Engineer April 27, 1964, as follows: the State of New York now elects to proceed with authorized combined beach erosion control and hurricane protection project for South Shore of Long Island; that Superintendent of Public Works hereby reaffirms his assurance of August 14, 1963, relative to complete project; that State of New York, as cooperating agency, will now agree that artificial fills will be added when and to extent found necessary by the Chief of Engineers, but not earlier than 3 years after completion of groins unless both the State of New York and the Chief of Engineers mutually agree to an earlier placement; that the superintendent agrees for State of New York to contribute the full amount of any increase in Federal costs resulting from the separate construction of the groins and subsequent fill; and that the State agree that construction of the two groins in the Georgica Pond area will depend on a favorable finding, following a study by the Chief of Engineers. Study was completed July 31, 1964, recommending construction, and approved by the Chief of Engineers on September 22, 1964. By letter dated November 5, 1964, the New York State Department of Public Works confirmed that title to all properties and interests in properties necessary for constructing the 11 grains was fully vested in Suffolk County.

By letter dated December 7, 1964, the Department stated that the county had obtained easements or fee title for the parcels necessary for constructing the two groins. New York State Department of Public Works furnished \$884,600 and \$830,330 required contributed funds October 30, 1964, and September 7, 1965, respectively, for construction of 11 groins in Moriches-Shinnecock reach and \$439,900 on January 22, 1965, for construction of 2 groins in Georgica Pond area of the Southampton-Beach Hampton reach. The completed 2 groins and 11 groins were accepted by the New York State Department of Public Works for maintenance on May 11, 1966 and April 10, 1967 respectively. On March 22, 1965, the State Recommended that planning priority be in the order; Southampton-Beach Hampton (Drainage structures first); Shinnecock Inlet-Southampton; Beach Hampton-Montauk Point; and Fire Island-Moriches Inlet. Planning on the

drainage structures was initiated but was suspended, based on; meeting of October 28, 1965 with Georgica Pond Association and the Preservation Society of East End wherein concern was indicated regarding the effects of the proposed drainage structure on ecology, salinity, pond level and aesthetic values; meeting with the Congressional representative, State legislators, Federal agencies and local officials held on May 26, 1966; and resolution of the Suffolk County Board of Supervisors adopted June 13, 1966 requesting advancement of the planning of the Fire Island-Moriches Inlet reach (Fire Island National Seashore). On June 16, 1967, the New York State Department of Public Works requested the following works undertaken as immediate priority items; in Moriches-Shinnecock reach, beach and dune fill at 11 groins, beach and dune fill east of the 11 groins; in Southampton-Beach Hampton reach (at East Hampton), construction of two additional groins, and the outlet structure at Georgica Pond. On March 18, 1968 the Suffolk County Board of Supervisors adopted a resolution supporting construction of 4 groin in Reach 2 (Moriches-Shinnecock) and 2 groins in Reach 4 (Southampton-Beach Hampton). On April 22, 1968 the Board adopted a more inclusive resolution authorizing participation in beach erosion and hurricane protection for the Moriches-Shinnecock reach and in the Georgica Pond area of the Southampton-Beach Hampton reach.

On December 24, 1968, the Commissioner of the New York State Conservation Department executed the second supplement to the assurances of local cooperation, which was accepted by the District Engineer on January 24, 1969. The reaffirmed previous assurances contained provisions for constructing for additional groins in an area extending 6,000 feet west from the most westerly groin in the existing levee-groin field in the Moriches Inlet to Shinnecock Inlet Reach, and for placing beach and dune fill in this area to the full design cross section as defined in the authorized project report. A General Design Memo completed in 1980 recommended placement of sand fill in the existing 11 groin field and along 9,500 feet of shore to the west.

Condition as of September 30. Engineering and design began November 1962 and the project construction commenced in January 1965. Two groins in Reach 4; Southampton Beach Hampton, Section 3, were initiated in March, and completed in September 1964, at a total cost of \$720,950 of which \$382,109 were incurred against required contributed funds. Eleven groins in Reach 2: Moriches-Shinnecock, Section 2, were initiated in January 1965, and completed in October 1966 at a total cost of \$2,845,656 of which \$1,370,191 were incurred against required contributed funds. Initial beach fill placement for 750,000 cubic yards in Reach 2. Section 1A was completed on May 23, 1969. On August 4, 1969 work started on 4 groins and sandfill in Reach 2, section 1A and was completed

November 14, 1970. 3,083 tons of stone and 1,111,000 cubic yards of sand was placed. Total cost for all Section 1A was \$3,663,455 including \$1,791,428 in required contributed funds. Funds in the amount of \$70,000 were allotted on April 14, 1977 for initiation of the Phase 1 study in Reach 1, Fire Island Inlet to Moriches Inlet. The Final Environmental Impact Statement was filed with Environmental Protection Agency on January 28, 1978. On March 7, 1978, the Department of the Interior, supported by the other environmental resource agencies referred the Environmental Impact Statement to Council on Environmental Quality as unacceptable. On June 6, 1978 the Council agreed and recommended project reformulation. Public meetings were held in October 1979 to delineate the scope and level of effort needed to reformulate the project. A final scoping session was held January 17, 1980 and agreement was reached between the Federal agencies although New York State had strong objections. A plan of study was completed in July 1980. However, because of New York State's inability to financially participate in construction at Westhampton Beach, reformulation was postponed.

Two breaches (new inlets) occurred in the vulnerable Westhampton area during periods of storm tides, one in Jan. 1980, just east of the Moriches Inlet, and the most recent in Dec. 1992, at the eastern end of Moriches Bay. Both breaches were filled in by contract, the last one completed in Sept. 1993, at a cost of \$7 million.

In April 1993, the State provided a letter of intent to participate in an interim project for the Moriches Inlet to Shinnecock Inlet Reach. Based on this agreement in 1993 on a conceptual plan for the most critically eroded reach of the authorized project between Moriches and Shinnecock Inlets, the Westhampton Interim Project, the Reformulation Study was reinitiated.

A construction contract for the Westhampton Interim Project was awarded in May 1996 to Great Lakes Dredge & Dock Company in the amount of \$16 million. The contract was substantially completed in December 1997 and included beach placement of 4 million cubic yards of sand, dune creation, fencing and grass planting, groin modifications and construction of public dune walkovers. The first renourishment was completed in February 2001; the second in March 2005; each at a cost of approximately \$5 million. The third renourishment was partially completed February 2009 at a cost of \$9 million. Renourishment is scheduled to continue as needed until 2027. In January 1996, a Breach Contingency Plan was approved, which provides a mechanism for rapid response to breaches along the barrier island, within the authorized project.

Due to the lack of non-Federal support, efforts on the Fire Island interim project have been deferred. Construction of an interim project West of Shinnecock Inlet was completed in March 2005 at a cost of \$5.5 million. Renourishment is scheduled to continue as needed until 2011, along with project monitoring in accordance with the New York State permit.

The Reformulation Study, which has been consistently funded since 1993, is currently underway. Data has been collected including beach profile surveys and aerial topography maps of the entire 83mile long shoreline. Scoping for the preparation of an Environmental Impact Statement has been conducted. A draft report and EIS is scheduled to be completed in November 2012.

44. RARITAN BAY AND SANDY HOOK BAY, NJ

Location. Situated at the southern end of Lower New York bay between the Raritan River and Sandy Hook, in Middlesex and Monmouth Counties, NJ Shoreline area is typified by small developing communities built upon and near salt and freshwater marshes. The study area is largely located in low elevation regions with numerous small creeks providing drainage. Low-lying residential and commercial structures in the area are experiencing flooding caused by coastal storm inundation. Problem has progressively worsened due to loss of protective beaches and increased urbanization in the area with structures susceptible to flooding from rainfall and coastal storm surges, erosion and wave attack, combined with restrictions to channel flow in the tidal creek.

Existing project. Existing Federal project was authorized by the Flood Control Act of 12 October 1962 as a dual purpose Beach Erosion Control and Hurricane Protection Project in accordance with House Document No.464, 86th Congress, Second session. This project provided for beach fill, groins, and levees for various sections of the study area. The constructed project consists of segmented sections of beach fill and levees surrounding the communities at Old Bridge Township and Keanburg and East Keanburg. A study was authorized by a resolution of the Committee on Public Works and Transportation, U.S. House of Representatives, adopted August 1, 1990. The study seeks to determine the advisability to the recommendations in the authorizing report for Raritan Bay and Sandy Hook Bay, Section 506 of WRDA 1996 authorized periodic nourishment, if determined necessary, for a period of 50 years from initiation of construction of the period of 50 years from initiation of construction of the project, in accordance with section 156 of WRDA 1976 and Section 934 of WRDA 1986.

Local cooperation. The non-Federal sponsor, NJDEP, is currently cost sharing a number of Raritan Bay and Sandy Hook Bay, NJ feasibility studies with USACE: Port Monmouth, Union Beach, and Cliffwood Beach. The non-Federal sponsor would also be required to cost share in feasibility studies for the communities of Leonardo, Highlands and Keyport in order for them to proceed. (The non-Federal sponsor also operates and maintains the existing, constructed project).

Operation and results during period, and condition as of Sept. 30. Construction of the authorized project for Old Bridge Township was initiated in 1965 and completed in 1966. Construction of the shoreline portion of the authorized project for Keanburg and East Keanburg was initiated in 1968 and completed in 1969. Construction of the closure portion (levees, closure gate and pumping station) of the authorized project for Keanburg and East Keanburg was initiated in 1970 and completed in 1973. Cliffwood Beach and Union Beach were the only portions of the authorized project that were not constructed. After construction of the closure work all of the completed works were formally turned over to the State of New Jersey in 1974.

A reconnaissance study was completed in March 1993. Subsequently, a feasibility study for Port Monmouth was initiated in February 1994, and for Union Beach and Cliffwood Beach in April 1997. In FY 2002, the final feasibility report and EIS for Port Monmouth were issued. Feasibility study activities for Union Beach and Leonardo continued. The feasibility study for Cliffwood Beach was completed by the project was not recommended for continued Federal involvement. The pre-feasibility activities for Highlands were finalized in preparation for a scheduled FY 2001 FCSA execution. Pre-feasibility activities continued for Keyport. A design agreement was executed with the NJDEP for the Raritan 934 (Keanburg, East Keanburg, Old Bridge) reevaluation study in November 1999. The study was initiated in January 2000. This reevaluation report will serve as a basis for extension of periodic nourishment for the constructed portions of the existing project for Keanburg East Keanburg and Old Bridge Township .The draft Reevaluation Report was released for public review December 2007, prior to submission to HQ. This report determined that the benefit to cost ratio for the Laurence Harbor portion of the project is not economically justified.

45. ROCKAWAY INLET TO NORTON POINT (CONEY ISLAND AREA), NY

Location. Atlantic Coast of New York City, in Brooklyn (Kings County), approximately nine miles south of the Battery, New York City.

Authorized project. Authorized by the Water Resources Development Act of 1986. The authorized plan provides for beach erosion control by restoring the Coney Island public beach up to 250 feet beyond its historic shoreline; the extension of the westerly terminal groin; construction of a terminal groin at the easterly end of the restored beach, and a fillet of beachfill from the terminal groin at W. 37th Street extending approximately 2300 feet into the community of Sea Gate. The authorized plan also provides for restoration of the beach by periodic beach nourishment. The project was modified by the Intermodal Surface Transportation and Efficiency Act (ISTEA) of 1991 to include the relocation of existing comfort and lifeguard stations at full Federal expense. The total Federal cost of the project is \$105,800,000 and non-Federal cost is \$53,200,000. The project was further modified by Section 329 of WRDA 2000, which authorized the construction of T-groins west of the West 37th Street groin.

Local cooperation. The local sponsor is the NY State Department of Environmental Conservation. In accordance with the provisions of the Project Cooperation Agreement, the sponsor will; provide without cost to the United States all lands easements, and rights-of-way including borrow areas necessary for construction of the project, hold and save the United States free from claims for damages which may result from the construction works and subsequent maintenance of the project: provide a cash contribution toward the total first cost; assure that water pollution that would affect the health of bathers will not be permitted; assure continued conditions of public ownership and use of the shore upon which the amount of Federal participation is based, during the economic life of the project; maintain public use facilities open and available to all on equal terms and maintain all improvements after completion in accordance with regulations prescribed by the Secretary of the Army, including periodic nourishment during the economic life of the project as may be required to serve the intended purpose, subject to Federal participation in the cost of periodic nourishment for the economic project life.

Operations and results during period, and condition as of September 30. Initial construction of the beach and the West 37th Street jetty was completed in January 1995. The design of the comfort and lifeguard stations was completed in 1996. A Limited Re-Evaluation report that includes an environmental assessment was completed in September 2004. The report recommended the construction of T- groins as a solution to these beach erosion and sand accumulation problems within Sea Gate. Construction of the T-groins is expected to begin upon receipt of Federal and Non-Federal funds, and execution of a PCA Amendment.

46. SANDY HOOK TO BARNEGAT INLET, NJ

Location. The northern portion of the Atlantic coast of New Jersey extending from Sandy Hook southerly to Barnegat Inlet-length about 48 miles. Erosion has seriously reduced the width of most beaches in the study area with consequent exposure of the shore to storm damage. Because of this erosion of the shore the area does not provide sufficient recreational beaches for the proper accommodation of the present and prospective tributary population.

SECTION I – SEA BRIGHT TO OCEAN TOWNSHIP, NJ

Location. That portion of the Atlantic coast of New Jersey in Monmouth County extending from Sea bright southerly to Ocean Township – length about 12 miles. Sea Bright is about 30 miles by water south of the Battery, New York City.

Authorized project. The Water Resources Development Act of 1988 (PL 100-670) authorized a plan substantially in accordance with the plan recommended in the General Design Memorandum for the project dated May, 1988. In general the plan provides for beach erosion control along approximately 12 miles of coastline, extending from Sea Bright southward to Ocean Township, New Jersey, by artificial placement of sand to widen the beach berm to 100 feet at an elevation of 10 feet above mean low water with an additional 2 foot high berm cap to provide an extra increment of protection from overtopping. The project also provides for the notching of 15 existing stone groins, and periodic nourishment throughout the 50 year economic life of the project. Existing storm outfall pipes are extended beyond the new , wider beach. Total estimated Federal cost for Section 1 is \$461,200,000. Total estimated non-Federal cost for all requirements of local cooperation is \$248,400,000.

Local cooperation. Includes reconstruction of sea wall at Sea Bright and all lands easements, rights-of-way and drainage outfall extensions.

Operations and results during period and condition as of September 30. The Local Cooperation Agreement for Section I was executed with the State of New Jersey on July 30, 1992. Work under Contract 1A (Monmouth Beach) was completed in November 1995. Work under contract 1B (Sea Bright) was completed in October 1996. Construction on Contract 2 (Long Branch) began in May 1997 and was completed in September 1999. Plans and specifications for Contract 3 (Deal) are near completion but

contract award is delayed indefinitely due to local real estate and funding issues. The first renourishment contract for Sea Bright and Monmouth Beach was awarded in August 2001. Sand placement commenced in Sea Bright in May 2002 and was completed in November 2002. Renourishment contract 2 (Long Branch) was completed February 2009.

SECTION II – ASBURY PARK TO MANASQUAN, NJ

Location. That portion of the Atlantic coast of New Jersey in Monmouth County extending from Asbury Park southerly to Manasquan – length about 9 miles.

Authorized project. Provides for Federal participation in the restoration and protection of the shore from Asbury Park to Manasquan by artificial placement of sand to widen the beach berm to a minimum width of 100 feet at an elevation of 10 feet above mean low water with a 2 foot high berm cap. The project provides for the notching of 20 existing stone groins and periodic nourishment for a period of 50 years from construction. Existing outfall pipes are extended beyond the new wider beach. Total estimated Federal cost is \$457,600,000. Total estimated non-Federal costs for all requirements of local cooperation is \$246,400,000.

Operations and results during period and condition as of September 30. The local cooperation agreement for Section II was executed with the State of New Jersey on August 20, 1996. The contract for the Southern Reach (Belmar to Manasquan) was awarded in March 1997. Construction began in June 1997 and was completed in August 1999. The award of the Northern Reach (Asbury Park to Avon-by-the-Sea) contract was in June 1999. Beachfill placement commenced in July 1999 and was completed in December 1999. Work on the groin notching and outfall extensions was completed in January 2001.

47. OTHER AUTHORIZED BEACH EROSION CONTROL PROJECTS

(See Table 2-H at end of chapter)

48. BEACH EROSION CONTROL WORK UNDER SPECIAL AUTHORIZATION

Beach Erosion Control activities pursuant to Section 103 Publ. Law 826, 84th Congress as amended (See Table 2-O at end of chapter).

Flood Control

49. THE HACKENSACK MEADOWLANDS AREA, NJ

Location. The project location is the Hackensack Meadowlands River Basin in Bergen and Hudson Counties, New Jersey.

Existing project. The program was authorized by Section 324 of the Water Resources Development Act of 1992. It was amended by Section 550 of the Water Resources Development Act of 1996 and Section 5105 of the Water Resources Development Act of 2007. The program was initially authorized for Federal funding of \$5,000,000 which was recently amended to \$20,000,000. The objective of the program is to provide design and construction assistance for the development of the Environmental Improvement Program within the Hackensack Meadowlands District of New Jersey. The intent of the program is both flood control and ecological restoration support of their Environmental Improvement Program. This has included evaluating tide gate improvements to control flooding in the Berry’s Creek drainage basins and Route 7 Belleville Turnpike, and the study and data collection for the enhancement of wetlands, in the Hackensack Meadowlands District. A hydraulic modeling study of the Hackensack River is underway evaluating a number of NJMC identified alternatives will be performed. It will also examine proposed alternates to reduce flooding on Route 7 in coordination with NJMC and NJDOT. The Corps of Engineers Engineer Research and Development Center is performing the modeling study.

Local cooperation. The non-Federal sponsor is the New Jersey Meadowlands Commission (NJMC).

Operations and results during the period and condition as of September 30. The General Management Plan, which outlines the management process for implementing the program, was completed in October 1998. A total of \$2.5 million was appropriated for the program in FY 1996. The design agreement was executed between the Corps of Engineers and the NJMC in March 2000. The parent model and four child models have been completed and updated to reflect recent structural changes to the system. Alternative stimulation studies have begun at a number of sites in the NJMC District where flooding problems routinely occur. FY 2009 funding was being used to further the analysis of potential flood reduction measures along Route 7 in the NJMC District, design of the preferred measures, and further data collection at various wetland sites identified for potential environmental restoration. An update to the 2000 Design Agreement is now under preparation.

50. JOSEPH G. MINISH PASSAIC RIVER WATERFRONT AND HISTORIC AREA, NJ

Location. The project area is located along the west bank of the Passaic River between Bridge and Brill Streets in the City of Newark, New Jersey. This reach of the Passaic River is eroded, deteriorated and environmentally degraded due to past heavy commercial and industrial use and flooding. The most recent flooding occurred in December 1992. In light of the renewal of the commercial downtown area of Newark near the Passaic River, the project area is viewed as an environmental resource to be restored.

Authorized project. The project was authorized in the Water Resources Development Act (WRDA) of 1990 (Public Law 101-640) as an element of the Passaic River Flood Damage Reduction Project on November 28, 1999, modified in the Water Resources Development Act of 1992 (Public Law 102-580) by extending the project area, and further modified in the Water Resources Development Act of 1996 (Public Law 104-303).

The project has been phased to complete riverbank stabilization first, followed by a greenway and waterfront park development phase. The first phase will provide 6,000 feet of new bulkhead, 3,200 feet of restored riverbank. Phase II/III will involve development of a waterfront walkway with park amenities along the 9,200 linear foot project alignment. Links to the Arts Center, Riverbank Park, and other sites will be provided. The project will reduce erosion and provide environmental restoration, recreation and economic benefits. The cost of the first phase is \$47,500,000, adding Phase II/III increases the cost to \$78,800,000. The sponsor of the first phase is the New Jersey Department of Environmental Protection and cost sharing is set a 75% Federal and 25% non-Federal. The State may reduce its share through credit provisions in WRDA 1992. The credit consists of the value of lands in the basin that the State puts into wetlands bank.

Local cooperation. Project will be operated and maintained by sponsor as each portion is completed.

Operations and results during period and condition as of September 30. Construction on the first phase started in September 1999 and 2,256 feet of new bulkhead is complete. Construction of the bulkhead from Central Street to Penn Station was completed in March 2003. Construction of the steel bulkhead from Jersey Street to Jackson Street was initiated in November 2005 and completed in June 2006. Contract4A was awarded January 2008 and work is ongoing to concrete cap existing steel bulkhead in the vicinity of Jackson Street Bridge.

Additional appropriations will be required to complete the first phase. Interest is also being expressed by the city of Newark to sponsor Phases II/III waterfront walkway and park development. The Project Cooperation Agreement amendment is being prepared.

51. NEW YORK CITY WATERSHED ENVIRONMENTAL ASISTANCE PROGRAM, NY

Location. The project location is the New York City Watershed, which is located within the following counties in New York State: Delaware, Greene, Schoharie, Ulster, Sullivan, Westchester, Putnam and Dutchess.

Existing project. The program was authorized by Section 552 of the Water Resources Development Act (WRDA) of 1996 and amended in WRDA 1999. The program was authorized for \$42,500,000 in Federal funds. The objective of the program is to provide design and construction assistance for water-related environmental infrastructure and resource protection and development projects in the New York City Watershed, including projects for water supply, storage, treatment and distribution facilities and surface water resource protection and development. Forty projects have been certified by the New York State Department of Environmental Conservation (NYSDEC) and recommended for implementation. The types of projects include stream restoration, installation of sanitary sewer lines, stormwater studies, pathogen monitoring, planning and implementation of agricultural non-point source pollution reduction and watershed protection training.

Local cooperation. The non-Federal sponsor for the program is the NYSDEC. The projects will be accomplished by the local sponsors, the New York City Department of Environmental Protection, municipalities and counties.

Operations and results during the period and condition as of September 30. The General Management Plan, which outlines the management process for implementing the program, was completed in September 1998. \$18.9 million has been appropriated for the program has been appropriated for the program from FY 1997 through 2009 of which \$7.2 million was reprogrammed in FY 05 for projects in Greene and Delaware Counties The request for proposals, under which the proposed projects were submitted, evaluated and certified for implementation, was completed in February 1999. A total of 33 Project Partnership Agreements have been executed to date covering 38 projects of which 31 projects have been completed, and work is in progress for 6 projects.

Discussion is on with NYSEC to select new projects for the NYC Watershed Program.

52. PASSAIC RIVER BASIN, NJ & NY

Location. The Passaic Basin, comprising 787 square miles in northeastern New Jersey and 148 square miles in southern New York State, is located

in the greater New York City Metropolitan area. The Passaic River Basin is roughly elliptical in shape 26 miles long and 56 miles wide – and contains portions of Bergen, Essex, Morris, Passaic, Hudson, Somerset, Sussex and Union Counties in New Jersey. The Basin also includes parts of Orange and Rockland Counties in New York.

Previous projects. Three Federal flood control projects have been completed by the Corps of Engineers in the Passaic River Basin. A \$67,400 de-snagging, debris removal, and channel restoration project was completed in 1951 along Beaver Brook and the Pequannock Township Ditch, tributaries of the Pompton River in Pequannock Township, NJ.

Along the Pompton River, a channel clearing project including shoal removal and channel restoration was implemented in the two mile reach from the Delaware, Lackawanna and Western Railroad Bridge to the Erie Railroad (Greenwood Lake Branch) Bridge. This work, in Pequannock Township, Wayne Township and Lincoln Park Borough, NJ, was completed in 1954 at a cost of \$50,000.

A \$1.5 million basin-wide project to improve the Flood Warning and Preparedness System was completed in 1988. The project was implemented by the Corps of Engineers in conjunction with the National Weather Service and U.S. geological Survey, The State of New Jersey is the non-Federal sponsor of the project.

Project history. U.S. Army Corps of Engineers involvement in Passaic River planning was first authorized in the Flood Control Acts of 1936. Since then reports recommending plans of action were issued in 1939, 1948, 1962, 1972, and 1973. None of these plans were implemented because they did not receive widespread public support. In 1976, Congress authorized a Phase I Advanced Engineering and Design Study in Section 101(a) of the Water Resources Development Act of 1976. Congressional Guidance on the conduct of the study was provided in House Report 94-1702. Local protection plans were completed for tributary flood damage areas along the Ramapo and Mahwah Rivers at Mahwah, NJ, and Suffern, NY, Molly Ann's Brook at Haledon, Prospect Park and Paterson, NJ, the Ramapo River at Oakland, NJ, and the Lower Saddle River in Bergen County, NJ. These projects

were authorized in the Water Resources Development Act of 1986. Construction began on the Molly Ann's Brook project in 1995. The Ramapo River at Oakland project received construction funds in Fiscal year 1995 and was reauthorized in WRDA 1996 and in the Energy and Water Development Appropriate Act of 2001.

In April 1984, the Passaic Basin experienced flooding estimated to be the worst in 40 years. In June 1984, the State of New Jersey selected a dual inlet diversion tunnel plan as the preferred Basin-wide alternative for detailed plan formulation. The Phase I General Design Memorandum and draft Environmental Impact Statement, (EIS), recommending the Pompton River/Passaic Dual Inlet Tunnel Diversion Plan, were completed during FY 1998. The final EIS was filed with EPA in December 1988.

Section 101(a) 18 of the Water Resources Development Act (WRDA) 1990 (PL 101-640), as modified by section 102(p) of WRDA '92 (PL 102-580) authorizes construction of the Passaic River Flood Protection Project for the Passaic River Basin which will address both environmental and engineering objectives of the Act. The Passaic River Flood Protection Project combines diversion tunnels, levees, flood walls channel modification, and natural flood storage to provide flood protection to about 35 towns in the Passaic River Basin.

Pre-construction, Engineering and Design for the Passaic River Flood Protection Project was initiated in FY 1989. A draft General Design Memorandum and Supplemental Environmental Impact Statement with accompanying project cost estimate, and update of buy-out plans were prepared. The draft report was completed in Sept. 1995.

The final report was completed in July 1996 with the State's decision to implement various separable clients as described below. Engineering and design for the Joseph G. Minish, Passaic River Waterfront Part and Historic Area project element, consisting of environmental and streambank restoration measures in the city of Newark was completed in May 1996.

Condition as of September 30. Construction has been completed on Molly Ann's Brook and on the Ramapo River at Oakland. Construction is continuing on Joseph G. Minish Passaic River and Waterfront Park and Preservation of the Natural Storage Areas. The purchases of the national flood storage areas is underway. The Saddle River, Harrison Levee Project, Mahwah River projects, and Passaic River Floodway Buyout are in the design phase.

53. PRESERVATION OF NATURAL FLOOD STORAGE – PASSAIC RIVER

FLOOD DAMAGE REDUCTION REPORT, NJ

Location. Flooding has long been a problem in the Passaic River Basin. Since colonial times, floods have claimed lives and damaged property. The most severe flood, the "flood of record", occurred in 1903, and more recent floods in 1968, 1971, 1972, 1973, two in 1975, 1984 and 1992 were sufficiently devastating to warrant Federal Disaster declarations. The flood of 1984 resulted in the loss of three lives and caused \$493 million in damages (October 1994 dollars).

Authorized project. The U.S. Army Corps of Engineers has been working on plans to reduce flooding in the basin since 1936, but no plan has yet been implemented. Congress authorized a new study of the Passaic River Basin for the State of New Jersey in the Water Resources Development Act (WRDA) of 1976 (Public Law 94-587) which led to a plan authorized in WRDA 1990 and modified in WRDA 1992. The project includes several elements (see separate fact sheet on Passaic River). The element described herein is the Preservation of Natural Flood Storage Areas which the State has asked to Corps to implement. The Preservation element includes the acquisition of 5,350 acres of natural storage areas. 5,200 acres of which are wetlands and could conceivably be developed, worsening existing flood problems. The State of New Jersey has an agreement with the Corps to continue to protect 6,300 floodway acres, thus avoiding any secondary development. About 9,500 acres of the Central Basin are already protected as designated parkland, bringing the total of natural storage areas that would be permanently protected with the project to 21,000 acres. The Preservation element will prevent flood damages from becoming worse. It will not reduce flooding in the Passaic River Basin. The cost sharing is set a 75% Federal and 25% State. The State may reduce its share by applying credits included in the authorization.

Local cooperation. Project lands will be operated and maintained by non-Federal sponsors as each parcel is acquired.

Operations and results during period and condition as of September 30. The General Design Memorandum for the element was completed in July 1996 and the State has requested that the Corps proceed with its implementation. Project Cooperation Agreement was signed in 1999. Purchases started in spring 2000 and continue. 3300 acres have been acquired to date. Total estimated Federal cost is \$25,100,000. The Total Non-Federal costs for all requirements of local cooperation is \$1,700,000.

54. RAMAPO RIVER AT MAHWAH, NEW JERSEY & SUFFERN, NY

Location. Flooding has occurred frequently on the Ramapo River, with flood events in 1968, 1971, 1973, 1977, 1979, 1980, 1983, 1984, 1987, 1996, and 1999. The 1977 and 1984 floods were the most severe causing extensive damages to the project area. Tropical Storm Floyd in September 1999 also cause significant damage.

Authorized project. The Ramapo River and Mahwah Rivers Flood Control Project is authorized for construction under the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662). The authorized project involves the construction of features for flood protection along the Ramapo and Mahwah Rivers in Mahwah, NJ and Suffern, NY. The authorized plan for flood damage reduction includes channel modification to approximately 13,000 feet of the Ramapo River, Mahwah River, and Masonic Brook. The modifications would include the widening and deepening of the channels, sheet pile walls, and bridge modifications. The project will provide protection to residential, commercial, and industrial developments in Suffern and in Mahwah.

Local Cooperation. The non-Federal sponsors, New York and New Jersey will sign a project design agreement after the State of New York negotiates with local sponsors. Assuming a favorable project is recommended and implemented, a construction project partnership agreement would be executed and upon completion construction the project would be turned over to the non-Federal sponsors for operation and maintenance. The sponsors will also provide all lands required for the project.

Condition as of September 30. The project design memorandum was completed and approved in September 1987. Plans and specifications were substantially complete in 1990. Construction funds were appropriated, but work was never initiated due to the lack of project cooperation agreements. After the flooding in 1999, the involved States, counties, and towns expressed interest in resuming the project. Letters of support from New York and New Jersey documented the interest and requested an update of the project to determine whether further interest is warranted. A project management plan has been developed. We will proceed with a general revaluation report and update the design when a design agreement between the Corps, New York and New Jersey State has been executed.

55. RAMAPO RIVER AT OAKLAND, NJ

Location. The project involves the construction of features for flood protection along the Ramapo River from Pompton Lake in Wayne Township and the Borough of

Pompton Lakes, upstream through the Borough of Oakland to West Oakland Avenue, a distance of 3.3 miles.

The principal problem along the Ramapo River is flooding caused by backwater effect produced by the Pompton Lake Dam, the hydraulic construction produced by bridges crossing the river, and insufficient channel capacity. Flooding has occurred frequently, with the most recent events in 1968, 1970, 1971, 1973, 1977, 1978, 1979, 1980, 1983, 1984, 1987, 1993, September 1999, April 2005, October 2005 and April 2007.

Authorized project. The Ramapo River was studied as part of the Passaic River Basin Phase I Advanced Engineering and Design Study which was authorized by the Water Resources Development Act of 1976 (Public Law 94-587, October 22, 1976). Congressional guidance for the conduct of the study is included in House of Representatives report 94-1702. The study was authorized for construction under the Water Resources Development Act (WRDA) of 1986 (Public Law 99-62) and reauthorized in WRDA 1996 (PL 104-303). The sponsor is the New Jersey Department of Environmental Protection. The authorized plan for flood damage reduction along the study area includes channel modification of 5,800 feet of the Ramapo River. The authorized plan also calls for the installation of flood control gates at the existing Pompton Lake Dam. Mitigation for the environmental impacts of the plan includes the creation of a five acre wetland in Potash Lake. The recommended plan would provide a consistent 40 year level of protection to the project area. The plan has an estimated cost of \$21,600,000. The cost is shared by the Federal Government (75%) and the State (25%). The State share includes the cost for all lands easements, and right-of-way as well as a cash contribution. The State share may be reduced through the use of credits available for Passaic River Basin projects.

Local cooperation. The completed project is operated and maintained by the project sponsor the New Jersey Department of Environmental Protection.

Operations and results during period and condition as of September 30. Engineering and design commenced in October 1987. The final general Design Memorandum was completed in May 1994 and approved in July 1994. Permits were issued in January 1999. The Project Cooperation Agreement was executed in April 1999. The overall project including a channel modification, wetland creation and the installation of the flood control gates in 2007. The completed project is operated and maintained by the project sponsor the New Jersey Department of Environmental Protection..

56. RARITAN RIVER BASIN GREEN BROOK SUB-BASIN, NJ

Location. The Green Brook Basin lies in central New Jersey within the counties of Somerset, Middlesex and Union. It encompasses 13 municipalities and drains approximately a 65 square mile of primarily urban and industrialized area. For the majority of the project area, specifically in the Borough of Bound Brook the most damaging floods of record resulted from the August 2, 1973 storm, Tropical Storm Floyd on September 16, 1999 and April 15-17 Nor'easter.

Project History. The Green Brook Flood Control Project is the result of efforts over the past three decades by the U.S. Army Corps of Engineers, other Federal agencies, state and local agencies, civic organizations and the general public. The Water Resources Act of 1986 authorized construction of a project, providing protection in all three portions of the Green Brook Basin. Section 401a of the Water Resources Development Act (WRDA) 1986 authorized construction of Section 401a of the Green Brook Flood Control Project for the Green Brook Sub-basin, which will address both environmental and engineering objectives of the Act. The Green Brook Flood Control Project for the Green Brook Sub-basin, which will address both environmental and engineering objectives of the Act. The Green Brook Flood Control Project combines levees, floodwalls, channel modification, flood proofing, and natural flood storage to provide flood protection to about 13 municipalities in the Green Brook Sub-basin

The Final General Reevaluation Report (GRR) and Supplemental Environmental Impact Statement (SEIS), dated May 1997 were signed by the Assistant Secretary of the Army (Civil Works) in October 1997. The report recommended flood protection for the Lower Basin and Stony Brook Basin, which has been supported by the project sponsor New Jersey Department of Environmental Protection (NJDEP). Based on this report and input obtained during the public review period, the State of New Jersey requested that the upper portion of the project be deferred pending additional consideration of alternatives. In FY 1998 an Upper Basin Task Force (UBTF) was formed to evaluate possible alternatives to provide flood protection that will be acceptable to the affected communities within the upper portion of the Green Brook watershed. The Green Brook Upper Basin Task Force submitted its final report dated 12 November 1998. The final Screening Analysis Report of Flood Control Alternatives for the Upper Portion of the Green Brook Sub-Basin was completed in January 2001. A Project Cooperation Agreement was signed 24 June 1999. With the provision of \$13M in ARRA funding, a completed line of protection of levees and floodwalls providing residents and businesses in the community of Bound Brook with much needed flood risk reduction, is

scheduled for December 2011. Efforts are also underway to use \$20M in **ARRA** funding to continue the Green Brook project in other communities within the project area. The Sebring's Mill Bridge Raising contract in Middlesex Borough and Green Brook Township, NJ is scheduled for award by 30 August 2010. Both the design and construction contract will be funded with **ARRA** funds.

Condition as of September 30. Construction of the East Main Street Bridge, Finderene Farm Wetland Mitigation, Segment T, Segment U and Segment R-1, levee system, and the buyout and demolition of 19 homes is complete. Construction is ongoing at the Talmadge Bridge Replacement R-2, levee system. Sites;along with engineering and design of the upcoming Closure Gate Contracts.

57. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

Inspections of the following completed flood control works and beach erosion and hurricane protection projects were performed to determine the extent of compliance by local interests with operation and maintenance requirements.

New England Inspection Date:

Adams, MA – Hoosic River	Sep. 09
Bennington, VT – Roaring Branch, Walloomsac River	Sep. 09
East Barre Dam, VT – Jail Branch	
Winooski River,VT	Sep. 09
Montpelier Dam, VT – Winooski River	Sep. 09
North Adams, MA – Hoosic River	Sep. 09
Pemberwick Byram River, CT	Jul. 09
Richford, VT – Missiquoi River	Sep 09
Waterbury Dam, VT – Little River	Sep 09
Wrightsville Dam, VT – North Branch	Sep 09
Winooski River	NI

NY – NJ Areas

*E. Rockaway Inlet to Rockaway Inlet	Sep09
Elizabeth, NJ – Elizabeth River	Aug09
*Fire Is. Inlet to Montauk Rt., NY	Sept09
Herkimer, NY – Bellinger Brook & Mohawk River-South Amsterdam	May09
Holland Patent, NY – Thompson Creek	May09
Hoosic Falls, NY – Hoosic River	May09
Kingston, NY – Esopus Creek	May09
North Ellenville, NY – Beer & Fantine Kills & Snadburg Creek	May09
Rahway, NJ – Rahway River, S.Branch	
Rahway River	Jul09

*Raritan Bay & Sandy Hook Bay, NJ	Sep09
Keansburg , NJ	Sep09
Rosendale, NY – Roundout Creek	May09
So. Amsterdam, NY – S. Chuctanunda Creek & Mohawk River	May09
S. Orange NJ – E. Branch, Rahway River	Apr08
Yonkers, NY – Saw Mill River	Jul09
Chappaqua, NY – Saw Mill River	May09
Ardsley, NY – Saw Mill River	May09
Sandy Hook to Barnagat Inlet, NJ	NI
Ballston Spa- Kayadersoseras Creek,NY	May09
Highland Mills- Woodbury Brook, NY	May09
Mt. Pleasant- Esopus Creek, NY	May09
Pompton Lake Dam,NJ(Pompton Lake)	Sep09
Hillside(Elizabeth River),NJ	Sep09
Mt.Tremper- Esopus Creek, NY	May09
Pleasant Valley- Wappinger Creek,NY	May09
Lincoln Park/Pequannock- Beaver Brook,NJ	Sep07
Shandaken- Esopus Creek, NY	May09
Wallkill River- Wallkill River	May09
Some NY Projects	

*Beach Erosion & Hurricane Protection Projects NI (NI= Not Inspected FY 2007)

58. OTHER AUTHORIZED FLOOD CONTROL PROJECT

(See Table 2-1 at end of chapter.)

59. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Flood Control activities pursuant to Section 205, Public Law 858, 80th Cong. As amended Pre-authorization. (See Table 2-P at end of chapter)

Chapter 1 Natural Disaster and Emergency Flood Control Activities. Pursuant to Public Law 84-99 and antecedent legislation provides for disaster preparedness, emergency operation, rehabilitation, advance measures, emergency water, and drought assistance.

Under disaster preparedness, the New York district initiated revisions to emergency response plans to include lessons learned from previous disasters, attended meetings and seminars dealing with emergency response planning and purchased supplies and equipment to maintain its' flood fight and response capability.

Under emergency operations, the New York District conducted field investigations, provided technical

assistance and sandbags to local and county government in response to flooding events.

In response to Presidential disaster declarations under P.L. 93-288 the New York District received mission assignment from the Federal Emergency Management Agency (FEMA) for Temporary Housing, ESF#3, AND Debris Management during Hurricane Isabel in September 2003.

General Investigations

60 SURVEYS

(See Table 2-J at end of chapter.)

61. COLLECTION AND STUDY OF BASIC DATA

Costs for the period of \$143,839 for flood plain management services are set forth in Table 2-L at the end of chapter.

62. DEAUTHORIZED PROJECTS

Projects having all, or inactive or uncompleted portions de-authorized by Congressional Action pursuant to Water Resources Development Acts

(See Table 2-M at end of chapter)

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS FOR FY 2009

TABLE 2-A COST AND FINANCIAL STATEMENT

Projects Funding		FY06	FY07	FY08	FY09	Total Coast to Sept 30, 2009
1. Aquatic Plant Control	New Work					
	Approp. Cost	396,000 396,657	400,000 460,540	394,000 60,546	200,000 392,299	5,462,500 ¹ 5,287,390 ²
2. Arthur Kill Channel Howland Hook Marine Terminal , NY&NJ	New Work					
	Approp. Cost	— —	— —	— —	— —	6,526,662 6,523,591
	Maint.					
3. Bronx River, NY	Approp. Cost	— —	— —	— —	— —	— —
	New Work					
	Approp. Cost	— —	— —	— —	— —	1,149,946 1,149,946
4. Buttermilk Channel, NY	Maint.					
	Approp. Cost	— —	— —	216,000 156,699	227,360 69,059	4,296,927 4,079,325
	New Work					
5. East Chester Creek, NY	Approp. Cost	— —	— —	— —	— —	7,250,210 7,250,210
	Maint.					
	Approp. Cost	89,000 89,000	163,980 163,075	174,000 63,067	163,660 45,226	7,623,490 7,393,218
6. East River, NY	New Work					
	Approp. Cost	— —	— —	— —	— —	32,750,745 32,723,662
	Maint.					
7. East Rockaway Inlet, NY	Approp. Cost	1,802,000 277,388	149,223 277,388	— —	454,720 102,267	11,029,527 10,677,074
	New Work					
	Approp. Cost	— —	— —	— —	— —	83,969 533,334
8. Fire Island to Jones Inlet, NY	Maint.					
	Approp. Cost	165,000 158,272	3,198,000 3,204,659	444,000 145,312	3,681,748 2,297,048	33,570,145 32,032,000
	New Work					
9. Flushing Bay and Creek, NY	Approp. Cos	— —	— —	— —	465,000 45,655	60,500,389 ³ 59,162,621
	Maint.					
	Approp. Cost	245,000 221,071	7,403,141 344,996	350,000 7,385,428	— 11,072	39,495,460 38,741,509
9. Flushing Bay and Creek, NY	New Work					
	Approp. Cost	— —	— —	— —	— —	2,182,905 2,182,905
	Maint.					
9. Flushing Bay and Creek, NY	Approp. Cost	85,000 73,052	58,065 64,082	139,000 6,512	413,560 195,225	15,104,010 14,747,157

NEW YORK, NY DISTRICT

TABLE 2-A (Continued)

COST AND FINANCIAL STATEMENT

Projects	Funding	FY06	FY07	FY08	FY09	Total Cost to Sept 30, 2009
10. Great Kills Harbor, NY	New Work					
	Approp.	—	—	23,000	—	188,882
	Cost	—	—	1,513	9,288	176,683
	Maint.					
	Approp.	—	—	23,000	—	1,578,000
	Cost	—	—	1,513	—	1,556,264
11. Hudson River, NY	New Work					
	Approp.	—	—	—	—	44,249,800 ^{4,5}
	Cost	—	—	—	—	44,249,865
	Maint.					
	Approp.	1,593,000	2,555,306	2,951,000	1,023,000	76,714,756 ^{6,7}
	Cost	4,992,378	909,186	847,060	972,083	74,105,348
Hudson River (Maint)	Maint. (American Recovery and Reinvestment Act)					
	Approp.	0	0	0	583,600	583,600
	Cost	0	0	0	5,618	5,618
12. Hudson River Channel, N	New Work					
	Approp.	—	—	—	—	6,771,870
	Cost	—	—	—	—	6,771,870
	Maint.					
	Approp.	296,000	4,765,605	12,574,000	454,720	56,049,939
	Cost	126,743	434,861	9,013,188	1,431,324	48,875,224
	Maint. (American Recovery and Reinvestment Act)					
	Approp.	0	0	0	2,475,000	2,475,000
	Cost	0	0	0	494,925	494,925
13. Jamaica Bay, NY	New Work					
	Approp.	—	—	—	—	4,545,750
	Cost	—	—	—	—	4,454,750
	Maint.					
	Approp.	125,000	200,000	5,761,000	77,360	22,590,078
	Cost	125,000	199,780	236,361	2,599,716	19,587,575
14. Jones Inlet, NY	New Work					
	Approp.	—	—	—	—	1,822,530
	Cost	—	—	—	—	1,822,530
	Maint.					
	Approp.	—	68,000	100,000	318,500	24,656,570
	Cost	—	68,041	—	19	24,237,970
15 Kill Van Kull-Newark	New Work					
	Approp.	—	—	—	—	402,563,617 ⁸
	Cost	—	—	—	—	402,392,273
16.Lake Montauk Harbort, NY	New Work					
	Approp.	—	—	—	—	791,680
	Cost	—	—	—	—	791,680
	Maint					
	Approp.	42,000	-24,973	111,000	487,000	3,361,265
	Cost	41,701	—	68,182	522,868	3,354,196
17Long Island Intracoastal Waterway,NY	New Work					
	Approp.	—	—	—	—	235,964
	Cost	—	—	—	—	235,964
	Maint					
	Approp.	177,000	100,000	199,000	332,280	17,442,742
	Cost	70,164	145,688	253,912	272,434	17,358,137

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS FOR FY 2009

TABLE 2-A (Continued) COST AND FINANCIAL STATEMENT

Projects	Funding	FY06	FY07	FY08	FY09	Total Coast to Sept 30, 2009	
18. Mattituck Harbor ,NY	New Work						
	Approp.	—	—	—	—	681,811	
	Cost	—	—	—	—	681,811	
	Maint						
	Approp.	—	—	—	18,620	134,620	
	Cost	—	—	—	2,203	117,810	
19 .Moriches Inlet ,NY	New Work						
	Approp.	—	—	—	—	9,801,000	
	Cost	—	—	—	—	9,799,000	
	Maint						
	Approp.	71,000	18,860	496,000	-52,000	2,474,539	
	Cost	-280,761	70,164	18,868	17,181	2,154,479	
20 Narrows of Lake Champlain NY&VT	New Work						
	Approp.	—	—	—	—	681,811	
	Cost	—	—	—	—	681,811	
	Maint						
	Approp.	—	8,301	74,000	72,520	3,259,086	
	Cost	—	8,301	73,634	41,857	3,149,406	
21. New York Harbor and Adjacent Channels,	New Work						
	Approp.	—	—	174,000	—	6,196,516	
	Cost	—	—	174,000	—	5,437,257	
	Maint						
	Approp.	—	—	—	—	73,052,435	
	Cost	—	—	—	—	73,052,435	
22. New York and New Jersey Channel	New Work						
	Approp.	—	—	—	—	73,052,435	
	Cost	—	—	—	—	73,052,435	
	Maint						
	Approp.	5,390,000	5,607,291	8,864,000	6,140,680	95,430,729	
	Cost	5,379,225	5,618,035	3,287,257	5,242,347	88,955,651	
	Maint. (American Recovery and Reinvestment Act)						
	Approp	—	—	—	2,250,000	2,250,000	
	Cost	—	—	—	—	—	
	23. New York Harbor- Collection and Removal of Drift	New Work					
		Approp.	—	—	—	—	45,980,000
		Cost	—	—	—	—	45,962,183
Maint							
Approp.		5,270,000	6,398,852	6,656,000	6,592,214	161,141,805 ⁹	
Cost		5,252,671	5,627,859	7,422,937	6,592,674	156,387,562	
24. New York Harbor- Entrance Channels & Anchorage Areas	Maint. (American Recovery and Reinvestment Act)						
	Approp	—	—	—	2,486,200	2,486,200	
	Cost	—	—	—	3,626	3,626	
	New Work						
	Approp.	—	—	—	—	45,009,710	
	Cost	—	—	—	—	45,009,710 ¹⁰	
25. New York and New Jersey Harbor NY & NJ	Maint.						
	Approp.	2,486,000	1,929,424	4,017,000	3,084,478	132,665,674	
	Cost	1,773,320	2,054,271	4,415,582	2,054,271	131,228,067	
	Maint. (American Recovery and Reinvestment Act)						
	Approp	—	—	—	1,520,400	1,520,400	
	Cost	—	—	—	—	—	
25. New York and New Jersey Harbor NY & NJ	New Work						
	Approp.	136,098,000	139,500,000	227,537,224	159,353,025	992,713,612 ¹¹	
	Cost	129,819,104	85,106,934	114,718,007	137,435,730	801,445,676	
	Maint. (American Recovery and Reinvestment Act)						
	Approp	—	—	—	3,872,950	3,872,950	
	Cost	—	—	—	—	—	

NEW YORK, NY DISTRICT

TABLE 2-A (Continued) COST AND FINANCIAL STATEMENT

Projects	Funding	FY06	FY07	FY08	FY09	Total Coast to Sept 30, 2009
26. Newark Bay Hackensack Passaic Rivers,NJ	New Work					
	Approp. Cost	—	—	—	—	29,014,500
	Maint. Approp. Cost	6,715,000	-822,000	3,388,000	294,000	13,019,460
		289,313	5,264,290	521,580	2,758,144	12,277,787
27. Newton Creek, NY	New Work					
	Approp. Cost	—	—	—	—	1,168,354
	Maint. Approp. Cost	—	—	—	199,920	1,875,262
		—	—	—	6,871	1,682,213
28. Plattsburgh Harbor, NY	New Work					
	Approp. Cost	—	—	—	—	198,415
	Maint. Approp. Cost	—	—	—	—	198,415
	Maint. (American Recovery and Reinvestment Act) Approp Cost	—	—	—	2,450,000	2,450,000
		—	—	—	22,573	22,573
29. Port Chester, NY	New Work					
	Approp. Cost	—	—	—	—	433,470
	Maint. Approp. Cost	—	—	17,000	136,220	1,316,015
		—	—	12,302	14,878	1,189,975
30. Raritan River, NJ	New Work					
	Approp. Cost	—	—	—	—	1,551,470
	Maint. Approp. Cost	469,000	-38,000	3,345,000	294,000	23,257,600
		230,579	184,557	418,371	2,758,144	22,779,251
31. Raritan River, To Arthur Kill Cutoff Channel,NJ	New Work					
	Approp. Cost	—	—	—	—	810,510
	Maint. Approp. Cost	133,000	-20,500	—	182,280	5,226,136
		91,629	7,189	9,990	16,401	5,056,565
32. Sandy Hook Bay at Leonardo,NJ	New Work					
	Approp. Cost	—	—	—	—	568,479
	Maint. Approp. Cost	193,000	—	—	36,260	979,422
		135,119	—	—	369	934,386
33. Shark River, NJ	New Work					
	Approp. Cost	—	—	—	—	150,000
	Maint. Approp. Cost	304,000	21,010	491,010	704,620	6,990,155
	Maint. (American Recovery and Reinvestment Act) Approp Cost	132,988	5,798,232	481,762	640,896	6,911,890
		—	—	—	1,100,000	1,100,000
		—	—	—	56,034	56,034
34 Shinnecock Inlet,,NY	Approp. Cost	—	—	—	—	14,863,000
	Maint. Approp. Cost	107,000	15,000	556,000	3,150,700	10,640,415
	Maint. (American Recovery and Reinvestment Act) Approp Cost	107,000	15,000	122,972	168,194	7,221,887
	Maint. (American Recovery and Reinvestment Act) Approp Cost	—	—	—	2,450,000	2,450,000
		—	—	—	22,573	22,573

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS FOR FY 2009

TABLE 2-A (Continued) COST AND FINANCIAL STATEMENT

Projects	Funding	FY06	FY07	FY08	FY09	Total Coast to Sept 30, 2009
35. Shrewsbury River, NJ	New Work					
	Approp.	—	—	—	—	1,145,457
	Cost	—	—	—	—	1,145,457
	Maint.					
	Approp.	380,000	—	40,300	108,780	6,965,046
36 Shoal Harbor/Compton Creek,,NJ	Cost	339,256	—	31,231	121,787	6,928,240
	Maint. (American Recovery and Reinvestment Act)					
	Approp.	—	—	—	3,495,000	3,495,000
	Cost	—	—	—	90,904	90,904
	Approp.	—	—	162,000	272,440	3,327,380
37. Supervisor of New York Harbor	Cost	—	—	38,408	205,136	3,136,484
	New Work					
	Approp.	846,000	690,000	987,000	1,014,360	43,378,320
	Cost	754,979	773,617	740,926	869,257	43,179,739
	New Work					
41. Long Beach Island NY	Approp.	143,000	350,000	77,033	96,000	4,125,033
	Cost	147,939	138,933	233,779	49,624	3,998,814
42. East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY	New Work					
	Approp.	—	—	334,000	699,000	61,068,389 ¹²
43. Fire Island Inlet to Montauk Point, NY	Cost	—	2,104	197,923	662,543	59,979,536
	New Work					
	Approp.	1,856,000	2,500,000	10,888,000	2,010,000	110,117,428 ¹³
	Cost	2,186,025	1,999,455	2,330,268	11,452,850	109,151,764
	Maint.					
44. Raritan Bay and Sandy Hook Bay, NJ	Approp.	—	—	—	—	113,970
	Cost	—	—	—	—	143,753
	New Work					
	Approp.	180,000	50,000	109,000	183,000	2,202,000 ¹⁴
	Cost	142,447	67,330	108,980	90,315	1,856,447
45. Rockaway Inlet to Norton Point (Coney Island), NY	New Work					
	Approp.	800,000	75,000	7,903,469	3,924,000	41,746,234
46. Sandy Hook to Bamegat Inlet, NJ	Cost	3,242	188,074	221,906	103,663	28,918,343 ¹⁵
	New Work					
	Approp.	3,961,000	3,305,000	5,480,800	957,000	193,270,611 ¹⁶
	Cost	1,938,560	1,609,684	1,609,684	10,034,111	191,247,494
	New Work					
49. Hackensack Meadowlands, NJ	Approp.	1,485,000	233,000	372,000	96,000	5,481,000 ¹⁷
	Cost	1,141,918	419,763	505,425	154,482	5,331,721
50. Joseph G. Minish Waterfront Park, NJ	New Work					
	Approp.	2,227,000	3,000,000	2,952,000	3,000,000	27,685,000
51. New York City Watershed, NY	Cost	5,155,069	352,365	2,721,807	2,421,435	23,607,784
	New Work					
	Approp.	3,340,000	8,044,000	475,000	453,000	18,493,815
	Cost	3,338,307	1,198,942	1,653,806	1,941,759	14,273,870
	New Work					
52. Passaic Mainstem NJ	Approp.	—	—	53,000	124,646	63,637,315
	Cost	16,940	82,324	13,557	15,102	63,314,841
53. Preservation of Natural Storage Areas, NJ	New Work					
	Approp.	2,967,000	2,997,000	1,345,000	4,806,000	25,094,000
	Cost	2,674,262	2,049,082	749,913	181,565	16,148,245

NEW YORK, NY DISTRICT

TABLE 2-A (Continued) COST AND FINANCIAL STATEMENT

Projects	Funding	FY06	FY07	FY08	FY09	Total Coast to Sept 30, 2009
54. Ramapo at Mahwah NJ	New Work Approp Cost	.116,000 60,966	20,000 32,499	343,000 79,134	191,000 18,765	3,012,460 ²⁰ 2,508,260
55. Ramapo at Oakland NJ	New Work Approp. Cost	5,554,000 3,500,870	955,000 1,238,883	— 210,605	— —	24,398,636 ¹⁸ 21,551,662
56 Green Brook Sub-basin	New Work Approp. Cost Maint.(American Recovery and Reinvestment Act) Appro Cost	6,450,000 10,580,593 — —	14,450,000 8,959,241 — —	14,151,000 5,342,185 — —	12,000,000 10,169,123 14,400,000 —	114,871,000 ¹⁹ 107,566,754 14,400,000 —

- ¹ Of which \$12,500 is for North Atlantic Division Accounts.
- ² Of which \$12,127 is for North Atlantic Division Accounts.
- ³ Excludes \$90,190 for new work expended from contributed funds. Additional NY State Funds were \$200,000 in 1990, \$581,000 in 1991, \$611,574 in 1996, \$2,093,194 in 1997, \$1,280,000 in 2000, \$1,468,734 in 2001, \$3,654,000 in 2002 and in 2003 \$292,959.
- ⁴ Includes \$5,112,694 for new work for previous project.
- ⁵ Includes \$238,350 for new work expended from public works funds and \$311,461 emergency relief funds. Excludes \$81,373 expended from contributed funds.
- ⁶ Excludes \$454,273 expended between August 18, 1915 and June 30, 1935, for operation and care of lock and dam at Troy, NY, under permanent indefinite appropriation. Excludes \$23,735 reimbursement for repairs to Troy Lock.
- ⁷ Includes \$346,797 for maintenance for previous project.
- ⁸ Includes \$107,991,000 from contributed funds.
- ⁹ Includes \$115,000 for new work for previous projects.
- ¹⁰ Includes \$2,491,206 expended to date for construction of land-based overfire air pit incinerator (\$1,493,393 in maintenance funds and \$997,813 in O & M funds.) and \$116,500 applied to removing wrecks authorized by acts prior to adoption of existing projects.
- ¹¹ Includes \$390,424,634 from contributed funds.
- ¹² Includes \$12,070,000 from contributed funds.
- ¹³ Includes \$21,179,750 from contributed funds.
- ¹⁴ Includes \$538,000 from contributed funds.
- ¹⁵ Includes \$12,792,100 from contributed funds.
- ¹⁶ Includes \$58,640,800 from contributed funds.
- ¹⁷ Includes \$487,500 from contributed funds.
- ¹⁸ Includes \$4,272,500 contributed funds.
- ¹⁹ Includes \$34,068,420 from contributed fund
- ²⁰ Includes \$350,000 from contributed fund

TABLE 2-B AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
River and Harbor Act of 1959	AQUATIC PLANT CONTROL (See Section 1 of Text) Control and progressive eradication of obnoxious Aquatic Plant growths	H. Doc. 37 85th Cong. 1st sess.
Section 104 and Harbor Act of 1958	Provided that all research and planning cost to be borne fully by the United States.	
Section 302 River and Harbor Act of 1965	Modified project to include control of waterchestnut	
River and Harbor 23 June 1874	ARTHUR KILL CHANNEL, HOWLAND HOOK, MARINE TERMINAL, NY & NJ (See Section 2 OF TEXT) Original Project for a “channel between Staten Island and New Jersey “; 150 feet wide, 16 feet deep	Report of the Chief of Engineers 1873, S. x.52 42 nd Cong., 3 rd Session
River and Harbor 14 August 1876	Indicated that improvements recommended in 1873 and actually commenced in 1874 were no longer necessary and that a Channel 11 feet deep and 500 feet wide would serve tows and sailing vessels most expeditiously	Report of the Chief of Engineers 1876, H. 44 44th Cong., 1 st Session
River and Harbor 13 June 1902	Recommended a channel between New York and New Jersey passing south of Shooters Island , 21 feet deep and 300 feet wide width would be 400 feet.	H.D. 393, 56 th Cong., 1 st session
River and Harbor 25 June 1910	Authorized a channel north of Shooters Island 1 mile long , 300 feet wide, 16 feet deep.	H.D. 337, 59 th Cong., 2 nd sess
River and Harbor 22 September 1922	The original project for “ New York and New Jersey “ provided for a channel 400 feet wide and 30 feet deep	H.K. 653, 66 th Cong. 2nd Session
River and Harbor 30 August 1935	Provided for present project depth of 35 feet and channel 600 -800 feet wide.	H.K. 133, 74 th Cong. 1 st Session
None	Feasibility study for the rehabilitation of the dike north of Shooters Island initiated 1960.	District Engineers April 1964
River and Harbor 27 October 1965	Provided for widening and deepening entrance to Kill Van Kill at Robbin’s Reef at a 35 foot depth.	H.D. 108, 89 th Cong., 1 st session
None	Investigation into the effects of the removal of Shooters Island And shore modifications on tides, currents, and shoaling in the Kill Van Kull channels. Study noted no detrimental effects.	Waterways Experiment Station U.S. Army Corps., Dec 1967
None	Investigation into widening and deepening NY and NJ Channels in response to House Committee on Public Works Resolutions 30 March 1995, and 27 June 1956 resulted in negative reports.	District Engineer, NY 9/21/73

NEW YORK, NY DISTRICT

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
28 May 1975	Investigation into the feasibility of deepening the triangular area Just east of Shooters Island to 35 feet MLW. Initiated in 1974. Built in 1976.	District Engineer, NY H.D. 494,89 th Cong, 2 nd session
None	Investigation into the impacts caused by the removal of Shooters Island; noted a lack of economic justification and significant potential environmental impacts. Chief of Engineers recommended 6 August 1979 that no Federal funds be provided.	District Engineer, Feb 1979
None	Investigation into widening and deepening Kill Van Kull and Newark Bay in response to House Committee on Public Works Revolution Dated 14 June 1972 . Currently under review by the Office of Management and Budget.	District Engineer, NY July 1980
House Committee On Public Works Arthur Kill Channel, Howland Hook Terminal Resolution 9 May 1979	Review the reports of the Chief of Engineers on NY and NJ Channel contained in H.D.133,74 th Cong., 1 st Sess., and and Transportation 1 st Cong. To determine the feasibility of deepening and easing the bends of NY and NJ Channels from deep water in Upper Harbor westward to Howland Hook Marine Terminal, Howland Hook, Staten Island, NY, and creating a turning basin to serve that facility; all to accommodate Deeper draft and otherwise larger ongoing general cargo and container vessels	Final Feasibility Report H.D. 108,89 th Cong., NY and NJ March 1986
Water Resources Development Act Of 1986 (PL99-662) Sec.202(b)	AK Channel deepening to 41 feet to Howland Hook Terminal, and to 40 feet to Exxon Bayway Gulfport facilities, as per the project for navigation , Report of BERH dated 31 March 1986.	
Water Resources Development Act Of 1996 (PL 1014-303) Sec.303(b)(11)	Modified WRDA 86 to authorize AK Channel deepening to a depth of not to exceed 45 feet , at cost \$83,000,000.	Final Limited Reevaluation Report , Arthur Kill Channel, Howland Hook Marine Terminal,NY&NJ Dec 1997.
Water Resources Development Act Of 1999 (PL106-53) Sec.338	Modified WRDA 86 and WRDA 96 to authorize AK Channel deepening at a total cost of \$315,700,000.	Addendum to Final Limited Reevaluation Report ,Arthur Kill Howland Hook Marine Terminal,NY&NJ May 2001.
Mar 4, 1913	BRONX RIVER,NY (See Section 3 of Text) Channel for 10 feet and 100 feet wide from East River to Dam at	H.Doc.897, 62nd Cong. 2ndsess.

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
	East 177 th Street.	
July 13,1902	BUTTERMILK CHANNEL,NY (See Section 4 of Text) Channel 1,200 feet wide and no less than 30 feet deep	H. Doc. 122 ,56th Cong. 2nd sess. (Annual Report 1901, p. 1299)
May 17,1950	EAST CHESTER CREEK,NY (See Section 5 of Text) Channel 10 feet deep and 150 to 70 feet wide.(Deauthorized in 1992) The 8-foot channel, authorized in 1930, completed in 1941, completed in 1941.	H. Doc. 749 ,80th Cong. 2nd sess.
March 2,1915	EAST RIVER,NY (Section 6 of Text) Removal of Coenties Reef to 35 feet , conditional upon local Local interests increasing depth to 40 feet	H. Doc. 188 ,63 rd Cong. 1 st sess.
July 27,1916	Channel across Diamond Reef 35 feet deep and 1,000 feet wide.	
August 8,1917	Channel east of Blackwells Island to 20 feet; channel between South Brother and Berrian Islands, to 20 feet; channel between North and South Brother Islands to 26 feet. Channel 40 feet deep through East River and Hell Gate	H. Doc.140,65th Cong. 1 st ,sess
July 18,1989	Secure a depth of 40 feet deep in channel through East River and Hell Gate as soon as practicable.	Specified in act
Sep.22,1922	Depth limited to 35 feet in through channel between Wallabout Channel and Throgs Neck, Channel east of Blackwells Island,30 Feet to English pl. Eliminated channel between North and South Brother Islands except as authorized prior to existing project. Remove certain rocks and reefs and construct dike in Pot cove, Hell Gate.	Rivers &Harbor Com Doc.3,67 th Cong.2 nd ses
E.Pub.Wks.Comm. Res., Dec.15 1970 S.Pub.Wks.Comm	Spur channel to Astoria waterfront 37 feet in rock, 35 feet in Material, for a length of 0.95 mile for varying widths, and Turning basin.(South Brother Channel).	S.Doc. 91-60,91stCong. 2 nd sess, Dec.1970
July 3,1930	EAST ROCKAWAY INLET,NY (Section 7 of Text) Channel 12 feet deep and 250 feet wide, and a jetty.	H. Doc. 19 ,71th Cong 1 st sess
August 26,1937	FIRE ISLAND TO JONES INLET,NY (Section 8 of Text) Construction of jetty .	Rivers & Harbor Com Doc.75 th Cong., 1 st sess

NEW YORK, NY DISTRICT

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
May 17,1950	Channel 10 feet deep.	H. Doc. 762 ,80th Cong 2nd sess
1958 River & Harbor Act	Three dredging operations with sand serving as nourishment. to the beaches westerly of the inlet.	H. Doc. 411 ,84th Cong 2nd sess
1962 River & Harbor Act	Extension of existing jetty, a littoral reservoir, a navigation. channel and dikes, sand deposit on westerly beaches.	H. Doc. 115 ,89th Cong 1st sess
March 1988	14 foot channel with sand placed along Gilgo Beach.	
Oct 23,1962	FLUSHING BAY AND CREEK, NY (Section 9 of Text) 15 foot bay, creek and branch channel; 15 foot maneuvering area; 6-foot anchorage basin; revetment of dike extension; & abandonment of portion of creek channel & repair of dike	H. Doc. 551 ,87th Cong 2nd sess
January 21, 1927	GREAT KILLS HARBORN COVE CREEK,NY (Section 10 of Text) Entrance channel to Crooks Island.	H. Doc. 252 69th Cong 1 st sess
January 20, 1938	Extension of entrance channel and anchorage area.	H. Doc. 559,75th Cong 3rd ^t sess
June 25,1910	HUDSON RIVER,NY (Section 11 of Text) Channel 12 feet deep from Hudson to Waterford, remove State lock and dam at Troy and construct a new lock and dam.	H. Doc. 719,61 st Cong 2nd sess
March 3,1925	Channel 27 feet deep from Hudson to Albany, NY	H. Doc. 350,68 th Cong 1 st sess
July 3,1930	Channel 27 feet below Hudson	H. Doc. 210,70thCong 1 st sess
July 1,1935	Operation and care of lock and dam at Troy were included in Project.	
August 30,1935	Relocation of 12 foot channel between Troy and Waterford.	S. Doc. 155,72th Cong. 2nd sess

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
June 20,1938	Deepen channel between Albany and Waterford to 14 feet With no change in depths for harbors in front of Albany & Troy	2nd sess H. Doc. 572,75th Cong 3rd sess
September 3,1954	Deepen channel between New York City and Albany to 32 feet And construct a turning basin and two anchorages.	H Doc. 228,83rd Cong. 1st sess
P.L. 89-72	Mooring facilities Note: The 12 and 27 foot classification have been de-authorized.	
March 4,,1913	HUDSON RIVER CHANNEL,NY&NJ (See Section 12 of Text) Channel 30 feet deep from Ellis Island to Newark St.,40 feet deep Through shoal from Newark St. to Castle Point and channel 26 by Feet along Weehawken-Edgewater waterfront. Remove shoal east Side of river between West 19 th and West 32 nd Sts.; remove rock Near Battery to 40 feet; remove obstruction near Spuyten Duyvil Creek.	H Doc. 719,62nd Cong. 5502nd sess
March 4,,1915	Additional dredging through shoal from Newark St. to Castle Point	Annual Report 1914, . pp.234-235
August 8,,1917	Remove shoal between West 32 nd and West 61 st Sts. to 40 feet and Widen 40 foot channel between Battery and Canal St. to 2,000 feet	H.Doc 1697,64 th Cong.. 2nd sess
March 3,,1925	Channel 30 by 750 feet along Weehawken-Edgewater waterfront. Widen 40 foot channel between Battery and Canal St. to 2,000 feet	H.Doc 313,68 th Cong.. 1st sess.
January 21,,1927	Modification of conditions of local cooperation affecting channel. Along Weehawken-Edgewater waterfront..	
July 3,,1930	Channel 40 feet deep between pierhead lines from 20 th St., Manhattan. To a point 1,300 feet below Newark St. Hoboken, thence 2,800 feet wide. To deep water off Ellis Island. Channel 30 feet deep between 40 foot Channel and channel along Jersey City waterfront.	H.Doc 155,,70 th Cong 2 nd sess.
August 30,,1935	Widen 40 foot channel to full width of river from north line of 59 th St. to south side of Little Basin, thence a channel of same Depth to deep water off Ellis Island.	H.Doc 309,,72nd Cong 1st sess.
August 30,,1935	Waiver all conditions of local cooperation affecting channel along Weehawken-Edgewater waterfront..	Rivers & Harbors Comm Doc 49,72 th Cong. 2 nd ses
August 26,,1937	Channel 45 and 48 feet deep and 2,000 feet wide	Senate Committee print, 75 th Cong. 1st ses

NEW YORK, NY DISTRICT

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
September, 1996	JAMAICA BAY (See Section 13 of Text) Construction of 1 jetty. Interior channel along west shore	H.Doc.1488,72 nd Cong 2 nd sess
March 2, 1945	Bay, 18 and 12 feet deep; interior channel along south Shore, 15 feet deep; entrance channel 20 and 18 feet deep And 1 riprap jetty all in lieu of work heretofore authorized. Modified conditions of local cooperation.	H.Doc.700,76th Cong 3 rd sess
May 17, 1950	Channel 15 feet deep in Mott Basin including its 2 branches	H.Doc.665,80th Cong 3 rd sess
March 2, 1945	JONES INLET (See Section 14 of Text) Construction of jetty and channel 12 feet deep and 250 Feet wide.	H.Doc.409,77th Cong
FY 1985 Supplemental Approp. Act	KILL VAN KULL-NEWARK BAY, NY & NJ (See Section 15 of Text) Deepening existing 35 foot channels in increments to 40 feet and then 45 feet	P.L. 99-662 P.L. 91-611
March 2, 1945	LAKE MONTAUK HARBOR, NY (See Section 16 of Text) Channel 12 feet deep and 150 feet wide, 70 feet boat basin; repair and extension of two jetties; and addition of sport facilities on top of jetties.	H. Doc 369,76 th Cong. 1 st sess.
August 26, 1937	LONG ISLAND INTRACOASTAL WATERWAY , (See Section 17 of Text) Channel 6 feet deep and 100 feet wide.	H. Doc 181,75 th Cong. 1 st sess.
	MATTITUCK HARBOR, N Y (See Section 18 of Text) A Channel 7 feet deep from Long Island Sound to the Village of Mattituck, 100 feet wide at the entrance and 80 feet wide and A 460 by 570 feet anchorage area at the upper end	Rivers & Harbors Act of 1986 modified in 1935 and 1964
	MORICHES INLET, N Y (See Section 19 of Text) Channel 100 feet deep and 200 feet wide in inlet and 6 feet and 100 feet wide in the Bay and of two jetties	H. Doc 126,86 th Cong. 1 st sess.
August 8 1917	NARROWS of LAKE CHAMPLAIN, NY & VT (See Section 20 of Text) Channel 12 feet deep and 150 feet wide.	Rivers & Harbor Comm
WRDA 1986	NEW YORK HARBOR AND ADJACENT CHANNELS PORT JERSEY, NY (See Section 21 of Text) Deepening existing 35 foot channel and turning basin.	PL99-662 Amended by PL106-541
September 6, 1933 August 30, 1965	NEW YORK AND NEW JERSEY CHANNEL NY&NJ (Section 22 of Text) Anchorage off Perth Amboy to 35 feet	H.Doc.1386,62nd Cong H.Doc.17,71th Cong 2nd sess

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
May 28,1935	Channel 35 feet deep from lower bay to upper bay , except between vicinity of Smith Creek and vicinity of Piles Creek to 30 feet with anchorage 38 feet deep at Sandy Hook and Perth Amboy	H.Doc.133,74thCong 1st sess
May 17,1950	Channel 35 feet deep from vicinity of Smith Creek to the vicinity of Piles Creek	H.Doc.133,74thCong 1st sess
October 27,1965	Widen entrance to Kill Van Kull to 1,400 feet narrowing minimum width of 1,000 feet	H.Doc.108,98thCong 1st sess
March14, 1915	<p>NEW YORK HARBOR COLLECTION AND REMOVAL OF DRIFT, NY&NJ (See Section 23 of Text) Allotment from appropriations made for New York Harbor and its immediate tributaries may be used for collection and removal of drift in these waterways.</p>	
July3, 1930 December31, 1970	Carrying on this work as a separate and distinct project. Increase scope of project to include removal and disposal of derelict vessels, some deteriorated shore structures and debris along shores; and the repair of other structures; all subject to approval by Secretary of the Army and the President.	PL91-611,91 st Cong., H.R.1987
March7, 1974	Removal and disposal of derelict vessels, some deteriorated shore structures and debris along shores and the repair of other shore structures.	PL91-611,93rd Cong.,
July5, 1884	<p>NEW YORK HARBOR ENTRANCE CHANNEL AND ANCHORAGE AREAS (See Section 24 of Text) Main-Ship-Bayside –Gedney to 30 feet deep for width of 1,000 feet (Dimensions fixed by Secretary of War , December 27,1886 by authority of Act of August 5, 1886).</p>	Annual Reports 1887, p62 and 1888,p63
March3, 1899	Ambrose Channel (East Channel)	H.Doc.159,55 th Cong., 2 nd sess.
June25, 1910	Maintenance of entrance channel under I head.	
August8, 1917	Anchorage Channel, extension of Ambrose Channel into Upper Bay	H.Doc.518,63rd Cong., 2 nd sess.
August8, 1917	Removal of Craven Shoal	H.Doc.557,64th Cong., 1st sess.

NEW YORK, NY DISTRICT

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
August8, 1917	Channel between Staten Island and Hoffman and Swinburne Islands	H.Doc.625,64th Cong., 1st sess.
August30, 1935	Dredging south end of Red Hook Flats, Liberty Island Anchorage, And channel along New Jersey pier-head line.	H.Doc.183,73rd Cong., 2nd sess.
August30, 1935	Deepen Bayside-Gedney Channel to 35 feet for a width of 800 feet.	H.Doc.133,74th Cong., 1st sess.
August26, 1937	Deepen Ambrose and Anchorage Channels to 45 feet for a width of 2,000 feet.	Senate Commerce Doc 75 th Cong, 1st sess.
July3, 1958	Dredging South Channel, elimination of portion of Bayside-Gedney Channel.	S. Doc. 45 84 th Cong. 1 st sess.
October27, 1965	Deepen and expand Red Hook Flats Anchorage, deepen Gravesend Bay Anchorage	S. Doc. 17 89 th Cong., 1 st sess
March31, 1982	Further expansion of Red Hook Flats Anchorage and the Relocation of Anchorage channel.1982	OCE Letter 31 Mar
May 2000	<p>NEW YORK AND NEW JERSEY HARBOR NY&NJ (Section 25 of Text)</p> <p>Deepen the Ambrose Channel from its existing/ previously authorized depth to 53 feet below mean low water, deepen the Anchorage, Bay Ridge, Port Jersey, Kill Van Kull ,Newark Bay and Arthur Kill(to Howland Hook) Channels from their previously authorized depths to 50 feet (52 feet in rock or otherwise hard material)</p> <p>below MLW. Authorized associated mitigation for aquatic and air quality impacts.</p>	WRDA 2000
March 2, 1907	<p>NEWARK BAY, HACKENSACK & PASSAIC RIVER, NJ (Section 26 of Text)</p> <p>16 foot channel of Passaic River</p>	H.Doc.441,59 th ,Cong 2 nd sess
February 27, 1911	Widening 16 foot channel in Passaic River	H.Doc.441,59 th Cong 2 nd sess
July 25, 1912	20-foot channel in Passaic River	H.Doc.707,62nd Cong 2 nd sess
January 21, 1927	10-foot channel in Passaic River	H.Doc.284,60 th ,Cong 2 nd sess
July 3, 1930	30-foot channel in Passaic River	H.Doc.156,71 st ,Cong 2 nd sess

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
March 22, 1945	35 and 37 feet in main channel of Newark Bay and branch Channel to an inshore channel Port Newark terminal and remove Portion of rock area at Bergen Point to same depths.	S.Doc.250,79 th Cong 2 nd sess
March2, 1945	Modification of local cooperation for 10 - foot channel	H.Doc.430,76 th Cong 1st sess
September3, 1954	34-32 foot channel in Hackensack River including approach channel in Newark Bay from branch channel at Port Newark terminal and remove portion of rock area at Bergen Point to same depths.	H.Doc.252,82 th Cong 1 st sess
October23, 1962	35 - foot channels at Port Elizabeth	H.Doc.289,88 th Cong 2nd sess
November7, 1966	Widening 35-foot channel in Newark Bay, provision of two Maneuvering areas, widening entrance into Port Elizabeth and Newark Bay branch channels, deepening and widening Newark Bay 32-foot channel and provision of a turning basin At junction of Hackensack and Passaic Rivers; and deepening 2 foot -channel in Hackensack River at 15 feet..	H.Doc 494,89 ^t Cong 2 nd sess
March 2, 1919	NEWTOWN CREEK, NY (See Section 27 of Text) 20-foot channel	H.Doc. 1936,64th Cong 1 st sess
July 3, 1930	23-foot channel 12-foot channel in English Kills	Rivers and Harbors Committee Doc. 42, 71st Cong; 2 nd , sess Rivers and Harbors Committee Doc. 4, 75th Cong; 1st, sess
July 4, 1836	PLATTSBURGH HARBOR, NY (See Section 28 of Text) Construction of 1,000 feet of breakwater	H.Doc. 131,23th Cong 2 nd sess
July 11, 1870	Extension of 400 feet to breakwater, dredging between Breakwater and wharves and beach revetment	H.Doc. 494,89th Cong 2 nd , sess
September 19, 1890	Extension of 300 feet to 1,250 feet of breakwater Already built.	Annual Report 1870,pg55. 2 nd , sess Annual Report 1889, Pg.2458
June 25, 1910	Completion of improvement by dredging areas not Heretofore dredged to 9 feet.	H.Doc. 759th, 61st Cong 2 nd , sess

NEW YORK, NY DISTRICT

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
June 10, 1910	RARTAN RIVER, NJ (See Section 29 of Text) Entrance channel 12 feet deep, thence 10 feet deep to and including turning basin, thence 3 feet deep to head of improvement	H.Doc. 1165, 60th Cong 2 nd sess
July 3,1930	Widening turning basin, dredging anchorage basin, and Constructing, fenders on east bank.	Rivers and Harbors Com Doc. 23, 70 th Cong. 2 nd sess (contains published map)
March 2, 1919	RARTAN RIVER, NJ (See Section 30 of Text) Channel 15 feet deep and 20 feet wide to Washington Canal 10 feet deep and 150 feet wide to canal locks and 10 feet deep thru South Channel	H.Doc. 1341,62nd Cong 3 rd sess
July 3,1930	Channel 25 feet deep and 300 feet wide up to New York and Long Branch Railroad bridge.	H.Doc. 454,70 th Cong 2 nd sess
July 3,1930	Channel 10 feet deep in earth and 11 feet in rock to New Brunswick Width reduced to 100 feet.	H.Doc. 127,70 th Cong 1st sess
July 3,1930	Relocation of lower reach to South Channel	Rivers & Harbors Comm H.Doc.31,71 th Cong 2 nd
August 26, 1937	Channel 25 feet deep and 300 feet wide to junction of main and south channels, thence of same depth on South Channel Titanium Pigment Co.	Rivers & Harbors Comm H.Doc. 74,74 th Cong 2sess
October 17, 1940	Channel 25 feet deep and 300 feet wide to junction of main south channels to government wharf, including a turning basin	Report on file in the Office Chief of Engineers (report not printed)
October 23, 1962	In South Channel, maintenance of 15 foot channel to dock of Middlesex County Sewerage Authority.	H.Doc. 455,86 th Cong 2 nd sess
RARTAN RIVER TO ARTHUR KILL CUT-OFF , NJ Channel, NJ (See Section 31 of Text)		
September 6, 1933 August 30,1935	Channel 1 mile long, 20 feet deep, 800 feet wide, connecting Raritan River and Arthur Kill channels	H.Doc. 50,,73rd Cong 1 st sess
SANDY HOOK BAY AT LEONARDO, NJ (See Section 32 of Text)		
May 17,1950	Channel 8 feet deep 150 feet wide from the 8-foot contour IN Sandy Hook Bay to the entrance of the small boat harbor at Leonardo, NJ.	H.Doc.108, 81st ^o Cong 1st sess
SHARK RIVER, NJ (See Section 33 of Text)		
March2,1945	Channel 18 feet deep 150 feet wide across entrance bar, 12 feet	H.Doc.102, 76th ^o Cong

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
March 2, 1945 Deep 100 feet wide to	SHARK RIVER, NJ (See Section 33 of Text) Channel 18 feet deep 150 feet wide across entrance bar, 12 feet Route 35 bridge, 8 feet deep 100 feet wide 1st sess To upper limit of Belmar boat basin; and 12-foot anchorage.	H.Doc.102, 76th Cong
July 14, 1960	SHINNECOCK INLET, NY (See Section 34 of Text) Channel 110 feet deep 200 feet wide in Inlet, and 6 feet deep and 100 feet wide in the Bay, and 2 jetties.	H.Doc.126, 86th Cong 1st sess FY 83 Supplemental Appropriations Act
March 2, 1919	SHREWSBURY RIVER, NJ (See Section 35 of Text) Channel 16 feet deep in North Branch	H.Doc.1296, 62nd Cong 3rd sess
August 30, 1975	Channel 12 feet deep.	H.Doc.157, 71st Cong 2nd sess
August 30, 1935	Channel 9 feet deep.	Rivers and Harbors Comm Doc.31, 74th Cong.
May 17, 1950	Turning basin and anchorage 6 feet at Red Bank and Channels 6. Feet deep in Claypit, Oceanport, and Little Silver Creeks.	H. Doc.285, 81st Cong. 1st sess
August 30, 1935	SHOAL HARBOR AND COMPTON CREEK, NY (See Section 36 of Text) 8-foot channel from the first bend in the creek to Main St. Bridge	H.Doc.58, 73rd Cong 1st sess
March 2, 1945	Extension of 8-foot channel to 1,000 feet upstream from Main St. Bridge	H.Doc.673, 76st Cong 1st sess
September 3, 1954	12-foot channel in bay to the first bend in the creek	H. Doc.89, 82nd Cong., 1st sess.
October 1, 1986	ATLANTIC COAST OF LONG ISLAND, JONES INLET TO EAST ROCKAWAY, LONG BEACH ISLAND NY (See Section 41 of Text) Storm damage protection , rehabilitation of existing groins Construction of new groins.	Section 101(a) 21 of WRDA 1996
1974 & 1986 WRDA	EAST ROCKAWAY INLET TO ROCKAWAY INLET AND JAMAICA BAY, NY (See Section 42 of Text) Beach nourishment of 100 to 200 foot wide beach elevation. 10 feet MSL	
1960 Rivers & Harbor	FIRE ISLAND TO MONTAUK POINT, NY (See Section 43 of Text) Raising dunes, widening beaches, interior drainage structures, groins beach replenishment , annual renourishment	H.Doc.425, 86th , Cong., 2nd sess.
1974 WRDA	Project modified to provide that non-Federal interest shall contribute 30 percent of first costs.	P.L.93-251, 93rd H.R.10203

NEW YORK, NY DISTRICT

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
October 12, 1962	RARITAN BAY AND SANDY HOOK ,NJ (See Section 44 of Text) This project provides for beach fills, groins, and various Sections of the study area.	Flood Control Act 1962 H.Doc.464,86 th .Cong 2 nd sess.
	The study seeks to determine the advisability of changes to The recommendation .	Section 506 WRDA. 1996
	ROCKAWAY INLET TO NORTON POINT (CONEY ISLAND) (See Section 45 of Text)	
1986 WRDA	Provides beach fill to public beach to furnish storm damage Protection to the area.	
Section 501	Extension of terminal groins at West 37 th and Brighton Beach, Fillet of beach fill at Sea Gate.	
1974 & 1992 July3, 1958 1988 WRDA	SANDY HOOK TO BARNEGAT INLET,NJ (See Section 46of Text) Restoration of beach to minimum width of 100 feet at height 10 feet above MLW, and construction of 23 new groins and extension of 14 existing groins.	H.Doc.332,85 th Cong 2 nd sess, modified by Appr.Act for Energy & Water Dev.1985
February,1996	HACKENSACK MEADOWLANDS,NJ (See Section 49 of Text) Provide design and construction assistance for the development Of the Environmental Improvement Program within the Hackensack Meadowlands District of New Jersey. The intent of the program Is flood control and ecological restoration support.	WRDA of 1992,sect Amended by WRDA of 1996 sect. 550 WRDA 2007;SEC 5105
	JOSEPH G. MINISH PASSAIC RIVER WATERFRONT PARK AND HISTORIC AREAS (See Section 50 of Text)	
November28, 1990	The first phase restores riverbanks and wetlands,. The The second phase adds a 9,200 foot waterfront walkway And third phase adds park facilities, plazas and landscaping	WRDA 1990;PL101- 640 WRDA 1992;PL101-580 WRDA 1996;PL104-303
	NEW YORK CITY WATERSHED, NY (See Section 51 of Text)	
April 1997	Provide design and construction assistance for water -related environmental infrastructure and resources management	WRDA1996, sect 552CR52 HR.36
	PASSAIC RIVER BASIN, NJ (See Section 52 of Text)	
WRDA1976, 1990&1992	Advanced engineering and design study; involving reformulation of plans for flood control and water resource management	H.Report 94-1702
	PRESERVATION OF NATURAL FLOOD STORAGE AREAS, PASSAIC RIVER, NJ (See Section 53 of Text)	
October22, 1976	The preservation element includes acquisitions 5,350 areas of natural storage , 5,200 acres of which are wetlands and could conceivably be developed.	WRDA1976;PL94-587 WRDA1990&1996

TABLE 2-B (Continued) AUTHORIZATION LEGISLATION

Acts	Work Authorized	Documents
WRDA1986	<p>RAMAPO AT MAWAH, NJ AND SUFFERN, NY (See Section 50 of Text) Plan for flood damage reduction includes channel modification to approximately 13,000 feet of the Ramapo River, Mahwah River and Masonicus Brook.</p>	<p>H.Doc.99-1013,Cong 2nd sess.</p>
October22, 1976	<p>RAMAPO AT OAKLAND, NJ (See Section 51 of Text) Phase I Advanced Engineering and Design Study was authorized. Congressional guidance for the conduct of the study. The study was authorized for construction.</p>	<p>WRDA1976,PL94-587 WRDA1986,PL99-662 WRD 1996,PL104-303</p>
March16,1981	<p>RARITAN RIVER BASIN, GREENBROOK SUB-BASIN, NJ (See Section 52 of Text) Recommended 150 flood protection in lower portion.</p>	
February 1984	<p>Recommended protection to 500 year level. Authorizes construction of Greenbrook Flood Control .Flood control combines levees ,flood walls, channel modification ,flood proofing and natural flood storage to provide protection</p>	<p>WRDA 1986 ,sect 401(a)</p>

NEW YORK, NY DISTRICT

TABLE 2-C

HUDSON RIVER, NY

FEATURES OF LOCK AND DAM INCLUDED IN EXISTING PROJECT (Section 6 of Text)	Location
Below Waterford	2.2 miles
Above Battery, New York City	152.6 miles
 Locks:	
Clear Width	44.4 feet
Greatest length available for full width	492.5 feet
Lift at lowest stages	17.3 feet
 Depth on miter sills:	
Upper (at normal pool level)	16.3 feet
Lower (at lowest low water)	13.0 feet
 Character of foundation: Rock	
King of dam: Fixed Crest	
Type of construction: Concrete	
Compleat: 1917	
Cost: \$1,463,014	

TABLE 2-E

SUPERVISOR OF NEW YORK HARBOR

Statement of Activities FY 2009

1. Number of Patrols:	
a. Shore	0
b. Vessel	81
c. Air (helicopter)	0
	Total 81
 2. Number of Inspections:	
a. Shore Facilities	86
b. Vessels	45
	Total 131
 3. Disposition of Cases:	
a. Voluntary Restoration	10
b. After-the-Fact Permit Applications Accepted	5
c. Permit Not Required or Already Under Permit	12
d. Submitted for Litigation to OCE or U.S. Attorney	0
e. Other Misc.	10
f. Cases Pending as of 10/1/05	241
	Total 278

TABLE 2-F RECONNAISSANCE AND CONDITION SURVEYS FY 09

NAME OF PROJECT	DATE SURVEY CONDUCTED
NEW JERSEY	
Cheesequake Creek, NJ	May09
Hackensack River	Feb09
Keyport Harbor/Matawan Creek	Jun09
New York New Jersey Channel, Kill Van Kull	Jan09
New York New Jersey Channel, Seguine Point	May09
New York New Jersey Channel, Raritan Reaches	May09
New York New Jersey Channel, Arthur Kill	May09
Newark Bay Port Elizabeth	Dec08
Newark Bay Main Channel	Dec08Jun09
Newark Bay Port Newark	Dec08
Passaic River, NJ	Apr09
Perth Amboy, NJ	Aug09
Port Jersey, NJ	Jul09
Raritan River	Jul09
Sandy Hook Bay	Mar09
Sandy Hook @ Leonard	Jun09
Shark River	Mar09
Shoal Harbor & Compton Creek	May08
Shrewsbury River	Aug08
NEW YORK	
Bayridge & Red Hook Channel, NY	Dec08
Brown Creek, NY	Feb09
Buttermilk Channel, NY	Sep09
East River, NY	Jul09
Eastchester Creek	Jun09
East River Spur Channel	Mar09
East Rockaway Inlet	Mar09-Aug09
Flushing Bay & Creek	Feb09
Fire Island Inlet	Mar09
Great Kills Harbor	Jun09
Greenport Harbor	Aug09
Hudson River 40 foot project	Oct 09
Jones Inlet	Mar 09
Lake Montauk Harbor	Mar09
Mamaroneck Harbor	Apr09
Moriches Inlet	Mar09
Newtown Creek	Apr09
New York Harbor-Channel Along the NJ Pierhead	Oct 08
New York Harbor-Gravesend Bay	Feb09
New York Harbor-Main Ship Channel	Nov09
New York Harbor-Red Hook Flats Anchorage	Jun09
Portchester Harbor	Jun09
Shinnecock Inlet	Mar09
Westchester Creek, NY	Sep09

Total cost of Reconnaissance and Condition Surveys in Fiscal Year 2009 was \$2,564,369

NEW YORK, NY DISTRICT

TABLE 2-G OTHER AUTHORIZED NAVIGATION PROJECTS

	For Last Full Report See Annual Projects Report for	<u>Cost to September 30, 2009</u> Construction	Operation & Maintenance
Bay Ridge-Red Hook Channels, NY	1992	5,523,297	41,200,035
Bronx River, NY	1991	1,149,946 ³	3,802,517
Browns Creek, NY	1995	33,976 ¹²	1,072,040
Burlington Harbor, VT	1966	706,414 ⁹	303,555
Channel between North & South Hero Islands, VT	1909	31,000	1,288
Cheesequake Creek, NJ	1953	40,000	210,675
Coney Island Channel, NY	1973	111,371	423,148
Coney Island Creek, NY	1952	69,489	6,203
East River, NY	1997	32,723,662 ¹³	8,225,184
East Rockaway Inlet, NY	1997	83,969	16,624,362
Echo Bay Harbor, NY	1953	64,584	21,571
Fire Island Inlet, NY	1973	594,355	2,908,786
Flushing Bay & Creek, NY	1997	2,102,905	8,878,900
Gordon's Landing, VT	1982	34,750	115
Gowanus Creek Channel, NY	1972	346,831	394,004
Great Chazy River, NY	1980	18,000	292,919
Great Kills Harbor, NY	1962	137,301 ¹	88,029
Great Lakes to Hudson River W/W, NY	1976	33,562,640 ²⁰	457
Greenport Harbor, NY	1953	74,681	21,720
Harlem River, NY	1969	3,616,119	493,491
Hempstead Harbor, NY	1993	3,687,949	76,497
Hudson River Channel, NY	1997	6,771,870	37,136,037
Huntington Harbor, NY	1953	91,081 ¹⁷	57,527
Keyport Harbor, NJ	1990	40,475	1,417,437
Lake Montauk, NY	1991	791,680	1,288,163
Larchmont Harbor, NY	1970	76,065	267,768
Little Neck Bay, NY	1969	1,741,210 ¹⁹	537
Mamaroreck Harbor, NY	1990	513,764	1,351,086
Matawan Creek, NJ	1984	21,000	315,613
Mattituck Harbor, NY	1990	177,925	1,417,832
Milton Harbor, NY	1984	151,373	1,057,26
Newton Creek, NY	1986	1,168,354	1,760,745
New Rochelle Harbor, NY	1971	73,214 ⁸	212,411

³ Excludes \$496,250 for new work for previous projects.

¹² Includes \$69,036 for new work and \$26,921 for maintenance for previous projects. Excludes \$10,000 for new work expended from contributed funds.

⁹ Includes cost of maintenance prior to July 1, 1886. Excludes \$1,415,133 for rehabilitation.

¹³ Includes \$6,187,690 for new work and \$37,664 for maintenance for previous projects.

¹ Excludes \$104,800 for new work expended from contributed funds.

²⁰ Included \$4,456,400 for new work expended from emergency relief funds.

¹⁷ Excludes \$19,546 for new work expended from contributed funds and \$31,454 to be contributed.

¹⁹ Excludes \$1,741,210 for new work expended from contributed funds

⁸ Includes \$43,175 for new work for previous projects.

TABLE 2-G (Continued) OTHER AUTHORIZED NAVIGATION PROJECTS

	For Last	<u>Cost to September 30, 2009</u>	
	Full Report See Annual Projects Report for	Construction	Operation & Maintenance
New York State Barge Canal, NY	1988	—	—
Northport Harbor, NY	1956	78,644	61,487
Peconic River, NY	1953	25,000	116,500
Peekskill Harbor, NY	1951	19,400	66,037
Plattsburgh Harbor, NY	1986	198,415	256,415
Port Chester Harbor, NY	1990	433,470 ⁶	1,742,097
Port Henry Harbor, NY	1931	69,406 ²⁵	1,299
Port Jefferson Harbor, NY	1977	221,128 ³¹	359,294
Raritan River, NJ	1991	1,551,470	16,114,463
Raritan River to Arthur Kill Cut-Off Channel, NJ	1991	810,500	3,965,631
Roundout Harbor, NY	1989	142,437	3,185,437
Rouses Point, Lake Champlain, NY	1895	98,468	249
Sag Harbor, NY	1964	212,805 ²⁶	11,710
Sandy Hook Bay, NJ	1985	508,936	4,002,330
Sandy Hook Bay @ Leonardo, NJ	1991	56,479	679,916
St. Albans Harbor, Lake Champlain, VT	1917	3,125	385
Saugerties Harbor, NY	1988	81,905	429,180
Shark River, NJ	1987	150,000	1,254,813
Sheepshead Bay, NY	1948	33,828	64,078
Shoal Harbor & Compton Creek, NJ	1990	124,572 ⁷	1,822,938
Staten Island Rapid Transit Railway Bridge, Arthur Kill, NY	1973	7,730,476	—
Sumpawanus (Babylon Creek) Inlet, NY	1895	7,000	—
Wallabout Channel, NY	1953	18,174	36,312
Wappinger Creek, NY	1950	13,000	44,691
Washington Canal and South River, NJ	1953	206,116 ³⁰	212,827
Woodbridge Creek, NJ	1953	48,823	178,398

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⁶ Includes \$16,369 for maintenance for previous projects.
²⁵ Excludes \$1,000 for new work expended from contributed funds.
³¹ Includes \$84,934 for maintenance for previous projects.
²⁶ Excludes \$66,758 for rehabilitation.
⁷ Includes \$17,000 for new work for previous projects.
³⁰ Includes \$84,934 for maintenance for previous projects.

NEW YORK, NY DISTRICT

TABLE 2-H OTHER AUTHORIZED BEACH EROSION CONTROL PROJECTS

Projects	For Last Full Report See Annual Report for	<u>Cost to Sept 30, 2008</u>	
		Construction	Operation & Maintenance
Atlantic Coast of NJ, Sandy Hook to Barnegat Inlet ¹	1959		
Raritan Bay and Sandy Hook Bay, NJ	1981	\$11,061,256	262
Fire Island Inlet to Jones Inlet, NY ²	1981	18,044,667	217,900

¹ Reactivated as a modified project in 1985 (Sec. 21)

² Listed since 1982 as a navigation and beach nourishment project (Sec. 4)

TABLE 2-I OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Projects	For Last Full Report See Annual Report for	<u>Cost to Sept 30, 2009</u>	
		Construction	Operation & Maintenance
Adams, Hoosic River Basin, Mass. 1	1964	6,282,307 ²	—
Ardsley, NY	1990	5,477,281	—
Atlantic Coast of NJ, Sandy Hook to Barnegat Inlet ¹	1959		
Byram River at Pemberwick, Conn. 1, 3	1959	363,515	—
East Barre Dam, Winooski River, Vt. 1	1963	2,898,334	—
Elizabeth, NJ	1985	54,374,070	—
Fire Island Inlet to Jones Inlet, NY ²	1981	18,044,667	217,900
Herkimer, NY	1973	1,249,530 ⁹	—
Hoosic Falls, Hoosic River Basin, NY 1	1956	1,064,626	—
Lamoille River, Vt: Hardwich Dams 5, 6	1939	—	—
Liberty State Park Levee and Seawall, NJ	1990	17,888,670	—
Missisquoi River at Richford, Vt 13	1965	238,169	—
North Adams, Hoosic River Basin, Mass.	1968	15,572,988 ⁷	—
Rahway, NJ	1971	973,142 ⁸	—
Rahway, South Branch, NJ	1979	15,863,723	—
Raritan Bay and Sandy Hook Bay, NJ	1981	\$11,061,256	262
Rosendale, NY	1975	3,684,966	—
Sandburg Creek, Spring Glen, NY	1976	109,702	—
Sawmill R. Elmsford & Greenburgh, NY	1987	62,917	—
South Amsterdam, Mohawk River, NY	1967	1,564,976	—
South Ellenville, NY	1984	289,702	—
South Orange, NJ	1981	6,857,484	—
Staten Island, NY	1983	664,998	—
Wappinger Creek at Pleasant Valley, NY 1-3	1959	142,075	—
Waterbury Reservoir Winooski River Basin, Vt.	1976	1,438,845	8,200

TABLE 2-I (Continued) OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Winooski River, Vt.	1940	5,897,427	—
Wrightsville Dam, Winooski River Basin, Vt.	1970	1,549,929	—
Yonkers, NY	1984	113,754,475 ¹⁰	—

¹ Completed.

² Excludes costs of \$913,360 under other contributed funds.

³ Authorized by Chief of Engineers pursuant to Sec. 205, Public Law 858, 80th Cong., as amended.

⁴ Inactive.

⁵ Includes \$213,507 emergency relief funds.

⁷ Excludes cost of \$21,000 under other contributed funds.

⁸ Excludes cost of \$51,500 under other contributed funds.

⁹ Uncompleted portion has been deauthorized.

¹⁰ Includes \$622,8176 contributed funds.

TABLE 2-J SURVEYS

Study Class	FY 09 Cost
Navigation Studies	\$ 62,039
Flood Control Studies	\$327,787
Beach Erosion Studies	\$205,851
Supplemental Work	\$332,486
<u>Special Studies 1</u>	<u>\$1,867,795</u>
TOTAL	\$2,795,958

¹ Includes watershed/ecosystems, special investigations, FERC licensing activities, Intra Army water resources, Nat'l Estuary studies, Marine Fisheries Service, Planning Ass't to States, Coord. studies of other agencies.

TABLE 2-K PRECONSTRUCTION ENGINEERING AND DESIGN

Authorized Projects	FY 09 Cost
Beach Erosion	
South River, Raritan River Basin, NJ	277,766
Raritan Bay and Sandy Hook, Union Beach, NJ	39,020
Flood Control	
Lower Saddle River, NJ	157,676
Passaic River, Harrison, NJ	33,096
Passaic River Mainstem, NJ	15,102
Sawmill River at Elmsford-Greenburgh, NY	3,358
TOTAL	\$526,018

NEW YORK, NY DISTRICT

TABLE 2-L COSTS FOR FLOOD PLAIN MANAGEMENT SERVICES

Study Class	FY 09 Cost
Flood Plain Management Unit	44,008

TABLE 2-M DEAUTHORIZED PROJECTS

Projects	For Last Full Report See Annual Report for	Date And Authority	Federal Funds Expended	<u>Funds Expended</u>	
				Construction	Operation And
Maintenance					
Bennington, VT (1936 & 41 Acts)	1974			670,000	
Bronx River, NY	1981	Aug. 1982	1,149,946	1,159,946 ¹²	1,947,853
Brown's Creek, NY	1980	Aug. 1977	33,976	33,976 ⁸	505,369
Cheesequake Creek, NJ 4	1953	Aug. 1982	40,000	40,000	30,675
Coney Island Creek, NY 4-6	1952	Aug. 1982	69,489	69,489	1,622
East Chester Creek, NY (1950 Act)	1992	July 1992	—	—	—
East Rockaway (Devs) Inlet, NY 4	1963	Aug. 1977	3,503,969 13	100,000	—
East Rockaway Inlet to Rockaway Inlet and Jamaica Bay, NY (Part 11)	1976	1988	—	1,185,365	—
Elizabeth, NJ	1948	Aug. 1977	60,481	60,481	59,391
Glen Cove Harbor, NY	1966	Aug. 1977	165,882	165,882 ¹¹	2,455
Hempstead Harbor, NY (68 Act) 14	1989	Jan. 1990	—	39,468	76,497
Hudson River, NYC to Albany (12 ft, 27 ft) 18	1982	Aug. 1987	—	—	—
Huntington Harbor, NY	1953	Aug. 1977	49,035	68,581 ⁵	51,566
Irvington Harbor, NY	1947	Aug. 1977	—	—	—
Lamoille River, VT	1939	Aug. 1977	49,837	49,837	—
Lemon Creek, NY	1937	1988	—	6,621	1,621
Manhasset Bay, NY	1948	1988	—	—	4,636
Matawan Creek, NJ (1881 Act)	1984	1988	—	21,000	257,237
N. Shore of Long Island, Suffolk County, NY	1979	Jan. 1990	—	—	—
Newark Bay, Hackensack and Passaic River, NJ 16	1982	Aug. 1982	—	—	—
NY & NJ Channels 4, 18	1982	Aug. 1982	—	—	—
Orowoc Creek, NY	1949	1988	—	—	4,951
Otter Creek, VT	1937	Jan. 1990	—	—	—
Perth Amboy, NJ	1966	Jan. 1990	—	—	—
Port Chester Harbor, NY 2,3	1967	Aug. 1977	433,470	433,470 ⁴	441,656
Port Jefferson Hbr. NY (1890, 1930 & 68 Acts)	1977	Jan. 1990	—	—	—
Rahway River, NJ 6, 7	1948	Aug. 1982	—	37,000 ⁴	307
Raritan River, NJ 4, 6	1981	Aug. 1982	1,551,470	1,617,470 ¹⁵	10,113,903
Rome Mohawk River, NY 6, 7	1959	Aug. 1982	7,000	7,000	—
Rutland, Otter Creed, VT	1963	1988	—	211,015	—

TABLE 2-M (Continued) DE-AUTHORIZED PROJECTS

Projects Maintenance	For Last Full Report See Annual Report for	Date And Authority	Federal Funds Expended	Funds Expended	
				Construction	Operation And
Sag Harbor, NY (Channel) 1	1964	Oct. 1992	—	—	—
Shooters Island, NJ & NY 9	—	July 1992	—	—	—
Shrewsbury River, NJ (1950 & 1965 Act)	1992	Jan. 1990	—	—	—
Swanton Harbor, VT 6	1888	Aug. 1977	—	70,500 ⁴	235
Ticonderoga River, NY 1-6	1895	Nov. 1983	167,760	16,500	1,260
Waterbury, VT (1941 Act) 7, 8	1951	Nov. 1981	9,253	9,253	—
Waterford, NY 6, 7	1939	Aug. 1982	—	—	—
Waycake Creek, NJ	1949	1988	—	2,781	—
Westchester Creek, NY 4	1981	Aug. 1982	175,933	175,933	2,921,311

- ¹ No Commerce reported
- ² Completed
- ³ A portion of this project is classified “inactive”
- ⁴ Uncomplete portion deauthorized
- ⁵ Excludes \$19,546 for new work expended contributed funds
- ⁶ Inactive
- ⁷ Entire project deauthorized
- ⁸ Excludes \$71,423 for rehabilitation
- ⁹ Removal for navigation
- ¹⁰ Deepening 8 foot project to 10 feet
- ¹¹ Includes \$93,882 for Rehabilitation
- ¹² Includes \$10,000 expended from contributed funds
- ¹³ Includes \$100,000 expended from contributed funds
- ¹⁴ Deepening project to 13 feet
- ¹⁵ Includes \$66,000 expended from contributed funds
- ¹⁶ 1912 authorization
- ¹⁷ 1935 authorization
- ¹⁸ 1910 construction dikes

NEW YORK, NY DISTRICT

TABLE 2-N		SECTION 14
Project	FY 09 Cost	
PLANNING AND DESIGN ANALYSIS		
Elizabeth River, Valley View Hillside, NJ	\$25,155	
Coordination Account	6,960	
County Center, White Plains, NY	55,372	
County Center, White Plains, NY (ARRA)	4,580	
Garth Woods, Bronx River, NY	13,088	
Harney Road, Bronx River, NY	10,125	
Long Island Sound, NY	58,909	
Mt. Pleasant Ave., Hanover, NJ	24,928	
Orient Harbor, Southhold, NY	7,669	
South Branch, Rahway River, NJ	37,743	
Tuckahoe, NY Section 14	60,632	

BLE 2-O		SECTION 106
Project	FY 09 Cost	
Old Place Creek, NY	\$283	

BLE 2-P		SECTION 111
Project	FY 09 Cost	
FEASIBILITY STUDY		
Coordination Account	\$19,305	

TABLE 2-Q		SECTION 204
Project	FY 09 Cost	
Coordination Account	\$5,917	

TABLE 2-R		SECTION 205
Project	FY 09 Cost	
FEASIBILITY STUDY		
Poplar Brook, Monmouth City NJ	\$33,116	
Fulmer Creek, Village of Mohawk, Herkimer City, NY	99,812	
Moyer Creek, Village of Frankfort, Herkimer City, NY	26,353	
Steele Creek, Village of Ilion, Herkimer City, NY	123,241	
Jackson Brook, Morris City, NJ	117,459	
PLANS AND SPECIFICATIONS		
Long Hill Township, NJ	64,404	
Mad River Basin, VT	5,417	

TABLE 2-S

SECTION 206

Project	FY 09Cost
FEASIBILITY STUDY	
Manhassat Bay, Town of North Hempstead, NY	73,640
Oriskany Flats, NY	5,712
Gerritsen Creek, NY	-45,935
PRELIMINARY RESTORATION PLANS/INITIAL APPRAISALS	
Coordination Account	13,320
New Rochelle, (Echo Bay), NY	167,254
Potash, VT	67
Wild Branch River, Wolcott, VT	17,599
Soundview Park, City of Bronx, NY	52,284
West Beach, Stowe, VT	15,215
Alley Creek, Queens, NY	887

TABLE 2-T

SECTION 1135

Project	FY 09Cost
FEASIBILITY STUDY	
Coordination Account	5,655
Gerritsen Creek, NY	158,763
Hoosic River, Ma	29,213
Lincoln Park West, Jersey City, NJ	18,248
Northport Harbor,, Town of Huntington, NY	49,533
Rahway River Environmental Restoration, NJ	9,945
Spring Creek , NY	70,840

PHILADELPHIA, PA DISTRICT

This district comprises a portion of southeastern New York, eastern Pennsylvania, western and southern New Jersey, northern and southern Delaware, and a small part of northeastern Maryland embraced in the drainage basins tributary to the Atlantic Ocean

from Manasquan River, NJ inclusive, to south boundary of Delaware. It also includes Chesapeake and Delaware Canal and approach channel thereto in Chesapeake Bay and Elk River, MD.

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Navigation:

1. BARNEGAT INLET, NJ

Location: On the east coast of New Jersey about 50 miles south of Sandy Hook, between Island Beach on the north and Long Beach Island on the south (See U.S. Coast and Geodetic Chart Nos. 825 and 1216). This inlet is the main entrance to Barnegat Bay, largest of the bays on New Jersey coast, which are separated from the ocean by narrow barrier beaches.

Previous Project: None

Existing Project: The existing project, adopted as HD 73-19 in 1935 and modified as HD 74-85 in 1937 and HD 79-358 in 1946, provides for a channel eight feet deep through the inlet and ten feet deep through the outer bar, protected by two converging stone jetties and a channel of suitable hydraulic characteristics extending in a northwesterly direction from the gorge in the inlet to Oyster Creek channel and through the latter channel to deep water in the bay. The project was modified in 1946 to provide for the maintenance of a channel eight feet deep and 200 feet wide to connect Barnegat Light Harbor with the main inlet channel. The project length is about 4.5 miles. (For details see page 203, Annual Report 1964).

The Supplemental Appropriation Act of 1985 contained language stating that the existing project has not worked as projected and, in fact has created a hazard to navigation. As a result, the following administratively approved modifications were constructed as design deficiency correction measures: a new south jetty 4,270 feet in length along an alignment generally parallel to the existing north jetty, extending from the old groin located near the Barnegat Lighthouse to the tip of the existing south jetty; a navigation channel 300 feet wide to a depth of 10 feet below mean low water from the outer bar in the Atlantic Ocean to the north end of the existing sand dike in Barnegat Bay; remove the shoal located between the north jetty and the proposed navigation channel; jetty sport fishing facilities on the new jetty. All dredged material from initial construction was placed on the shores of Barnegat Light between the existing and new south jetties, and is being stabilized by vegetation and sand fence. Dredged material from maintenance operations are placed on the down drift beaches, the area between the existing and new south jetties, or in other locations as determined by a shoreline monitoring program. The existing bulkhead on the interior of the North Jetty was failing and land was eroding causing

additional shoaling in the Inlet resulting in an increased cost for maintenance dredging. The erosion was also impacting State Environment Lands. (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: Fully complied with a local cooperation agreement for the approved modification was executed on 19 May 1986 and a modification to the local cooperation agreement was executed on 20 March 1987.

Terminal Facilities: There are four docks or terminals in inner harbor at Barnegat Light that furnish adequate facilities for present commerce of locality.

Operation During Fiscal Year: Maintenance: Condition surveys were accomplished. Dredging was performed by the U.S. Government Dredge Currituck which removed a total of 109,580 cubic yards of material at a total cost of \$327,600.

2. COLD SPRING INLET, NJ

Location: In Cape May County, Southern New Jersey, about 3 miles east of Cape May City and about 16 miles northeast of Delaware breakwater. Inlet connects Cape May Harbor and New Jersey Intracoastal Waterway with the Atlantic Ocean and is about 1 mile long. (See Coast and Geodetic Survey Charts 234, 827 and 1219).

Existing Project: An entrance channel 25 feet deep and 400 feet wide, protected by two parallel jetties, and extending from the 25-foot depth curve in the Atlantic Ocean to a line 500 feet harbor ward of a line joining the inner ends of the jetties, thence 20 feet deep and 300 feet wide to deep water in Cape May Harbor. The total length of the section included in the project is about 2.25 miles. Extreme tidal range, due to ocean storms, is about 11 feet. Project was completed in 1942. (For details see page 238, Annual Report for 1962. See Table 3-B at end of chapter for Acts authorizing existing project). (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: Complied with Act of 1907, except work of deepening and enlarging inner harbor that is 80 percent complete.

Terminal Facilities: See page 238 Annual Report for 1962.

Operations During Fiscal Year: Maintenance: Condition surveys were accomplished. Dredging of Cold Spring Inlet was performed by the U.S. Government

PHILADELPHIA, PA DISTRICT

Dredge Fry and the Government Dredge Currituck which removed a total of 71,578 cubic yards of material.

Operations During Fiscal Year (ARRA Funds): Maintenance: A total of 71,578 cubic yards were dredged from Cape May Harbor at a cost of \$300,000 under a lease of plant contract awarded to Barnegat Bay Dredging Company.

3. DELAWARE RIVER BETWEEN PHILADELPHIA AND TRENTON, PA & NJ

Location: Rises in southeastern New York, flows generally southerly 367 miles, forming boundary line between New York and New Jersey on the east and Pennsylvania and Delaware on the west, and empties into Delaware Bay. (See U.S. COAST and Geodetic Survey Charts 1218, 280, 294, 295, and 296).

Previous Project: For details see page 1778 of annual report for 1915, page 311 of Annual Report for 1924, page 220 of Annual Report for 1934, and page 296, Annual Report for 1938.

Existing Project: A channel from Allegheny Avenue, Philadelphia, 23.5 miles to upstream end of Newbold Island, 40 feet deep and 400 feet wide, with suitable widening of bends, including relocation of channel at Delair Railroad bridge, and reconstruction of bridge, thence 5.5 miles to upper end of Trenton Marine Terminal, 35 feet deep and 300 feet wide, with a turning basin 800 feet wide and 1,700 feet long at the terminal; and maintenance of a channel 12 feet deep and 300 feet wide from upper end of 34-foot channel to Penn Central Railroad Bridge at Trenton, dredged under a previous project. Project also provides for an auxiliary channel 20 feet deep and 200 feet wide east of Burlington Island, extending easterly from main channel to upper end of U.S. Pipe and Foundry Company's property at East Burlington, with a turning basin 450 feet wide at upper end; for initial excavation, only, of a cross channel 8 feet deep and 200 feet wide through artificial island opposite Delanco, NJ, and for construction of such bank protection works as may be necessary. Section included in project is about 30.5 miles long, excluding auxiliary channel east of Burlington Island, which is 1.4 miles long, and cross channel opposite Delanco. Lower end is about 55 miles above river mouth at Liston Point and about 105 miles above Harbor of Refuge at mouth of Delaware Bay. Freshets, which occur usually during February and March, attain a height of 9 to 20 feet above mean low

water in the vicinity of Trenton. Navigation is occasionally suspended during a portion of winter months due to ice. Existing project is 90 percent complete. A 40-foot channel under the 1954 modification from Allegheny Avenue to upper end of Newbold Island was completed April 1964. Work remaining is dredging from upper end of Newbold Island to Trenton Marine Terminal and widening turning basin at terminal that is in deferred category. (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: Modification authorized by 1954 River and Harbor Act provides local interests must provide suitable terminal facilities, furnish lands and rights-of-way for construction and future maintenance, and hold the United States free from damages. Local interest complied with requirements, except city of Trenton has not provided suitable terminal facilities.

Terminal Facilities: There are 21 piers, wharves, and docks from Allegheny Avenue, Philadelphia, PA to Trenton, NJ facilities are considered adequate for existing commerce. (For details see Port Series No. 8 (revised 1966-Corps of Engineers).

Operations During Fiscal Year: Maintenance: Work included channel examination performed by regular operations and maintenance.

Operations During Fiscal Year (ARRA Funds): Maintenance: Work included channel examination surveys and a contract for maintenance dredging of the upper reach of the 40-foot channel from the Bristol/Keystone Intersection to Newbold Island Range, Fairless Turning Basin and a portion of Duck Island Range. The dredging was performed by Norfolk Dredging Company.

4. DELAWARE RIVER MAIN CHANNEL DEEPENING, NJ, PA & DE

Location: The project area is located within the Delaware Estuary and borders Pennsylvania, New Jersey and Delaware. It extends over 100 miles of the Delaware River from Philadelphia Harbor, Pa. and Beckett Street Terminal in Camden, NJ to the mouth of the Delaware Bay.

Existing Project: Delaware River Federal Navigation

Channel (Philadelphia to the Sea Project) completed in 1942. The project calls for modifying the existing Delaware River Federal Navigation (Philadelphia to the Sea Project) channel from 40 to 45 feet below Mean Low Water (MLW) with an allowable dredging over depth following the existing channel alignment from Delaware Bay to Philadelphia Harbor and the Beckett Street Terminal, Camden New Jersey, a distance of about 102.5 miles. The channel width (same as the existing 40-foot project) would range from 400 feet in Philadelphia Harbor to 800 feet from Philadelphia Naval Business Center to Bombay Hook and then 1,000 feet in Delaware Bay. The plan includes appropriate bend widening as well as provision of a two-space anchorage for safety purposes to a depth of 45 feet at Marcus Hook. Dredged material would be placed in confined upland disposal areas and for beneficial uses in Delaware Bay.

The improved channel will have a significant impact in allowing more efficient vessel loading, reducing the lightering requirements of crude oil tankers in the lower Delaware Bay, and attracting larger, more efficient container and dry bulk vessels. It is estimated that the proposed deepening will result in annual transportation savings of \$24.1 million. Project estimate cost is Federal, \$291,529,000, which includes \$431,000 of Coast Guard contributions. Non-Federal costs are \$138,071,100. (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: The local sponsor for this project is the Philadelphia Regional Port Authority (PRPA).

Operations During Fiscal Year: New Work: Completed plans and specifications for the Reach C Contract; coordinated with the U.S. Government Accountability Office regarding its audit of the project; initiated an economic update to support the preparing of the Fiscal Year 2011 Budget and continued coordination associated with the State of Delaware Permit.

5. DELAWARE RIVER, PA, NJ, and DE PHILADELPHIA TO THE SEA

Location: See U.S. COAST and Geodetic Survey Charts 1218, 394, 295, and 280.

Previous Project: For details see page 1779 of Annual Report for 1915, and page 299, Annual Report for 1938.

Existing Project: Provides for a channel from deep water in Delaware Bay to a point in the bay, near Ship John Light, 40 feet deep and 1,000 feet wide; thence to Philadelphia Naval Base, 40 feet deep and 800 feet wide, with 1,200-foot width at Bulkhead Bar and 1,000-foot width at other bends; thence to Allegheny Avenue, Philadelphia, PA, 40 feet deep and 500 feet wide through Horseshoe Bend and 40 feet deep and 400 feet wide through Philadelphia Harbor, along west side of channel; and for anchorages at Reedy Point, Deepwater Point, Marcus Hook, and Mantua Creek, each 40 feet deep and 2,300 feet wide with respective length of 8,000, 5,200, 12,650, and 11,500 feet; anchorage at Gloucester 30 feet deep and about 3,500 feet long. Project also provides for construction of dikes and training works for regulation and control of tidal flow; for maintenance of an area on north side of channel opposite Philadelphia Naval Base between Shipway 3 and Schuylkill River to 40 feet deep and width of 150 feet on Mifflin Range and 200 feet on West Horseshoe Range; and for maintenance of any areas dredged by local interests to 35 feet deep between channel and a line 100 feet channelward of pierhead line between Point House wharf and Philadelphia Naval Base, when in opinion of Chief of Engineers such areas are so located as to be of benefit to generate navigation. Section included in project is about 96.5 miles long. All depths refer to plane of mean lower low water. Under influence of heavy and long-continued winds extreme tidal range is about 14 feet. Normal maximum velocity of tidal currents in the dredged channel varies between 2 and 3.5 miles per hour. Storm tides may increase maximum to as much as 4.5 miles per hour. Estimated cost for new work is \$71,630,000 (July 1972) exclusive of amounts expended on previous projects. Channel to 37 deep and 500 feet wide through Horseshoe Bend and 37 feet deep and 60 feet wide through Philadelphia Harbor along east side of channel and Port Richmond anchorage to 37 feet deep, except for that portion of channel which forms a part of 40 feet deep and 400 feet wide channel portion is to be restudied and excluded from foregoing cost estimate. Estimated cost (July 1960) of this portion of project is \$2,951,000. Existing project, excluding work deferred for restudy, is about 66 percent complete. The 40-foot channel from Naval Base to the sea was completed in 1942. Dredging Naval Base to Allegheny Avenue to 40 feet deep was completed in 1962. Enlarging anchorage at Marcus Hook was completed in 1967. Work remaining is to construct new anchorages at Reedy Point and Deepwater Point, and enlarge Mantua Creek anchorage, channel dredging from 35 to 37 feet deep over a width of 500 feet through Horseshoe Bend and about 600 feet through Philadelphia Harbor, and deepening Port Richmond Anchorage to 37 feet, all of

PHILADELPHIA, PA DISTRICT

which have been deferred for restudy. (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: Requirements under 1938 River and Harbor Act for maintaining channel and anchorage in Philadelphia Harbor annually by cities of Philadelphia and Camden were removed (see 1962 Annual Report for details).

Terminal Facilities: There are 217 piers, wharves, and docks between Allegheny Avenue, Philadelphia and the sea, 135 on the waterfront of Philadelphia, Camden, and Gloucester, and 82 below Philadelphia. Facilities are considered adequate for existing commerce. (For further details see Port Series Nos. 7, revised 1967, and 8, revised 1966-Corps of Engineers).

Operations During Fiscal Year: Maintenance: Normal operation and routine maintenance of the project continued, which included Channel Examination Surveys, Environmental Monitoring, Groundwater Monitoring, Disposal Area Management, Maintenance Dredging, Real Estate, Safety Inspections, Project Coordination, Leased Equipment, Disposal Area Maintenance and Construction, also Environmental Review Guide for Operations. There was also maintenance dredging by Norfolk Dredging Company, removing a total of 2,222,211 cubic yards of material at a total cost of \$6,966,911. Work also included dredging by the U.S. Government Dredge McFarland, which removed spot shoals throughout the river, removing a total of 351,500 cubic yards of material at a cost of \$4,324,000.

Operations During Fiscal Year (ARRA Funds): Maintenance: Accomplished restoration activities on Federal dredged material disposal areas serving the project, disposal area restoration and chemical and sediment testing .

6. DELAWARE RIVER, VICINTY OF CAMDEN, NJ (PHILADELPHIA TO CAMDEN)

Location: Camden, NJ on east bank of Delaware River is directly opposite the City of Philadelphia, PA. It is about 51 miles above mouth of the river an about 101 miles above Harbor of Refuge at the mouth of Delaware Bay. (See U.S. Coast Guard and Geodetic Survey Charts Nos. 295 and 280).

Previous Project: Adopted by River and Harbor Act of June 25, 1910. No work was done on this project for further details, see page 321, Annual Report for 1932.

Existing Project: The existing project which is a modification to the Delaware River from Philadelphia to the Sea project was adopted as House Document No. 63-1120 in 1919 and modified by House Document No. 70-111 in 1930 and House Document No. 77-353 in 1945. Dredging to project depth of 37 feet in front of the Camden Marine Terminal was completed in March 1988. It also provides for dredging in Camden to Newton Creek, with the depth increased to 40 feet in front of the Beckett Street Marine Terminal. These depths extend from the ship channel in Delaware River to a line parallel with and 50 feet distant from the established pier head line. The project length is about four miles. Projects depths are well maintained in 40 foot depth section of channel. (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: Fully complies with.

Terminal Facilities: See page 228, Annual Report 1962.

Operations During Fiscal Year: Maintenance: Work included project condition surveys.

7. HARBOR OF REFUGE, DE

Location: At lower end of Delaware Bay, a few miles from Atlantic Ocean on Delaware side of bay. It is about 120 miles south of New York Harbor, about 114 miles north of entrance to Chesapeake Bay and about 101 miles from Philadelphia, PA. (See Coast and Geodetic Survey Charts Nos. 1218, 1219 ad 379.)

Previous Project: For details see Annual Reports for 1874, part II, page 146; page 330; and 1938, page 330.

Existing Project: For details see page 229 of Annual Report for 1962. New work cost for completed project was \$2,412,778. (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009. See Table 3-B at end of chapter for Acts authorizing existing project).

Local Cooperation: Fully complied with.

Terminal Facilities: See page 229 of Annual Report for 1962.

Operation During Fiscal Year: Maintenance: Completed a detailed inspection of the condition of the historic breakwater; and investigated a plan forward for the stabilization and repair of the Breakwater and historic lighthouse structure.

8. INDIAN RIVER INLET AND BAY

Location: Indian River rises in Sussex County, DE, and flows easterly 13 miles into Indian River Bay which is a shallow lagoon 6 miles long and 2 miles wide on the Delaware Coast about midway between Cape Henlopen and the Maryland State line. The inlet is an opening through the barrier beach separating Indian River Bay and the Atlantic Ocean (See U.S. COAST and Geodetic Survey Chart No. 1219.)

Previous Project: Adopted by River and Harbor Act of August 2, 1882. For further details see page 744, Annual Report for 1888. Report last updated in 2001.

Existing Project: This provides for the fixation of the inlet by the construction of two parallel jetties of steel sheet pile and stone design extending to approximately the 14-foot depth curve in the ocean, and for dredging an entrance channel 15 feet deep and 200 feet wide, for a distance of 7,000 feet inshore from the jetties; thence a channel 9 feet deep, 100 feet wide in the bay, and 80 feet wide in the river, to and including a turning basin 9 feet deep, 175 feet wide, and 300 feet long at Old Landing; thence a channel 4 feet deep and 60 feet wide to the highway bridge at Millsboro. The project also provides that the interior channel dimensions may, at the discretion of the Chief of Engineers, be modified as found desirable to increase the hydraulic efficiency of the channel, without increasing the cost. The total length of the section included in the project is about 13.75 miles. All depths refer to the plane of mean low water. The extreme tidal range at the highway bridge is about 6 feet. Existing project was completed in 1951. For details see Annual Report for 1963. (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009.)

Local Cooperation: Local interests are required to furnish suitable areas for disposal of dredged material during maintenance as needed, and provide terminal facilities.

Terminal Facilities: There is a privately owned basin with berthing facilities for small boats located .75 miles west of the highway bridge near the inlet and .25 miles north of the inlet channel, connected therewith by a channel 6 feet deep and 40 feet wide; a U.S. Coast Guard wharf on the north side of the inlet channel in the same locality; and two wharves at Oak Orchard in Indian River Bay. The facilities are considered adequate for existing commerce.

Operation During Fiscal Year: Maintenance: Channel Surveys and sediment samples were conducted in preparation for ARRA-funded dredging project.

Operations During Fiscal Year (ARRA Funds): Maintenance: A dredging contract in the amount of \$3,400,000 was awarded to Paul Howard Construction Co. in September 2009 and work will commence in Fiscal Year 2010.

9. INTRACOASTAL WATERWAY FROM DELAWARE RIVER TO CHESAPEAKE BAY, DE & MD

Location: The Waterway begins at Reedy Point on Delaware River, about 41 miles below Philadelphia, PA and passes through the sea level Chesapeake and Delaware Canal, a distance of 14 miles, to Back Creek, at Chesapeake City, MD. It then passes for 5 miles down Back Creek, thence 9 miles down Elk River to Chesapeake Bay and thence 18 miles down Chesapeake Bay to a point near Poole's Island. A branch channel connects Delaware River at Delaware City, DE, with main channel at a point about 1.5 miles west of Reedy Point. (See U.S. COAST and Geodetic Survey Charts (294, 1226, 570, and 572)

Previous Project: None

Existing Project: A channel 35 feet deep and 450 feet wide from Delaware River through Elk River and Chesapeake Bay to water of natural 35-foot depth in Chesapeake Bay including a cutoff at Penn Central Railroad crossing, and having a maximum radius of curvature of 7,000 feet at bends; a high-level, fixed railroad bridge with vertical clearance of 600 feet and the railroad crossing over the cutoff; five high-level fixed highway bridges over canal at Reedy Point, St. Georges, Senator Roth (SR-1), Summit and Chesapeake City; a bascule drawbridge across Delaware City Branch Channel; extension of entrance jetties at Reedy Point; and anchorage and mooring basin in Back Creek to afford an area about 400 feet wide, 1000 feet long and 12 feet

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deep; dredging Delaware City Branch Channel to 8 feet deep and 50 feet wide, and deepening existing basin to same depth; revetment banks of canal as required between Delaware City Branch Channel east of Fifth Street Bridge; and construction of bulkheads. Total of section included in project, excluding Delaware City Branch channel which is about 2 miles long, is about 46 miles. All depths refer to plane of low water in Delaware River. Extreme tidal range is from 6.3 feet above mean high water to 3 feet below mean low water.

High level fixed highway bridges were completed at St. Georges (4-lane) in 1942; at Chesapeake City (2-lane) in 1949; at Summit (4-lane) in 1960; and at Reedy Point (2-lane) in 1969.

Senator Roth (SR-1) Bridge: This project was authorized by the Water Resources Development Act (WRDA) of 1990. It states that the project for navigation, Inland Waterway from the Delaware River to the Chesapeake Bay, Delaware and Maryland, authorized by the first section of the Act of August 30, 1935 (45 Stat. (030) and modified by the Act entailed an Act authorizing construction of a highway bridge across the Chesapeake and Delaware Canal at St. Georges, Delaware, approved August 7, 1939 (53 Stat. 1240-1241) is modified to direct the Secretary to replace the highway bridge on United States Route 13 in the vicinity of St. Georges, Delaware, to meet current and projected traffic needs, at a Federal cost of \$115,000,000. The bridge was officially opened to traffic in December 1995. (See Table 3-B at end of chapter for Acts authoring existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Enlargement to 35 feet deep and 450 feet wide was completed in 1975 with the exception of the anchorage at Elk River.

Local Cooperation: The State of Delaware is the documented owner of the SR-1 Bridge. The Corps has routinely reimbursed DelDOT for ordinary maintenance on the bridge. Water Resources Development Act (WRDA) 2007 provides for the Corps to take ownership responsibly for the SR1 Bridge as of the date the construction completion of 1995. The extent of the ownership from station 114+75 to station 163+25 has been agreed upon by DELDOT and Philadelphia District. Philadelphia District is currently waiting for final guidance from Headquarters for the acceptance of the bridge.

Terminal Facilities: Ample mooring facilities at eastern and western ends of canal and bulkheads at Delaware City and St. Georges were constructed by the United States. A small boat harbor was provided and a wharf constructed at Chesapeake City. Facilities are adequate for existing commerce.

Operations During Fiscal Year: Maintenance: Work included general maintenance, dispatch service, operation of traffic, administration, building, bridges, roadways, grounds, museum, auxiliary works, channel exams and bridge inspections.

Operations During Fiscal Year (ARRA funds): Maintenance: Repairs to the Town Point Warf will begin in October 2009. The project is approximately 80% complete. Reedy Point Jetty repair is approximately 60% complete with an expected completion date of April 2010. Concrete Deck Spall Repairs St Georges Bridge was awarded September 2009 – work began on January 19, 2010.

10. INTRACOASTAL WATERWAY REHOBOTH BAY TO DELAWARE BAY, DE

Location: A tidal canal in southeasterly part of Sussex County, DE. It extends 12 miles northward from Rehoboth Bay through high land west of town of Rehoboth to Gordon Lake; thence down Lewes River to its junction with Broadkill River near its mouth. An entrance to the waterway from Delaware Bay is about 4 miles above Cape Henlopen. (See U.S. Coast and Geodetic Survey Charts 379, 1218, and 1219).

Previous project: A canal along a slightly different route formed a part of projected waterway from Chincoteague Bay, Va. to Delaware Bay, begun in 1886 and abandoned in 1905.

Existing project: This provides for an entrance channel near Lewes 10 feet deep and 200 feet wide protected by two parallel jetties 500 feet apart; thence a channel 10 feet deep and 100 feet wide to South Street Bridge at Lewes, and a basin of the same depth 1,200 feet long and up to 375 feet in width at the latter point; thence a channel 6 feet deep and 100 feet wide (40 feet wide through Deep Cut near Rehoboth Bay) to Rehoboth Bay; a channel 6 feet deep and 100 feet wide from the entrance to Broadkill River; two parallel rubble jetties 725 feet long at the Rehoboth Bay entrance; and the construction of the one highway bridge and one railroad Bridge to

Rehoboth. The total length of the section included in the project is about 12 miles. (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

The extension of the jetties at the Delaware Bay entrance is considered to be inactive and is excluded from the foregoing cost. The cost of the portion was last revised in 1960 and was estimated to be \$816,000. Existing project is about 70 percent complete. For details on completed work see page 241 of Annual Report for 1963. Work remaining, extension of existing jetties at Delaware Bay entrance, is considered inactive. The Sheet Pile Jetty at the Delaware Bay entrance was removed during Fiscal Year 1987. (See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local cooperation: Complied with except local interest must furnish suitable terminal facilities and necessary spoil-disposal areas.

Terminal facilities: See page 228, Annual Report 1962.

Operations during fiscal year: Maintenance: Work included a real estate inspection of all government out grants for use of Federal property as well as all lands the government holds an interest in, be it by fee or easement right, from Savannah Avenue Bridge to Rehoboth Bay. Also, a channel examination of the Roosevelt Inlet was performed by our in-house survey force.

11. MANASQUAN RIVER, NJ

Location: This small stream flows in eastern part of New Jersey, rises near Freehold, flows easterly and empties into the Atlantic Ocean, about 26 miles south of Sandy Hook. (See U.S. Coast and Geodetic Survey Chart No. 795).

Previous Projects: For details see Annual Report for 1909, page 186, and Annual Report for 1938, page 269.

Existing Project: A channel 14 feet deep and 250 feet wide, protected by jetties and other works, extending from the Atlantic Ocean to inner end of north jetty, thence 12 feet deep and 300 feet wide to within 700 feet of New York and Long Branch Railroad bridge, thence of same depth and narrowing to 100 feet wide to within 300 feet of bridge; for a widening on northerly side of channel of 200 feet for 3,150 feet and 8 feet deep on south side of channel and for a 27.5-acre anchorage to 12 feet deep about 0.5 miles west of Route 35 highway bridge.

Section included in project is about 1.5 miles long. Mean tidal range is 3.7 feet at inner end of inlet and 4 feet at ocean end; mean range of spring tides, 4.4 and 4.8 feet, respectively, irregular fluctuations due to wind and barometric pressure vary from 2.7 feet below to 7.5 feet above mean low water at inner end of inlet. Project, excluding 10-and 12-foot anchorages, cost \$518,243. Estimated cost (1958) for 10 and 12-foot anchorages portion of project considered inactive is \$504,000. Restoration of bulkheads completed 16 August 1965 at a cost of \$117,807. Existing project was completed in June 1963. Dredging 19-acre anchorage south of channel and 27.5-acre anchorage west of highway bridge is in the inactive category. (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: River and Harbor Act of 1945 provides that local interests must furnish lands and rights-of-way for construction and future maintenance and hold the United States free from damages. The locals have complied with all assurances to date.

Terminal Facilities: Five landings with a total wharf age of 700 feet used by commercial fishermen, and 7 landings and boat basins for pleasure craft. Existing facilities are considered adequate for present requirements.

Operations During Fiscal Year: Maintenance: Condition Surveys were accomplished. There was also maintenance dredging done by the Government Dredge Currituck, removing a total of 54,350 cubic yards of material at a total cost of approximately \$187,000.

12. MISPELLON RIVER, DE

Location: Rises in Kent County and Sussex Counties, DE, flows northeasterly 15 miles along the boundary line between the two counties and empties into Delaware Bay about 16 miles above Cape Henlopen. (See Coast and Geodetic Survey Chart 1218).

Previous Project: For details see page 1786, Annual Report for 1915, page 448 of Annual Report for 1918, and page 327 of Annual Report for 1938.

Existing Project: Project is about 31 percent complete. Four cutoffs for 6-foot channel were completed in 1923; 6-foot channel from Delaware Bay to Milford in 1924; and jetties at the mouth in 1939. Work remaining is dredging channel to 9-foot depth, 80 feet wide in Delaware Bay to the mouth, thence 60 feet wide

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to Milford with the provision of three cutoffs to eliminate bends, and a turning basin at Milford. Controlling depths at mean low water, in October 1964 from Delaware Bay to mouth 7.1 feet, and thence to fixed highway bridge at Report 1957, (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: Assurances required by 1954 River and Harbor Act has not been furnished. For details see page 243, Annual Report for 1957. Prior requirements fully complied with.

Terminal Facilities: For details see page 244, Annual Report for 1957.

Operations During Fiscal Year: Maintenance: A Channel condition survey of the Federal navigation channel was performed by our in-house survey force.

Operations During Fiscal Year (ARRA Funds): Maintenance: A contract for maintenance dredging of the project entrance channel at Mispillion River and a portion of Cedar Creek was completed by Southwind Construction Company in September 2009. In addition, a contract to remove the navigation hazard located at the confluence of Cedar Creek and Mispillion River was completed.

13. MURDERKILL RIVER, DE

Location: Rises in Kent County, DE, flows northeasterly 19 miles through county, and empties into Delaware Bay about 25 miles above Cape Henlopen. (See U.S. Coast and Geodetic Survey Chart no. 1218).

Existing Project: Provides for a channel 7 feet deep at mean low water, 150 feet wide in Delaware Bay to mouth, and thence 80 feet wide to Frederica, 7.5 miles above mouth. Total length of section included in project is about 8.5 miles. Extreme tidal range is from about 1 foot below mean low water to about 2 feet above mean high water.

Estimated cost for new work revised in 1954 is \$38,000. Portion comprising widening channel to project width throughout its length is to be restudied and excluded from foregoing cost estimate. Estimated cost of this portion last revised in 1954 was \$86,000. Project was authorized by River and Harbor Act on July 13, 1892 (H. Ex. Doc. 21, 52d Cong., and 1st Sess. See page 981

Annual Report for 1892). Latest published map is in House Document 1058, 62d Congress 3rd Session.

Existing project about 30 percent complete, including revision to be restudied. Channel 7 feet deep and 60 feet wide was completed in 1911. Work remaining is widening the channel to project width. (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: None required.

Terminal Facilities: There are a number of light timber wharves on both sides of river near mouth and two wharves at Frederica, all privately owned. Facilities are considered adequate for existing commerce.

Operations During Fiscal Year: Maintenance: Work included channel condition surveys of the project's entrance channel.

14. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation activities pursuant to Section 107, Public Law 86-645.

Name of Project	Cost to September 30, 2009
	Coordination
Section 107 Coordination Account	\$ 8,670
	Feasibility
Fairless Hills, PA	\$18,557

15. NEW JERSEY INTRACOASTAL WATERWAY

Location: A sea level inland water route approximately parallel with New Jersey coast, extends from Atlantic Ocean at Manasquan Inlet, about 26 miles south of Sandy Hook, NJ to Delaware Bay about 3 miles above Cape May Point. Waterway extends through inlet and up Manasquan River about 2 miles; thence by Point Pleasant Canal through high ground for 2 miles to head of Barnegat Bay. It then passes through a series of bays, lagoons, and thoroughfares along New Jersey coast to Cape May Harbor; thence across Cape May County to Delaware Bay through a land cut by way of New England Creek basin. (See U.S. COAST and Geodetic Survey

Charts, 234, 795, 825, 826, 827, 1216, 1217, 1218, and 1219).

Existing Project: This provides for a channel 12 feet deep at mean low water and generally 100 feet wide, extending from the Atlantic Ocean at Manasquan Inlet, NJ to Delaware Bay above Cape May, NJ, by the further improvement of Manasquan River and Inlet, NJ, and the present New Jersey Intracoastal Waterway, and by the construction of a canal of similar dimensions from Cape May Harbor to Delaware Bay via the New England Creek basin, with adequate jetties at the Delaware Bay entrance. The total length of the project is about 117 miles. The un-constructed portion of the project, deepening the channel from 6 feet to 12 feet from the Atlantic Ocean at Manasquan Inlet to Cape May Harbor, was de-authorized on 1 January 1990, by PL 99-662. Normal tide range in sections of the waterway remote from inlets is 0.5 foot. (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Existing project was adopted by 1945 River and Harbor Act (H. Doc 133, 76th Cong., and 1st Sess).. Latest published map is in project document. River and Harbor Act of 1946 (Public Law 525, 79th Cong., 2nd Sess., as extended by Public Law 240, 82d Cong).

A canal 12 feet deep and 100 feet wide from Cape May Harbor to Delaware Bay was completed in 1942 as well as two parallel stone jetties at Delaware Bay entrances and a temporary highway and a railroad bridge in 1944, all with Navy Department funds. The project between Ottens Harbor and Richardson Channel and from that point to Cape May are being maintained to 10 feet and 12 feet, respectively, since they were originally dredged to these depths by the State. Section 860 of the Water Resources Development Act of 1986 authorized, for preconstruction engineering and design, a 15 foot depth in the Vicinity of Cape May Harbor, titled as Cold Spring Inlet. (See Table 3-B at end of chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: The project is subject to the conditions that the State of New Jersey cede to the United States all right, title, and interest that it has acquired to lands, easements, rights-of-way, and structures other than bridges for the Bayhead-Manasquan Canal; that the State of New Jersey furnish, free of cost to the United States, all lands, easements, rights-of-way, and disposal areas required for construction of the Cape May Canal and for improvement of the proposed waterway and for their

subsequent maintenance; that local interests provide, maintain, and operate suitable bridges over the waterway; that the State of New Jersey donate to the United States the navigation aids in use on the present New Jersey Intracoastal Waterway; and that the State of New Jersey hold and save the United States and its agents free from any claims for damages resulting from the work of improvement. Compliance with these conditions was completed January 15, 1954, except that local interests are required to furnish disposal areas for the construction and the subsequent maintenance of the proposed improvements.

Terminal Facilities: See Annual Report for 1962.

Operations During Fiscal Year: Maintenance: Normal operation and routine maintenance of the project continued, which included Maintenance Dredging, Channel Examination Surveys, Disposal Area Management, Real Estate Coordination. Maintenance dredging was conducted as part of a lease of plant contract awarded to Barnegat Bay Dredging Company (combined ARRA and Regular funds).

Operations During Fiscal Year (ARRA Funds): Maintenance: Maintenance dredging was conducted that removed 43,150 cubic yards of material from the Cape May Ferry Area at a cost of \$850,000 and also removed 42,591 cubic yards from the Ludlam vicinity of the NJIWW. Both dredging operations were conducted as part of a lease of plant contract with Barnegat Bay Dredging Company. Additionally, contracts were awarded for bulkhead repair along the west side of the Pt. Pleasant Canal (Abhe & Syoboda) and repair of the old Rt 88 east and west bridge abutments along the Pt. Pleasant Canal (H&S Environmental). Work on both projects will commence in Fiscal Year 2010.

16. RECONNAISSANCE AND CONDITION SURVEYS

Condition Surveys	Survey Conducted
Mispillion River, DE.	April 2009
Mispillion River, DE (ARRA)	August 2009

17. SALEM RIVER, NJ

Location: This river rises in Salem County, NJ, flows through the county westerly 13 miles, thence southerly 7 miles to the City of Salem, and thence westerly 3 miles, emptying into Delaware River about 45 miles below Philadelphia, PA. It is joined at Salem by

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Little Salem River, or Fenwick Creek, from the east. (See U.S. Coast and Geodetic Survey Chart No. 294).

Previous project: The River and Harbor Act of July 11, 1870, provided for a survey and the original project was adopted by River and Harbor Act of March 3, 1871, and modified in 1878, and a subsequent project adopted by River and Harbor Act of March 2, 1907. This project was further modified as HD 68-110 in 1925, providing an entrance channel from the Delaware River to the fixed highway bridge in Salem with dimensions and limits as shown, including a cut-off and by the Water Resources Development Act (WRDA) of 1986. The letter provided for channel widening and deepening; a turning basin; and wetland restoration. For further details see the Report of the Secretary of the Army dated 20 October 1994.

Existing project: Provides a channel depth to 16 feet below mean low water between the Route 49 highway bridge and the Delaware River, a distance of about 5 miles. The channel is 150-250 feet wide and a trapezoidal shaped turning basin has a width of 495 feet and average length of 1000 feet. The project also contains 15.6 acres of wetland restoration to replace the loss of wetlands and shallow water habitat. The dredging for the existing project is completed. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: None.

Terminal facilities: There are 9 wharves on the river all at Salem, NJ. Eight wharves are privately owned and one is owned by the City. The facilities are considered adequate for existing commerce.

Operations During Fiscal Year: Maintenance: Project Monitoring.

18. SCHUYLKILL RIVER, PA

Location: Rises in Schuylkill County, PA, flows generally southeasterly 150 miles, and empties into Delaware River at Philadelphia, PA (See U.S. Coast and Geodetic Survey Charts 295 and 280).

Previous Project: For details see page 325, Annual Report for 1932.

Existing Project: This provides for a channel 33 feet deep and 400 feet wide in Delaware River the mouth and within the river to 29th Street, .75 mile above the

mouth; thence the same depth and 300 feet wide to Passyunk Avenue Bridge, 3.5 miles above the mouth; thence 26 feet deep and 300 feet wide to Gibson Point, 4.5 miles above the mouth; and thence 22 feet deep and 200 feet wide to University Avenue Bridge, 6 miles above the mouth, including widening at bends. The total length of the section included in the project is about 6.5 miles. All depths refer to the plane of mean lower water. The extreme tidal range, due to freshets and prolonged heavy winds, is about 14 feet.

Existing project was completed in September 1962. For details see Annual Report for 1962. (See Table 3-B at end of chapter for acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: The River and Harbor Act of July 24, 1946, imposed the condition that the City of Philadelphia agrees to remove 60,000 cubic yards, place measurement, of material annually from that portion of those portions of the project which the District Engineer may designate until such time as adequate municipal sewage-treatment works are constructed and placed in effective operation. Compliance with this condition has been met through the completion of sewage-treatment works by the City of Philadelphia. All other requirements have been fully complied with.

Terminal Facilities: There are 38 wharves, piers, and docks within limits of improvement. Facilities are considered adequate for existing commerce. (For further details see Port Series No. 7, Revised 1967, Corps of Engineers).

Operations During Fiscal Year: Maintenance: Channel Examination Surveys, Maintenance Dredging, Environmental Monitoring, Disposal Area Management, Leased Equipment, and Project Coordination. There was maintenance dredging by Cottrell Contracting Corporation, removing a total of 153,748 cubic yards of material.

19. WILMINGTON HARBOR, DE

Location: Formed by Christina River, which rises in New Castle County, DE, flows northeasterly 16 miles, passing through the City of Wilmington, DE, and empties into Delaware River about 29 miles below Philadelphia, PA (See U.S. Coast and Geodetic Survey Chart 294).

Previous Project: For details see page 1785 of Annual Report for 1915 and page 308 of Annual Report

for 1938.

Existing Project: This provides for a channel 38 feet deep and 400 feet wide from west edge of Delaware River ship channel to Lobdell Canal, a distance of about 1.2 miles; thence 21 feet deep and 250 feet wide for the distance of .8 mile to the mouth of Brandywine River; thence the same depth and 200 feet wide for a distance of about 2.2 miles to a point approximately 4.2 miles from the Delaware River ship channel; thence decreasing to a depth of 10 feet in a distance of 750 feet to Penn Central Railroad bridge No. 4; and thence 7 feet deep and 100 feet wide for a distance of about 5.6 miles to Newport, DE, approximately 9.9 miles above Delaware River ship channel, including a turning basin 38 feet deep opposite the Wilmington Marine terminal and extending upstream from the mouth to Lobdell Canal, 320 feet wide, 2,900 feet long on the north side of the channel and decreasing to a length of 2,000 feet on the north side of the basin. It also provides for the removal of about 1,200 feet of the outer end of a stone-filled, pile-and-timber crib jetty constructed 2,150 feet long on the north side of the entrance; for a steel sheet-pile jetty 2,300 feet long, with 120-foot inshore wing, on the south side of the entrance, and for a V-shaped stone-filled pile-and-timber jetty at the mouth of Brandywine River 430 feet along the north side of Brandywine and 260 feet long on the Christina. Depths refer to the plane of mean low water. The extreme tidal range, due to prolonged heavy winds, is about 13 feet. Existing project was completed in 1962. (For details see page 222, Annual Report 1962). Authority from Section 107 of the River and Harbor Act of July 1960 provide for channel and turning basin deepening from 35 to 38 feet and the turning basin widened from 200 to 320 feet. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: Fully complied with.

Terminal Facilities: There are 18 piers, wharves, and docks within limits of the improvement. Facilities considered adequate for existing commerce. (For further details see Port Series No.8, revised 1966-Corps of Engineers).

Operations During Fiscal Year: Maintenance: Routine maintenance of Disposal Areas by both hired labor and leased plant contract, Real Estate Coordination, a \$1,913,000 leased equipment contract to construct a new cross dike along the New Jersey/Delaware state boundary at the Killcohook Disposal Area was completed August 31, 2009, and a \$1,354,714 contract for

maintenance dredging of both the 35-foot and 38-foot project channels was completed under contract by the Norfolk Dredging Company on August 13, 2009.

Operations During Fiscal Year (ARRA Funds): Maintenance: The Killcohook dike construction mentioned above, \$800,000 of maintenance dredging funds covering part of the annual dredging contract and \$1,060,000 of ARRA funding for disposal area maintenance work supplemented the operations described above during the Fiscal Year.

Shore Protection:

20. BARNEGAT INLET TO LITTLE EGG HARBOR INLET, NJ

Location: The project is located along the Atlantic coast of New Jersey approximately 14 miles north of Atlantic City, covering Long Beach Island, New Jersey.

Existing Project: The selected plan consists of berm and dune restoration utilizing sand obtained from offshore borrows sources. This plan would require 4.95 million cubic yard of sand for initial berm placement, and 2.45 million cubic yards for dune placement. Approximately 1.9 million yards would be needed for periodic nourishment every 7 years for the 50-year period of analysis. The template for the plan is a dune at an elevation of +22-ft NAVD, with a 30-ft dune crest width; 1V:5H slopes from dune crest down to a berm at elevation +8-ft NAVD, with a berm width of 125 feet from the centerline of the dune. (See Table 3-B at end of Chapter for Acts authorizing existing project. Estimated cost of project is \$240,000,000 of which \$134,600,000 is Federal costs and \$106,000,000 is Non-Federal costs. (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: The local sponsor for this project is the New Jersey Department of Environmental Protection. The Non-Federal sponsor is the State of New Jersey Department of the Environment.

Operations During Fiscal Year: New Work: Awarded next phase of initial construction in Harvey Cedars Borough in September 2009. Construction in Harvey Cedars is to commence October 2009. Sponsor coordination, engineering and design, construction management, real estate coordination, project and environmental monitoring.

**21. BRIGANTINE INLET TO
GREAT EGG HARBOR INLET, NJ
(ABSECON ISLAND)**

Location: This project is located along the Atlantic Coast of New Jersey in Atlantic County, approximately 50 miles east of Philadelphia, Pennsylvania. It is 8.1 miles in length, extending from Absecon Inlet to Great Egg Harbor Inlet.

Existing Project: The project consists of providing 7.1 million cubic yards of initial beachfill, with subsequent periodic nourishment of 1.7 million cubic yards every three years, for a 200-foot wide berm at elevation 8.5 feet above mean low water and a dune to elevation 16 feet above mean low water for Atlantic City, and a 100-foot wide berm at elevation 8.5 feet above mean low water and a dune to 14 feet above mean low water for Ventnor, Margate and Longport along 8.1 miles of shoreline. The plan also includes 0.3 miles of bulkhead construction along the Absecon Inlet frontage of Atlantic City. Project estimate cost is \$313,700,000 of which \$204,000,000 is federal costs and \$109,700,000 is non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009.)

Local Cooperation: The non-Federal sponsor for this project is the New Jersey Department of Environmental Protection.

Operations During Fiscal Year: New Work: Coordination efforts with the New Jersey Department of Environmental Protection and the local communities of Atlantic City and Ventnor. The work included conducting project monitoring and continuing coordination of bulkhead plans, environmental and maintenance issues.

**22. BRIGANTINE INLET TO
GREAT EGG HARBOR INLET, NJ
(BRIGANTINE ISLAND)**

Location: This project is located along the Atlantic Coast of New Jersey in Atlantic County, approximately 50 miles east of Philadelphia, Pennsylvania. Brigantine Island extends from Brigantine Inlet to Absecon Inlet and is approximately 6 miles in length. The project covers approximately 2 miles of shoreline along the northern portion of this island.

Existing Project: The project consists of providing approximately 750,000 cubic yards of initial beach fill, with subsequent periodic nourishment of 312,000 cubic yards every six years, for a 100 foot-wide berm at elevation 6 feet above mean low water and a dune to elevation 10 feet above mean low water. The plan also includes 12,000 linear feet of sand fencing and the planting of 10 acres of dune grass along the project's length. A bubble system will also be installed to divert municipal storm water that requires 50 linear feet of iron pipe and two catch basin structures. Estimated cost of project (October 2008) is \$44,600,000, of which \$29,000,000 is Federal costs and \$15,600,000 is Non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: The local sponsor for this project is the New Jersey Department of Environmental Protection.

Operations During Fiscal Year: New Work: Coordination efforts with the New Jersey Department of Environmental Protection and the local community. The work included conducting project monitoring and coordinating environmental and maintenance issues.

**23. CAPE MAY INLET TO
LOWER TWP., NJ**

Location: The project is located in Cape May County and extends along the beach front from the western side of Cape May Inlet to the boundary of Lower Township, and Cape May City.

Existing Project: The plan, as presented in HD 94-641, was authorized for the Phase I Design Memorandum Stage of Advance Engineering and Design by Section 101(a) of the Water Resources Development Act of 1976, proposes the following features: breakwater on the updrift side of Cape May Inlet; beachfill from Cape May Inlet to Cape May Point; provision of a dune with sand fence and grass from Cape May Inlet to Wilmington Avenue; construction of two groins in Cape May City and seven groins in Lower Township; inclusion of all groins comprising the existing project; and periodic nourishment of the beaches and maintenance of the dune and dikes.

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The Phase I GDM, completed in August 1980 and approved by the Chief of Engineers in December 1981, determined that only beach erosion control measures in Cape May City are warranted. The plan proposed in that document consists of modifying the existing navigation project for Cape May Inlet to provide; a weir-breakwater at Cape May Inlet with construction being deferred pending demonstration of need; two new groins at Trenton and Baltimore Avenues in Cape May City; placement of beachfill between Cape May Inlet and the terminal groin at Third Avenue in Cape May City; maintenance of two new groins and existing groins in Cape May; periodic beach maintenance with material obtained from deposition basin on the northeast side of Cape May Inlet; and institution of a beach monitoring program in Lower Township area. Work for the initial beachfill was accomplished as follows; USGS feeder beach fiscal year 1989, Cape May City groin fiscal year 1990, and Beachfill Cape May City fiscal year 1991.

The existing authority is for Phase I studies as provided by Section 101(a) of the Water Resources Development Act of 1976 in accordance with the provision of House Document 94-641. Continuation of planning and engineering for this proposed project was initiated in October 1977. The Phase I GDM was completed in August 1980 and approved by the Chief of Engineers in December 1981. Phase II AE&D studies were completed in July 1983. The estimated project cost is Federal, \$148,230,000, which includes \$53,700,000 of Coast Guard contributions. Non-Federal costs are \$3,270,000. The project was authorized for separable elements under Section 501(a) of the Water Resources Development Act of 1986, PL 99-662. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: The local sponsor for this project is the New Jersey Department of Environmental Protection.

Operations During Fiscal Year: New Work: Work included periodic nourishment, construction management, engineering and design, hydraulic studies, and monitoring data collection including beach profile surveys, and aerial photography.

24. DELAWARE BAY COASTLINE, BROADKILL BEACH, DE

Location: The project area is located along the Delaware Bay Coastline at Broadkill Beach, Sussex

County, Delaware.

Existing Project: The plan proposed in the final feasibility report for flood and coastal storm damage reduction at Broadkill Beach is a 100 foot wide berm with an elevation of +8.0 feet NGVD, and a dune with an elevation of +16.0 feet NGVD over a total project length of 14,600 feet. The selected plan includes dune grass, dune fencing and suitable advance beachfill and periodic nourishment every five years to ensure the integrity of the design. Estimated cost of project is \$63,200,000 of which \$41,100,000 is Federal costs and \$22,100,000 is required Non-Federal costs. The PED phase was completed in FY01 and consisted of completion of detailed plans and specifications for those features recommended in the feasibility report. (See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: Federal participation in the proposed project is contingent upon a signed Project Partnership Agreement (PPA) with the local sponsor, the Delaware Department of Natural Resources and Environmental Control.

Operation During Fiscal Year: New Work: Project management duties and coordination with the local sponsor.

25. DELAWARE BAY COASTLINE, REEDS BEACH TO PIERCES POINT, DE & NJ

Location: This ecosystem restoration project is located along the Delaware Bay in Middle Township, Cape May County, New Jersey.

Existing Project: The project consists of providing initial beachfill for the purposes of environmental restoration, and storm damage/erosion control. The project provides a total of 5,000 linear feet of berm (6,800 feet including tapers) with a minimum of 80-foot widths at a landward elevation of +5.5 feet NAVD and a bayward elevation of +3.5 feet NAVD with a 40H: IV slopes along two locations at Reeds Beach and Pierces Point. The estimated project cost is \$9,620,000 of which \$6,250,000 is Federal costs and \$3,370,000 is required Non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: The New Jersey Department of Environmental Protection (NJDEP) will be the Non-Federal sponsor.

Operations During Fiscal Year: New Work: Continued coordinating Project Partnership Agreement (PPA) with the State of New Jersey.

26. DELAWARE BAY COASTLINE, ROOSEVELT INLET, LEWES BEACH, DE

Location: The Roosevelt Inlet-Lewes Beach project area is located in Sussex County in Southern Delaware at the entrance to the Delaware Bay. Sussex County is one of three counties in the State of Delaware. It is bordered on the east by the Atlantic Ocean, on the south and west by Maryland and on the north by Kent County. The project area begins at Roosevelt Inlet and extends southeast along Lewes Beach for approximately 1,400 feet.

Existing project: The project consists of providing initial beachfill with subsequent periodic nourishment for the purposes of flood and coastal storm damage reduction and navigation mitigation. The project provides for a 100-foot wide berm at an elevation of +8.0 feet North American Vertical Datum (NAVD) and a dune at an elevation of +14.0 feet NAVD over a total project length of 1,400 feet. The project includes dune grass, dune fencing, suitable advance beachfill, and periodic nourishment every six years over the 50-year project life to ensure the integrity of the design. The project also provides for reconstruction of the south jetty at Roosevelt Inlet. The south jetty will be parallel to and will extend into the bay a distance equal to the north jetty on the opposite side of the inlet. The south jetty will have a top elevation of +5.1 feet NAVD and a bottom elevation of -6.0 feet NAVD. The top width of the jetty will be 12 feet and it will have 2H: 1V side slopes. Initial construction was completed in December 2008. Estimated cost of project is \$34,900,000 of which \$27,000,000 is Federal costs and \$7,900,000 is required Non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: A Project Cooperation Agreement (PCA) with the Delaware Department of Natural Resources and Environmental Control was signed November 1, 2002.

Operations during fiscal year: New Work: Project Monitoring.

27. DELAWARE COAST, BETHANY TO SOUTH BETHANY, DE

Location: The Bethany Beach to South Bethany Beach project area stretches for approximately 2 miles along the northern part of the Atlantic Ocean coast of Delaware in Sussex County, Delaware. Sussex County is bordered on the east by the Atlantic Ocean, on the south and west by Maryland, and on the north by Kent County.

Existing project: The recommended plan consists of a sand fill beach and dune project, in two independent discontinuous segments, for both Bethany Beach and South Bethany. The plan at each location consists of a 150-foot wide berm at an elevation of +7.0 feet NAVD, and a dune at an elevation of +16.0 feet NAVD. The initial beachfill will be 3.5 million cubic yards, with subsequent nourishment of 480,000 cubic yards every three years. The total project length is 14,950 feet. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009). Estimated project costs are \$142,700,000; Federal \$92,800,000; Non-Federal \$49,900,000.

Local Cooperation: The Non-Federal sponsor is the State of Delaware, Delaware Department of Natural Resources and Environmental Control (DNREC).

Operations during fiscal year: New Work: Completed re-nourishment beachfill construction in Bethany Beach; provided engineering and design, and construction management efforts.

28. DELAWARE COAST FROM CAPE HENLOPEN TO FENWICK ISLAND, DE (FENWICK ISLAND)

Location: The Fenwick Island project area is located in Sussex County, and is the southernmost point on the Delaware ocean coast. It extends for approximately 6,500 feet, and lies just north of the Delaware-Maryland state border. Fenwick Island is bordered to the north by Fenwick Island State Park, to the west by Little Assawoman Bay, and to the south by Ocean City, Maryland.

Existing Project: The project consists of providing initial beachfill with subsequent periodic nourishment for the purpose of flood and coastal storm damage reduction. The project includes a 200-foot wide berm at an elevation of +7.7 feet North American Vertical Datum (NAVD) and a dune with an elevation of +17.7 feet NAVD over a total project length of 6,500 feet. Also included are appurtenant project features such as dune grass planting, sand dune fencing, vehicle access ramps, dune walkovers, and suitable advance beachfill. The initial placement quantity is approximately 600,000 cubic yards of material. Subsequent periodic nourishment of approximately 320,000 cubic yards of material will be required every 4 years throughout the 50-year project life to ensure the integrity of the design. The material for the initial construction and subsequent periodic nourishment will be taken from offshore borrows areas. Initial construction was completed in November 2005. Estimated cost of project is \$72,700,000 of which \$37,100,000 is Federal costs and \$35,600,000 is required non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: A Project Cooperation Agreement (PCA) with the Delaware Department of Natural Resources and Environmental Control was signed September 13, 2004.

Operation During Fiscal Year: New Work: Completed annual monitoring of the project area.

29. DELAWARE COAST FROM CAPE HENLOPEN TO FENWICK ISLAND, DE (REHOBOTH BEACH TO DEWEY BEACH)

Location: The Rehoboth Beach to Dewey Beach project area stretches for approximately 2 miles along the northern part of the Atlantic Ocean Coast of Delaware in Sussex County, Delaware. From north to south the project area includes the Town of Rehoboth Beach, the unincorporated region in front of Silver Lake (under Sussex County jurisdiction), and the Town of Dewey Beach. (See NOAA Nautical Chart Number 12214).

Previous Project: The project consists of providing initial beachfill with subsequent periodic nourishment. The proposed plan 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 beach berm at elevation +7.2 feet North American Vertical Datum (NAVD) and a dune at elevation +13.2 feet NAVD. At Dewey Beach, the project would transition to a 150-foot wide beach berm at elevation +7.2 feet NAVD and a dune at elevation +13.2 feet NAVD. The plan requires the initial placement of 1,400,000 cubic yards of material and subsequent periodic nourishment of approximately 277,000 cubic yards of material every 3 years throughout the 50-year project life to ensure the integrity of the design. The material for the initial construction subsequent periodic nourishment will be taken from an offshore borrows area. The plan also includes the extension of stormwater outfalls at Rehoboth Beach. Appurtenant project features such as dune grass planting, sand dune fencing, vehicle access ramps, and dune walkovers are included with the plan as well. Estimated cost of project is \$86,900,000 of which \$56,500,000 is Federal costs and \$30,400,000 is required non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009.)

Local Cooperation: A Project Cooperation Agreement (PCA) with the Delaware Department of Natural Resources and Environmental Control was signed December 19, 2003.

Operation During Fiscal Year: New Work: Completed annual monitoring of the project area. Completed periodic nourishment at Dewey Beach, provided engineering and design, and construction management efforts.

30. DELAWARE COAST PROTECTION, DE

Location: The project is located in Sussex County, Delaware, on the Atlantic Ocean and starts immediately south of Delaware Bay extending in a southerly direction a distance of 24.5 miles to Fenwick Island on the Delaware-Maryland border.

Previous Project: The previous project, adopted as HD 85-216 in 1958 and modified by P.L. 87-874 in 1962, provided for Federal participation in the cost of restoration and subsequent periodic nourishment, and the initial periodic nourishment was completed in 1957 by local interests. The second increment of beach replenishment by local interest was completed in 1963.

Existing Project: Provides a sand bypass system and periodic nourishment until 2021. (For details, see S. Doc.

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90, 90th Cong. 2nd Sess). Estimated cost of project is \$25,600,000 of which \$11,800,000 is Federal costs and \$13,800,000 is required Non-Federal costs. The construction of the feeder beach north of Indian River Inlet was completed in 1973 and nourished in 1978, and 1984. Section 869 of the Water Resources Development Act of 1986 deauthorized the unscheduled portion of the project. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: Assurances of local cooperation were provided by the State of Delaware, January 13, 1981.

Operations During Fiscal Year: New Work: Work included construction management, engineering and design, monitoring, environmental coordination, and operation of the sand bypassing.

31. GREAT EGG HARBOR INLET & PECK BEACH, NJ

Location: The project is located in Cape May and Atlantic Counties, New Jersey. Great Egg Harbor Inlet, an unimproved inlet, is about 1.1 miles wide at its narrowest point and provides a tidal connection between the Atlantic Ocean, Great Egg Harbor Bay, the New Jersey Intercoastal Waterway, and Great Egg Harbor River. Peck Beach is occupied in its entirety by the City of Ocean City and extends from Great Egg Harbor Inlet southward to Corson Inlet. The ocean frontage is about eight miles in length.

Existing Project: The project consists of providing initial beachfill, with subsequent periodic nourishment, with a minimum berm width of 100 feet at an elevation of 8 feet above mean low water. The beachfill extends from Surf Road southwest to 34th Street with a 1000 foot taper south of 34th Street. This plan required the initial placement of 6,200,000 cubic yards of material and subsequent periodic nourishment of approximately 1,100,000 cubic yards every three years. The material for the initial construction, and periodic nourishment is being taken from the ebb shoal area located approximately 5,000 feet offshore of the Great Egg Harbor Inlet. Additionally, the construction of the project required the extension of 38 storm drainpipes. All work is programmed. Estimated project costs are \$406,800,000; Federal share is \$257,700,000 and Non-Federal is \$149,100,000. (See Table 3-B at end of Chapter for Acts

authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: The local sponsor for this project is the State of New Jersey Department of Environmental Protection Agency.

Operations During Fiscal Year: New Work: Work included monitoring efforts and award of construction contract for 5th cycle of periodic nourishment.

32. GREAT EGG HARBOR INLET TO TOWNSEND INLET, NJ

Location: This storm damage reduction project is located along the Atlantic Ocean coast in the municipalities of Ocean City, Upper Township, and Sea Isle City, Cape May County, New Jersey.

Existing Project: The plan for south Ocean City extends from 34th Street to 59th Street for a total length of 2.6 miles. The plan consists of a dune of top width 25 feet at elevation 12.8 feet NAVD88 with side slopes of 1V:5H, and a 100-foot wide berm at elevation 7.0 feet NAVD88 thence sloping at 1V:25H to the water for a total width seaward from toe of dune of 218 feet. Initial sand placement is estimated at 1.6M cubic yard with periodic nourishment estimated at 403,000 cy every 3 years. The plan for Ludlum Island (Upper Township and Sea Isle City) extends from north of Seaview Avenue in Strathmere (Upper Township) to Pleasure Avenue (just beyond 93rd Street) in Sea Isle City. In addition, there is a 734-foot taper into Corson's Inlet State Park at the project's north end and a 66-foot taper into terminal groin south of 93rd Street. Total length of beachfill including tapers is 6.7 miles. The plan consists of a dune of top width 25 feet at elevation 14.8 feet NAVD88 with side slopes of 1V:5H, and a 50-foot wide berm at elevation 6.0 feet NAVD88 thence of varying slope (1V:30H to 1V:50H) to the water for a total width seaward from toe of dune ranging from 195 feet to 285 feet. Initial sand placement is estimated at 5.2M cubic yard with periodic nourishment estimated at 1.8M cy every 5 years. The plan also includes the extension of 2 stormwater outfalls by 150 feet at 82nd and 86th Streets. Estimated cost of this work is \$250,000,000 (October 2009) of which \$133,180,000 is Federal cost and \$116,820,000 is non-Federal.

Local Cooperation: The local sponsor for this project is the New Jersey Department of Environmental Protection.

Operations During Fiscal Year: New Work: Work included completion and submittal of Project Partnership Agreement (PPA).

33. SHORE PROTECTION WORK UNDER SPECIAL AUTHORIZATION

Name of Project Cost to September 30, 2009

Coordination

Section 103 Coordination Account \$ 3,652

Feasibility

Philadelphia Shipyard, PA \$218,940

34. TOWNSEND INLET TO CAPE MAY INLET, NJ

Location: This project is located along the Atlantic Coast of New Jersey in Atlantic County, approximately 50 miles east of Philadelphia, Pennsylvania. The project area is located along the Atlantic Coast of New Jersey, extending approximately 15 miles from Townsends Inlet to Cape May Inlet, including the communities of Avalon, Stone Harbor, and North Wildwood.

Existing Project: The recommended plan includes interim shoreline protection projects for Avalon, Stone Harbor and North Wildwood, New Jersey, and an environmental restoration project for Stone Harbor Point, as follows: (1) 4.3 miles of beachfill with a berm width of 150-foot at elevation 8.5 feet NGVD and dune height of +16-feet along with periodic nourishment for Avalon and Stone Harbor. The beachfill portion of the project consists of providing approximately 4 million cubic yards of initial beachfill, with subsequent periodic nourishment of 750,000 cubic yards every three years. (2) 2.2 miles of revetment construction along Townsends and Hereford Inlets frontages; (3) and ecosystem restoration of about 107 acres of natural barrier island habitat at Stone Harbor Point including beachfill, dune construction, and the planting of bayberry and red cedar rousting habitat. Estimated project cost is \$247,090,000 of which \$159,600,000 is Federal costs and \$87,490,000 is Non-Federal costs. (See Table 3-B at end of Chapter for Acts

authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: New Jersey Department of Environmental Protection is the sponsor.

Operations During Fiscal Year: New Work: Seawall construction is continuing on the Anglesea portion of the wall in North Wildwood, New Jersey, schedule completion to be Spring 2010. In addition, continued engineering and design, construction management, sponsor coordination, project performance monitoring and environmental monitoring.

Flood Control:

35. BELTZVILLE LAKE, PA

Location: Dam site is on Pohopoco Creek about 4.5 miles upstream from its confluence with Lehigh River and 4 miles east of Lehigh, PA (See Geological Survey Quadrangle Map for Lehigh, PA-1960).

Existing Project: This is a multiple-purpose development project providing water supply, flood control, and recreation. Plan of improvement provides for an earth and rock fill dam 4,200 feet long rising 170 feet above creek bed; a spillway around the north end of dam; and gate control outlet works discharging through a conduit on rock along right abutment. The lake, a unit of comprehensive plan for flood control and other purposes of Delaware River Basin, has a reservoir capacity of 68,250 acre-feet at spillway crest level with 1,390 acre-feet of inactive storage, 39,830 acre-feet for water supply and recreation, and 27,030 acre-feet for flood control. The cost of project was \$22,931,400 including \$6,100,000 required Non-Federal reimbursement for costs allocated to water supply storage during life of project. The construction of the dam and appurtenances was completed in 1971. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: Project was approved subject to certain requirements of cooperation by local interests as defined in approved House Document. Resolution of Delaware River Basin Commission providing assurances of repayment of water supply and pollution control costs was accepted June 7, 1965. A contract for repayment of water supply costs was signed October 16, 1966.

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Operations During Fiscal Year: Maintenance: Normal operation and maintenance of the project continued, Real Estate Coordination, Environmental Review Guide for Operations, Continue Evaluation Gathering, Water Control and Water Quality Analysis, Annual Dam Inspection and Dam Safety. Lead Paint Abatement and Repainting of the tower and performance of some backlog maintenance items and environmental stewardship tasks.

Operations During Fiscal Year (ARRA Funds): Maintenance: A service contract to purchase a boat motor and trailer was awarded to Brunswick Marine in the amount of \$26,235. A service contract to procure a slope mower was awarded to Finch Services in the amount of \$26,985. A contract to rehabilitate the left service gate in the tower was awarded to the Future Net Group on September 29, 2009 in the amount of \$178,347 for the base contract work (base plus options is \$373,000). Work on the gate will be accomplished in Fiscal Year 2010.

36. BLUE MARSH LAKE, PA

Location: Dam site is on Tulpehocken Creek about 1.5 miles upstream from its confluence with Plum Creek and about 6 miles northwest of Reading, PA (See Geological Survey Quadrangle Sheet, Bernville, PA)

Existing Project: This is a multiple-purpose development project providing water supply, flood control, and recreation. Construction started in 1974 and was completed in 1980. The dam is 1,775 feet long and rises 98 feet above creek bed, with spillway about 1,500 feet south of dam, and gate-controlled outlet works discharging through a conduit on rock along right abutment. The lake, a unit of comprehensive plan for flood control and other purposes of Delaware River Basin, has a capacity of 50,010 acre-feet at spillway crest level, with 3,000 acre-feet of inactive storage, 14,620 acre-feet for water supply and recreation, and 32,390 acre-feet for flood control. (For details see H.Doc 533 87th Cong., 2nd Sess). Costs of project \$63,163,791. Existing project was authorized by 1962 Flood Control Act. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009). (H. Doc. 533, 87th Cong., 2d Sess., contains latest published maps).

Local Cooperation: Project was approved subject to certain requirements by local interests, as prescribed in

House Document cited above. Delaware River Basin Commission on December 29, 1964, adopted a preliminary resolution providing for repayment of water supply costs.

Operations During Fiscal Year: Maintenance: Normal operation and maintenance, Real Estate Coordination, Environmental Review Guide for Operations, Continue Evaluation Gathering, Water Control and Water Quality Analysis, Annual Dam Inspection, Recreation and Environmental Stewardship tasks.

Operations During Fiscal Year (ARRA Funds): Maintenance: A contract to rehabilitate the service gate and replace the hydraulic seals in the water quality gate was awarded to the Future Net Group on September 29, 2009 in the amount of \$341,233 for the base contract work (base plus options is \$631,000). Work on the gate will be accomplished in Fiscal Year 2010.

37. EMERGENCY BANK PROTECTION

Emergency Bank Protection Section 14, Public Law 79-526.

Name of Project Cost to September 30, 2009

Coordination

Section 14 Coordination \$ 4,441

Design & Implementation

East Point, NJ \$ 38,297
Manasquan River, NJ \$ 7,686

Feasibility

Mt. Holly, NJ \$ 5,124
North Coventry, PA \$46,913

38. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Flood control activities pursuant to Section 205, Public Law 838, 80th Congress, as amended (Preauthorization).

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Name of Project Cost to September 30, 2009

Coordination

Section 205 Coordination \$ 10,126

Design and Implementation

Little Mill Creek, New Castle City, DE \$124,771

Feasibility

Hamilton Township, NJ \$ 27,077

Pennsylvania Ave. Improvement,
Bethany, DE \$ 25,533

Pennsville, NJ \$ 40,218

Philadelphia Shipyard Flood Reduction \$ 5,277

Port Jervis, NY \$ 32,783

Tookany Creek, Church Road, PA \$ 44,915

Tookany Creek, Glenside Road, PA \$ 35,113

Emergency flood control activities-repair, flood fighting, and rescue work (Public Law 99, 84th Congress, and antecedent legislation).

Fiscal year costs were \$483,216 for disaster preparedness.

39. FRANCIS E. WALTER DAM, PA

Location: Reservoir is in northeastern Pennsylvania on Lehigh River between White Haven and Stoddartsville. Dam is about 0.4 mile below mouth of Bear Creek, about 60 miles above confluence of Lehigh River and Delaware River at Easton, PA (See Geological Survey Quadrangle Sheet, Stoddartsville, PA).

Existing Project: Plan of improvement authorized by 1946 Flood Control Act (H. Doc. 587, 79th Cong., 2d Sess). provided for a single-purpose flood control reservoir. Modification of project, authorized by 1962 Flood Control Act (H. Doc.522, 87th Cong., 2d Sess)., provides for a multiple-purpose development for water supply and recreation in addition to present single-purpose flood control project. Plan of improvement requires altering spillway, increasing height of dam, constructing a new intake tower, extending outlet tunnel by addition of a concrete conduit, and constructing new dikes and raising existing dikes. Modified dam will rise 264 feet above riverbed and be 3,500 feet long. Reservoir modification, a unit of comprehensive plan for flood control and other purposes of Delaware River Basin, will have a reservoir capacity of 181,000 acre-feet

spillway crest level with 3,000 acre-feet of inactive storage, 70,000 acre-feet for water supply and recreation and 108,000 acre-feet for flood control. Total cost is \$186,000,000, estimated Federal cost of new work (October 1993) is \$30,000,000 including \$156,000,000 required Non-Federal reimbursement for costs allocated to water supply storage during life of project after use of this storage is initiated. Project as authorized under the 1946 Flood Control Act was completed June 1961. Settlement for lands was completed October 1962. The advance engineering and design for the modified project is completed. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: None required under 1946 Flood Control Act. Under 1962 Flood Control Act, project was approved subject to certain requirements by local interests, as defined in House Document 522 cited above. The Delaware River Basin Commission expressed its support by a resolution dated 23 April 1980 and reiterated its sponsorship for the modified project in August 1985, October 1985, and July 1988.

Operations During Fiscal Year: Maintenance: Normal operation and routine maintenance, Project Coordination, Environmental Review Guide for Operations, Real Estate Coordination, Continuing Evaluation Gathering, Dam Safety, Water Control and Water Quality Analysis. Lead paint abatement was conducted, the cracked bonnet cover was repaired and bypass valves were installed in the tower.

Operations During Fiscal Year (ARRA Funds): New Work: Additionally, several tasks to upgrade electric at the FE Walter facility and replace the damaged tower door were conducted in August 2009. A contract for grouting of the abutment was awarded to Layne GeoConstruction in September 2009. Work will be conducted in Fiscal Year 2010. Prepared design documents for an exploratory drilling and grouting program to repair ongoing seepage in the dam's right abutment. A construction contract totaling \$3,501,759 was awarded to Layne Christensen Company to complete the work in Fiscal Year 2010.

Maintenance: In FY09 Citadell Construction was awarded contracts to: 1.) Repair Cracks in the Intake Tower in the amount of \$120,251, 2.) Conduct Miscellaneous Concrete and Maintenance repairs (outlet structure slab and monoliths) in the amount of \$285,070 and 3.) Upgrade Access Road to Sitling Basin and to Upgrade Access Road to Stream Gaggling Station in the

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amount of \$537,833. Work on these tasks will be completed in Fiscal Year 2010.

40. GENERAL EDGAR JADWIN DAM AND RESERVOIR, PA

Location: In Dyberry Creek Valley in central part of Wayne County, PA, between borough of Honesdale and Village of Tanners Falls. Dam is about 3 miles above confluence of Dyberry Creek and Lackawaxen River in Honesdale and 29 miles above confluence of Lackawaxen and Delaware Rivers. (See Geological Survey Quadrangle Sheet, Honesdale, PA).

Existing Project: A single-purpose flood control reservoir with a capacity of 24,500 acre-feet formed by an earth embankment, about 1,225 feet long at crest and rising 109 feet above creek bed. It also has a tunnel with intake structure and a chute-type spillway with a stilling basin in left abutment. Reservoir controls runoff from a drainage area of 65 square miles which is 91 percent of watershed of Dyberry Creek and 39 percent of Lackawaxen River watershed above Honesdale, PA. Construction of project was authorized by 1948 Flood Control Act (H.Doc. 113, 80th Cong., and 1st Sess).. Project completed in June 1960. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total costs for existing project to September 30, 2009).

Local Cooperation: Assurances of Compliance with requirements of local cooperation were accepted July 30, 1956. For details see page 251, Annual Report for 1962.

Operations During Fiscal Year: Maintenance: Normal operation and routine maintenance, Project Coordination, Real Estate Coordination, Continuing Evaluation Gathering, Periodic Dam Inspection and Water Control Analysis and seepage analysis.

Operations During Fiscal Year (ARRA Funds): Maintenance: A contract to Repair the Ogee Weir and to Complete Miscellaneous Concrete Repairs (stilling basin slab) was awarded to Citadell Construction Company on July 29, 2009 in the amount of \$708,367. Work will be completed in Fiscal Year 2010.

41. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS

To ascertain whether local interests were maintaining and operating completed projects as required, inspections

were made as follows:

PROJECT INSPECTION	DATES
City of Allentown	April 2009
City of Chester, PA	May 2009
Little Mill Creek, DE	May 2009

Local interests are satisfactorily maintaining and operating projects in accordance with regulation. Costs during the period were \$94,785.

42. INSPECTION OF NON-FEDERAL LEVEES

Inspection of Non-Federal levees were conducted at the following sites:

PROJECT INSPECTION	DATES
Borough of Conshohken, PA	August 2009
Borough of Hawley, PA	July 2009
Borough of Honesdale, PA	June 2009
Borough of Stroudsburg, PA	August 2009
Borough of Weissport, PA	August 2009
City of Wilmington, PA	August 2009

43. NATIONAL EMERGENCY PREPAREDNESS

The total fiscal year cost for this category amounted to \$24,997.

44. PROMPTON LAKE, PA

Location: In Lackawaxen River Valley in central part of Wayne County, PA, between borough of Prompton and Village of Aldenville. Dam is within corporate limits of Prompton, 4 miles upstream from Honesdale, PA, and approximately 30 miles above confluence of Lackawaxen and Delaware River. (See Geological Survey Quadrangle Sheet, Honesdale, PA)

Existing Project: Plan of improvement authorized by 1948 Flood Control Act (H. Doc. 113, 80th Cong., 1st Sess). provides for a single-purpose flood control reservoir. Modification of project authorized by 1962 Flood Control Act (H. DOC 522, 87th Cong., 2nd Sess). provides for a multiple-purpose development for water supply and recreation in addition to present single-purpose flood control project. Plan of improvement requires construction of control tower with

gates and service bridge, placing an impervious blanket on valley walls and floor upstream from dam, widening spillway, and clearing land and relocating roads in reservoir. Dam, completed under 1948 Flood Control Act which will not be modified, is 1,230 feet long and rises 140 feet above riverbed. Existing spillway, cut into rock of right abutment, will be modified and present uncontrolled outlet works discharging into a concrete conduit along right bank, and will be provided with gates and a control tower. Reservoir modification, a unit of comprehensive plan for flood control and other purposes of Delaware River basin has a capacity of 52,000 acre-feet: 3,500 acre-feet for inactive storage, 28,200 acre-feet for water supply and recreation, and 20,300 acre-feet for flood control. Estimated Federal cost of new work (October 1994 PL) is \$26,600,000, including \$54,990,000 required Non-Federal reimbursement for costs allocated to water supply storage during life of project after use of this storage is initiated. Project as authorized under the 1948 Flood Control Act was completed in November 1960. (For details, see page 358, Annual Report for 1963). Work accomplished under the 1962 Flood Control Act was preconstruction engineering and design. (See Table 3-B at end of Chapter for Acts authorizing existing project. See table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: Project modification was approved subject to certain requirements by local interests, as defined in House Document 522 cited above. Assurances of compliance under Flood Control Act of 1948 have been met. Delaware River Basin Commission on March 18, 1966, gave their view that the need for water supply was not urgent at that time. However recent studies conducted by DRBC have determined that there is now a need for water supply. In August 1983, DRBC expressed their strong support for the project modification. Preconstruction engineering and design was initiated in 1966, suspended in 1968 and again suspended in and resumed in 1986.

Operations During Fiscal Year: New Work: Spillway modified, and constructed crestwall across the top of the dam, Engineering and Design and Construction Management were also performed.

Maintenance: Normal operation and routine maintenance of the project continued, which included Project Coordination, Real Estate Coordination, Environmental Review Guide for Operations, Continuing Evaluation Gathering, Dam Safety, Water Control and Water Quality Analysis.

Operations During Fiscal Year (ARRA Funds):

New Work: A contract to complete the Prompton Phase II Project was awarded to the Construction Company in September 2009. Work will be completed in Fiscal Year 2010. Prepared design documents to complete phase 2 of the spillway modifications. A construction contract totaling \$10,280,550 was awarded to Thalle Construction Company to complete the work in Fiscal Year 2010.

Maintenance: A contract to complete Miscellaneous Concrete Repairs on the intake structure and stilling basin was awarded to Citadell Construction Company on July 19, 2009 in the amount of \$308,607. This work will be completed in Fiscal Year 2010.

Environmental Restoration:

45. ENVIRONMENTAL IMPROVEMENT WORK UNDER SPECIAL AUTHORIZATION

Activities pursuant to Section 1135, Public Law 99-662.

Name of Project **Cost to September 30, 2009**

Coordination

Coordination Account Funds \$ 14,407

Design & Implementation

Assunpink Creek, NJ	\$	32,264
Bark Camp Run Restoration, PA	\$	4,630
Delaware Bay Oyster Restoration	\$	198,435
Fairmont Park Dam, PA	\$	675,642
Pine Mount Creek, NJ	\$	25,508
Pond Creek, NJ	\$	11,094
Mordecai Island Restoration, NJ	\$	83,261

46. DELAWARE BAY COASTLINE, PORT MAHON, DE & NJ

Location: The Port Mahon environmental restoration and protection project is located in Kent County, Delaware along the Delaware Bay coastline. The study area is located on the south bank near the mouth of the Mahon River and extends for roughly 1.5 miles along the Delaware Bay coastline. Port Mahon is situated about 7.5 miles east of Dover, Delaware and approximately 3 miles northeast of Little Creek, the nearest town.

Existing Project: The project consists of three elements designed to restore the ecosystem at Port Mahon. The first element consists of restoration of 19.2 acres of horseshoe crab habitat through the placement of 306,000 cubic yards (cy) of sand for approximately 4,900 feet along the shoreline with 150-foot tapers at each end to tie into the existing upland. The plan also includes construction of a 1200-foot revetment at the southern end of the proposed project to tie into the existing revetment from the termination of the beachfill to provide stability. Periodic nourishment of approximately 150,000 cubic yards of sand is scheduled to occur every 7 years for the 50-year project life. The second element of the project calls for raising State Road 89 to +7.0 feet North American Vertical Datum (NAVD) for a distance of 7,500 feet to protect 59.1 acres of wetlands to the west of State Road 89 from excessive damaging overwash. A total initial volume of 15,800 cubic yards of fill material would be required to raise State Road 89. In addition, 13,600 square yards of geotextile and 3,500 cubic yards of crushed stone would be used for the road surface. The third element consists of restoration of 21.4 acres of degraded marsh west of State Road 89. This calls for the reestablishment of daily tidal inundation into the wetlands and the creation of three open water ponds of 1-acre size. Removal of material to an elevation 6 inches below the mean high water line would enable replacement of the existing common reed (*Phragmites*) with smooth cordgrass (*Spartina alterniflora*), a more productive plant community. The excavation of the marsh, ponds, and ditches would generate approximately 96,000 cubic yards of material that would be placed adjacent to the active disposal area owned by the Delaware Department of Natural Resources and Environmental Control (DNREC). This placement is estimated to result in 10 acres of upland habitat, which would contribute to habitat diversity. Approximately 15,500 cubic yards of material would be accommodated at the DNREC site. Estimated cost of project is \$36,100,000 of which \$23,500,000 is Federal costs and \$12,600,000 is required Non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009). The Office of Management and Budget (OMB) provided a clearance letter for the Port Mahon project to the Assistant Secretary of the Army for Civil Works in June 2008.

Local Cooperation: Federal participation in the proposed project is contingent upon a signed Project Partnership Agreement (PPA) with the local sponsor, the Delaware Department of Natural Resources and Environmental Control.

Operations During Fiscal Year: New Work: Project management duties and coordination with the local sponsor.

47. DELAWARE BAY COASTLINE VILLAS & VICINITY, NJ

Location: This ecosystem restoration project is located along the Delaware Bay in Middle and Lower Townships, Cape May County, New Jersey.

Existing Project: The recommended plan, restoring horseshoe crab and shore bird habitats, is a one time placement of 950,000 cubic yards of beach fills to provide an 80-foot wide berm at elevation +4.7 feet NAVD over a length of 29,000 feet. Seventeen outfalls located in the project boundaries will be extended about 100 feet. The project does not involve periodic nourishment. Total project costs are \$15,500,000; Federal \$10,100,000, Non-Federal \$5,400,000. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: The New Jersey Department of Environmental Protection (NJDEP) will be the Non-Federal sponsor.

Operations During Fiscal Year: New Work: Started work on Limited Revaluation Report and continued coordinating Project Partnership Agreement (PPA) with the State of New Jersey.

48. LOWER CAPE MAY MEADOWS - CAPE MAY POINT, NJ

Location: The project area includes Lower Cape May Meadows, which consists of Cape May Point State Park and the Cape May Migratory Bird Refuge, and the Borough of Cape May Point. The Lower Cape May Meadows area consists of approximately 343 acres and extends through the Borough of Cape May Point, totaling about 2 miles along the southern Atlantic coast of New Jersey.

Existing Project: The plan for the purposes of ecosystem restoration, navigation mitigation, and hurricane and storm damage reduction consists of an initial construction sand quantity of 1,400,000 cubic yards to be placed for a total length of 11,000 ft, and 650,000 cubic yards of periodic nourishment every 4

years over the 50-year project life; a dune with a 100 ft-wide base, and a 25 ft-wide crest at a height of 16.75ft (NAVD 88); a berm 100-150 feet wide in the vicinity of Cape May Point and 200-450 feet wide in the vicinity of Lower Cape May Meadows; planting of 18 acres of dune vegetation; seaward restoration of 35 acres of emergent wetland; elimination of 95 acres of the nuisance plant *Phragmites australis*; planting of 105 acres of wetland vegetation; excavation of existing drainage ditches to restore fresh water flow; creation of drainage ditches to link hydrological segments of a project area; installation of two weir-flow control structures; creation of six fish reservoirs; and construction of elements to create 25 acres of tidal marsh. The project also includes monitoring and adaptive management over a 5-year period for the Lower Cape May Meadows freshwater wetlands restoration element. Estimated project cost is \$124,231,000 of which \$113,601,000 is Federal cost and \$10,580,000 is Non-Federal costs. (See Table 3-B at end of Chapter for Acts authorizing existing project. See Table 3-A at end of chapter for total cost for existing project to September 30, 2009).

Local Cooperation: The sponsor for this project is the New Jersey Department of Environmental Protection.

Operations During Fiscal Year: New Work: Work included engineering and design, adaptive management of ecosystem restoration features, hydraulic studies and monitoring data collection including beach profile surveys and aerial photography.

Environmental Infrastructure:

49. SOUTHEASTERN, PENNSYLVANIA, PA

Location: Section 566 of the Water Resources Development Act (WRDA) of 1996 authorized a pilot program to provide for environmental assistance (design and construction) to Non-Federal interests for publicly owned facilities in the five (5) county areas surrounding the city of Philadelphia.

Previous Projects: The four pilot projects were the East Central Incinerator, Wissinoming, Logan (Feltonville), and Delaware Canal.

Existing Project: (1) Mill Creek Diversion - divert the stream flow generated in Montgomery County from the combined sewer by constructing an alternate channel to either the Schuylkill River via an underground tunnel

under City Line Avenue or to the East Branch of Indian Creek. (2) Cobbs Creek Habitat Restoration – construct approximately 650ft to 1000ft of new channel, including pools and riffles. (3) Cobbs Creek Fish Passage Restoration - investigates, select, design, and construct the best alternative to reestablish fish passage on Cobbs Creek. (4) Tacony Creek Project – entails the restoration of approximately 2,200 feet of Tacony Creek using a natural stream-channel design approach. (5) Hatfield Sewer Collection Improvement Project – involves replacing or fixing sewer lateral lines connecting residential structures to the main sewer lines within Hatfield Borough to resolve a public and community-wide problem of inflow and infiltration into the public sewer system. (6) Chester, Delaware and Montgomery County Environmental Improvement – evaluating a wide-range of parameters including but not limited to sedimentation, erosion, aquatic habitat, ecosystem restoration and improvement, point and non-point source pollution and flood damage reduction and developing preliminary designs.

Local Cooperation: On all projects, the Non-Federal sponsor is required to provide 25% of the project costs to include lands, easements and rights of way and bear all costs of operation and maintenance of the projects after construction. The Non-Federal sponsors receive credit for any design work completed prior to the Federal involvement.

Terminal Facilities: None.

Operations During Fiscal Year: New Work: Executed Cost Share Agreements with Hatfield Borough for the Hatfield Sewer Collection Improvement Project and with the Philadelphia Water Department for the Cobbs Creek Fish Passage and Tacony Creek Ecological Improvement Projects. Coordinated potential sponsorship with the Pennsylvania Department of Environmental Protection to support the Chester, Delaware and Montgomery County Environmental Improvement Project. Continued efforts implementing the Mill Creek Diversion project including completion of the geotechnical and HTRW analysis, development of potential alternatives and environmental scoping.

Operations During Fiscal Year (ARRA Funds): New Work: Recovery funds were used to support project management and coordination activities for Cobbs Creek Fish Passage, Cobbs Creek Habitat Restoration, Mill Creek Diversion and the Chester, Delaware and Montgomery County projects.

Miscellaneous:

50. AQUATIC ECOSYSTEM RESTORATION WORK UNDER SPECIAL AUTHORIZATION

Activities pursuant to Section 206, Public Law 104-303.

Name of Project	Cost to September 30, 2009
Coordination	
Section 206 Coordination Account	\$ 13,945
Feasibility	
Musconetcong River Dam Removals, NJ	\$ 23,627
Design and Implementation	
Grover's Mill Pond	\$ 766,096
South Hampton Creek (ARRA)	\$ 36,380

General Investigations:

51. COLLECTION AND STUDY OF BASIC DATA

Cost and expenditures during the period for flood plain information studies were \$553,580.

52. PRECONSTRUCTION ENGINEERING AND DESIGN

Cost and expenditures during the period totaled \$3,055.

53. SURVEYS

Cost for the period was \$19,181 for navigation studies; \$374,817 for flood damage protection studies; \$206,540 for shoreline protection studies; \$455,464 for ecosystem restoration studies, \$51,259 for miscellaneous studies, \$347,824 for Planning Assistance to States studies: a total of \$1,455,085.

Cost (ARRA) for the period was \$35,097 for shoreline studies and \$85,003 for ecosystem restoration studies for a total of \$120,100.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
1.	Barnegat Inlet, NJ (Regular Funds)	New Work					
		Approp.	0	0	0	0	31,083,849
		Cost	0	0	0	0	30,994,896
		Maint.					
		Approp.	444,000	447,000	1,418,000	418,460	38,395,356
		Cost	462,490	446,369	1,319,157	354,152	38,221,879
		Maint. (ARRA)					
		Approp.	0	0	0	350,000	350,000
		Cost	0	0	0	0	0
	(Contributed Funds)	New Work					
		Approp.	0	0	0	0	13,917,000
		Cost	0	0	0	0	13,793,140
2.	Cold Spring Inlet, NJ (Regular Funds)	New Work					
		Approp.	0	0	0	0	879,275
		Cost.	0	0	0	0	879,275
		Maint					
		Approp.	784,000	349,000	414,000	221,480	12,304,303
		Cost	613,113	767,191	268,820	341,425	11,976,435
		Maint. (ARRA)					
		Approp.	0	0	0	640,000	640,000
		Cost	0	0	0	540,240	540,240
		Rehab.					
		Approp.	0	0	0	0	1,134,346
		Cost .	0	0	0	0	1,134,346
	(Contributed Funds)	New Work					
		Approp.	0	0	0	0	150,000 ⁸
		Cost .	0	0	0	0	150,000 ⁸
3.	Delaware River between Philadelphia, and Trenton, PA & NJ (Regular Funds)	New Work					
		Approp.	0	0	0	0	72,147,800 ²
		Cost .	0	0	0	0	72,147,800 ²
		Maint					
		Approp.	3,690,000	2,476,000	1,494,000	682,080	78,248,092 ³
		Cost	1,094,663	4,825,599	1,614,778	767,982	78,197,007 ³
		Maint. (ARRA)					
		Approp.	0	0	0	6,178,150	6,178,150
		Cost	0	0	0	2,545,349	2,545,349
	(Contributed Funds)	New Work					
		Approp. .	0	0	0	0	565,000
		Cost .	0	0	0	0	565,000
4.	Delaware River Main Channel Deepening, NJ, PA & DE (Regular Funds)	New Work					
		Approp.	1,073,000	700,000	2,340,000	3,828,000	17,843,000
		Cost	677,426	478,857	553,840	1,699,196	13,201,321

PHILADELPHIA, PA DISTRICT

TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
5.	Delaware River, PA, NJ, and DE, Philadelphia to the Sea	New Work					
		Approp.	0	0	0	0	57,879,872 ⁴
		Cost	0	0	0	0	57,879,872 ⁴
	(Regular Funds)	Maint.					
		Approp.	16,664,000	15,887,000	18,507,000	17,097,390	688,337,180 ¹⁷
		Cost	15,899,821	16,446,455	18,427,323	17,404,650	687,657,281 ¹⁷
		Maint. (ARRA)					
		Approp.	0	0	0	2,853,250	2,853,250
		Cost	0	0	0	1,782,543	1,782,543
		Rehab.					
		Approp. .	0	0	0	0	508,324
		Cost .	0	0	0	0	508,324
6.	Delaware River Vicinity of Camden (Regular Funds)	New Work.					
		Approp. .	0	0	0	0	4,616,000 ²⁴
		Cost .	0	0	0	0	4,589,130 ²⁴
	(Contributed Funds)	Maint.					
		Approp.	9,000	15,000	0	13,720	3,996,282
		Cost	9,000	14,400	0	18,000	3,998,037
		New Work					
		Approp. .	0	0	0	0	2,513,131
		Cost .	0	0	0	0	2,321,078
7.	Harbor of Refuge, DE (Regular Funds)	New Work					
		Approp.	0	0	0	0	5,162,230 ²⁵
		Cost .	0	0	0	0	5,162,230 ²⁵
		Maint.					
		Approp.	0	0	343,000	230,300	1,742,314 ²⁶
		Cost	0	0	88,362	42,595	1,299,971 ²⁶
8.	Indian River Inlet & Bay (Regular Funds)	New Work					
		Approp.	0	0	0	0	511,210
		Cost.	0	0	0	0	511,210
	(Contributed Funds)	Maint.					
		Approp.	0	0	687,000	230,300	6,291,257 ²⁷
		Cost	0	0	127,658	427,945	5,927,283 ²⁷
		Maint. (ARRA)					
		Approp.	0	0	0	4,049,150	4,049,150
		Cost	0	0	0	157,037	157,037
		Rehab.					
		Approp.	0	0	0	0	1,323,775
		Cost .	0	0	0	0	1,323,775

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TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
9.	Intracoastal Waterway from Delaware River to Chesapeake Bay, DE and MD (Regular Funds)	New Work Approp. Cost . Maint. Approp. Cost Maint. (ARRA) Approp. Cost Rehab. Approp. Cost .	0 0 12,284,000 10,656,491 0 0 0 0 0 0	0 0 16,166,131 12,108,945 0 0 10,000 9,393 0 0	0 0 13,282,000 13,183,153 0 0 19,000 10,562 0 0	0 0 13,451,815 13,444,154 17,414,350 2,838,031 0 0	132,535,591 ⁶ 132,532,598 ⁶ 462,485,940 ⁷ 456,418,190 ⁷ 17,414,350 2,838,031 17,356,292 17,356,290 561,514 561,514 6,397,989 6,371,396 60,000 60,000 8,008,278 ^{20,21} 8,008,278 ^{20,21} 7,268,489 ²² 7,140,907 ²² 738,839 ²³ 738,839 ²³ 5,920,005 ¹⁶ 5,451,711 ¹⁶ 2,150,000 701,091 37,630 37,630 3,500,535 3,498,050
10.	Intracoastal Waterway, Rehoboth Bay to Delaware Bay, DE (Regular Funds) (Contributed Funds)	New Work Approp. . Cost . Maint. Approp Cost New Work Approp. . Cost .	0 0 0 0 0 0 0 0	0 0 10,000 9,393 0 0	0 0 19,000 10,562 0 0	0 0 36,260 20,842 0 0	561,514 561,514 6,397,989 6,371,396 60,000 60,000
11.	Manasquan River, NJ (Regular Funds)	New Work Approp. . Cost . Maint. Approp. Cost	0 0 452,000 422,393	0 0 334,000 366,859	0 0 185,000 39,584	0 0 330,260 349,837	8,008,278 ^{20,21} 8,008,278 ^{20,21} 7,268,489 ²² 7,140,907 ²²
12.	Mispillon River DE (Regular Funds)	New Work . Approp. . Cost . Maint Approp. Cost Maint. (ARRA) Approp. Cost	0 0 18,000 16,594 0 0	0 0 30,000 31,400 0 0	0 0 399,000 78,805 0 0	0 0 244,020 96,816 2,150,000 701,091	738,839 ²³ 738,839 ²³ 5,920,005 ¹⁶ 5,451,711 ¹⁶ 2,150,000 701,091
13.	Murderkill River, DE (Regular Funds)	New Work Approp. . Cost . Maint Approp. Cost	0 0 18,000 5,839	0 0 30,000 42,161	0 0 19,000 19,000	0 0 27,440 27,000	37,630 37,630 3,500,535 3,498,050

PHILADELPHIA, PA DISTRICT

TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
15.	New Jersey Intracoastal Waterway (Regular Funds)	New Work					
		Approp. .	0	0	0	0	71,549 ⁹
		Cost .	0	0	0	0	71,549 ⁹
		Maint.					
		Approp.	1,110,000	870,000	989,000	870,240	68,322,516 ¹⁰
		Cost	1,064,000	601,568	1,306,391	548,754	66,284,595 ¹⁰
		Maint. (ARRA)					
		Approp.	0	0	0	10,137,800	10,137,800
		Cost	0	0	0	1,530,198	1,530,198
		Rehab.					
		Approp. .	0	0	0	0	1,196,581
		Cost .	0	0	0	0	1,196,581
	(Contributed Funds)	New Work					
		Approp. .	0	0	0	0	99,000
		Cost .	0	0	0	0	99,000
17.	Salem River , NJ (Regular Funds)	New Work.	0	0	0	0	6,701,864 ¹¹
		Approp.	0	0	0	0	6,701,764 ¹¹
		Cost .					
		Maint.					
		Approp.	857,000	662,000	24,000	63,700	5,750,069 ²⁸
		Cost	(512,227)	2,029,488	15,534	73,364	5,748,941 ²⁸
	(Contributed Funds)	New Work					
		Approp.	(88,750)	3,000	(2,700)	1,100	1,452,225
		Cost .	0	0	0	0	802,038
18.	Schuylkill River, PA (Regular Funds)	New Work					
		Approp. .	0	0	0	0	3,334,007 ¹
		Cost .	0	0	0	0	3,334,007 ¹
		Maint.					
		Approp.	62,000	944,000	1,402,000	2,279,480	50,742,613
		Cost	8,059	233,480	1,275,702	2,147,019	46,174,011
19.	Wilmington Harbor, DE (Regular Funds)	New Work					
		Approp. .	0	0	0	0	1,954,725 ^{12,5}
		Cost .	0	0	0	0	1,954,725 ^{12,5}
		Maint.					
		Approp.	3,626,000	3,456,000	4,119,000	3,409,420	138,465,003
		Cost	3,507,737	2,316,579	4,042,679	2,880,083	136,610,559
		Maint. (ARRA)					
		Approp.	0	0	0	3,860,000	3,860,000
		Cost	0	0	0	3,652,746	3,652,746
	(Contributed Funds)	New Work					
		Approp. .	0	0	0	0	160,000 ¹⁵
		Cost .	0	0	0	0	160,000 ¹⁵

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TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
20.	Barnegat Inlet to Little Egg Harbor Inlet, NJ	New Work					
		Approp	5,957,000	2,530,000	4,920,000	11,700,000	25,621,000
		Cost	206,299	8,325,946	63,430	68,498	9,057,354
	(Contributed Funds)	New Work					
		Approp.	3,235,000	1,352,373	2,649,000	6,285,000	13,992,373
		Cost	468,524	3,296,355	873,250	401,318	5,039,447
21.	Brigantine Inlet to Great Egg Harbor Inlet, NJ (Absecon Island)	New Work					
		Approp.	0	0	877,000	1,914,000	21,046,000
		Cost	0	508	217,692	133,509	18,605,496
	(Regular Funds)	New Work					
	(Contributed Funds)	Approp.	0	22	503	0	10,684,444
		Cost	63,028	231,365	0	0	9,297,855
22.	Brigantine Inlet to Great Egg Harbor Inlet, NJ (Brigantine Island)	New Work					
		Approp.	538,000	0	75,000	77,000	3,187,000
		Cost	2,044,236	224,586	119,223	108,184	3,061,654
	(Regular Funds)	New Work					
	(Contributed Funds)	Approp.	0	0	238,000	41,000	1,831,940
		Cost	2,144,236	51,709	2,108	0	1,199,297
23.	Cape May Inlet to Lower Twp., NJ	New Work					
		Approp.	2,481,000	1,704,000	522,000	2,500,000	30,444,000
		Cost	94,182	3,480,919	235,755	3,396,179	30,443,730
	(Regular Funds)	New Work					
	(Contributed Funds)	Approp.	268,000	145,183	167,000	278,000	4,607,741
		Cost	41,736	499,527	0	364,437	4,526,636
24.	Delaware Bay Coastline, Broadkill Beach, DE	New Work					
		Approp.	0	0	234,000	0	234,000
		Cost	0	0	172,228	33,782	206,010
	(Regular Funds)	New Work					
	(Contributed Funds)	Approp.	0	0	0	0	0
		Cost	0	0	0	0	0
25.	Delaware Bay Coastline, Reeds Beach to Pierces Point, DE & NJ	New Work					
		Approp.	575,000	(69,000)	0	0	1,019,400
		Cost	61,171	38,178	0	2,029	597,968
	(Regular Funds)	New Work					
	(Contributed Funds)	Approp.	0	0	0	0	0
		Cost	0	0	0	0	0

PHILADELPHIA, PA DISTRICT

TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
26.	Delaware Bay Coastline, Roosevelt Inlet/ Lewes Beach, DE (Regular Funds) (Contributed Funds)	New Work Approp. Cost New Work Approp. . Cost	19,000 4,439 0 17,605	60,000 41,002 0 0	95,000 84,836 0 5,571	335,000 28,076 0 13,934	3,955,000 3,602,542 1,094,197 1,075,116
27.	Delaware Coast, Bethany to South Bethany (Regular Funds) (Contributed Funds)	New Work Approp Cost New Work Approp. Cost	2,756,000 294,105 0 0	14,400,000 1,943,159 8,536,083 46,063	141,000 15,052,332 0 4,994,663	0 3,401 0 2,604,968	17,596,000 17,589,910 8,536,083 7,645,694
28.	Delaware Coast Cape Henlopen to Fenwick Island, DE (Fenwick Island) (Regular Funds) (Contributed Funds)	New Work Approp. Cost New Work. Approp. Cost	1,863,000 1,586,654 0 1,494,586	0 (2,000) 0 0	93,000 130,169 0 120,979	0 201,750 0 8,535	4,018,000 3,977,903 2,555,000 1,991,723
29.	Delaware Coast Cape Henlopen to Fenwick Island, DE (Rehoboth Beach to Dewey Beach) (Regular Funds) (Contributed Funds)	New Work Approp. Cost New Work Approp. Cost	0 5,371 0 454,821	0 0 0 341,255	2,657,000 81,176 1,952,000 92,997	0 2,569,462 0 3,507,273	14,216,000 14,209,580 4,578,100 4,523,962
30.	Delaware Coast Protection, DE (Regular Funds) (Contributed Funds)	New Work Approp. Cost Maint. Approp. . Cost New Work Approp. . Cost	317,000 237,266 0 0 0 0	180,000 243,974 0 0 0 0	365,000 333,677 0 0 0 0	373,000 213,464 0 0 0 0	7,305,000 ¹⁹ 7,098,381 ¹⁹ 215,350 215,350 1,268,671 ¹⁸ 1,259,002 ¹⁸
31.	Great Egg Harbor Inlet & Peck Beach, NJ (Regular Funds) (Contributed Funds)	New Work Approp. Cost New Work Approp. Cost	424,000 190,654 300,000 652,391	0 129,831 27 95,254	2,808,000 67,613 0 119,596	2,967,000 343,511 3,100,051 15,935	50,275,000 44,802,795 31,276,687 27,953,835

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
32.	Great Egg Harbor Inlet to Townsend Inlet, NJ (Regular Funds) (Contributed Funds)	New Work	0	0	0	239,000	239,000
		Approp.	0	0	0	12,416	12,416
		Cost					
		New Work					
		Approp. .	0	0	0	0	0
		Cost	0	0	0	0	0
34.	Townsend Inlet to Cape May Inlet, NJ (Regular Funds) (Contributed Funds)	New Work					
		Approp.	11,355,000	9,410,974	4,779,000	1,340,000	57,147,358
		Cost	9,925,538	5,196,868	5,313,228	3,977,029	54,646,534
		New Work					
		Approp.	5,553,000	5,419,485	3,350,078	721,600	32,492,673
		Cost	7,919,197	715,615	3,183,290	7,573,409	30,859,236
35.	Beltzville Lake, PA (Regular Funds)	New Work					
		Approp. .	0	0	0	0	22,931,831
		Cost	0	0	0	0	22,931,831
		Maint.					
		Approp.	946,000	1,023,000	2,273,000	1,192,660	25,918,416
		Cost	769,765	1,049,748	1,264,056	1,621,405	25,148,080
		Maint. (ARRA)					
		Approp.	0	0	0	588,000	588,000
		Cost	0	0	0	51,669	51,669
36.	Blue Marsh Lake, PA (Regular Funds)	New Work					
		Approp. .	0	0	0	0	63,180,300
		Cost	0	0	0	0	63,180,299
		Maint.					
		Approp.	2,332,000	2,297,000	2,882,000	2,489,200	54,729,075
		Cost	2,308,231	2,354,317	2,506,540	2,679,433	54,429,117
		Maint. (ARRA)					
		Approp.	0	0	0	693,950	693,950
		Cost	0	0	0	15,373	15,373
39.	Francis E. Walter Dam, PA (Regular Funds)	New Work					
		Approp. .	0	0	0	0	12,449,682 ¹³
		Cost	0	0	0	0	12,437,323 ¹³
		New Work (ARRA)					
		Approp.	0	0	0	6,502,950	6,502,950
		Cost	0	0	0	148,159	148,159
		Maint.					
		Approp.	649,000	684,000	1,190,000	703,640	26,307,719
		Cost	659,509	669,845	821,748	958,422	26,129,082
		Maint. (ARRA)					
		Approp.	0	0	0	1,264,000	1,264,000
		Cost	0	0	0	93,298	93,298

PHILADELPHIA, PA DISTRICT

TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
40.	General Edgar Jadwin Dam and Reservoir, PA (Regular Funds)	New Work Approp. . Cost Maint. Approp. Cost Maint. (ARRA) Approp. Cost	0 0 221,000 202,880 0 0	0 0 168,000 179,630 0 0	0 0 344,000 274,101 0 0	0 0 207,760 219,396 849,300 33,267	4,073,105 4,073,105 6,706,535 6,635,456 849,300 33,267
44.	Prompton Lake (Regular Funds)	New Work Approp. Cost New Work (ARRA) Approp. Cost Maint. Approp. Cost Maint. (ARRA) Approp. Cost	7,680,000 2,673,159 0 0 429,000 394,885 0 0	0 4,495,951 0 0 554,390 517,190 0 0	0 555,781 0 0 733,000 515,173 0 0	0 12,229 12,766,150 660,615 459,620 538,599 364,300 23,631	13,089,483 ¹⁴ 13,088,829 ¹⁴ 12,766,150 660,615 16,102,552 5,392,663 364,300 23,631
46.	Delaware Bay Coastline, Port Mahon, DE & NJ (Regular Funds) (Contributed Funds)	New Work Approp. Cost Approp. Cost	638,000 138,924 0 0	100,000 30,372 0 0	0 27,742 0 0	0 2,803 0 0	1,236,000 608,039 0 0
47.	Delaware Bay Coastline Villas, DE & NJ (Regular Funds) (Contributed Funds)	New Work Approp Cost Main. Approp. . Cost	1,675,000 43,675 0 0	(815,000) 86,161 0 0	0 178,205 0 0	(203,000) 2,209 0 0	741,000 394,021 0 0
48.	Lower Cape May Meadows, Cape May Point, NJ (Regular Funds) (Contributed Funds)	New Work Approp. Cost New Work Approp. Cost	4,805,000 694,663 3,770,000 1,694,131	0 4,037,677 (876,602) 1,850,137	4,785,000 177,857 280,000 177,077	144,000 4,809,402 31,000 368,661	17,244,000 17,223,723 6,489,398 5,843,385

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-A COST AND FINANCIAL STATEMENT

See Section in Text	Projects	Funding	FY06	FY07	FY08	FY09	SEPT. 30, 2009
49.	Southeastern Pennsylvania, PA (Regular Funds)	New Work Approp. Cost	547,000 35,077	0 65,523	777,000 136,563	837,000 455,491	5,260,404 4,265,774
		Maint. (ARRA) Approp. Cost	0 0	0 0	0 0	1,997,750 17,355	1,997,750 17,355
	(Contributed Funds)	New Work Approp. Cost	0 2,056	0 0	131,187 0	0 0	1,206,553 1,075,366

- * Total adjusted to correct discrepancies in prior years.
- 1. Includes \$525,000 for previous projects.
- 2. Includes \$2,489,173 for new work for previous projects, \$105,000 for preauthorization studies and minus \$142,015 adjustment new work to Delaware River, Philadelphia to Sea project from this project under 1954 modification.
- 3. Includes \$552,720 for maintenance for previous projects, and \$685,000 Jobs Bill Funds.
- 4. Excludes \$12,976,054 for new work for previous projects and \$142,015 adjustment from Delaware River, Philadelphia to Trenton, NJ under 1954 modification.
- 5. Excludes \$412,400 spent for Continuing Authority project.
- 6. Includes \$10,709,755 for new work for previous projects.
- 7. Includes \$6,903,748 for maintenance for previous projects, and \$9,500 Job Bill Funds.
- 8. Includes \$50,000 Navy Department Funds & \$100,00 Contributed Funds.
- 9. Excludes \$1,824,940 Navy Department Funds.
- 10. Excludes \$286,953 Navy Department Funds expended for maintenance.
- 11. Includes \$55,809 for new work funds expended on previous projects.
- 12. Includes \$402,121 for new work for previous project, and \$206,177 emergency relief funds.
- 13. Includes \$40,000 appropriated and \$61,551 expended under Code 710 Recreation Facilities.
- 14. Includes \$63,000 appropriated and \$61,551 expended under Code 710 Recreation Facilities, excluded \$23,600.
- 15. Excludes \$213,336 spent on Continuing Authority project.
- 16. Includes \$61,172 for maintenance on previous projects.
- 17. Includes \$1,025,409 for maintenance of previous projects, and \$8,000 Jobs Bill funds.
- 18. Excludes \$85,000 cash and \$130,000 services furnished during preconstruction planning.
- 19. Includes \$704,000 AE&D.
- 20. Includes \$39,000 for new work for previous projects.
- 21. Includes \$555,809 for previous projects.
- 22. Includes \$2,054 for maintenance for previous projects.
- 23. Includes \$148,798 for new work on previous projects.
- 24. Includes \$1,950,906 for 30 and 27 foot projects.
- 25. Includes \$2,749,452 for new work for previous projects.
- 26. Excludes \$1,089 for Reconnaissance and Condition Surveys Fiscal Year 1963.
- 27. Includes \$10,000 for previous projects.
- 28. Includes \$1,285 for Reconnaissance and Condition Surveys in Fiscal Year 1957.

PHILADELPHIA DISTRICT

TABLE 3-B

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Aug. 30, 1935	<p>BARNEGAT INLET, NJ (See Section 1 of Text) An 8-foot depth through inlet to Oyster Creek Channel across inner bar, and 10-foot depth through outer bar and for jetties.</p>	<p>Rivers and Harbors Committee Doc. 19, 73rd Cong., 2nd sess.¹</p>
Aug. 26, 1937	<p>A channel of suitable hydraulic characteristics from gorge to Oyster Creek Channel, and thence to deep water in bay.</p>	<p>Rivers and Harbors Committee Doc.85, 74th Cong., 2nd sess.¹</p>
Jul. 24, 1946	<p>Maintenance dredging of channel to connect main inlet channel with Barnegat City Harbor.</p>	<p>H. Doc. 358, 79th Cong., 2nd sess.</p>
Jul. 2, 1985	<p>Construction of a parallel, 4270 foot rubble mound south jetty and dredging a channel 10 feet deep, 300 feet wide, and 11,300 feet long.</p>	<p>H. Doc. 236, 99th Cong., 2nd sess.</p>
<p>COLD SPRING INLET, NJ (See Section 2 of Text)</p>		
Mar. 2, 1907	<p>An inlet channel 25 feet deep and jetties.</p>	<p>H. Doc. 388, 59th Cong., 2nd sess.</p>
Mar. 2, 1945	<p>A 20-foot channel to deep water in harbors.</p>	<p>H. Doc. 262, 77th Cong., 1st sess.</p>
<p>DELAWARE RIVER BETWEEN PHILADELPHIA, AND TRENTON, PA & NJ (See Section 3 of Text)</p>		
Jul. 3, 1930	<p>A channel 28 feet deep, 300 feet wide between Allegheny Ave., Philadelphia, PA and Delair Bridge.</p>	<p>Rivers and Harbors Committee Doc. 3, 71st Cong., 1st sess.</p>
Aug. 30, 1935	<p>Channel 25 feet deep from Delair Bridge to Trenton, NJ, and maintenance of 12-foot channel from upper end of 25-foot project to Penn Central R.R. Bridge at Ferry St., Trenton.</p>	<p>Rivers and Harbors Committee Doc. 11, 73rd Cong., 1st sess.</p>
Aug. 30, 1935 ²	<p>Auxiliary channel, 20 feet deep east of Burlington Island.</p>	<p>Rivers and Harbors Committee Doc. 66, 74th Cong., 1st sess.¹</p>
Aug. 26, 1937	<p>A cross channel 8 feet deep, opposite Delanco, NJ.</p>	<p>Rivers and Harbors Committee Doc. 90, 74th Cong., 2nd sess.</p>
Jul. 24, 1946	<p>Anchorage at mouth of Biles Creek.</p>	<p>H. Doc. 679, 79th Cong., 2nd sess.</p>
Sept. 3, 1954	<p>A channel 40 feet deep and 400 feet wide between Allegheny Ave., Philadelphia, PA, and upstream end of Newbold Island, thence 35 feet deep to Trenton Marine Terminal and turning basin to 800 feet wide. Relocate channel at railroad bridge at Delair and suitably reconstruct bridge. Construct necessary bank protection works; and eliminate authorized anchorage near mouth of Biles Creek, PA.</p>	<p>H. Doc. 358, 83d Cong., 2nd sess.¹</p>

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-B AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
DELAWARE RIVER MAIN CHANNEL DEEPENING NJ, PA, & DE (See Section 4 of Text)		
October 1992	The 45-foot deep project was authorized for construction.	WRDA 1992 P.L. 102-580 Section 101 (6)
	Allows for certain credits to the Non-Federal sponsor and the payment of disposal fees, and the development of a disposal area management plan.	WRDA 1999 P.L. 106-53, Section 308
DELAWARE RIVER, PA, NJ, AND DE, PHILADELPHIA TO THE SEA (See Section 5 of Text)		
Jun. 25, 1910	Channel 35 feet deep from Allegheny Ave., Philadelphia, PA to Delaware Bay.	Doc. 733, 61st Cong., 2nd sess.
Jul. 3, 1930	Anchorage 35 feet deep at Port Richmond and Mantua Creek, a 30 foot anchorage at Gloucester, NJ and extend 1,000 foot channel in Philadelphia Harbor to Horseshoe Bend.	H. Doc. 304, 71st Cong., 2nd sess. ¹
Aug. 30, 1935 ²	An anchorage 35 feet deep at Marcus Hook, PA.	Rivers and Harbors Committee Doc. 5, 73 rd Cong., 1 st sess.
Jun. 20, 1938 ³	A channel 37 feet deep from Philadelphia – Camden Bridge to Navy Yard, thence 40 feet deep to deep water in Delaware Bay.	S. Doc. 159, 75th Cong., 3rd sess. ¹
Mar. 2, 1945 ⁴	A 37-foot depth channel from Allegheny Ave., Philadelphia, PA to Philadelphia-Camden Bridge.	H. Doc. 580, 76th Cong., 1st sess. ¹
Mar. 2, 1945 ⁴	A 37-foot depth in an enlargement of anchorage near Mantua Creek and Marcus Hook.	H. Doc. 340, 77th Cong., 1st sess. ¹
Mar. 2, 1945 ⁴	Maintain enlarged channel opposite Philadelphia Navy Yard.	Specified in Act. H. Doc. 358, 83rd Cong., 2nd sess. ¹
Sept 3, 1954	A channel from Allegheny Ave., to Naval Base 40 feet deep, 400 feet wide along west side of channel through Philadelphia Harbor and 500 feet wide through Horseshoe Bend.	
Jul. 3, 1958	Anchorage at Reedy Point, Deepwater Point, Marcus Hook and Mantua Creek 40 feet deep and 2,300 feet wide with mean lengths of 8,000, 5,200, 13,650 and 11,500 feet respectively.	H. Doc. 185, 85th Cong., 1st sess. 74th Cong., 1st sess. ¹

PHILADELPHIA DISTRICT

TABLE 3-B

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
<p>DELAWARE RIVER VICINITY OF CAMDEN, NJ (PHILADELPHIA TO CAMDEN) (See Section 6 of Text)</p>		
Mar. 2, 1919	A depth of 30 feet from Newton Creek to Kaighn Point, thence 18 feet to Cooper Point.	H. Doc. 1120, 63 rd Cong., 2 nd sess.
Jul. 3, 1930	Extending the 30-foot depth upstream to Berkley Street Terminal.	H. Doc. 111, 70 th Cong., 1 st sess.
Mar. 2, 1945	A depth of 37 feet in front of the Camden Marine Terminal.	H. Doc. 353, 77 th Cong.
Oct. 20, 1988	A depth of 40 feet in front of the Camden Marine Terminal.	1 st sess., WRDA 1988
<p>HARBOR OF REFUGE, DELAWARE BAY, DE (See Section 7 of Text)</p>		
June 3, 1896	Breakwater construction Construction of 10 ice piers Construction of 5 additional ice piers	H. Doc. 112, 53d Cong., 1 st sess. (subproject, approved by War Department, April 23, 1900). (Subproject, approved by War Department, June 30, 1902.)
July 3, 1930	Channel 18 feet deep to Queen Anne pier at Lewes, Del. (no work has been done on this channel).	Rivers and Harbors Committee Doc. 15, 70 th Cong., 1 st sess. ¹
Aug. 30, 1935	Channel 15 feet deep to pier of Atlantic Fisheries Co. about 0.7 mile east of Queen Anne pier.	Rivers and Harbors Committee Doc. 56 74 th Cong., 1 st sess. ¹
<p>INDIAN RIVER INLET AND BAY (See Section 8 of Text)</p>		
Aug. 26, 1937	A 15-foot inlet channel, steel and stone jetties, 6 foot channel from end of inlet channel to deep water in the bay and authority to modify interior inlet channel.	Rivers and Harbors Committee Doc. 41, 75 th Cong., 1 st sess.
Mar. 2, 1945	A 9-foot channel from inlet to Old Landing, including basin and 4-foot channel to highway bridge at Millsboro.	H. Doc 330, 76 th Cong., 1 st sess. ¹
<p>INTRACOASTAL WATERWAY FROM DELAWARE RIVER TO CHESAPEAKE BAY, DE & MD (See Section 9 of Text)</p>		
Aug. 30, 1935	A sea level channel 27 feet deep, 250 feet wide from Delaware River to Elk River and 400 feet wide down Elk River and Chesapeake Bay to deep water at or near Pooles Island; alter existing bridges over canal; enlarge	H. Doc. 201, 72nd Cong., 1st sess. and Rivers and Harbors

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-B AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
	Delaware City Branch Channel to 8 feet deep and 50 feet wide, with a basin same depth and revetment of banks east of Fifth Street; enlarge anchorage and mooring basin in Back Creek to 400 feet wide, 1,000 feet long and 12 feet deep; extend jetties at Reedy Point; and construct bulkheads.	Committee Docs. 18 and 24, 736 Cong., 2nd sess. ¹
Aug. 7, 1939	Construct a 4-lane high-level fixed highway bridge at or near St. Georges.	Public Law 310, 76th Cong., 1st sess.
Sept 3, 1954	A channel 35 feet deep and 450 feet wide from Delaware River through Elk River and Chesapeake Bay.	S. Doc. 123, 83rd Cong., 2nd sess. ¹
Aug. 30, 1935	For an 8-foot depth and width increased to 150 feet in Delaware Bay.	H. Doc. 275, 73rd Cong., 2nd sess. ¹
INTRACOASTAL WATERWAY, REHOBOTH BAY TO DELAWARE BAY, DE (See Section 10 of Text)		
Jul 25, 1912	For a 6-foot depth canal to connect Rehoboth Bay and Delaware Bay.	H. doc. 823, 60 th Cong., 1 st sess. and Rivers and Harbors Committee Doc. 51, 61 st Cong., 3 rd sess.
Aug. 30, 1935	For a 6-foot depth entrance near Lewes, for jetties, for widening the canal from Broadkill River to Lewes and basin.	Rivers and Harbors Committee Doc. 56, 75 th Cong., 2 nd sess. ¹
Mar. 2, 1945	for a 10-foot depth from Delaware Bay to Lewes and in basin, and for extending jetties. ⁵	H. Doc 344, 77 th Cong., 1st sess. ¹
MANAQUAN RIVER, NJ (See Section 11 of Text)		
Jul. 3, 1930	Channel 8 feet deep and provision of works designed to secure channel.	H. Doc. 482, 70 th Cong., 2 nd sess.
Aug. 30, 1935	Widening channel on northerly side.	Senate Committee Doc., 74 th Cong., 1 st sess.
Mar. 2, 1945	Deepening channel to 12 and 14 feet, 10 and 12 foot anchorages. ⁵	H. Doc. 356, 77 th Cong., 1 st sess.
MISPILLON RIVER, DE (See Section 12 of Text)		
Mar. 2, 1912	A 6-foot depth and extension of south.	H. Doc. 678, 62 nd Cong., 2 nd sess. ¹
Aug. 26, 1937	Extension of north jetty.	Rivers and Harbor Committee Doc. 83

PHILADELPHIA DISTRICT

TABLE 3-B

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Sep. 3, 1954	A channel 9 feet deep, 80 feet wide from like depth in Delaware Bay to the landward end of the jetties and thence 60 feet wide to Milford, including 3 cutoffs, with a turning basin at Milford.	S. Doc. 229, 81 st Cong., 2 nd Sess.
Jul. 13, 182	<p>MURDERKILL RIVER, DE (See Section 13 of Text)</p> <p>A channel 7 feet deep at low water from Frederica to the 7 foot curve in Delaware Bay, 80 feet wide down to the mouth, and 150 feet wide at bottom and 250 feet wide at top from the mouth to the 7 foot curve in the bay. Embankment of dredged material on each side to a height of at least 2 feet above high spring tides.</p>	H. Doc. 21, 52 nd Cong., 1 st Sess. (See page 981 in Annual Report of 1892).
Jul. 1, 1945	<p>NEW JERSEY INTRACOASTAL WATERWAY (See Section 15 of Text)</p> <p>A channel 12 feet deep at mean low water and generally 100 feet wide, extending from the Atlantic Ocean at Manasquan Inlet, NJ to Delaware Bay above Cape May, NJ. Construction of a canal of similar dimensions from Cape May Harbor to Delaware Bay via the New England Creek basin with adequate jetties at the Delaware Bay entrance.</p>	H. Doc. 133, 76 th Cong., 1 st Sess. Rivers and Harbors Committee Doc. 525 79 th Cong., 2 nd sess.
Nov. 17, 1986	To increase the depth of the 2,000 foot reach of the waterway in Cape May County to 15 feet.	WRDA of 1986
Jul 3, 1930	<p>SALEM RIVER, NJ (See Section 17 of Text)</p> <p>A channel of 10-foot depth from Delaware River Master Sand Plant</p>	H. Doc. 217, 70 th Cong., 1 st sess. ¹
Aug. 30, 1935	Extension of project to Clements Bridge.	Rivers and Harbors Comm. Doc. 15, 73 rd Cong., 1 st sess. ¹
Nov. 17, 1986	A channel of 20-foot depth.	WRDA of 1986 ¹
Aug. 8, 1917	<p>SCHUYLKILL RIVER, PA (See Section 18 of Text)</p> <p>Depths of 35 feet from mouth to Girard Point thence 30 feet, 26, and 22 feet to University Avenue Bridge, Philadelphia.</p>	H. Doc. 1270, 64 th Cong., 1 st sess.
Jul. 3, 1930	A depth of 30 feet instead of 35 feet between the mouth and the conditional restoration and maintenance of the channel below Passyunk Ave., channel dimensions between Passyunk Ave., and ¹ by the United States.	Rivers and Harbors Committee Doc. 40, 71 st Cong., 2 nd sess ¹
Jul. 24, 1946	A depth of 33 feet from the channel in Delaware River to Passyunk Ave., restoration of the project channel dimensions between Passyunk Ave. and University Ave., and full maintenance of the entire project.	H. Doc. 699, 79 th Cong., 2 nd sess ¹

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-B AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Jun. 3, 1896	WILMINGTON HARBOR, DE (See Section 19 of Text) Depths of 21, 10 and 7 feet and jetties.	H. Doc. 66, 54 th Cong., 1 st sess. Annual Report, 1897 p. 12501
Jul. 25, 1912	Purchase or construct a dredge and auxiliaries including a wharf and depot, and maintenance of project.	H. Doc. 359, 62nd Cong., 2nd sess.
Sept 22, 1922	Entrance channel and basin with 25-foot depth and construction by local interests of new south jetty.	H. Doc. 114, 67th Cong., 1st sess. and S. Committee Print, 68th Cong., 1st sess.
Jul. 3, 1930	A 30-foot depth between Delaware River and Lobdell Canal and modification or removal of a portion of north jetty.	Rivers and Harbors Committee Doc. 20, 71st Cong., 2nd sess.
Aug. 30, 1935 ⁶	Completion of new south jetty by the United States subject to provision that city of Wilmington reimburse the United States for cost, without interest, of any part of structure that may subsequently be occupied and utilized for city activities.	Rivers and Harbors Committee Doc. 32, 73rd Cong., 2nd sess.
Oct. 17, 1940	Permit temporary occupancy by city of Wilmington of any part of south jetty for city activities under revocable license, provided occupied portion of jetty is properly maintained without expense to the United States.	H. Doc. 658, 76th Cong., 3rd sess.
Jul. 14, 1960	A 35-foot depth between Delaware River ship channel and Lobdell Canal including turning basin of same depth, opposite Wilmington Marine Terminal, 200 feet wide, 2,900 feet long on north side of channel, and 2,000 feet long on north side of basin.	H. Doc. 88, 86th Cong., 2nd sess.
Dec. 11, 2000	BARNEGAT INLET TO LITTLE EGG HARBOR INLET, NJ (See Section 20 of Text) Provides for shore protection and periodic nourishment over the 50-year life of the project.	Section 101 (a) (1) of WRDA 2000
Oct. 12, 1996	BRIGANTINE INLET TO GREAT EGG HARBOR INLET, NJ (ABSECON ISLAND, NJ) (See Section 21 of Text) Consists of providing storm damage reduction and shoreline protection.	Section 101 (b) (13) of WRDA 1996

PHILADELPHIA DISTRICT

TABLE 3-B

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Aug. 17, 1999	<p>BRIGANTINE INLET TO GREAT EGG HARBOR INLET, NJ (BRIGANTINE ISLAND, NJ) (See Section 22 of Text) Provides for hurricane, storm damage reduction and shore protection.</p>	Section 101 (b) (12) of WRDA 1999
Nov. 17, 1986	<p>CAPE MAY INLET TO LOWER TOWNSHIP, NJ (See Section 23 of Text) Consists of beach fill; dune fill; new groins; maintenance of existing groins; rehabilitation of an existing seawall; and a breakwater with weir and deposition basin at Cape May Inlet. Project may be constructed separately or in combination with any other feature of the project.</p>	Rivers & Harbors Act of 1968 WRDA of 1986
Oct 1, 1986	<p>DELAWARE BAY COASTLINE, DE BROADKILL BEACH (See Section 24 of Text) Provides for hurricane and storm damage reduction.</p>	WRDA of 1999
Aug. 17, 1999	<p>DELAWARE BAY COASTLINE, REEDS BEACH TO PIERCES POINT, DE & NJ (See Section 25 of Text) Provides for shore protection and ecosystem restoration.</p>	Section 101 (b) (6) of WRDA 1999
Aug. 17, 1999	<p>DELAWARE BAY COASTLINE, ROOSEVELT INLET, LEWES BEACH, DE (See Section 26 of Text) Provides for navigation mitigation, hurricane, and storm damage reduction.</p>	Section 101 (a) (13) of WRDA 1999
Aug. 17, 1999	<p>DELAWARE COAST, BETHANY TO SOUTH BETHANY (See Section 27 of Text) Provides for hurricane and storm damage reduction and periodic nourishment over the 50-year life of the project.</p>	Title I, Section 101 (a) (15) of WRDA 1999
	<p>DELAWARE COAST FROM CAPE HENLOPEN TO FENWICK ISLAND, DE (FENWICK, ISLAND) (See Section 28 of Text) Provides for hurricane and storm damage reduction.</p>	Section 101 (b) (11) of WRDA 1996

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-B AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
	DELAWARE COAST FROM CAPE HENLOPEN TO FENWICK ISLAND, DE (REHOBOTH BEACH TO DEWEY BEACH) (See Section 29 of Text)	
Oct. 12, 1996	Provides for storm damage reduction, shoreline protection, and periodic nourishment over the 50-year life of the project.	Section 101 (b) (6) of WRDA 1996
Dec. 11, 2000	Project is modified to authorize increased project costs.	Section 307 of WRDA 2000
	DELAWARE COAST PROTECTION, DE (See Section 30 of Text)	
	Provides for Federal participation in the cost of restoration and subsequent periodic nourishment, not to exceed 10 years, of the shore from Rehoboth Beach to Indian River Inlet.	H. Doc. 90, 90th Cong., 2nd sess.
Nov. 17, 1986	Project is modified to authorize the construction of sand bypass facilities and stone revetment erosion control measures at Indian River Inlet, DE. ⁷	WRDA of 1986 Sec. 869
	GREAT EGG HARBOR INLET & PECK BEACH, NJ (See Section 31 of Text)	
Nov. 17, 1986	Project may be constructed separately or in combination with any other feature of the project. Consists of providing initial beachfill, with subsequent periodic nourishment, with a minimum berm width of 100 feet at an elevation of 8 feet above mean low water.	River and Harbor Act of 1965. WRDA of 1986.
	GREAT EGG HARBOR INLET TO TOWNSEND INLET, NJ (See Section 32 of Text)	
Aug. 17, 1999	Provides for hurricane and storm damage reduction and periodic nourishment over the 50-year life of the project.	Title I, Section 1001 of WRDA 2007
	TOWNSEND INLET TO CAPE MAY INLET, NJ (See Section 34 of Text)	
Aug. 17, 1999	Provides for hurricane and storm damage reduction, shore protection, and ecosystem restoration.	Section 101 (a) (26) WRDA of 1999
	BELTZVILLE LAKE, PA (See Section 35 of Text)	
	Provides for multiple-purpose development for water supply flood control and recreation.	H. Doc. 522, 87th Cong., 2nd sess.
	BLUE MARSH LAKE, PA (See Section 36 of Text)	
	Provides for multiple purpose development for water supply, flood control, and recreation. Site is located on Tulpehocken Creek about 1 ½ miles up-stream from its confluence with Plum Creek and about six miles northwest of Reading, PA.	H. Doc. 522, 87th Cong., 2nd sess.

PHILADELPHIA DISTRICT

TABLE 3-B

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
	<p>FRANCIS E. WALTER DAM, PA (See Section 39 of Text) Provided for a single-purpose flood control reservoir.</p> <p>Provides for a multiple-purpose development for water supply and recreation.</p>	<p>H. Doc. 587, 79th Cong., 2nd sess.</p> <p>H. Doc 522, 87th Cong., 2nd sess.</p>
	<p>GENERAL EDGAR JADWIN DAM AND RESERVOIR, PA (See Section 40 of Text) A single-purpose flood control reservoir with a capacity of 24,500 acre-feet formed by an earth embankment.</p>	<p>H. Doc 113, 80th Cong., 1st sess.</p>
	<p>PROMPTON LAKE, PA (See Section 44 of Text) Provides for a single-purpose flood control reservoir.</p> <p>Provides for multiple-purpose development for water supply, and recreation in addition to present single-purpose flood control project.</p>	<p>H. Doc. 113, 80th Cong., 1st sess.</p> <p>H. Doc. 522, 87th Cong., 2nd sess.</p>
Aug. 17, 1999	<p>DELAWARE BAY COASTLINE, PORT MAHON, DE & NJ (See Section 46 of Text) Provides for ecosystem restoration.</p>	<p>Section 101 (a) (12) of WRDA 1999</p>
Aug. 17, 1999	<p>DELAWARE BAY COASTLINE, VILLAS & VINICTY, NJ (See Section 47 of Text) Provides for shore protection and ecosystem restoration.</p>	<p>Section 101 (a) (14) of WRDA 1999</p>
Aug. 17, 1999	<p>LOWER CAPE MAY MEADOWS – CAPE MAY POINT, NJ (See Section 48 of Text) Provides for navigation mitigation, ecosystem restoration, shore protection, and hurricane and storm damage reduction.</p>	<p>Section 101 (a) (25) WRDA of 1999</p>
	<p>SOUTHEASTERN PENNSYLVANIA, PA (See Section 49 of Text) Pilot program providing for environmental assistance (design and construction) to Non-Federal interests for publicly owned facilities in the five (5) county areas surrounding the City of Philadelphia.</p> <p>“Brownfield’s” initiative to investigate to spur the revitalization of these properties and return them to productive use.</p>	<p>Section 566, WRDA of 1996</p> <p>Section 104 (d) (1) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980</p>

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-B AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
<ol style="list-style-type: none"> 1. Contains latest published maps. 2. Also Public Works Administration September 6, 1933, and Emergency Relief Administration, May 28, 1935. 3. Channel 37 feet deep and 600 feet wide from Naval Base to Philadelphia-Camden Bridge, deferred for restudy. 	<ol style="list-style-type: none"> 4. Channel 37 feet deep and 600 feet wide from Philadelphia-Camden Bridge to Allegheny Ave. deferred for restudy. 5. The 10 and 12 foot anchorages are considered inactive. 6. Also May 28, 1935, under Emergency Relief Administration. 7. De-authorized the remaining portion of the project.. 	

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR 2009

TABLE 3-C OTHER AUTHORIZED NAVIGATION PROJECTS

Active Projects	Status	For Last Full Report See Annual Report For	Construction	Cost to Sept. 30, 2009 Operation and Maintenance
Absecon Creek, NJ	COMPLETED	1989	11,935	84,186*
Absecon Inlet, NJ	ACTIVE	2008	534,209 ¹⁸	6,242,017 ¹⁹
Alloway Creek, NJ ¹	COMPLETED	1989	21,398	55,117
Aquatic Plant Control	INACTIVE	1975	87,594	—
Big Timber Creek, NJ	COMPLETED	1989	58,665 ²	71,925*
Broadkill River, DE	COMPLETED	1976	68,228	243,641
Cedar Creek, NJ	ACTIVE	1999	256,100	560,813
Chesapeake and Delaware Canal, St. Georges Bridge Replacement, DE	COMPLETED	2000	—	122,299,786
Cohansey River, NJ	COMPLETED	1995	146,756 ¹⁶	3,749,983
Cooper River, NJ ¹	COMPLETED	1989	33,102	396,528*
Delaware Bay to Millville Millville fixed bridge to upper end of project	COMPLETED SEE TABLE 3-F	—	143,984 ¹⁷ —	161,913 —
Delaware River, Pennsville, NJ	COMPLETED	—	256,624	—
Dennis Creek, NJ ¹	INACTIVE	1897	4,701	—
Double Creek, NJ ¹	COMPLETED	1912	7,800	— ⁴
Elk River, Cecil County, MD	ACTIVE	2004	—	161,000
Goshen Creek, NJ ¹	INACTIVE	1905	15,359	870
Ice Harbor at Marcus Hook, PA ^{1,5}	INACTIVE	1928	208,964	14,336
Ice Harbor at New Castle, DE ^{1,5}	INACTIVE	1898	224,704	—
Inland Waterway from Chincoteague Bay to Delaware Bay	COMPLETED	1981	168,412 ¹¹	98,360 ¹²
Leipsic River, DE ¹	INACTIVE	1931	36,956	32,345
Little Egg Harbor, NJ ^{1,3}	INACTIVE	— ⁶	15,048	—
Little River, DE	COMPLETED	1980	12,016	288,310
Mantua Creek, NJ	COMPLETED	1966	169,687 ⁷	339,340*
Maurice River, NJ	ACTIVE	1997	110,000	1,577,194
Neshaminy State Park** Harbor, PA	COMPLETED	1968	128,203 ¹⁴	54,601
Oldmans Creek, NJ	COMPLETED	1941	31,188	32,125
Pepper Creek, DE**	COMPLETED	1989	138,094 ¹⁵	38,988*
Raccoon Creek, NJ	COMPLETED	1994	83,665 ¹³	368,001
Schuylkill River above Fairmount Dam, PA ¹	COMPLETED	1955	4,291,810	— ⁴

Philadelphia District

TABLE 3-C OTHER AUTHORIZED NAVIGATION PROJECTS

Active Projects	Status	For Last Full Report See Annual Report For	Construction	Cost to Sept. 30, 2009 Operation and Maintenance
Smyrna River, DE		1949	—	—
Delaware River to Wharf at Smyrna Landing ⁹	COMPLETED	—	198,844	197,327
Wharf at Smyrna Landing to fixed bridge.	SEE TABLE 3-F	—	—	—
Toms River, NJ	ACTIVE	1996	10,050	262,485
Tuckerton Creek, NJ	ACTIVE	1999	60,242	1,307,669
Waterway from Indian River Inlet to Rehoboth Bay, DE	ACTIVE	1997	—	340,104
Woodbury Creek, NJ ¹	COMPLETED	1940	27,093 ¹⁰	56,474
Deferred Projects	Status	For Last Full Report See Annual Report For	Construction	Cost to Sept. 30, 2009 Operation and Maintenance
St. Jones River, DE		1961	—	—
Delaware Bay to Lebanon ^{1,8}		—	207,102	66,093
Jetties and new entrance at mouth	DEFERRED	—	—	—

1. Completed.
2. Excludes \$50,000 contributed funds expended for new work.
3. Abandonment recommended in House Doc. 467, 69th Congress, 1st Sess.
4. Maintenance assumed by local interests.
5. Harbor not now required by commerce.
6. Last appropriation for project was in 1852. No information is at hand relative to work done.
7. Includes \$3,000 for new work for previous projects.
8. Includes \$54,590 new work and \$28,935 maintenance funds expended.
9. Includes \$55,085 new work and \$22,723 maintenance funds expended on previous projects.

10. Includes \$2,950 new work funds expended on previous projects.
11. Entire amounts expended on previous projects repealed in 1905.
12. Excludes \$2,000 contributed funds and includes \$25,330 for maintenance for previous project.
13. Excludes \$757 new work funds expended on previous projects.
14. Excludes \$327,957 contributed funds allotted expended for new work.
15. Excludes \$38,988 Non-Federal funds.
16. Includes \$36,000 for new work for previous projects.
17. Includes \$43,000 new work funds expended on previous projects.
18. Includes \$2,489,173 for maintenance for previous projects.
19. Includes \$116,497 for new work on previous projects.
- * Operation and maintenance figure includes cost incurred for preparation of environmental impact statements.
- ** Projects authorized by the Chief of Engineers.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR 2009

**TABLE 3-D
OTHER AUTHORIZED
SHORE PROTECTION PROJECTS**

Project	Status	For Last Full Report See Annual Report For	Construction	Cost to Sept. 30, 2009 Operation and Maintenance
Townsend Inlet and Seven Mile Beach, NJ	INACTIVE*	—	—	—

* NO CURRENT YEAR FUNDS.

**TABLE 3-E
OTHER AUTHORIZED
FLOOD CONTROL PROJECTS**

Project	Status	For Last Full Report See Annual Report For	Construction	Cost to Sept. 30, 2009 Operation and Maintenance
Allentown, Lehigh River, PA	COMPLETED	1961	1,615,581	— ¹
Bethlehem, Lehigh River, PA	COMPLETED	1966	4,520,995	— ¹
Glen Ford, PA	COMPLETED	1999	998,860	—
Hay Creek, Birdsboro, PA	INACTIVE	1984	335,299	—
Mt. Holly, NJ	COMPLETED	1946	283,655	— ¹
Molly Ann's Brook, NJ	COMPLETED	2008	24,083,959	—
Pottstown, PA	ACTIVE	1984	487,366	—
Schuylkill River Park Philadelphia, PA	COMPLETED	2006	2,594,026	—
South Central, Pennsylvania Environmental Improvement, PA	ACTIVE	2007	7,514,421	—
Tamaqua, PA	ACTIVE	1990	628,467 ²	—

1. Maintenance assumed by local interest as required by authorizing project.

2. Transferred from Baltimore District in FY 1989.

PHILADELPHIA, PA DISTRICT

TABLE 3-F DEAUTHORIZED PROJECTS

Navigation Projects	For Last Full Report See Annual Report For	Date And Authority	Federal Funds Expended	Contributed Funds Expended
Appoquinimink River, DE ¹	1934	3 Oct 78 HD 95-351	\$78,243	—
Delaware County, PA	1931	PL 99-662 52 Stat. 323	\$ 7,139	—
Maurice River, NJ Millville fixed bridge to upper end of project ²	1948	Section 12 PL 93-251	—	—
Oldmans Creek, NJ ³	1941	2 Nov 79 Section 12 PL 93-251	\$63,313	—
Rancocas River, NJ ⁴	1942	2 Nov 79 Section 12 PL 93-251	\$57,590	—
Smyrna River, DE ⁵ Wharf at Smyrna Landing to fixed bridge.	1949	2 Nov 79 HD 95-157	\$396,169	—
Shore Protection Projects	For Last Full Report See Annual Report For	Date And Authority	Federal Funds Expended	Contributed Funds Expended
Atlantic City, NJ	1972	HD 538 918	\$2,083,289	—
Barnegat Light, NJ	1964	HD 208 918	\$ 70,908	—
Cape May City, NJ	1961	3 Sep 54 HD 206 918	\$ 22,957 ⁷	—
Corson Inlet and Ludlam Beach, NJ	1978	—	\$ 314,400	—
Hereford Inlet	—	—	—	—
Long Beach Island, NJ	1964	14 Jul 60 HD 208 918	\$ 40,665	—
Ocean City, NJ	1969	HD 184 918	\$ 395,831 ⁹	—

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 3-F DEAUTHORIZED PROJECTS

Shore Protection Projects (Continued)	For Last Full Report See Annual Report For	Date And Authority	Federal Funds Expended	Contributed Funds Expended
Rehoboth Beach to Indian River Inlet, DE	1965	HD 216 918	\$326,116	—
Flood Control Projects	For Last Full Report See Annual Report For	Date And Authority	Federal Funds Expended	Contributed Funds Expended
Aquashicola Reservoir, PA	1963	17 Nov 86 PL 99-662 46 Stat., 918	—	—
Chester River, Delaware County, PA	1931	17 Nov 86 PL 99-662 52 Stat., 323	—	—
Delaware River, Mouth of Neversink	1917	5 Aug 77 HD 94-192	—	—
Lehigh River at Bethlehem, PA ⁶	1966	2 Nov 79 Section 12 PL 93-251	\$ 4,520,995	—
Maiden Creek Reservoir, PA	1963	17 Nov 86 PL 99-662 46 Stat., 918	—	—
Tocks Island, PA, NJ, and NY ⁸	1979	23 Oct 62 PL 87-87	\$65,106,260 ¹⁰	—
Tocks Island (Relocation of U.S. Route 209 only) PA ⁸	1979	23 Oct 62 PL 87-874	\$ 195,223	—
Trexler Lake, PA	1981	17 Nov 86 PL 99-662 76 Stat., 1180	—	—

1. Includes \$36,973 new work, and \$41,270 for maintenance.
2. There is no need now for this portion of the project.
3. Includes \$31,188 new work, and \$32,125 for maintenance.
4. Includes \$44,500 new work, and \$13,090 for maintenance.
5. Includes \$143,759 new work, \$55,085 previous project, and \$174,602 for maintenance, and \$22,723 maintenance, previous project.
6. Maintenance assumed by local interest.

7. Excludes \$58,585 Accelerated Public Works funds expended for extension to two groins.
8. National Parks and Recreation Act of 1978 terminated Corps authority to proceed with the project. Legislation would be required to proceed with the project.
9. Excludes cost of \$1,146,325 to local interests and \$272,766 Federal participation expended under Public Works Acceleration Program for extension of five existing groins completed 11 May 1964.
10. Includes \$3,489,088 for AE&D.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

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NAVIGATION

1. BALTIMORE HARBOR AND CHANNELS, MD AND VA

Location. Baltimore Harbor is at the head of the navigable portion of Patapsco River about 12 miles from Chesapeake Bay. The Patapsco River rises near the town of Westminster in Carroll County, MD, and flows generally southeast for about 65 miles to enter Chesapeake Bay. (See National Ocean Survey Chart 12278.)

Existing project.

a. A uniform main channel depth of 50 feet between Cape Charles, VA, and Fort McHenry at Baltimore, MD, with dimensions as follows: (1) Cape Henry Channel: 50 feet deep and 1,000 feet wide from the 50-foot depth curve in the Atlantic Ocean to that depth in Chesapeake Bay, a distance of 3.0 miles; (2) York Spit Channel: 50 feet deep and 1,000 (constructed to 800 feet wide) feet wide connecting the 50-foot depth curves in Chesapeake Bay near York Spit, a distance of 18.4 miles; (3) Rappahannock Shoal Channel: 50 feet deep and 1,000 (constructed to 800 feet wide) feet wide connecting the 50-foot depth curves in the Chesapeake Bay opposite the Rappahannock River, a distance of 10.3 miles; and (4) Baltimore Harbor Approach Channels: 50 feet deep and generally 800 (constructed to 700 feet wide) feet wide, widened at the approach and bends, from the 50-foot depth curve in Chesapeake Bay opposite the mouth of the Magothy River to Fort McHenry on the Patapsco River, a distance of 20.7 miles.

b. Branch channels with dimensions as follows: (1) Connecting Channel to Chesapeake and Delaware Canal Approach Channel: 35 feet deep, 600 feet wide, and 15.6 miles long from the Cutoff Angle in the main channel to the 35-foot depth curves in the natural channel on the east side of Chesapeake Bay which is part of the inland waterway from Delaware River to Chesapeake Bay. The channel includes the Brewerton Extension and Swan Point and Tolchester Channels; (2) Curtis Bay: 50 feet deep, 600 (constructed to 400 feet wide) feet wide, and 2.3 miles long from the main channel to and including a turning basin at the head of Curtis Bay; (3) Curtis Creek: (a) a channel, 35 feet deep and generally 200 feet wide, from the 50-foot channel in Curtis Bay to 750 feet downstream of the Pennington Avenue Bridge; (b) a channel, 22 feet deep and generally 200 feet wide, from the 35-foot channel to and along the marginal wharf of the Curtis Bay Ordnance Depot; (c) an irregular shaped 3-acre basin, with a depth of 18 feet, adjacent to the head of the 22-foot channel; (d) a basin, 15 feet deep and 450 feet wide, from the end of the 22-foot channel to the end of the marginal wharf; and (e) a channel, 22 feet deep and 200 feet wide, from the 22-foot channel south of the Baltimore and Ohio Railroad Bridge to the vicinity of

Arundel Cove, a distance of 2,800 feet, thence 100 feet wide in Arundel Cove for a distance of 2,100 feet, with an anchorage basin, 700 feet square, adjacent to the channel and southwest of the wharf of the Coast Guard Depot at Curtis Bay; (4) Middle Branch; Ferry Bar East Section: a channel, 42 feet deep and 600 feet wide, from the main channel at Fort McHenry to Ferry Bar, a distance of 1.5 miles; and (5) Northwest Branch: Federal maintenance of 39-foot or 35-foot deep channels after either depth has been provided by local interests: (a) East Channel: a channel, 49 feet deep, 600 feet wide, and 1.0 mile long with a turning basin at the head of the channel from that depth existing at the time of construction; and (b) West Channel: a channel, 40 feet deep, 600 feet wide, and 1.3 miles long with a turning basin at the head of the channel from that depth existing at the time of construction.

c. The following anchorages: (1) Riverview Anchorage No. 2: 30 feet deep, 2400 feet long, and 1,200 feet wide; (2) Riverview Anchorage No. 1: 35 feet deep, 4,500 feet long, and 1,500 feet wide; and (3) Fort McHenry Anchorage: 35 feet deep, 3,500 feet long, and 400 feet wide.

The mean range of tide is 2.8 feet at the Cape Henry Channel, 2.3 feet at the York Spit Channel, 1.4 feet at the Rappahannock Shoal Channel, 0.8 foot at the Craighill Entrance, 0.9 foot in the Cutoff Section, 1.1 feet at Fort McHenry, and 1.2 feet at Pooles Island in the upper Chesapeake Bay. Depths refer to mean low water.

Estimated cost for work is \$361,581,000 which includes: \$8,330,000 for completed work through the River and Harbor Act of 1945; \$38,411,000 for work completed under the River and Harbor Act of 1958 of which \$33,991,000 is Corps of Engineers, \$60,000 is U.S. Coast Guard and \$4,360,000 is non-Federal; and \$314,840,000 (October 1989 prices) for work authorized by the River and Harbor Act of 1970, of which \$460,000 is U.S. Coast Guard and \$314,380,000 is Corps of Engineers and non-Federal.

Local cooperation. Requirements are described in full on page 4-3 of Fiscal Year 1982 Annual Report.

Terminal facilities. The Port of Baltimore has 45 miles of waterfront with more than 100 piers, wharves and docks spread among 23 private and 7 public marine terminals. These terminals handle a full spectrum of bulk, break-bulk and containerized cargo. The Port has more than 1,000 acres of open storage. There are 39 public general merchandise warehouses, with 8.5 million square feet of storage space and 16.8 million cubic feet of cold storage space. There are 3 ship repair facilities, and the port is served by 2 trunk line railroads. Latest description of terminal facilities is in "Port Series No. 10 (revised 1991)" on Port of Baltimore, MD, (issued by Board of Engineers for Rivers and Harbors).

Operations and results during fiscal year.

New Work, Baltimore District: None.

New Work, Norfolk District: None.

Maintenance, Baltimore District.

Condition surveys of the project channels were performed. A contract in the amount of \$9,360,110 was awarded to Great Lakes Dredge & Dock Company on October 21, 2008 to dredge 660,738 CY of material from the Cutoff Angle and Craighill Entrance with placement in the Sarbanes Environmental Restoration Project at Poplar Island. Dredging began on Feb 6, 2009 and was finished on May 19, 2009. A total of 3,299,974 cubic yards of material was dredged including options to dredge Brewerton Extension, Brewerton Channel, Craighill Upper Range, Dundalk East Channel, and Tolchester Channel, and placed in Sarbanes Environmental Restoration Project at Poplar Island and the Hart-Miller Island placement facility at a cost of \$28,385,433 (\$22,801,129 Operations & Maintenance – Baltimore Harbor, \$5,584,304 Construction General – Poplar Island).

A contract to dredge an estimated 1,846,500 CY from Curtis Bay, Ferry Bar Channel, Northwest Branch East Channel, Ft. McHenry Channel, Tolchester Channel and Brewerton Extension with options was awarded to Weeks Marine, Inc. on August 26, 2009 in the amount of \$13,272,064 (\$8,153,153 Operations & Maintenance – Baltimore Harbor, \$5,118,901 American Recovery and Reinvestment Act). The material will be placed in the Hart-Miller Island placement facility.

Maintenance, Norfolk District. Condition surveys of Cape Henry Channel and York Spit Channel were made.

Maintenance, American Recovery and Reinvestment Act. ARRA funds in the amount of \$5,118,901 were used to partially fund the Baltimore Harbor maintenance dredging contract described above.

**1A. TOLCHESTER CHANNEL
S-TURN, MD**

Location. The Tolchester Channel is located along the eastern side of the upper Chesapeake Bay, near Tolchester Beach, Kent County, Maryland (see National Ocean Survey Chart 12278).

Existing Project. The Tolchester Channel is a uniform channel 35 feet deep, 600 feet wide with widening at the bends, and 7 miles long that follows the naturally deeper water along the eastern side of the upper Chesapeake Bay. The mean range of tide is 1.2 feet. Depths refer to mean lower low water. Section 329 of the Water Resources Development Act of 1999 modified Section 101 of the Rivers & Harbors Act of 1958 to “direct the Secretary to

straighten the Tolchester Channel S-Turn as part of the project maintenance”. The project provides for a new straight channel 35 feet deep, 600 feet wide, and 2 miles long to replace the Tolchester Channel S-Turn, which had several turns within a 3-mile long reach of channel.

Local cooperation. Section 101 of the River and Harbor Act of 1958, PL 85-500, 3 Jul 1958 requires locals interests to: (1) furnish without costs to the United States all lands, easements, right-of-way, and dredged material placement areas necessary for construction and subsequent maintenance, when and as required; (2) hold and save the United States free from damages due to construction and maintenance of the project, and (3) provide and maintain all necessary alterations in sewer, water supply, drainage, and other utilities.

Terminal facilities. Terminal facilities are described under the Baltimore Harbor & Channel, MD and VA, Federal navigation project.

Operations and results during fiscal year. Maintenance: Condition surveys of the project channel were performed.

**2. BALTIMORE HARBOR
ANCHORAGES AND CHANNELS, MD**

Location. The project area encompasses the 32-square mile area of the Port of Baltimore. The port area of Baltimore includes the navigable part of the Patapsco River below Hanover Street, the Northwest and Middle Branches, and Curtis Bay and its tributary, Curtis Creek.

Existing project. Prior to the project, existing anchorages and branch channels were not of sufficient depth, length and width to accommodate vessels now in operation. The implemented plan will reduce delays and increase efficiency and safety through the following improvements: (1) widen and deepen Federal Anchorages 3 and 4; (2) widen and provide flared corners for state-owned East Dundalk, Seagirt, Connecting, and West Dundalk branch channels; (3) dredge a new branch channel at South Locust Point; and (4) dredge a turning basin at the head of the Fort McHenry Channel. An estimated 4.3 million cubic yards of material were dredged for these improvements. The final project cost was \$30.5 million including \$22.3 million Federal and \$8.2 million non-Federal. The state of Maryland also reimbursed an additional \$1.55 million to the Federal government as a post-construction payback.

Local cooperation. The PCA with the State of Maryland was executed December 19, 2001. The sponsor was required to provide lands, easements, rights-of-way, including disposal areas and pay 25 percent of costs allocated to general navigation facilities during construction and pay 50 percent of the costs of incremental maintenance below 45 feet

below mean low water. All dredged material from the project was considered contaminated by law, and was placed in a containment site provided by the non-Federal sponsor (Hart-Miller Island). The State received credit for proportional costs to modify the site to make it usable for placement of project material.

Terminal facilities. See Section 1 of this text.

Operations and results during fiscal year. New Work, Baltimore District: None. Maintenance, Baltimore District: Condition surveys on the project channels were performed. Dundalk East Channel was dredged as part of the Baltimore Harbor annual maintenance project. 91,571 cubic yards were removed and placed in the Hart-Miller Island placement facility by Great Lakes Dredge and Dock Company at a cost of \$631,840.

3. BALTIMORE HARBOR, MD, COLLECTION AND REMOVAL OF DRIFT

Location. Project applies to Baltimore Harbor, MD, and its tributaries.

Existing project. Provides for collection and removal of drift from Baltimore Harbor and its tributary waters, and authorizes the Secretary of the Army to allot such amounts as may be necessary for work from appropriations for maintenance and improvement of existing river and harbor works or other available appropriations, and that this work shall be carried as a separate and distinct project. It is wholly a work of maintenance. Purpose of work is to afford relief from variable conditions of obstruction.

Local cooperation. None required.

Terminal facilities. See Section 1 of this text.

Operations and results during fiscal year. Maintenance: Operations, by hired labor, consisted of collection and disposal of 37,800 cubic feet of driftwood and miscellaneous debris ranging from small blocks up to timbers of large dimensions.

4. GOOSE CREEK, MD.

Location. Goose Creek is a tidal stream penetrating the south shore of the Manokin River about 1.5 miles above its mouth. The creek is about 1,800 feet wide at its mouth and 4,000 feet long. The drainage area is less than one square mile and the mean range of tide is 2.1 feet. (See Coast and Geodetic Survey Chart 555.)

Existing project. A channel, 60 feet wide and 6 feet deep, from that depth in the Manokin River, to and including a basin 120 feet wide and 170 feet long, in Goose Creek. Estimated cost for work is \$78,000 of which \$75,900 is Federal and \$2,100 non-Federal.

Local cooperation. Fully complied with except local interests must furnish all lands, easements, and rights-of-way for future maintenance; hold the United States free from damages; and maintain an adequate public landing and sanitary facilities; and also, necessary retaining dikes, bulkheads and embankments. Therefore, or the costs of such retaining works.

Terminal facilities. Somerset County has built a public wharf and a boat launching ramp at Goose Creek.

Operations and results during fiscal year. Maintenance: Engineering and design activities for future maintenance dredging of the project started in FY08 and continued in FY09 to identify and evaluate placement sites. A private pier located in the federal channel is currently impacting the funding and solicitation of a maintenance dredging contract.

5. HERRING BAY & ROCKHOLD CREEK, MD

Location. Herring Bay is a wide-mouthed indentation on the west side of Chesapeake Bay about 20 miles below Annapolis, MD. It is about 3 miles long from north to south and penetrates the shore for a depth of about 1 mile. Rockhold Creek, which is about 2.5 miles long, is an estuary which extends northward from the northerly end of Herring Bay. (See U.S. Coast and Geodetic Survey Chart 1225.)

Existing project. Provides for channel 7 feet deep and 60 feet wide from 7-foot contour in Herring Bay to vicinity of county wharf on Rockhold Creek, with turning basin of same depth, 100 feet wide and 150 feet long at head of channel, and a stone breakwater approximately 900 feet long east of entrance channel. Mean range of tide about 1.5 feet and extreme tidal range about 4 feet. The Federal cost of work for completed project was \$50,591.

Local cooperation. Fully complied with except local interest are to furnish disposal areas for future maintenance as needed.

Terminal facilities. Consists of a public wharf on Rockhold Creek about 600 feet below the county bridge, open to all, together with a few private landing stages. No freight-handling devices are installed on any of the wharves which are considered adequate for existing commerce.

Operations and results during fiscal year. Maintenance dredging of the channel removed 32,711 cubic yards of dredged material at a contract cost of \$554,528.50.

6. HONGA RIVER AND TAR BAY, MD

Location. Honga River is a tidal estuary of Chesapeake Bay and penetrates Dorchester County on Eastern Shore of Maryland between Hooper Island and the mainland; Tar Bay lies between Barren Island, the mainland and Hooper Island. Fishing

Creek connects Tar Bay and Honga River. Back Creek is a branch of Honga River extending into Hooper Island; the mouth is about 2 miles south of Fishing Creek. (See Coast and Geodetic Survey Chart 1224.)

Existing project. Provides for a channel 60 feet wide and 7 feet deep at mean low water from the 7-foot contour in Chesapeake Bay, through Tar Bay and Fishing Creek to the 7-foot contour in Honga River, 25,300 feet long, and a channel in Back Creek 7 feet deep and 60 feet wide from the 7-foot depth curve in Honga River to a point near the head of Back Creek with a turning basin of the same depth 150 feet long and 200 feet wide at the head of channel, about 5,500 feet long. Mean range of tide is about 1.4 feet. Federal cost of work for the completed project was \$66,119.

Local cooperation. Local interests identified placement areas for future maintenance dredging.

Terminal Facilities. Numerous small private wharves are scattered along Fishing Creek and Back Creek. A public wharf is on Fishing Creek. A public wharf, four oyster houses, and a marine railway are on Back Creek. Facilities are adequate for existing and reasonable prospective commerce.

Operations and results during fiscal year, Maintenance dredging of the Tar Bay channel removed 51,689 cubic yards of dredged material at a contract cost of \$873,115.73.

Maintenance, American Recovery and Reinvestment Act. Breakwater construction for containment of additional dredged material at a contract cost of \$547,318.

7. LITTLE WICOMICO RIVER, VA

Location. A tidal estuary 6 miles long in Northumberland County, VA, flowing southeasterly to Potomac River, which it enters on the right bank one-half mile upstream of its mouth and about 108 miles downstream from Washington, DC. (See U.S. Coast and Geodetic Survey Chart 12233.)

Existing project. A channel 8 feet deep, 150 feet wide, and 4,800 feet long, extending from deep water in the Potomac River to deep water in the Little Wicomico River; two stone jetties, extending to the 8-foot contour in Potomac River; and bulkhead walls from the inner ends thereof extending sufficiently into Little Wicomico River to stabilize the dredged inner channel. Plane of reference is mean low water. Tidal ranges in Potomac River at the entrance are: Mean 1.2 feet; irregular, 2.5 feet; and extreme, about 7 feet. Mean tidal range within the river is about 1 foot. Federal cost of work for the completed project was \$81,885, exclusive of \$5,000 contributed by local interests.

Local cooperation. Fully met except local interests are to furnish disposal areas for future maintenance dredging.

Terminal facilities. Two wharves open to the public and numerous small wharves and staging's for private use, an oyster shucking, and packing plant, and a marine railway and boat-building yard. Facilities are considered adequate for present commerce.

Operations and results during the fiscal year. Maintenance: Engineering and design activities were completed and a maintenance dredging contract was advertised and awarded for \$341,914.

8. OCEAN CITY HARBOR AND INLET AND SINEPUXENT BAY, MD

Location. Ocean City is on a barrier island between Sinepuxent Bay and Atlantic Ocean about 35 miles south of entrance to Delaware Bay. (See U.S. Coast and Geodetic Survey Chart 12211.)

Existing project. This provides for an inlet channel 200 feet wide and 10 feet deep through the inlet to the channel in the Isle of Wight Bay, protected on the south side by a stone jetty with a top elevation of 8.8 feet above mean low water and a top width of 18 feet, and on the north side by a stone jetty with a top elevation of 9 feet above mean low water and a top width of generally 20 feet, thence generally 100 feet wide and 6 feet deep to the project harbor; a channel 6 feet deep and 150 feet wide in Sinepuxent Bay from the inlet to Green Point, and thence 100 feet wide in Chincoteague Bay; and for a channel 6 feet deep and 125 feet wide from the inlet channel to a point opposite North Eighth Street in Ocean City, thence 75 feet wide into the Isle of Wight Bay. The modification authorized by the 1954 River and Harbor Act was de-authorized in December 1989. This work included 16- and 14-foot depth channels with widths from 300 to 100 feet from the Atlantic Ocean to the head of the harbor. Depths in the inlet channel and harbor refer to project datum. Depths in the bay channels refer to mean low water.

The elevation of mean low water in the bays above mean low water in the ocean at Ocean City varies from about 0.8 foot in the vicinity of the inlet to 1.7 feet at their heads. The mean range of ocean tide is 3.4 feet. The extreme range is from 3 feet below mean low water to about 3.5 feet above mean high water, a total of 9.9 feet. In the bays the mean range of tide varies from approximately 2.5 feet at the inlet to 0.3 foot at their heads. Greater fluctuations are caused by prolonged high winds.

Local cooperation. Fully met except local interests must furnish disposal areas for future maintenance as needed.

Terminal facilities. On bay side of Ocean City: two storage basins, for pleasure and small commercial craft, and numerous privately owned pile-and timber piers and bulkhead wharves. At project harbor: a

public landing about 1,000 feet long, several privately constructed bulkhead wharves open to the public for transaction of business with the owners, and a boat repair yard with a marine railway capable of handling boats up to about 150 tons. All piers and wharves are accessible by highway. Port facilities have been expanded to include all available space in the Fish Harbor.

Operations and results during fiscal year. Maintenance dredging of the Isle of Wight channel removed 21,331 cubic yards of dredged material at a contract cost of \$480,130.07. The dredged material was placed on the beach at 33rd Street.

9. PARISH CREEK, SHADY SIDE, MD

Location. A small branch of West River, an estuary of Chesapeake Bay on Maryland western shore, at Shadyside, MD, about 7 miles south of the mouth of Severn River. (See U.S. Coast and Geodetic Survey Chart No. 1225.)

Existing project. Provides for a channel 8 feet deep and 50 feet wide, widened at ends, from deep water in West River to head of south fork of Parish Creek, and an anchorage basin at junction of north fork having a depth of 6 feet and an area not exceeding 1 ½ acres. Mean tidal range is about 2 feet. Cost of work for completed project was \$19,170 exclusive of \$1,000 contributed by local interests. Average annual maintenance cost for past 5 years was \$6,000. Existing project was adopted by River and Harbor Act of August 30, 1935. (See H. Doc. 185, 72d Cong., 1st Sess., which contains latest published map).

Local cooperation. Local interests must contribute \$1,000 toward cost of improvement, furnish suitable spoil-disposal areas and provide a suitable water freight terminal at head of Parish Creek, open to all on equal terms. Total funds required to complete project were provided by Works Progress Administration. Local interests furnished disposal areas. Not fully complied with in that a public wharf has not been provided.

Terminal facilities. There are numerous timber piers, one bulkhead wharf, two marine railways, 300 feet of concrete bulkhead and 350 feet of timber bulkhead on Parish Creek. Piers and bulkheads are privately owned, but open to the public for transaction of business with owners. Facilities are considered adequate for existing commerce.

Operations and results during fiscal year. Maintenance: Engineering and design activities were completed and a maintenance dredging contract was advertised and awarded for \$902,086.

10. POTOMAC AND ANACOSTIA RIVERS, DC, COLLECTION AND REMOVAL OF DRIFT

Location. Project applies to the Potomac and Anacostia Rivers, Washington, DC, and their tributaries.

Existing project. Collection and removal of drift from the waters of the Potomac and Anacostia Rivers and their tributaries in the Washington area from the head of tidewater to Mount Vernon, VA. Total length of project, considering both sides of the waterway, is about 50 miles.

Local cooperation. None required.

Terminal facilities. See Section 13 of this text.

Operations and results during fiscal year. Maintenance: Operations by hired labor consisted of collection and disposal of 119,000 cubic feet of driftwood and miscellaneous debris ranging from small blocks up to timbers of large dimensions. Indirectly support other federal agencies in the area for recovery and emergency response to hazards within and around federal navigation channels.

Maintenance, American Recovery and Reinvestment Act. Two contracts were awarded for (1) \$22,500 for paving the parking lot; and (2) \$19,219 for the installation of security cameras to assist with monitoring the safety and security of the facilities, equipment, and personnel supporting the drift mission.

11. RHODES POINT TO TYLERTON, MD

Location: Rhodes Point and Tylerton are two settlements about 1.5 miles apart on Smith Island, between Chesapeake Bay and Tangier Sound, about 60 miles north of Virginia Capes, and about 110 miles south of Baltimore. (See U.S. Coast and Geodetic Survey Chart 1224.)

Existing project. Channel 6 feet deep, 50 feet wide from that depth in Tyler Creek to and including an anchorage basin of the same depth 150 feet wide and 400 feet long at Tylerton; channel 6 feet deep and 50 feet wide from that depth in Big Thorofare River to Tylerton; and channel 6 feet deep and 50 feet wide from Rhodes Point to Tylerton. Mean range of tide is 1.7 feet. On January 22, 1982, the Chief of Engineers under authority of Section 107 of the 1960 River and Harbor Act, as amended, authorized a channel 6 feet deep and 50 feet wide a distance of about one mile from the anchorage basin at Rhodes Point through Sheep Pen Gut to deep water in the Chesapeake Bay.

Local cooperation. Fully met except local interests must furnish placement sites for future maintenance dredging.

Terminal facilities. There are numerous pile-and-timber wharves along waterfronts at Rhodes Point and Tylerton. Facilities are privately owned, open to the public without charge when not in use by the owners, and are adequate for existing commerce. Sufficient space for construction of additional facilities is available, if required.

Operations and results during fiscal year. A contract in the total amount of \$4,759,048 was awarded to perform maintenance dredging of Rhodes Point to Tylerton and Twitch Cove and Big Thorofare under the American Recovery and Reinvestment Act of 2009 49,850 cubic yards of dredging material were removed from the Rhodes Point to Tylerton federal channel. The majority of the material removed from the federal channel is targeted for beneficial placement at Hog Neck Peninsula.

Maintenance, American Recovery and Reinvestment Act. See preceding paragraph.

12. TWITCH COVE AND BIG THOROFARE, MD

Location. A tidal waterway about 4 miles long traversing Smith Island, MD, southeasterly from Chesapeake Bay on the west to Tangier Sound on the east. (See U.S. Coast and Geodetic Survey Chart 1224.)

Existing project. A channel 7 feet deep at mean low water and 60-feet wide from Twitch Cove on Tangier Sound through Big Thorofare, thence through canal at Ewell, MD, thence through Levering Creek and Big Thorofare to vicinity of Swan Point, thence of same depth and 100 feet wide through offshore bar to deep water in Chesapeake Bay, with twin stone jetties at entrance, north jetty is about 2,080 feet long, and south jetty about 1,800 feet long; and anchorage basin 7 feet deep, 100 feet wide, and 700 feet long connecting with west side of existing project channel at Ewell; extension of existing channel in Levering Creek, 6 feet deep, 60 feet wide, and 1,000 feet long; and a channel 4 feet deep and 25 feet around point between Big Thorofare and Tyler's River. Mean range of tide is 1.7 feet, and extreme tidal range is 3 feet. Federal cost of work for completed project was \$193,175.

Local cooperation. Fully complied with, except that local interests are to furnish placement sites for future maintenance as needed.

Terminal facilities. Numerous privately owned pile-and-timber wharves and bulkheads at Ewell are open to the public for business transactions with the owners. A county wharf is also at west end of town. Five crab houses are on Levering Creek, and one oyster house on project waterway west of Town of Ewell.

Operations and results during fiscal year. A contract in the total amount of \$4,759,048 was

awarded to perform maintenance dredging of Rhodes Point to Tylerton and Twitch Cove and Big Thorofare under the American Recovery and Reinvestment Act of 2009 for the maintenance dredging of 115,112 cubic yards. Dredged material removed from between the Big Thorofare jetties will be placed at the south jetty tie-in to help abate flanking. The remainder of the material will be placed upland at Easter Point.

Maintenance, American Recovery and Reinvestment Act. See preceding paragraph.

13. WASHINGTON HARBOR, DC

Location. Within the District of Columbia at junction of the Anacostia River with the Potomac River which flows southeasterly 108 miles to the Chesapeake Bay. It is southerly 202 miles by water from Baltimore, MD, and northerly 195 miles from Norfolk, VA. (See U.S. Coast and Geodetic Survey Chart 12289.)

Existing projects. The Washington Harbor project provides for a channel in the Potomac River from Giesboro Point to Key Bridge, a second channel from Giesboro Point to the end of Washington Channel, and a third channel from the mouth of the Anacostia River to the foot of 15th Street, SE, with turning basins opposite the Naval Weapons Plant (800 feet wide 2,400 feet long) and at the head of the Anacostia Channel (400 feet square). Channel dimensions are 24 feet deep and 400 feet wide except upstream from Anacostia Channel Bridge where the width is reduced to 200 feet and from Giesboro Point to a point 3,000 feet downstream of Arlington Memorial Bridge and above Easby Point where channel dimensions are 20 feet deep and 200 feet wide. Channel lengths including turning basins are: Virginia Channel, 5,000 feet; Washington Channel, 10,000 feet; and Anacostia River, 15,000 feet; and operations and maintenance of the inlet gates and lock and the outlet gates of the Tidal Basin constructed under a previous project to flush Washington Channel. Plane of reference is low-water datum which is .35 foot below mean low tide as observed from 1932 to 1942. Tidal ranges are: mean, 2.9 feet; irregular, 4.5 feet; and extreme, 10.7 feet. Federal cost of work for the completed project was \$162,006.

Local cooperation. None required.

Terminal facilities. There are four wharves generally of bulkhead type on Virginia Channel that are privately owned and not open to the public except by special arrangement. On Washington Channel there are four piers under jurisdiction of District of Columbia, two of which are open to the public and one open to the public by special arrangement. In Anacostia River there are four privately owned piers and eight government piers and slips. None of the piers are open to the public except by special

arrangement. Terminal facilities are considered adequate for existing commerce.

Operations and results during fiscal year. Maintenance: The tidal basin gates were inspected and maintained by hired labor at a cost of \$19,927.

14. WICOMICO RIVER, MD

Location. Wicomico River has its source in northern part of Wicomico County, MD, and flows generally southwardly emptying into Monie Bay, a tributary of Tangier Sound on the east side of Chesapeake Bay about 85 miles southeast of Baltimore. Webster Cove is the site of an improved small-boat harbor on southeast bank of Wicomico River about 3 miles above the mouth. (See U.S. Coast and Geodetic Survey Charts 12261.)

Existing project. Channel 14 feet deep and 150 feet wide from Chesapeake Bay to Salisbury, about 37 miles long, including about 12 miles from the mouth of river to Chesapeake Bay; 14 feet deep in channels and turning basins in north and south prongs with channel widths of 100 feet, and a channel 6 feet deep and 60 feet wide extending from 6-foot contour in Wicomico River to and including a basin in Webster Cove of the same depth, 100 feet wide and 400 feet long; and extension of basin 200 feet long and 100 feet wide on each side. Plane of reference is mean lower low water. Mean range of tide is about 3 feet, and extreme tidal range is 4.4 feet. Cost of work for the completed project was \$421,609, exclusive of amounts expended on the previous project.

Local cooperation. Fully met, except that local interests are to furnish disposal areas for future maintenance as needed and hold the United States free from such damages as may occur to public or leased oyster beds.

Terminal facilities. Present waterfront at Salisbury consists of pile-and-timber bulkheads with earth fills. Some wharves have warehouses and factories with mechanical freight-handling and petroleum handling facilities. All terminals are privately owned. A shipyard, with two marine railways with capacities of 1,200 and 500 tons, respectively, is on right bank of river below prongs. Areas for development of new terminals on north prong are limited. Areas for considerable expansion of terminal facilities are available on Main River. There is a pile-and-timber wharf about 4 miles above the mouth of river at Mount Vernon. A wharf of similar construction is at White Haven. There is a county wharf at head of basin in Webster Cove, a pile-and-timber pier at oyster house on southwest side of basin, a T-shaped pile-and-timber pier at cafe on southwest side of basin and several small timber piers on walkways that local interests constructed around

the basin. Fueling facilities are available for construction of additional facilities when required.

Operations and results during fiscal year. Maintenance: Engineering and design activities were performed for maintenance dredging of the middle and lower portions of the project. A maintenance dredging contract was advertised and awarded for \$2,632,000.

15. RECONNAISSANCE AND CONDITION SURVEYS

(See Table 4-H at end of chapter.)

16. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Fiscal year costs were \$8,994 for Section 107 Coordination; and \$186,223 for Rhodes Point, MD; and \$120,580 for St. Jerome Creek, St. Mary's County, MD.

Non-Federal contributed costs were \$159,669 for Rock Hold Creek; \$38,345 for St. Jerome Creek, St. Mary's County, MD.

Fiscal year costs were \$10,363 for Section 111.

SHORE PROTECTION

17. ASSATEAGUE ISLAND, MD

Location. The Town of Ocean City and adjacent areas of Worcester County comprise an area of 625 square miles including Assateague Island, Ocean City Inlet, and Chincoteague, Sinepuxent, Assawoman, and Isle of Wight Bays on the Eastern Shore of Maryland. Adjacent to Ocean City is the Assateague Island National Seashore and State Park.

Existing project. The project involves the short-term and long-term restoration of Assateague Island. Completed in December 2002, the short-term restoration plan includes the dredging of approximately 1.4 million cubic meters yards from Great Gull Bank and placing it on Assateague Island in the area between 1.6 miles and 7.2 miles south of the south jetty. The beach will be widened varying distances based on the varying erosion rates. A low-storm beam wall is constructed to elevation 3.3 meters. The long-term portion of the project consists of the mobile bypassing of 190,000 cubic yards of sand around the inlet that occurs in the spring and in the fall. Both the short-term and long-term projects include monitoring components. The project area is composed of 4.7 miles of National Park Service and 0.9 miles of State of Maryland land.

Local cooperation. The sponsor for the project is the National Park Service who administers the Assateague Island National Seashore. The National Park Service will provide lands, easements and rights-of-way for the initial construction work. Short-term costs will be 100% Corps funded and Long-term

costs **will be 50% Corps and 50% National Park Service.**

Operations and results during fiscal year. New Work: Monitoring activities for both the short-term and long-term portions of the project. Annual sand by-passing started in April 2004 and is routinely scheduled for about two months in the spring and fall of each year.

18. ATLANTIC COAST OF MARYLAND

Location. The project is located on Fenwick Island at Ocean City, MD, which is about 35 miles south of the entrance to Delaware Bay. (See U.S. Coast and Geodetic Survey Charts 1220.)

Existing project. The authorized project provides for a steel sheet pile bulkhead along the ocean ward edge of the boardwalk from about 4th Street to 27th Street and a sand dune from 27th Street to about 0.3 mile across the Delaware line. The bulkhead is fronted by a 165-foot wide beach, and the dune is fronted by a 100-foot wide beach. The project also provides for periodic nourishment over the 50-year project life. The current estimated total project cost is \$500,000,000 (including a future inflation allowance through the project completion) which includes \$44,881,000 for initial construction and \$455,119,000 for periodic nourishment.

Local cooperation. The State of Maryland is the project sponsor and the Local Cooperation Agreement was executed March 30, 1990. The sponsor is required to: provide lands, easements, and rights-of-way; modify or relocate buildings, utilities, roads, bridges and other facilities; pay 35% of the first costs and 47% of periodic nourishment costs; and bear all costs of operation maintenance, replacement and major rehabilitation of storm damage reduction facilities. To date, the sponsor has fully met these requirements.

Operations and results during fiscal year. The latest renourishment project was completed in November 2006. The Corps determined that projects in some areas experiencing severe erosion were not Federally-justified. During the Nor'easter event November 11-13, 2009 there were damages sustained along the 8.3-mile length of the project with the majority of damage occurring along 6.8 miles of vegetated dune area. The Corps and the City Engineer of Ocean City performed a visual inspection of the project and a cross-section survey of the protective sand dunes that run from 27th Street to the MD-DE state line. The Corps compared the November 2009 dune survey results to the June 2009 project survey results to determine that the area extending from the landward toe of the dune to the approximate mean high water shoreline between 27th Street and the MD-

DE state line had lost 450,000 cubic yards as a result of the storm. The existing seawall that runs from 4th Street to 27th Street appeared to suffer no adverse impacts from Ida.

19. SHORE PROTECTION WORK UNDER SPECIAL AUTHORIZATION

Shore Protection pursuant to Sec. 103 of Public Law 727, as amended (pre-authorization). Fiscal year costs were \$5,019 for Section 103; \$4,981 for Conquest Preserve, Queen Anne's County; \$9,905 for Franklin Point Park, Anne Arundel County, MD, and \$2,667 for Pleasure Island, Baltimore County, MD.

FLOOD RISK MANAGEMENT

20. CHARLESTOWN, MD

Location. Charlestown is located in Cecil County, Maryland on the edge of the Northeast River at the head of the Chesapeake Bay.

Project. Investigations into a possible project to address flooding along Peddlars Run were evaluated to determine a Federal interest. A Phase 1 Fact Sheet was prepared and a locally preferred plan of buyouts and relocations was recommended.

Local Cooperation. The Town of Charlestown has expressed an interest in pursuing a project but lacks funding to pursue further study or implementation.

21. CUMBERLAND, MD, AND RIDGELEY, WV

Location. On the North Branch of the Potomac River, 21 miles upstream from its junction with the South Branch of the Potomac River and 197 miles upstream from Washington, DC. The Chesapeake and Ohio (C&O) Canal stretches 184.5 miles along the Potomac River from the District of Columbia to its terminus in Cumberland, MD, Allegany County. (See Geological Survey Quadrangles, Frostburg and Flintstone, MD, WV, and PA.)

Existing project. Channel improvements on the North Branch of Potomac River from the Western Maryland Railway bridge in South Cumberland upstream to the mouth of Wills Creek, with levees and fill along the left bank and levees along the right bank from downstream corporate limits of Ridgeley, WV, to a point about 150 feet above Johnson Street Bridge; channel improvements along Wills Creek from its mouth upstream to a point in the Narrows about 500 feet upstream from the highway bridge on U.S. Highway 40; levee and flood wall in West Cumberland, MD, on the left bank of the North Branch of the Potomac River from the mouth of Wills Creek upstream to Kelly Boulevard; levee and flood wall in Ridgeley, WV, on the right bank of the North Branch of the Potomac River from Carpenter Avenue upstream to Patapsco Street near the upstream

corporate limits of Ridgeley, WV; interior drainage facilities in Cumberland and West Cumberland, MD, and Ridgeley, WV; removal of the Chesapeake and Ohio Canal dam and construction of a new industrial dam on the North Branch of the Potomac River immediately above mouth of Wills Creek; and alteration and reconstruction of highway and railroad bridges.

Section 580 of WRDA 99 authorizes the Secretary of the Army to undertake "restoration of the historic Chesapeake and Ohio Canal substantially in accordance with the Chesapeake and Ohio Canal National Historic Park"...The plan envisioned is to rebuild and rewater up to 1.1 miles of the historic Chesapeake and Ohio Canal terminus at Cumberland. The turning basin was filled in by the Corps in the 1950's as part of the Cumberland, MD-Ridgeley, WV Flood Protection Project. WRDA 2007 increased the project authorization from \$15 million up to \$25.75 million. How to maintain the Western Maryland Scenic Railroad connection to the CSX mainline needs to be resolved before the project can proceed beyond the completed quarter-mile portion.

Local cooperation. **Canal:** Fully met for the project. The City of Cumberland is the non-Federal sponsor for the work. The local sponsor is required to provide 35% of the cost of the project, including lands, easements, rights-of-way, and relocations. In-kind services are permitted to count towards the sponsor's share to include those incurred prior to a signed project cooperation agreement. The National Park Service (NPS) is responsible for operation and maintenance (O&M).

Operations and results during fiscal year. New Work: None. The NPS has assumed O&M responsibilities of the canal systems. Maintenance: Normal operation and maintenance of the flood risk management project continued.

22. JENNINGS RANDOLPH LAKE, MD AND WV

Location. Project is located on the North Branch Potomac River on the state line between Garrett County, MD, and Mineral County, WV. The dam site is located approximately 7.9 miles upstream from the confluence with Savage River at Bloomington, MD. It is also about 5 air miles southwest of the tritowns of Luke and Westernport, MD and Piedmont, WV. (See Geological Survey quadrangle sheets, Kitzmiller and Westernport, MD.)

Existing project. The improvement consists of a rolled earth and rock fill dam with an impervious core and an 800-foot long dike on the left bank. Top of dam is 296 feet above streambed with a total length of 2,130 feet. When filled to spillway crest, the reservoir will extend about 6.6 miles upstream and inundate 965 acres. Flood Damage Reduction

storage of 36,200 acre-feet is provided. Storage available for low flow augmentation water supply and water quality improvement is 92,000 acre-feet. The reservoir controls a drainage area of 263 square miles. Recreation facilities are provided for picnicking, camping and boating. Final project cost is \$176,325,300.

Local cooperation. See page 4-15 of the 1977 Annual Report for requirements. A water supply contract between the Federal Government and the Washington Suburban Sanitary Commission in concert with the Fairfax County Water Authority, VA and the District of Columbia was executed for repayment of all water supply costs. The first of 50 annual payments began in July 1981. Federally approved water quality standards put into effect by Maryland, Virginia, West Virginia, and the District of Columbia are considered satisfactory assurances of intent to control pollution. Satisfactory assurances have been received from Maryland, West Virginia, and Virginia that they will protect downstream channels from encroachment that would adversely affect operation of the project. Local interests operate a white water access area below the dam. The State of Maryland has constructed a recreation area on the Maryland side of the lake.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continues.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to hire seasonal staff, pave project roads, replace windows and doors throughout the project and replace a water pump.

23. LACKAWANNA RIVER BASIN, PA

Flood Control Act of 1962 authorized construction of Aylesworth Creek Lake, Fall Brook Lake, and local protection works on Lackawanna River at Scranton, PA, substantially as recommended by the Chief of Engineers (S. Doc. 141, 87th Cong., 2nd Sess.). The Basin includes an area of 346 square miles in northeastern Pennsylvania.

23A. AYLESWORTH CREEK LAKE, PA

Location. Project is located in Lackawanna County on Aylesworth Creek about one mile above its confluence with the Lackawanna River, near the community of East Jermyn, PA.

Existing project. Provides for an earth fill dam with a maximum height of 90 feet above streambed and a top length of 1,200 feet. The spillway located adjacent to the left abutment is an open cut channel 80 feet wide with a concrete sill. The outlet works consist of a 3-foot diameter uncontrolled conduit.

Project controls a drainage area of 6.2 square miles and provides Flood Damage Reduction storage of 1,700 acre-feet equivalent to 5.1 inches of runoff from the drainage areas. The lake will extend about 4,600 feet and inundate 87 acres when filled to spillway crest. Recreation facilities constructed by local interests include a bathing beach, bathhouse, and picnic area. Federal cost of work was \$2,268,200 of which \$2,153,559 was for construction and \$114,641 for lands and damages.

Local cooperation. None required. Lackawanna County operates and maintains day use facilities including a small beach. Lackawanna County constructed a new building that includes park offices and garage. Public restrooms and a large picnic shelter,

Operations and results during fiscal year.

Maintenance: Normal operation and maintenance of the project continued.

24. LACKAWANNA RIVER, OLYPHANT, PA

Location. The project is located along the Lackawanna River in Lackawanna County, Pennsylvania. (See Geological Survey quadrangle sheets, Olyphant, PA)

Existing project. The project is authorized to provide 100-year level of protection and includes a combination of approximately 5,200 feet of levee and floodwall, a closure structure, interior drainage structures, and an upgraded flood forecast and warning system. Project completed in October 2006.

Local cooperation. The Borough of Olyphant is the sponsor for the project.

Operations and results during fiscal year.

The sponsor is responsible for the operation and maintenance of the completed project.

25. RAYSTOWN LAKE, RAYSTOWN BRANCH, JUNIATA RIVER, PA

Location. Dam site is on Raystown Branch, about 5.5 miles upstream from its confluence with Juniata River. Project is about 10 miles south of Huntingdon, PA. (See Geological Survey Quadrangle sheets, Huntingdon, Mt. Union, Broad Top and Everett, PA.)

Existing project. The rock and earth fill dam rises 225 feet above streambed with a gated concrete spillway and auxiliary spillway in the right abutment. The reservoir has a storage capacity of 762,000 acre-feet, of which 248,000 acre-feet are for Flood Damage Reduction, 476,000 acre-feet for recreation and water quality control, and the balance for sediment reserve. At full Flood Damage Reduction pool elevation, the reservoir would inundate 10,800

acres and extend 34 miles upstream. Recreation facilities are provided for boating, fishing, camping, swimming, hunting, hiking, and picnicking. Federal cost for work was \$77,408,700 of which \$46,120,931 was for construction and \$31,287,769 was for lands and damages including relocations. Construction of a private hydroelectric plant at Raystown Lake was completed May 1988.

Local cooperation. None required.

Operations and results during fiscal year.

Maintenance: Normal operation and maintenance of the project continued.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized for several environmental stewardship projects, reservoir shoreline protection, upgrade electric and water in campground, E&D to upgrade water treatment plant and repair tainter gates and hire seasonal staff.

26. LACKAWANNA RIVER, SCRANTON, PA

Location. The project is located along the Lackawanna River in the northeastern portion of the Commonwealth of Pennsylvania in Lackawanna County. (See Geological Survey Quadrangle sheets, Scranton, PA.)

Existing project. The project provides 100-year level of flood protection for the communities of Albright, Plot, and Green Ridge. The Albright portion of the project was completed in September 2003, and provides for 6,800 feet of earth levee, 700 feet of concrete floodwall, 3 closure structures, interior drainage facilities, 2,700 feet of gabion slope protection, an improved flood warning system, removal of a railroad bridge, access ramps, and associated cultural mitigation. Construction is currently underway in the lower portion of Green Ridge. This final portion of the project is scheduled to be completed in January 2011. The current estimated total project cost is \$99,900,000.

Local cooperation. The City of Scranton is the sponsor for the project. The local sponsor is required to: provide lands, easements and rights-of-way; modify or relocate buildings, utilities, roads, bridges, and other facilities; pay a minimum of 5% of the cost allocated to Flood Damage Reduction; and bear all costs of operation, maintenance, and replacement of Flood Damage Reduction facilities after construction.

Operations and results during fiscal year.

New Work: The Corps completed construction on the Albright portion of the project in September 2003.

New Work American Recovery and Reinvestment Act. On June 29, 2009, the Corps awarded the final construction contract to Tri-State Construction Company, Inc/KC Construction

Company, Inc., in the amount \$9,978,049 in lower Green Ridge. The overall project is scheduled to be completed in January 2011.

27. SOUTHERN NEW YORK FLOOD CONTROL PROJECTS

Authorized plan provides for construction of reservoirs and related Flood Damage Reduction works for protections are located in the upper watershed of the Susquehanna River to and including the Chemung River.

27A. ADDISON, NY

Location. At confluence of Tuscarora Creek and Canisteo River in the City of Addison, NY. (See Geological Survey map for Addison, NY.)

Existing project. Provides for construction of about 3,100 feet of earth levee and 700 feet of concrete flood wall on the right bank of the Canisteo River, extending from high ground on Steuben Street near the Baltimore & Ohio Railroad to the mouth of Tuscarora Creek; removal of existing dam, mill, and raceway from the channel; construction of about 2,200 feet of earth levee on the left bank of Tuscarora Creek, extending from Tuscarora Street to Canisteo River; construction of 4,600 feet of earth levee on the right bank of Tuscarora Creek, extending from high ground at the southwest edge of the village to high ground at the southeast edge of the village; and appurtenant drainage structures.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27B. ALMOND LAKE, NY

Location. Dam is located two miles upstream from Hornell, NY, on Canacadea Creek, a tributary of the Canisteo River. (See Geological Survey map for Hornell, NY.)

Existing project. The dam is an earth fill structure, 1,260 feet long rising 90 feet above the streambed, with a concrete spillway and a gated outlet conduit in the left abutment. The outlet works consist of three 5-foot by 10-foot service gates and three emergency gates of the same size. The reservoir has a storage capacity of 14,640 acre-feet at spillway crest. The project controls a drainage area of 56 square miles, 36 percent of the watershed of the Canisteo River upstream from Hornell, NY. Recreation facilities include a boat-launching ramp and dock, bathing beach, picnic area, and tent and trailer camping area.

Local cooperation. None required. Local interests have developed recreational facilities at the lake in conjunction with the Federal Government.

These facilities are operated and maintained by the Steuben County Board of Supervisors.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27C. ARKPORT DAM, NY

Location. Dam is located five miles upstream from Hornell, NY, on the Canisteo River, a tributary of the Chemung River which flows into the Susquehanna River. (See Geological Survey map for Arkport, NY.)

Existing project. The dam is an earth fill structure, 1,200 feet long, exclusive of spillway, rises 113 feet above the streambed, with a concrete spillway and an ungated outlet in the right abutment. The outlet structure consists of an 8-foot diameter reinforced concrete lined conduit, 660 feet long. A cast iron nozzle placed in the lower end of the conduit, reduced the outlet size to 4 feet 4 inches. The reservoir has a storage capacity of 7,950 acre-feet at spillway crest. The project controls a drainage area of 31 square miles, 20 percent of the watershed of the Canisteo River upstream from Hornell.

Local cooperation. None required.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27D. AVOCA, NY

Location. On the Cohocton River at the Village of Avoca, NY, about 30 miles upstream from the confluence of the Cohocton and Chemung Rivers. (See Geological Survey map for Avoca, NY.)

Existing project. Provides for improvement and realignment of about 8,300 feet of Cohocton River channel, extending from above the Erie Railroad to below the junction of Main Street and U.S. Highway 15; construction of about 8,500 feet of earth levee on left bank of the Cohocton River, extending from high ground above Alexander Avenue to about 1,300 feet below the junction of Main Street and U.S. Highway 15; and 4,500 feet of earth levee on the right bank of Salmon Creek, extending from high ground above Alexander Avenue to the Erie Railroad; a highway bridge for U.S. Highway 15 over Cohocton River, raising of the Erie Railroad bridge 4 feet; and appurtenant drainage structures.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27E. BINGHAMTON, NY

Location. At the confluence of the Chenango and Susquehanna Rivers in the City of Binghamton, NY. (See Geological Survey map for Binghamton, NY.)

Existing project. Provides for construction of earth levees, concrete flood walls, and appurtenant drainage structures, consisting of about 850 feet of channel excavation and about 1,375 feet of earth levee along Phelps Creek, Town of Port Dickinson; concrete wall on the right bank of the Chenango River, extending downstream from high ground near the city limits to an existing flood wall below DeForest Street, a distance of about 520 feet; about 150 feet of concrete wall just below Cutler Dam; about 180 feet of concrete wall at the pump house near McDonald Avenue; raising existing earth levees on the right bank of Chenango River, extending from Cutler Dam downstream for about 1,220 feet; about 2,915 feet of earth levee on the left bank of Chenango River north of the city limits in the Village of Port Dickinson, extending from Church Street to high ground just north of the city line; about 3,900 feet of earth levee on the left bank of Chenango River, extending from DeForest Street to Cutler Dam; concrete flood walls and riverbank revetment for about 5,570 feet extending on the left bank of Chenango River from Cutler Dam to the junction with the Susquehanna River; about 540 feet of concrete flood wall and raising about 1,085 feet of concrete flood wall on the right bank of the Susquehanna River, extending from the Delaware, Lackawanna & Western Railroad downstream to Tompkins Street Bridge; about 1,940 feet of earth levee; about 1,940 feet of concrete flood wall and capping about 125 feet of concrete flood wall, on the right bank of the Susquehanna River from Stuyvesent Street to mouth of Chenango River; about 8,380 feet of earth levee, about 2,180 feet of concrete flood wall on the left bank of the Susquehanna River extending from Pierce Creek to high ground at State Highway 17, a debris dam and flume between Corbett and Hotchkiss Streets and a concrete pressure conduit, 1,060 feet long to carry flow of Park Creek from Vestal Avenue to the Susquehanna River; about 665 feet of levee extending from the Erie Railroad to high ground along the right bank of Chamberlain Creek near the mouth; closure structures at Erie Railroad and at Court Street; a weir, a drop structure, and about 1,800 feet of earth levee, about 2,235 feet of channel excavation, about 645 feet of channel paving and raising, about 470 feet of existing concrete flood wall, and about 200 feet of concrete flood wall for improvement of Pierce Creek from its mouth to about 1,000 feet about Conklin Avenue; and appurtenant drainage structures. Improvement, supplemented by authorized Flood Damage Reduction dams above the area, will provide protection for the City of Binghamton against a flood discharge about 20 percent greater than the maximum flood of record, which occurred in July 1935 on the Chenango River and in March 1936 on the Susquehanna River.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27F. CANISTEO, NY

Location. On Purdy and Bonnets Creeks in the Town of Canisteo, NY, situated along the south side of the Canisteo River, at the confluence of Bonnets Creek and in the Canisteo River. (See Geological Survey map for Canisteo, NY.)

Existing project. Provides for construction of about 8,000 feet of earth levees on the right bank of the Canisteo River, extending from high ground 1,570 feet west of State Highway Route 21 above the Town to a point at the intersection of Ordway Lane and East Main Street; about 7,400 feet of earth levee on the left bank of Purdy and Bennetts Creeks, extending from the Main Street Bridge to high ground above Greenwood Street 1,000 feet of earth levee on the right bank of Bennetts Creek extending upstream from the Main Street Bridge; a concrete check dam with wing levees from Greenwood Street; a highway bridge at Greenwood Street; channel excavation in Bennetts and Purdy Creeks; and appurtenant drainage structures.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27G. CORNING, NY

Location. On the Chemung River in the City of Corning, NY, about 44 miles upstream from the confluence of Chemung River and North Branch of Susquehanna River. (See Geological Survey map for Corning, NY.)

Existing project. Plan of improvement provides for construction of a pumping station, earth levees, and concrete flood walls, consisting of about 4,300 feet of earth levee, enlargement of about 8,610 feet of existing earth levee and about 3,100 feet of concrete flood wall on the right bank of the Chemung River, extending from the Erie Railroad Bridge to high ground at Park Avenue below the City; about 200 feet of concrete flood walls, about 2,500 feet of earth levees and enlargement of about 11,500 feet of existing earth levee on the left bank of the Chemung and Cohocton Rivers, extending from the Erie Railroad Bridge over Cohocton River to the mouth of Post Creek; about 2,500 feet of earth levee and enlargement of about 4,700 feet of existing earth levee on the right bank of Post Creek; about 2,500 feet of earth levee and enlargement of about 4,700 feet of existing earth levee on the right bank of Post Creek from its mouth to Watkins Street; realignment of about 3,000 feet of channel, about 8,800 feet of earth levee, about 3,000 feet of channel excavation, a pressure conduit about 400 feet long, a drop structure

and a weir for improvement of Cutler Creek, extending from its mouth to high ground at Deckertown Road and Hornby Road; and appurtenant drainage structures. Flood protection on Monkey Run was authorized by the Flood Damage Reduction Act of 1950. Plan of improvement provides for construction of 2,010 feet of open flume, 2320 feet of pressure conduit storm sewers, and appurtenant facilities between the existing improved channel above Sixth Street and the Chemung River at a point immediately east of Pine Street East. Modified improvement will provide protection for the City of Corning against a flood discharge in Chemung River approximately equal to the maximum flood of record, which occurred in May 1945 and on tributary streams against floods of greater magnitude than known to date.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27H. EAST SIDNEY LAKE, NY

Location. Dam is located near East Sidney, NY, on the Ouleout Creek, about five miles above the confluence of the creek with the Susquehanna River. (See Geological Survey map for Franklin, NY.)

Existing project. The dam is an earth fill and concrete structure, 2,010 feet long, including spillway, rises 130 feet above the streambed and consists of a concrete gravity-type section with a compacted earth-dike section at the right abutment. The outlet works consist of five rectangular conduits each 3.5 feet by 5.85 feet and 105 feet long. The reservoir has a storage capacity of 33,500 acre-feet at spillway crest. The project controls a drainage area of 102 square miles which is 93 percent of the Ouleout Creek drainage area and 5 percent of the watershed of the Susquehanna River upstream from Binghamton, NY, exclusive of the separately controlled Chenango River. Recreation facilities include a bathing beach, picnic and camping areas, and boat-launching and docking facilities.

Local cooperation. None required. The Town of Sidney, NY, cooperated in the development of recreation facilities and operates and maintains all recreation facilities with the exception of the recreational pool, which is the responsibility of the Federal Government.

Operations and results during fiscal year. Maintenance: Normal operations and maintenance of the project continued

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to replace lawn and utility tractors.

27I. ELMIRA, NY

Location. On the Chemung River in the City of Elmira, NY, about 27 miles stream from the confluence of the Chemung River and North Branch of Susquehanna River (See Geological Survey map for Elmira, NY).

Existing project. Provides for about 17,700 feet of earth levees, and about 4,100 feet of concrete flood wall on the right bank of the Chemung River, extending from South Hoffman Street to a point below the city near the upper end of Big Island; about 12,100 feet of earth levee and about 6,300 feet of concrete wall on the left bank of the Chemung River extending from Durland Avenue to the Delaware, Lackawanna & Western Railroad at the mouth of Newton Creek; about 10,000 feet of earth levee on right bank of Newton Creek, extending from about the intersection of Delaware, Lackawanna & Western Railroad and East Church Street to high ground near intersection of Sullivan and Warren Streets; about 4,300 feet of earth levee on the right bank of Divan Creek; about 2,000 feet of concrete conduit enclosing Hoffman Brook from West Second Street to the Chemung River; clearing islands and riverbanks of trees and brush for about 3.5 miles in the Chemung River; about 14,300 feet of earth levee on the left bank of Seely Creek, extending from the Erie Railroad to high ground approximately 1,000 feet northwest of the intersection of South Broadway and Pennsylvania Avenue; a pumping plant for disposal of interior drainage; an interceptor sewer about 6,000 feet long varying in size from 48 to 96 inches in diameter; and appurtenant structures.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27J. HORNELL, NY

Location. On the Canisteo River in the City of Hornell, NY, about 42 miles upstream from the confluence of the Canisteo and Tioga Rivers. (See Geological Survey map for Canisteo, NY.)

Existing project. Provides for channel realignment and earth levees, concrete flood walls, and check dams consisting of: realignment of about 4,600 feet of the Canisteo River channel, and about 5,800 feet of earth levee on its right bank, extending from Seneca Street upstream to the junction of the Pittsburgh, Shawmut & Northern Railroad and the Erie Railroad; about 4,500 feet of earth levee, extending on both sides of Seneca Street from the Canisteo River to Wrightman Avenue and the junction of Cleveland Avenue and Bethesda Drive; about 7,200 feet of earth levee, about 2,500 feet of concrete flood wall, and raising about 1,500 feet of

existing concrete flood wall, on the right bank of the Canisteo River, and about 12,000 feet of channel improvement, extending from Seneca Street to the Erie Railroad; about 2,500 feet of earth levee, about 2,100 feet of concrete flood wall on the left bank of the Canisteo River extending from Seneca Street to the Erie Railroad; about 2,500 feet of earth levee, about 2,100 feet of concrete flood wall on the left bank of the Canisteo River extending from a point opposite Walnut Street to the Erie Railroad; a ring-earth levee about 2,800 feet long around the sewage-disposal plant on the left bank of the Canisteo River; about 4,500 feet of realignment and improvement of the Canisteo River Channel with about 4,500 feet of earth levee on its right bank extending from Cedar Street downstream to about 1,400 feet about East Avenue; about 2,400 feet of channel paving, 1,400 feet of earth levee, raising about 1,900 feet of concrete flood wall, and construction of one check dam on Canacadea Creek; about 1,600 feet of channel paving and construction of three check dams on Chauncey Run with about 300 feet of new wall and about 300 feet of capping; a weir, a check dam, 3,030 feet of channel paving, 4,800 feet of flood walls and levees, and related work on existing walls, on Crosby Creek; removal of 6 bridges, erection of 4 bridges, miscellaneous bridge structures, and 3 drop structures; and appurtenant drainage structures and small stream control works. Upstream reservoirs (Arkport and Almond) provide protection for the City of Hornell against a flood discharge approximately double the maximum flood of record, which occurred in July 1935.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27K. LISLE, NY

Location. On the Tioughnioga River in the Village of Lisle, NY, about 12 miles upstream from the confluence of the Tioughnioga and Chenango Rivers. (See Geological Survey map for Lisle, NY.)

Existing project. Provides for channel realignment and construction of earth levees and concrete flood walls, consisting of: relocation of about 3,000 feet of Dudley Creek Channel, extending from 1,200 feet west of the intersection of Cortland and Main Streets to the confluence with Tioughnioga River; realignment of some 5,700 feet of Tioughnioga River Channel east of the Village; about 4,150 feet of earth levee and 970 feet of concrete wall on the right bank of Dudley Creek and Tioughnioga River; realignment of some 5,700 feet of Tioughnioga Street to the railroad crossing on River Street; raising about 1,860 feet of the Delaware, Lackawanna & Western single track railroad over the levee; relocation of about 1,600 feet of Cortland Street; a new bridge over

relocated Dudley Creek; and appurtenant drainage structures.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27L. OXFORD, NY

Location. On the Chenango River in the Village of Oxford, NY, about 40 miles upstream from the confluence of the Chenango and Susquehanna Rivers. (See Geological Survey map for Oxford, NY.)

Existing project. Provides for earth levees and clearing of Chenango River Channel, consisting of about 2,100 feet of earth levees on the left bank of the Chenango River, extending from high ground near Cemetery Drive and running mostly along the railroad to high ground near Main Street; removal of dam and island below Main Street; raising the Delaware, Lackawanna & Western Railroad over the levee; and appurtenant closure and drainage structures. Improvement provides protection for the Village of Oxford on the left bank against a flood discharge substantially larger than the maximum flood of record, which occurred in July 1935.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

27M. WHITNEY POINT LAKE, NY

Location. Dam is located near Whitney Point, NY, on the Otselic River about 0.7 miles upstream from its confluence with Tioughnioga River. (See Geological Survey map for Whitney Point and Willet, NY.)

Existing project. The dam is an earth fill structure, 4,900 feet long, exclusive of a spillway, rises 95 feet above the streambed, with a concrete spillway and gated outlet in the left abutment. The outlet works consist of three 5-foot by 10-foot gates and one emergency gate of the same size. The reservoir has a storage capacity of 86,440 acre-feet at spillway crest. The project controls a drainage area of 255 square miles, the entire watershed of Otselic River, or 16 percent of the Chenango River watershed upstream from Binghamton, NY. Recreation facilities, constructed in cooperation with local interests, provide for swimming, picnicking, camping, boating, fishing, and hunting.

Local cooperation. None required. Local interests operate and maintain all of the recreation facilities.

Operations and results during fiscal year. Under the Section 1135 program, project modifications for improvements to the environment are being undertaken. The Section 1135 modification

consists of improvements to several recreational features, creation of a wetland enhancement area, and changes to reservoir operations to augment environmental releases. Construction of the Section 1135 features began in October 2007, and was completed in 2009. Maintenance: Normal operation and maintenance of the project continued.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to construct access road to intake tower, replace utility tractor, replace gatehouse furnace and pave parking area and driveway.

27N. WHITNEY POINT VILLAGE, NY

Location. On the Tioughnioga River at the confluence of the Tioughnioga and Otselic Rivers, tributaries of the Susquehanna River. (See Geological Survey map for Whitney Point, NY.)

Existing project. Provides for channel realignment and earth levees, consisting of realignment of about 1,800 feet of Tioughnioga River Channel, above the confluence with Otselic River; about 7,100 feet of earth levee along the right bank of the Tioughnioga River, extending from high ground on Main Street above the Village to Collins Street just below the Village; and appurtenant drainage structures.

Local cooperation. Fully met.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

28. STILLWATER LAKE, LACKAWANNA RIVER, PA

Location. Dam is on the Lackawanna River, 39 miles from the mouth of the stream and about 4 miles upstream from Forest City, Susquehanna County, PA (See Geological Survey Quadrangle sheet, Honesdale, PA.)

Existing project. Dam is earth fill type, rising 77 feet above the streambed, with a controlled outlet conduit and side channel spillway in the left abutment. Reservoir capacity is 12,000 acre-feet, of which 11,600 acre-feet is Flood Damage Reduction storage and the remainder is used to maintain the existing water supply reservoir for Forest City, PA, at this site. Reservoir area is 422 acres, and the pool extends about 2.1 miles upstream. Reservoir controls 52 percent of the watershed above Carbondale, 26 percent above Olyphant, and 17 percent above Scranton. Federal cost of work, completed in 1965, was \$5,725,700 of which \$4,500,500 was for construction and \$1,225,200 was for lands and damages.

Local cooperation. None required. Section 2, Flood Control Act of June 28, 1938, applies. Pennsylvania Fish and Boat Commission operate and maintain a boat launch at the project.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

29. SUSQUEHANNA RIVER FLOOD CONTROL PROJECTS, NY AND PA

Plan of improvement authorized by the 1958 Flood Control Act provides for construction of Cowanesque Lake, PA, Tioga-Hammond Lakes, PA, local protection works at Elkland, PA, and Nichols, NY, and channel improvements at Cortland, NY. This project plan supplemented the comprehensive Flood Damage Reduction program for Southern New York and Northern Pennsylvania which included the Southern New York Flood Damage Reduction project and Stillwater, Genegantslet, and South Plymouth Reservoirs.

29A. COWANESQUE LAKE, PA

Location. Dam is on the Cowanesque River about 2.2 miles above its confluence with Tioga River at Lawrenceville, PA. (See Geological Survey map for Tioga, PA.)

Existing project. The project provides for an earth fill dam 3,100 feet long and rising 151 feet above the streambed, an uncontrolled spillway in the right abutment, a gated conduit in the Valley floor, and Flood Damage Reduction storage is 82,000 acre-feet. Relocation of the Town of Nelson to a new town site was authorized by Section 121 of the Water Resources Development Act of 1976. The Federal cost of this work was \$106,030,700 of which \$61,743,600 was for construction and \$44,287,100 was for lands and damages and relocations (which includes \$5,755,000 for relocation of the Town of Nelson). Within the discretionary authority of the Chief of Engineers the project was modified in March 1983 in accordance with the Water Supply Act of 1958, as amended, and the Flood Damage Reduction Act of 1944, as amended. The modification provides for reallocating 25,600 acre-feet of present Flood Damage Reduction storage for water supply storage by raising the permanent pool from elevation 1,045 to 1,080 mean sea level. Other features include modifying the existing intake tower and two access ramps, stabilizing the reservoir slope near the relocated Town of Nelson, replacing existing day-use recreation facilities, and expanding both day-and overnight-use recreation facilities to accommodate an expected increase in annual visitation due to the larger pool. Estimated cost (October 1991) of the modification is \$55,198,00 of which \$1,257,00 is Federal (for expanded recreation facilities) and \$53,941,000 is non-Federal (which includes \$39,414,000 for reimbursement of the cost of existing

Flood Damage Reduction storage reallocation to water supply storage, \$13,270,000 cash contribution for the water supply modification, and \$1,257,000 cash contribution for expanded recreation facilities.)

Local cooperation. The Water Resources Development Act of 1976, which authorized relocation of the Town of Nelson, provides that before the Secretary of the Army acquires any real estate property for the new town site, appropriate non-Federal interests shall furnish binding contractual commitments that all lots in the new town site will be either occupied when available, replacements for open space and vacant lots in the existing town, or will be purchased by non-Federal interests at the fair market value. The required contractual agreement for local cooperation was executed with Nelson Township on August 25, 1977. The March 1983 project modification (discussed above) requires non-Federal interests repay 100 percent of the investment cost of project modifications allocated to water supply, to terrestrial wildlife habitat mitigation, and to in-kind replacement recreation, plus the allocated share of the project's original cost (escalated to current price levels). Additionally, they are required to pay annual costs of operation, maintenance, and major replacements allocated to water supply and to provide 50 percent of the cost of expanded recreation facilities, as well as, all operation, maintenance, and replacement costs for the expanded facilities. Water supply and recreation contracts were executed by the Assistant Secretary of the Army (Civil Works) and the Susquehanna River Basin Commission on June 30, 1986.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to upgrade campground, reclamation mowing in mitigation areas and E&D to repair spillway.

29B. TIOGA-HAMMOND LAKES, PA

Location. The dams are located in Tioga County, PA, upstream from the confluence of the Tioga River and Crooked Creek. Tioga Dam is located on the Tioga River and Hammond Dam on Crooked Creek, approximately opposite the Tioga dam site, about 3.3 miles above its mouth and less than one mile from Tioga, PA. (See Geological Survey map for Tioga, PA.)

Existing project. Tioga Dam is 2,600 feet long, rising 140 feet above the streambed, with a controlled outlet conduit. Hammond Dam is 5,900 feet long, and has a maximum height of 121.5 feet above the streambed, with a concrete spillway. Both dams are of earth and rock fills construction. The Tioga-Hammond Lakes project controls a total drainage area of 402 square miles, with Tioga Dam controlling

280 square miles of the Tioga River Basin and Hammond Dam controlling 122 square miles of the Crooked Creek Basin. Recreation facilities are provided for swimming, camping, picnicking, boating, and fishing. Federal cost of completed work was \$185,620,000 of which \$125,029,000 was for completed construction and \$60,591,000 was for lands and damages and relocations

Local cooperation. None required.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to pave roads in Ives Run recreation area, repair Corey Creek conduit, remove sediment from Mansfield LFP and hire seasonal staff.

30. WEST BRANCH OF SUSQUEHANNA RIVER, PA

Location. A system of three Flood Damage Reduction reservoirs, in the headwaters of the West Branch Susquehanna River, PA, are known as Curwensville, Alvin R. Bush (formerly known as Kettle Creek), and Foster Joseph Sayers (formerly known as Blanchard).

In accordance with the terms of local cooperation, the Commonwealth of Pennsylvania furnished assurances that it will coordinate operation of George B. Stevenson Reservoir (formerly known as First Fork Reservoir) with operation of Curwensville, Alvin R. Bush, and Foster Joseph Sayers Reservoirs to secure optimum Flood Damage Reduction benefits from system operation. George B. Stevenson Reservoir on the First Fork Sinnemahoning Creek in Cameron and Potter Counties, PA, was constructed by the Commonwealth of Pennsylvania at a first cost of \$12,240,000 and an estimated \$30,000 annually for operation and maintenance.

30A. ALVIN R. BUSH DAM, PA

Location. Alvin R. Bush (formerly Kettle Creek Dam) is located on Kettle Creek about 8.4 miles above the mouth and 15 miles upstream from Renovo, PA. (See Geological Survey map for Keating, PA.)

Existing project. Dam is an earth fill structure; about 1,350 feet long, rises 165 feet above the streambed, with an uncontrolled spillway located in rock adjacent to the right abutment, and has a horseshoe-shaped outlet tunnel with 3 service gates. The reservoir has a storage capacity of 75,000 acre-feet at spillway crest. The project controls a drainage area of 226 square miles or about 92 percent of the Kettle Creek watershed. Recreation facilities are provided for camping, fishing, boating, picnicking,

hiking, winter sports, hunting, and swimming by the State of Pennsylvania at Kettle Creek State Park.

Local cooperation. None required.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

30B. CURWENSVILLE LAKE, PA

Location. Dam is on the West Branch of Susquehanna River approximately 2.5 miles upstream from Curwensville, Clearfield County, PA. (See Geological Survey map for Curwensville, PA.)

Existing project. Dam is an earth filled structure 2,850 feet long, rising 131 feet above the streambed, with a spillway and gate – controlled outlet. The reservoir has a storage capacity of 124, 200 acre-feet at spillway crest and extend 14 miles upstream when filled to that level. The project controls a drainage area of 365 square miles or 98 percent of the West Branch at Curwensville and 75 percent at Clearfield, PA. Within the discretionary authority of the Chief of Engineers, the project was modified in September 1992, in accordance with the Water Supply Act of 1958, as amended. The modification provides for reallocating an estimated 5,360 acre-feet of storage from conservation to water supply. The reallocation project includes a year-round normal pool and modifications to the existing recreation area. Estimated cost of the modification is \$1.7 million which is being funded entirely by the local sponsor, the Susquehanna River Basin Commission. In addition, the sponsor will reimburse the Federal Government about \$4.5 million for part of the original project cost. Clearfield County operates and maintains the recreation area for camping, boating, picnicking and swimming.

Local cooperation. The 1992 project modification require non-Federal interests to pay 100 percent of costs allocated to water supply plus the allocated share of the original project cost (escalated to current price levels). Additionally, they must pay annual costs of operation, maintenance, and major replacement allocated to water supply. A water supply contract was executed on September 30, 1994.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to upgrade relief wells and repair toe drains.

30C. FOSTER JOSEPH SAYERS DAM, PA

Location. Dam is located on Bald Eagle Creek in Centre County, PA, about one mile upstream from Blanchard and about 14 miles above the confluence of Bald Eagle Creek with the West Branch

Susquehanna River at Lock Haven, PA. (See Geological Survey map for Howard, PA.)

Existing project. Dam is an earth fill structure; about 6,835 feet long, rises 100 feet above the streambed, and has an open-cut concrete chute and uncontrolled concrete weir 600 feet wide located in rock in a saddle adjacent to the left abutment. The outlet works, located in the left abutment, consist of a 15-foot diameter circular outlet conduit with two hydraulically-operated wheel gates 7 feet wide and 15 feet high. The reservoir has a storage capacity of 99,000 acre-feet at spillway crest. The project controls a drainage area of 339 square miles or 88 percent of the drainage area above Beech Creek and 43 percent of the Bald Eagle Creek drainage area. Recreation facilities are provided for boating, camping, fishing, picnicking, hunting, swimming, hiking, and winter sports by the State of Pennsylvania at Bald Eagle State Park.

Local cooperation. None required.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to replace tractor and remove debris and sediment from stilling basin.

31. WYOMING VALLEY, PA (LEEVE RAISING)

Location. The Wyoming Valley Flood Damage Reduction projects are located in Northeastern Pennsylvania on the Susquehanna River in Luzerne County and are the four contiguous existing Federal Flood Damage Reduction projects at Plymouth, Kingston-Edwardsville, Swoyersville-Forty Fort, and Wilkes-Barre/Hanover Township, which together function as a Flood Damage Reduction system within the Wyoming Valley.

Existing project. The proposed modification provides for raising existing levees and floodwalls between 3 and 5 feet, structural, mechanical and electrical modifications to pump stations, modifying closure structures, relocating utilities and providing some new floodwalls and levees to maintain the integrity of the existing Flood Damage Reduction system. The proposed project also includes a plan to reduce project-related adverse impacts. The current estimated total project is \$197,200,000 which includes a future inflation allowance through project completion.

Local cooperation. The Luzerne County Flood Protection Authority is the sponsor for the project. The local sponsor is required to: provide lands, easements and rights-of-way; modify or relocate buildings, utilities, roads, bridges, and other facilities;

pay a minimum of 5% of costs allocated to Flood Damage Reduction and pay 50% of costs allocated to recreation; and bear all costs of operations, maintenance and replacement of Flood Damage Reduction and recreation facilities after construction.

Operations and results during fiscal year. Normal operation and maintenance of the project continues.

Active Construction includes:

1. Wilkes-Barre 2C- Riverfront project was awarded 25 September 2006, to Conti Environmental, Inc. for \$22,623,222.00; Scheduled completion timeframe is in Summer 2010. Work consists of riverfront development including: 2 portals (Millennium Circle and Northampton Portals, fountain, bridge and closure structures, river landing and fishing terrace, amphitheater and stage, riverside access road, ramps, plazas, stairs, lighting, floodwall and site furnishings.)
2. Toby Creek Phase I – Embankment Raising – Contract awarded in September 2007 and is scheduled to be completed in April 2010.

New Work, American Recovery and Reinvestment Act.

3. Toby Creek Phase II – RCC Spillway – Contract awarded in July 2009 in the amount of \$2,805,422. Work scheduled to be completed in June 2010.

32. YORK, INDIAN ROCK DAM, PA

Location. On Codorus Creek 10 miles above its confluence with the Susquehanna River. Codorus Creek has tributary branches in York County in the south and central parts of Pennsylvania. (See Geological Survey Quadrangle sheets for York and Hanover, PA.)

Existing project. Indian Rock Dam is an earth and rock fill dam about 1,000 feet long at the top, rising 83 feet above the streambed, with a reservoir providing for control storage of 28,000 acre-feet. The dam is on the main branch of Codorus Creek about 3 miles above York. Outlet works are in the right abutment, and the uncontrolled spillway is on the right bank. The reservoir controls the entire drainage area of the main branch of Codorus Creek and 41 percent of the drainage area above York. Improvements in Codorus Creek in the vicinity of and through the City of York provide for 22,969 feet of channel extending from 300 feet above Richland Avenue to a point downstream from the Pennsylvania Railroad crossing known as Black Bridge. Improvements, which increased channel capacity to 24,000 cubic feet per second, include widening and deepening the channel, bank protection, removal of York Roller Mill Dam, and a low water channel about 3,900 feet long in the vicinity of York Roller Mill

Dam. Cost of work for the completed project was \$5,061,167, of which \$4,566,446 (regular funds) and \$11,588 (emergency relief funds) were for construction and \$483,133 (regular funds) was for lands and damages.

Local cooperation. Section 2, Flood Control Act of June 28, 1938, applies.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

Maintenance, American Recovery and Reinvestment Act. ARRA funding was utilized to replace roofs on buildings at the dam site and remove trees and sediment from Codorus Creek LFP.

33. INSPECTION OF COMPLETED FLOOD DAMAGE REDUCTION PROJECTS

Projects in New York, Pennsylvania, Maryland, District of Columbia, and Virginia were inspected during the period by hired labor. See Table 4-I.

34. SCHEDULING FLOOD DAMAGE REDUCTION RESERVOIR OPERATIONS

Operations and results during fiscal year. The operation of George B. Stevenson Dam, PA, was coordinated with the operation of Alvin R. Bush, Curwensville, and Foster Joseph Sayers Dams in the West Branch Susquehanna River Basin in order to secure optimum Flood Damage Reduction benefits from the system operation. Costs during the period were \$35,732..

Supplemental instructions for the operation of Savage River Dam, MD, were provided, during periods of high water, to insure maximum protection for downstream localities. Costs during the period were \$55,553.

35. FLOOD DAMAGE REDUCTION WORK UNDER SPECIAL AUTHORIZATION

Cost for the period was \$462,359 for the Disaster Preparedness Program; \$18,876 for Emergency Operations; \$316,328 for Rehabilitation and Inspection Program. Federal year costs were \$19,870 for Section 205 Coordination; \$6,354 for Heshbon to Hepburnville, Lycoming County, PA; and \$4,979 for Borough Lackawanna County, PA.

Non-Federal contributed costs were: \$1,397 for Heshbon to Hepburnville, Lycoming County, PA.

Flood Damage Reduction activities pursuant to Section 14, Public Law 526, 79th Congress, as amended (pre-authorization). Fiscal year costs were \$10,052 for Section 14 Coordination; \$825,364 for Patuxent River Patuxent Beach Road, MD and \$44,937 for Lidy's Creek, Center Street, PA. Dam Safety Assurance Fiscal Year costs were \$1,324 Jennings Randolph Lake.

Non-Federal contributed costs were: \$9,504 for Newton Creek Newton Avenue, NY; and \$604,600 for Patuxent River, Patuxent Beach Road, MD.

Non-Federal costs were \$14,552 for Loyalsock Creek, Warrensville Road, PA; and \$5,415 for Newton Creek, Newton Avenue, NY.

**MULTIPLE-PURPOSE PROJECTS
INCLUDING POWER - None**

ENVIRONMENTAL

**36. ANACOSTIA RIVER AND
TRIBUTARIES, MD AND DC**

Location. The project area is the 170-square mile watershed of the Anacostia River. This watershed encompasses approximately 145 square miles in Montgomery and Prince George's Counties, Maryland, and 25 square miles in the District of Columbia. The entire area is within the Washington, D.C. metropolitan area.

Existing project. The authorized plan provides for the construction of 80 acres of tidal and non-tidal freshwater wetlands, the restoration of 5 miles of piedmont streams, and the planting of 33 acres of bottomland hardwood forest within the highly urbanized Anacostia River watershed. The construction is located at 13 sites within the project area. The 13 actions include 2 wetland restorations, development of 5 storm water management wetlands areas, and restoration of 6 stream reaches. The current estimated total cost for the Anacostia environmental restoration project is \$18 million.

Local cooperation. The non-Federal sponsors for the project are Montgomery County, Prince George's County, the District of Columbia, the Maryland-National Capital Park and Planning Commission, and the National Park Service. The last two sponsors are the current landowners of the project sites. The non-Federal sponsors are required to pay 25 percent of the cost allocated to fish and wildlife restoration and to bear all costs of operation, maintenance, repair, rehabilitation and replacement of the facilities after construction.

Operations and results during fiscal year. The construction at eight sites in Montgomery County and the Kingman Lake and River Fringe Wetlands site in the District of Columbia was completed in 2000-2003. The remaining sites will not be constructed at the sponsors' request. Project monitoring of the completed sites is ongoing.

**37. CHESAPEAKE BAY OYSTER
RECOVERY, MD AND VA**

Existing project. The authorized project contributes to multi-agency and private efforts to restore oyster populations in the Maryland portion of

the Chesapeake Bay. Project elements include: construction and rehabilitation of oyster habitat; construction of seed bar facilities for production of oyster seed or "spat"; purchase of disease-free spat from the state-owned hatcheries, planting of disease-free spat in locations which best foster oyster production and health; and monitoring of project performance to increase oyster populations. The current authorized Federal cost for the restoration program is \$50 million.

Local cooperation. The State of Maryland is the sponsor for the Maryland portion of the project. The local sponsor is required to pay 25% of the cost allocated to fish and wildlife restoration and to bear all costs of operation, maintenance, repair, rehabilitation and replacement of fish and wildlife facilities after construction. The program extends into the Chesapeake Bay waters in Virginia where the Norfolk District conducts activities.

Operations and results during fiscal year. New Work: Short-term construction activities were conducted in the summer of 2002-2006; in 2007-2008 only project monitoring was conducted due to the unavailability of suitable substrate. In 2009, restoration of 13 acres in the Severn River was completed using alternative substrate materials. Planning for a Chesapeake Bay-wide native oyster restoration master plan is ongoing and will continue through 2011.

**38. CHESAPEAKE BAY ENVIRONMENTAL
RESTORATION/PROTECTION
PROGRAM, MD**

Location. The project is located in the Chesapeake Bay area within portions of the states of Maryland, Virginia and Pennsylvania.

Existing Project. Section 510 of WRDA 1996 authorizes a pilot program for the Corps of Engineers to provide design and construction assistance to non-Federal interests for publicly owned water-related environmental infrastructure and resource protection and development of projects affecting the Chesapeake Bay estuary. These projects include sediment and erosion control, protection of eroding shorelines, creation or restoration of wetlands and submerged aquatic vegetation, protection of essential public works, wastewater treatment and related facilities, water supply and related facilities, beneficial uses of dredged material, and other related projects that may enhance the living resources of the estuary. At least one project has been established in each of the states of Maryland, Virginia and Pennsylvania. The following are completed projects: in 2001, the Lower Rappahannock River, VA Oyster Restoration; in 2003, the Tylerton Shoreline Protection on Smith Island, MD; in 2005, the Scranton, PA Wastewater Treatment Plant (WWTP) Upgrade Design Report;

and in 2009, the Programmatic Environmental Impact Statement (EIS) for introduction of non-native oyster species into the Chesapeake Bay that was specifically authorized under this program with a 50/50 cost share. The following projects are on-hold pending non-federal sponsor actions/funding: (1) Upgrading WWTP's at Tylerton and Ewell on Smith Island, MD. The Tylerton WWTP was constructed and turned over to the sponsor in 2007, but the Ewell WWTP construction was terminated due to site conditions. A report was prepared in 2006 that recommended a \$6,400,000 Sequencing Batch Reactor WWTP as the alternative, however, non-Federal sponsor funding remains unavailable; (2) Restoring wetlands and constructing a trash interceptor at Warner Street along the Middle Branch of the Patapsco River in Baltimore City, MD. The interceptor was completed in 2006, however, initiating a design agreement for the wetlands is on-hold pending the City's finalizing site development plans and removal of contaminated soils; (3) Constructing 5,200 linear feet shoreline protection consisting of twelve breakwaters and a stone revetment at Taylor's Island/Punch Island Road, MD at the confluence of the Little Choptank River and the Chesapeake Bay. The stone revetment and six breakwaters (phase I) were completed in 2008, construction of the remaining six breakwaters (phase II) at \$3,500,000 will occur when non-Federal sponsor funding becomes available. The current Federal authorized limit is \$40 million.

Local cooperation. Maryland sponsors include Somerset County, the Council for Dorchester County, the City of Baltimore, and the Maryland Department of the Environment. For Virginia, the sponsor was the Marine Resources Commission and for Pennsylvania, it was the City of Scranton Sewer Authority.

Operations and results during fiscal year. The stone revetment and Phase I breakwaters portion of the Taylors Island Shoreline Protection Project was completed in November 2008. The Norfolk District completed the non-native oyster programmatic EIS in July 2009. In 2009, the WWTP upgrade projects at Milton, PA and Curwensville, PA were scoped as project candidates but, based on coordination with the non-Federal sponsor, the Curwensville project will no longer be pursued under this program.

39. BALTIMORE METROPOLITAN WATER RESOURCES, GWYNNS FALLS WATERSHED, MD

Location. The Gwynns Falls watershed is located in Baltimore City and County and drains through the Baltimore Harbor into Chesapeake Bay. The watershed is approximately 66 square miles (42,000 acres) in total area.

Proposed projects. The proposed projects include restoring 3.3 acres of wetland habitat, stabilizing 2,000 feet of stream bank, rehabilitating 7 miles of sanitary sewer pipe, daylighting 600 feet of piped stream, and constructing one storm water management feature.

Local cooperation. The City of Baltimore is the non-Federal sponsor for the project and is cost sharing the construction of the project at a rate of 65 percent Federal and 35 percent non-Federal. The current estimated cost of construction is \$14,700,000.

Operations and results during fiscal year. The design for the first phase of construction (Maidens Choice Run – Site MC10) was completed in November 2006. The construction contract for Maiden's Choice Run – Site MC10 was awarded in September 2008 Current construction cost is \$1,600,000. The construction of Site MC10 is substantially complete with 100% completion anticipated by Spring 2010.

40. NORTHEAST COUNTIES, PA

Location. The authorized program area consists of the following Pennsylvania counties: Lackawanna, Lycoming, Susquehanna, Wyoming Pike, Wayne, Sullivan, Bradford, and Monroe, including assistance for the Montoursville Regional Sewer Authority, Lycoming County, Pennsylvania. WRDA 2007 added the counties of Northumberland, Union, Snyder, and Luzerne.

Existing program. Section 219, WRDA 92 provides planning and design assistance for water and sewer related environmental infrastructure and resource protection and development projects for local communities. The program was amended by Section 502, WRDA 99 to allow for the provision of construction services as well. The program for Northeast Pennsylvania is authorized up to \$20 million.

Local cooperation. Cost sharing is 75% Federal and 25% non-Federal. The non-Federal sponsor can use real estate credit and cash to meet their cost-sharing requirement; no in-kind credits are permitted. The non-Federal sponsor assumes 100% of the responsibility for operations & maintenance.

Operations and maintenance. The following Section 219 projects have been constructed and turned over to the local sponsors for operations and maintenance: Muncy Creek Sewer Project, Halls Station Sewer Project, and the Athens Sewer Project.

41. POPLAR ISLAND, MD

Location. The group of islands known as Poplar Island is located in the upper middle Chesapeake Bay approximately 34 nautical miles southeast of the Port of Baltimore and 1 mile northwest of Tilghman Island, Talbot County, MD.

Existing project. The authorized project provides for the use of approximately 33 million cubic yards of dredged material from the southern approach channels of the Baltimore Harbor and Channels navigation project to restore 1,715 acres of remote habitat. The restoration project will employ dikes to contain the dredged materials necessary for the wetlands vegetation and to protect the facility from the severe wave activity common in this region of the Chesapeake Bay. The placement site will restore Poplar Island and will consist of 840 acres of upland habitat at an elevation up to +25 feet MLLW and 737 acres of wetland habitat and an embayment of approximately 138 acres. The current estimated total project cost is \$667 million (including a future inflation allowance through the project completion).

Local cooperation. The State of Maryland is the project sponsor and the Local Cooperation Agreement was executed April 4, 1997. The sponsor is required to provide lands, easements, and rights-of-way; pay 25% of the cost of the project; and bear all costs of operation, maintenance, replacement and major rehabilitation of the ecosystem restoration project.

New Work: A third wetland cell was completed bringing the total acres of tidal wetlands created to 100. A contract was awarded to dredge sand that will be used to raise the cell 6 dikes.

New Work, American Recovery and Reinvestment Act. A contract was awarded for construction of a tidal inlet for cell 1C and spillway #16 using ARRA funds.

42. SOUTH CENTRAL PENNSYLVANIA ENVIRONMENTAL IMPROVEMENT PROGRAM

Location. The south central Pennsylvania area includes fifteen counties defined by the authorizing legislation. Funds for an additional six counties were provided in the FY 1998 and FY 1999 Energy and Water Appropriation Act. The program area within the Baltimore District consists of the Chesapeake Bay watershed portion of the program area including Bedford, Blair, Clearfield, Franklin, Fulton, Huntingdon, Juniata, and a portion of Cambria and Somerset Counties. Section 3143 of the Water Resources Development Act of 2007, removed Clearfield, Mifflin and Snyder Counties.

Existing project. Section 313 of the Water Resources Development Act of 1992, as amended, established a pilot program for providing environmental assistance to non-Federal interests in south central Pennsylvania. Such assistance may be in the form of design and construction assistance for water-related environmental infrastructure and resource protection and development projects, including projects for waste water treatment and related facilities, water supply, storage treatment,

distribution facilities, and surface water resource protection and development. The Federal share may be provided in the form of grants or reimbursements to the sponsor. Section 313 as amended authorizes Federal appropriations of \$200 million to carry out the program, including \$100 million within the Chesapeake Bay watershed area. From FY 94 through FY09, Congress has added \$85,929,000 to the Corps budget for over 90 projects in the Baltimore District for water supply and distribution, wastewater collection and treatment and a master plan.

Local cooperation. The non-Federal sponsors are required to provide 25% of project costs including lands, easements, rights-of-way, and relocations and bear all costs of operation, maintenance, replacement, repair and rehabilitation of the project after construction.

Operations and results during fiscal year. New Work: Completed several of the active projects and executed four new Project Partnership Agreements.

ENVIRONMENTAL INFRASTRUCTURE

Fiscal year costs were \$293,989 for Clinton County, PA; and \$37,359 for Central West Virginia.

Non-Federal contributed costs were: \$129,620 for Clinton County, PA.

43. REGULATORY PROGRAM

The Baltimore District Regulatory Program began FY09 with 653 applications pending from FY08. During FY09, approximately 4212 new applications were received; approximately 4112 permit actions were finalized; and 239 were withdrawn for activities in regulated waterways and wetlands in MD, Washington DC, and part of PA. At the beginning of the FY, 127 enforcement cases were pending. During FY09, 161 violations were resolved. 1794 jurisdictional determinations were requested and verified. Total FY09 Regulatory Program expenditures were \$5,736,838.

AQUATIC ECOSYSTEM RESTORATION

44. DENTS RUN, PA

Location. The Dents Run watershed is located in Benezette Township, Elk County, Pennsylvania. The lower 4.5 miles of Dents Run is devoid of aquatic life due to acid mine drainage (AMD) along its tributary, Porcupine Hollow. In addition, approximately 250 acres of upland habitat scarred from past mining activities does not provide suitable habitat for wildlife.

Existing Project. The project includes a combination of reclamation and passive treatment technologies at six AMD sites (1934, 3888, 3893, 3896, 3897, and 3898) within the Dents Run

watershed. The work is being accomplished, under Section 206 of the Water Resources Development Act of 1996, as amended.

Local cooperation. The sponsor is the Bennett Branch Watershed Association. The sponsor funds are provided from PADEP-BAMR (\$2.7 million) and the Pennsylvania Growing Greener Program (\$1.3 million), and in partnership with the Pennsylvania Game Commission (PGC) is responsible for providing 35 percent of the project costs and for providing the entire cost of design and construction reclamation and passive treatment system work at PA 1934. The Western Pennsylvania Conservancy, under a Memorandum of Understanding with the sponsor, will assist the sponsor in all real estate acquisition activities.

Operations and results during fiscal year. Construction of the passive treatment measures is scheduled to be completed in July 2010.

45. AQUATIC ECOSYSTEM RESTORATION

Fiscal year costs were \$16,401 for Section 206 Coordination \$59,773 for Greenbury Point, MD; \$73,199 for Deep Run/Tiber Hudson, MD; \$14,997 for Nanticoke Creek Luzerne Co., PA; \$13,689 for North Beach, MD; \$229,195 for Northwest Branch Anacostia, MD;; \$109,624 for Western Branch, Patuxent, MD; \$3,804 for Fall Brook, PA; \$273,545 for Paint Branch Fish Passage, MD; \$27,218 for Sweet Arrow Lake, PA; \$28,085 for Wright's Creek, MD; \$34,171 for Tidal Middle Branch, MD; and \$37,990 for Urieville Lake, MD; and \$10,136 for Franklin Point Park, MD.

American Recovery and Reinvestment Act costs were \$50,483 for Nanticoke Creek, PA.

Non-Federal contributed costs were: \$46,938 for Western Branch Patuxent, MD; and \$146,923 for Paint Branch Fish Passage, MD.

Fiscal year costs were \$12,604 for Section 1135 Coordination; \$2,707 for Rooster Island Restoration, MD; \$33,171 for Hart-Miller Island, MD; and \$33,426 for Lower Kingman Island, DC.

Non-Federal contributed costs were: \$882,589 for Whitney Point Reservoir, NY; and \$3,941 for Heritage Island, DC.

Fiscal year costs were \$15,026 for Section 204 Coordination.

Fiscal year costs were \$1,748 for Aquatic Plant Control.

WATER SUPPLY

46. WASHINGTON AQUEDUCT

Location. The diversion dam and raw water supply intakes at Great Falls, the two collecting conduits, part of Dalecarlia receiving reservoir, the booster

pumping of Dalecarlia receiving reservoir, the booster pumping station and the Little Falls raw water pumping station are located in Maryland. All other structures of the water supply system including parts of the raw water collecting system, two purification plants, pumping stations, storage reservoirs, and transmission mains are in the District of Columbia. Federally owned water mains are maintained in Virginia and Maryland.

Existing project. Control of the water supply system is vested in the Chief of Engineers (see Acts of March 3, 1859, and March 2, 1867, November 22, 1973 and Sec. 1800 of Revised Statutes). The project includes: administration; operation and maintenance of the collection, purification, pumping, and transmission facilities; protection of the water supply system; engineering; and construction of major water system additions and improvements.

Authority to supply water to Arlington County, the City of Falls Church, and other jurisdictions in Virginia is contained in Public Law 119, 69th Congress, approved April 14, 1926; and Public Law 118, 80th Congress, June 26, 1947.

Local cooperation. Requirements are described in full on page 4-19 of the Fiscal Year 1981 Annual Report.

Operations and results during fiscal year 2009. Purified water furnished to the District of Columbia; Arlington County and City of Falls Church, VA. Total consumption for fiscal year 2009 was 55.9 billion gallons. The average amount furnished Arlington County and Falls Church, VA was 40.23 million gallons per day. The Corps of Engineers was reimbursed \$33,837,869.86 for operations and maintenance of which \$9,674,497.74 was from Virginia

GENERAL INVESTIGATIONS

47. SURVEYS

Federal costs for the fiscal year were \$2,075,703 including \$33,278 for flood damage prevention studies, \$87,506 for shoreline protection studies, \$931,561 for special studies, \$783,298 for Watershed comprehensive studies, \$0 for Review of Authorized Projects; \$167,942 for special investigations, \$19,964 interagency water resource development, \$2,840 for National Estuary Studies, and \$49,314 for coordination with other agencies and non-Federal interests.

Non-Federal contributed costs for the fiscal year were \$813,957 of which \$0 was for navigation studies, \$112,206 for flood damage prevention studies, \$233,673 for special studies \$443,587 for Comprehensive studies, and \$24,490 for coordination with other Agencies and non-Federal interests.

48. COLLECTION AND STUDY OF BASIC DATA

Costs for flood plain management activities and general planning guidance during the period were \$644,126. Providing assistance and guidance to local interests on methods and procedures for preventing and reducing flood damages was in progress at end of fiscal year.

49. PRECONSTRUCTION ENGINEERING AND DESIGN

Bloomsburg, PA--The Town of Bloomsburg is located at the confluence of Fishing Creek and the North Branch of the Susquehanna River in central Columbia County, Pennsylvania. The Susquehanna River forms the southern boundary of the Town and is the most prominent drainage features, draining an area of 10,576 square miles. The NED plan recommended in the Study consists of a series of floodwater barriers that provide Bloomsburg with protection from a Hurricane Agnes-level storm (440-year return frequency) on the Susquehanna River and 100-year storm on Fishing Creek. Total expended Federal costs during FY 2009 were \$106,806.

Washington D.C. & Vicinity-- The project is authorized to provide protection from a 185-year flood event, but was designed and constructed to protect the Washington downtown area from a 100-year flood event. The National Park Service (NPS) is responsible for constructing the temporary closures at 17th Street and at 23rd Street, and for the operation and maintenance of the levee. The DC Emergency Management is responsible for constructing the temporary closure at P & Canal Streets. Total Federal costs during FY 2009 were \$9,749.and total American Recovery and Reinvestment Act costs were \$44,423.

**FORMERLY UTILIZED SITES
REMEDIAL ACTION PROGRAM
(FUSRAP)**

**50. W.R. GRACE, CURTIS BAY FACILITY,
MD**

Location. The W.R. Grace Curtis Bay Facility is located at 5500 Chemical Road in Baltimore, Maryland on an industrialized peninsula in south Baltimore, and consists of 260 acres owned by Grace. The property is bordered on the north by Curtis Bay, on the west by Curtis Creek, on the east by the Patapsco River, and on the south by the Baltimore city Municipal Landfill. The facility currently consists of a manufacturing plant and waste disposal areas.

Existing project. Currently, W.R. Grace manufactures and produces specialty chemicals at its Curtis Bay facility. The W.R. Grace Site has been separated into 2 distinct work components; Building 23 and the Radioactive Waste Disposal Area. Contamination at the site consists of radioactively-contaminated concrete building slabs and other surfaces impacted by the thorium extraction process in Building 23 and process residuals residing in the Radioactive Waste Disposal Area to the east of the plant property. The overall project cost is estimated at over \$30 million. A Site-Wide Settlement Agreement for Cleanup of the Site was signed in April 2008. The landowner, W.R. Grace-Davidson is responsible for leading the remedial activities with technical oversight provided by USACE. W.R. Grace-Davidson liability will be 40% of the total cost of cleanup for the site with the Government being responsible for the remaining 60%. Building 23 has a signed Record of Decision (ROD) and W. R. Grace-Davidson has begun to implement the remedial design.

Local Cooperation. Not applicable.

Operation and results during fiscal year. New Work: The Record of Decision (ROD) the Radioactive Waste Disposal Area has been drafted and is ready for HQUSACE signature in 2010. Pre-Remedial Activities were conducted by W.R.Grace-Davidson and a total of \$ 355,387.68 in costs were submitted by W.R.Grace-Davidson to the Government for financial reimbursement according to the Site-Wide Settlement Agreement Total cost for the fiscal year was \$547,805.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY 06	FY 07	FY08	FY09	Total to SEPT 30. 2009	
1	Baltimore Harbor and Channels, MD and VA	New Work						
		Approp.	(40,000)	0	0	(65,825)	151,507,887 <u>1/</u>	
		Cost	(43,931)	0	(39,777)	0	151,495,346 <u>1/</u>	
		Maint.					0	
		Approp.	17,582,209	16,701,000	19,188,000	16,806,140	359,306,072 <u>2/</u>	
		Cost	18,479,192	16,630,423	16,247,183	19,167,432	357,519,276	
		Contributed					0	
		Approp.	0	0	0	0	71,169,648	
		Cost	(14,643)	0	0	0	70,243,727	
		Maint.	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	10,610,200	10,610,200	
		Cost	0	0	0	8,450,767	8,450,767	
		1A.	Tolchester Channel, S-Turn, MD	Maint.				
Approp.	0			0	0	0	11,096,533	
Cost	0			0	0	0	11,096,530	
2	Baltimore Harbor, Anchorage & Channels, MD	New Work					0	
		Approp.	(40,000)	0	0	(65,825)	21,654,175	
		Cost	(16,034)	0	(39,777)	0	21,654,175	
		Contributed					0	
		Approp.	14,000	0	16,566	0	8,720,566	
		Cost	148,795	0	39,777	0	8,720,566	
3	Baltimore Harbor, MD, Collection & Removal of Drift	Maint.					0	
		Approp.	290,000	330,000	310,000	332,720	11,645,541	
		Cost	291,948	334,233	308,089	304,780	11,616,038	
4	Goose Creek, MD	Maint.					0	
		Approp.	0	0	118,000	0	118,000	
		Cost	0	0	74,408	10,428	84,836	
5	Herring Bay & Rockhold Creek, MD	Maint.					0	
		Approp.	0	0	689,000	1,000	1,310,673	
		Cost	0	0	52,389	630,289	1,302,535	
6	Honga River & Tar Bay, ¹	New Work					0	
		Approp.	0	0	0	0	66,119 <u>3/</u>	
		Cost	0	0	0	0	66,119 <u>3/</u>	
		Maint.					0	
		Approp.	0	0	702,000	354,000	12,822,287	
		Cost	4,431	0	84,896	934,460	12,818,951	
		Maint.					0	
		Maint.	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	562,950	562,950	
		Cost	0	0	0	7,013	7,013	
7	Little Wicomico, MD	Maint.					0	
		Approp.	0	0	92,000	852,600	1,495,742	
		Cost	0	0	58,218	97,487	706,848	
						0		

BALTIMORE, MD DISTRICT

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section	Project	Funding	FY 06	FY 07	FY08	FY09	Total to SEPT 30. 2009	
8	Ocean City Harbor and Inlet and Sinepuxent Bay, MD	New Work					0	
		Approp.	0	0	0	0	353,393 <u>4/</u>	
		Cost	0	0	0	0	365,344 <u>4/</u>	
		Maint.					0	
		Approp.	1,174,000	(583,000)	139,000	527,980	19,863,199	
		Cost	330,767	185,000	123,774	602,280	19,836,902	
						0		
9	Parish Creek, MD	Maint.					0	
		Approp.	0	0	59,000	1,078,000	1,177,000	
		Cost	0	0	47,268	70,048	157,314	
						0		
10	Potomac and Anacostia Rivers, DC, Collection & Removal of Drift	Maint.					0	
		Approp.	663,000	856,000	786,000	797,224	23,494,922	
		Cost	646,193	855,982	792,304	765,560	23,436,534	
		Maint.	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	84,000	84,000	
		Cost	0	0	0	41,295	41,295	
11	Rhodes Point to Tylerton, MD	Maint.					0	
		Approp.	0	0	130,000	473,340	1,769,661 <u>5/</u>	
		Cost	0	0	63,448	146,972	1,376,351 <u>5/</u>	
		Maint.	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	890,112	890,112	
		Cost	0	0	0	0	0	
12	Twitch Cove & Big Thorofare, MD	New Work					0	
		Approp.	0	0	0	0	424,800	
		Cost	0	0	0	0	424,800	
		Maint.					0	
		Approp.	0	0	93,000	122,500	8,373,999	
		Cost	0	0	64,019	142,077	8,340,453	
13	Washington Harbor, DC	Maint.					0	
		Approp.	0	0	0	3,731,088	3,731,088	
		Cost	0	0	0	13,868	13,868	
		New Work					0	
		Approp.	0	0	0	0	3,191,077 <u>6/</u>	
		Cost	0	0	0	0	3,191,077 <u>6/</u>	
14	Wicomico River, MD	Maint.					0	
		Approp.	723,000	20,000	19,000	7,540	6,393,200 <u>7/,8/</u>	
		Cost	168,910	485,835	100,540	19,928	6,372,213 <u>7/,8/</u>	
		Maint.					0	
		Approp.	0	0	0	0	471,609 <u>9/</u>	
		Cost	0	0	0	0	471,609 <u>9/</u>	
17	Assateague Island, MD	Maint.					0	
		Approp.	559,000	1,826,989	1,068,000	1,274,000	21,814,770	
		Cost	315,730	1,940,386	1,182,800	173,860	20,668,287	
		New Work					0	
		Approp.	757,000	1,000,000	1,722,000	478,000	16,743,560	
		Cost	645,726	1,057,603	793,744	1,157,565	16,338,517	
						0		

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section	Project	Funding	FY 06	FY 07	FY08	FY09	Total to SEPT 30. 2009
18	Atlantic Coast of Maryland	New Work					0
		Approp.	4,400,000	400,000	187,000	100,000	44,354,000
		Cost	651,612	4,118,172	156,626	163,494	41,292,790
		Contributed					0
		Approp.	3,444,000	545,064	115,314	236,391	30,362,438
		Cost	56,969	3,881,689	93,926	159,347	29,895,555
						0	
20	Charlestown, MD	New Work					0
		Approp.	0	0	197,000	0	197,000
		Cost	0	0	12,352	40,874	53,226
						0	
21	Cumberland, MD and Ridgeley, WV	New Work					0
		Approp.	609,000	200,000	280,000	0	24,194,070
		Cost	458,356	87,150	76,500	60,156	23,669,816
		Maint.					0
		Approp.	668,000	1,343,000	155,000	70,180	4,885,382
		Cost	442,765	386,231	1,218,731	158,932	4,562,824
						0	
22	Jennings Randolph Lake, MD and WV	New Work					0
		Approp.	352,000	50,000	0	0	178,040,077
		Cost	300,110	97,780	40,563	1,324	178,029,160
		Maint.					0
		Approp.	1,702,000	2,030,000	1,600,000	1,548,295	47,414,981
		Cost	1,800,293	1,988,986	1,712,997	1,464,022	47,304,345
						0	
22	Jennings Randolph Lake, MD and WV	Maint. (American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	670,000	670,000
		Cost	0	0	0	98,576	98,576
		Contributed					0
		Approp.		0	0	0	6,350
		Cost		0	0	0	0
						0	
23	Lackawanna River, PA	Contributed					0
		Approp.	0	0	0		0
		Cost	13,267	0	0		13,267
						0	
23A	Aylesworth Creek Lake, PA	New Work					0
		Approp.	0	0	0	0	2,320,400
		Cost	0	0	0	0	2,320,400
		Maint.					0
		Approp.	213,000	260,000	296,000	195,020	5,414,702
		Cost	211,856	244,806	274,919	201,767	5,383,785
						0	
24	Olyphant, Lackawanna River, PA	New Work					0
		Approp.	0	0	0	0	12,959,000
		Cost	150,673	54,661	0	3,008	12,767,839

BALTIMORE, MD DISTRICT

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section							Total	
In Text	Project	Funding	FY 06	FY 07	FY08	FY09	to SEPT 30. 2009	
25	Raystown Lake, Raystown Branch, Juniata River, PA	New Work					0	
		Approp.	0	0	0	0	77,408,770	
		Cost	0	0	0	0	77,408,770	
		Maint.					0	
		Approp.	4,257,198	4,418,000	4,104,000	3,210,619	104,812,931	
		Cost	4,168,763	4,175,457	4,338,708	3,277,105	104,225,752	
		Maint.	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	3,564,726	3,564,726	
		Cost	0	0	0	678,532	678,532	
		Contributed					0	
		Approp.	0	0	0	0	28,334	
		Cost	0	0	0	0	26,143	
							0	
							0	
26	Lackawanna River, Scranton, PA	New Work					0	
		Approp.	15,000,000	0	3,218,000	4,576,000	53,586,000	
		Cost	10,392,078	6,047,131	6,062,369	1,353,211	49,892,162	
		New Work	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	6,829,575	6,829,575	
		Cost	0	0	0	689,634	689,634	
		Contributed					0	
		Approp.	0	2,537,833	200,000	2,555,201	6,184,034	
		Cost	0	0	2,528,437	1,700,384	5,106,554	
							0	
27A	Addison, NY	New Work					0	
		Approp.	0	0	0	0	827,050	
		Cost	0	0	0	0	827,050	
		Maint.					0	
		Approp.	17,000	19,000	20,300	16,000	525,180	
		Cost	15,286	17,458	21,083	18,932	525,069	
					0			
27B	Almond Lake, NY	New Work					0	
		Approp.	0	0	0	0	5,760,211	
		Cost	0	0	0	0	5,760,211	
		Maint.					0	
		Approp.	429,000	462,000	539,000	386,120	12,438,138	
		Cost	390,582	445,093	573,936	400,009	12,397,720	
					0			
27C	Arkport Dam, NY	New Work					0	
		Approp.	0	0	0	0	1,910,000 <u>10/</u>	
		Cost	0	0	0	0	1,910,000 <u>10/</u>	

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section							Total	
In Text	Project	Funding	FY 06	FY 07	FY08	FY09	to SEPT 30. 2009	
27E	Binghamton, NY	New Work					0	
		Approp.	0	0	0	0	3,460,000 <u>12/</u>	
		Cost	0	0	0	0	3,460,000 <u>12/</u>	
		Maint.					0	
		Approp.	138,000	415,300	208,100	76,722	2,255,150	
		Cost	93,769	399,801	221,973	122,275	2,254,027	
							0	
27F	Canisteo, NY	New Work					0	
		Approp.	0	0	0	0	1,183,111 <u>13/</u>	
		Cost	0	0	0	0	1,183,111 <u>13/</u>	
		Maint.					0	
		Approp.	56,000	76,000	111,300	79,000	1,722,461	
		Cost	47,839	75,029	88,176	77,160	1,687,577	
							0	
27G	Corning, NY	New Work					0	
		Approp.	0	0	0	0	3,322,000 <u>14/</u>	
		Cost	0	0	0	0	3,322,000 <u>14/</u>	
		Maint.					0	
		Approp.	75,000	76,000	126,400	74,855	2,004,250	
		Cost	64,968	86,632	125,593	73,392	1,997,928	
							0	
27H	East Sidney Lake, NY	New Work					0	
		Approp.	0	0	0	0	6,049,504	
		Cost	0	0	0	0	6,049,504	
		Maint.					0	
		Approp.	485,000	598,000	621,000	476,827	15,003,785	
		Cost	477,584	588,379	601,110	507,320	14,996,015	
							0	
		Maint.	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	57,865	57,865	
		Cost	0	0	0	0	0	
27I	Elmira, NY	New Work					0	
		Approp.	0	0	0	0	6,883,305	
		Cost	0	0	0	0	6,883,305	
		Maint.					0	
		Approp.	18,000	11,000	25,200	11,000	671,546	
		Cost	17,059	11,895	23,144	12,054	670,437	
							0	
27J	Hornell, NY	New Work					0	
		Approp.	0	0	0	0	4,558,698 <u>15/</u>	
		Cost	0	0	0	0	4,558,698 <u>15/</u>	
		Maint.					0	
		Approp.	180,000	187,200	200,900	206,420	12,096,386	
		Cost	111,737	174,287	203,189	213,333	12,022,522	
							0	
27K	Lisle, NY	New Work					0	
		Approp.	0	0	0	0	661,199 <u>16/</u>	
		Cost	0	0	0	0	661,199 <u>16/</u>	

BALTIMORE, MD DISTRICT

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section							Total to
In Text	Project	Funding	FY 06	FY 07	FY08	FY09	SEPT 30. 2009
27L	Oxford, NY	New Work					0
		Approp.	0	0	0	0	131,000 17/
		Cost	0	0	0	0	131,000 17/
		Maint.					0
		Approp.	18,000	20,000	41,500	35,000	615,837
		Cost	18,217	14,577	30,104	48,631	612,451
							0
27M	Whitney Point Lake, NY	New Work					0
		Approp.	10,000	4,316,000	0	0	9,747,540
		Cost	9,990	142,521	2,445,808	1,687,482	9,707,341
		Maint.					0
		Approp.	637,000	831,000	626,000	520,690	22,128,467
		Cost	631,027	853,960	637,632	563,683	22,123,901
		Maint. (American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	152,284	152,284
		Cost	0	0	0	38,528	38,528
		Contributed					0
		Approp.	0	1,480,000	600,000	0	2,080,000
		Cost	0	0	976,241	882,589	1,858,830
							0
27N	Whitney Point Village, NY	New Work					0
		Approp.	0	0	0	0	424,196
		Cost	0	0	0	0	424,196
		Maint.					0
		Approp.	18,000	26,500	95,300	45,900	1,578,286
		Cost	16,692	21,365	85,400	58,309	1,569,479
							0
28	Stillwater Lake, Lackawanna River, PA	New Work					0
		Approp.	0	0	0	0	5,725,700
		Cost	0	0	0	0	5,725,700
		Maint.					0
		Approp.	408,000	379,000	529,000	326,860	9,920,389
		Cost	334,772	391,904	564,323	308,414	9,871,799
							0
29A	Cowanesque Lake, PA	New Work					0
		Approp.	0	0	0	0	107,470,700
		Cost	0	0	0	0	107,470,751
		Maint.					0
		Approp.	1,866,903	2,047,000	2,336,000	1,795,360	43,948,883
		Cost	1,849,443	2,004,596	2,249,110	1,903,897	42,895,546
		Maint. (American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	387,452	387,452
		Cost	0	0	0	62,546	62,546

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section		Funding	FY 06	FY 07	FY08	FY09	Total to	
In Text	Project						SEPT 30. 2009	
29B	Tioga-Hammond Lakes, PA	New Work					0	
		Approp.	0	0	0	0	186,244,800	
		Cost	0	0	0	0	186,244,800	
		Maint.					0	
		Approp.	2,426,300	2,568,500	2,749,500	2,125,620	60,446,825	
		Cost	2,369,051	2,564,418	2,578,984	2,309,072	60,431,553	
	30A	Alvin R. Bush Dam, PA	Maint.					0
			Approp.	(American Recovery and Reinvestment Act)				0
			Approp.	0	0	0	1,314,000	1,314,000
			Cost	0	0	0	269,369	269,369
			New Work					0
			Approp.	0	0	0	0	7,103,001
30B	Curwensville Lake, PA	Cost	0	0	0	0	7,103,001	
		Maint.					0	
		Approp.	629,000	620,000	752,000	568,095	18,485,421	
		Cost	606,150	605,178	710,358	637,151	18,481,938	
		New Work					0	
		Approp.	0	0	0	0	20,396,060	
	30C	Foster Joseph Sayers Dam, PA	Cost	0	0	0	0	20,396,060
			Maint.					0
			Approp.	631,500	725,000	745,000	557,316	21,346,686
			Cost	581,641	753,989	719,132	604,145	21,335,381
			Maint.	(American Recovery and Reinvestment Act)				0
			Approp.	0	0	0	604,800	604,800
31		Wyoming Valley, PA (Levee Raising)	Cost	0	0	0	40,412	40,412
			Contributed					0
			Approp.	0	0	(1,157)	0	1,749,896
			Cost	(474)	0	0	0	1,733,579
			New Work					0
			Approp.	0	0	0	0	30,887,063
30C	Foster Joseph Sayers Dam, PA	Cost	0	0	0	0	30,887,063	
		Maint.					0	
		Approp.	656,000	860,000	745,000	593,160	22,350,531	
		Cost	643,195	847,793	698,305	661,445	22,343,628	
		Maint.	(American Recovery and Reinvestment Act)				0	
		Approp.	0	0	0	96,000	96,000	
	31	Wyoming Valley, PA (Levee Raising)	Cost	0	0	0	41,000	41,000
			New Work					0
			Approp.	10,391,000	5,600,000	1,096,000	1,187,000	115,055,000
			Cost	2,863,334	4,059,755	6,407,100	4,696,824	114,732,608
			New Work	(American Recovery and Reinvestment Act)				0
								0

BALTIMORE, MD DISTRICT

**TABLE
4-A**

COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	Total to					
			FY 06	FY 07	FY08	FY09	SEPT 30 2009	
32	York, Indian Rock Dam, PA	New Work					0	
		Approp.	0	0	0	0	5,601,167	19/
		Cost	0	0	0	0	5,601,167	19/
		Maint.					0	
		Approp.	505,000	822,000	728,000	497,260	23,360,938	20/
		Cost	476,637	671,549	891,158	515,487	23,239,560	20/
							0	
		Maint. (American Recovery and Reinvestment Act)					0	
		Approp.	0	0	0	168,000	168,000	
		Cost	0	0	0	20,596	20,596	
36	Anacostia River & Tributaries, MD & DC	New Work					0	
		Approp.	0	6,250	303,000	30,000	10,769,250	
		Cost	37,959	28,464	15,224	28,574	10,664,864	
		Contributed					0	
		Approp.	0	0	100,000	0	1,090,000	
		Cost	581	1,294	16,092	0	1,005,425	
					0			
37	Chesapeake Bay Oyster Recovery, MD	New Work					0	
		Approp.	1,255,000	250,000	65,000	2,200,000	10,274,000	
		Cost	895,842	202,758	192,746	553,448	8,276,414	
					0			
38	Chesapeake Bay Environmental Program, MD	New Work					0	
		Approp.	1,709,989	116,621	1,549,000	485,825	8,246,435	
		Cost	804,439	439,422	598,831	645,270	6,777,562	
		Contributed					0	
		Approp.	603,740	0	292,063	0	1,999,519	
		Cost	220,669	226,397	288,436	275,839	1,934,829	
					0			
39	Gwynns Falls, MD	New Work					0	
		Approp.	905,000	1,000,000	439,000	478,000	2,822,000	
		Cost	87,678	63,151	509,188	1,534,116	2,194,133	
		Contributed					0	
		Approp.	0	0	0	0	87,500	
		Cost	70,700	5,638	0	11,063	87,401	
					0			
40	Northeast Counties, PA	New Work					0	
		Approp.	1,671,500	2,318,000	3,611,000	30,000	10,450,500	
		Cost	1,026,412	1,224,215	954,517	2,215,862	7,777,419	
		Contributed					0	
		Approp.	1,234,833	399,947	761,865	571,942	3,641,587	
		Cost	617,753	952,391	322,449	937,035	3,231,763	
					0			

TABLE 4-A COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY 06	FY 07	FY08	FY09	Total to SEPT 30 2009	
41	Poplar Island, MD	New Work					0	
		Approp.	13,102,000	13,786,015	13,387,000	9,412,000	183,877,015	
		Cost	10,682,368	10,887,539	11,971,431	9,429,783	176,907,194	
		New Work	(American Recovery and Reinvestment Act)					0
		Approp.	0	0	0	910,746	910,746	
		Cost	0	0	0	0	0	
		Contributed					0	
		Approp.	0	1,400,000	0	0	42,500,000	
		Cost	29,628	0	2,042,832	(2,355)	42,479,260	
								0
42	South Central PA Environ- mental Improvement Program	New Work					0	
		Approp.	4,196,000	7,969,000	4,133,000	4,500,000	84,278,550	
		Cost	3,677,365	2,586,815	2,401,189	3,656,414	77,036,701	
		Contributed					0	
		Approp.	250,000	0	0	0	7,347,916	
		Cost	177,402	62,985	9,613	0	7,347,916	
						0		
44	Dents Run, PA	New Work					0	
		Approp.	964,900	704,254	474,000	0	4,467,554	
		Cost	711,769	681,351	1,198,517	135,627	4,181,512	

1. Includes \$8,467,003 for previous projects.
2. Includes \$399,802 for previous projects.
3. Excludes \$2,200 contributed funds and includes \$27,668 emergency relief funds.
4. Includes \$283,008 public works funds and \$67,185 emergency relief funds; excludes \$500,000 contributed funds.
5. Excludes \$2,368,946 for previous projects.
6. Includes \$3,029,001 for previous projects.
7. Excludes \$1,831,609 for previous projects.
8. Excludes \$4,000 for emergency dredging under provisions of Sec 3, 1945 River and Harbors Act.
9. Includes \$50,000 for previous project and excludes \$14,000 contributed funds.
10. Includes \$62,577 emergency relief funds.
11. Includes \$109,944 emergency relief funds.
12. Excludes \$163,096 contributed funds.
13. Includes \$207,520 rehabilitation funds.
14. Excludes \$34,729 contributed funds.
15. Includes \$250,899 emergency relief funds and excludes \$15,000 Contributed funds.
16. Includes \$71,557 emergency relief funds.
17. Includes \$73,465 emergency relief funds.
18. Excludes \$263,900 contributed funds in accordance with the Tri-party Agreement for construction of sanitary system for public use.
19. Includes \$11,588 emergency relief funds.

BALTIMORE, MD DISTRICT

TABLE 4-B

AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
1.		BALTIMORE HARBOR AND CHANNELS, MD and VA	
	Aug 8, 1917	Branch channel 35 feet deep to head to Curtis Bay, and one 35 feet deep and 400 feet wide Fort McHenry to Port Covington entrance channel, thence 150 feet wide to Ferry Bar, and thence 27 feet deep and 150 feet wide to Hanover Street Bridge, widens approaches and bends, and enlarge anchorage basin near entrance. Inclusion of Patapsco River and tributaries into one project for Baltimore Harbor.	H. Doc. 799, 64th Cong., 1 st Sess.
	Jan 21, 1927	Change in location of anchorage near upper end of Fort McHenry Channel.	
	Jul 3, 1930	Increased anchorage facilities Rivers and Harbors.	Committee Doc. 11, 70th Cong., 1 st Sess.
	Jul 3, 1930	For 37-foot depth in that portion of channel to Baltimore lying between 37-foot depth curve near Baltimore Light to Sparrows Point entrance channel; widen angle between Fort McHenry and Ferry Bar section; and for width of 400 feet in Curtis Bay section.	H. Doc. 86, 85 th Cong., 1 st Sess.
	Oct 17, 1940	For 22-, 18-, and 15-foot channels in Curtis Creek from 22-foot depth below Pennington Avenue Bridge to upper end of marginal wharf of U.S. Ordinance Depot	Adopted as a national defense project. (No printed report.)
	Mar 2, 1945	Uniform main channel 309 feet deep from the ocean through York Spit section and Craighill entrance to Fort McHenry, additional anchorage area, 2,400 feet long, 1,200 feet wide, and 30 feet deep; a connecting channel 400 feet wide and 27 feet deep from Cutoff Brewerton Angle in main channel to Inland Waterway from Delaware River to Chesapeake Bay; a channel in Curtis Creek 200 feet wide and 35 feet deep from head of existing 35-foot project channel in Curtis Bay to a point in the creek about 750 feet below Pennington Avenue Bridge.	H. Doc. 741, 79 th Cong., 2 nd Sess.
	Mar 2, 1945	A channel 22 feet deep and 200 feet wide from 22-foot depth curve south of Baltimore & Ohio R.R. bridge about 2,800 feet to vicinity of Arundel Cove, thence 100 feet wide in Arundel Cove for about 2,100 feet; with an anchorage basin about 700 feet square adjacent to channel southwesterly of Coast Guard wharf.	In accordance with plans on file in the Office, Chief of Engineers
	Jul 3, 1958	Main channel 42 feet deep and 1,000 feet wide in Cape Henry section at entrance to Chesapeake Bay and in York Spit section; 42 feet deep and 800 feet wide in Rappahannock Spit section and in approach channel to Baltimore Harbor from Craighill entrance to Fort McHenry, with widening at entrance and bends; channels 42 feet deep and 600 feet wide in Curtis Bay and Ferry Bar sections of harbor; a connecting channel 35 feet deep and 600 feet wide from main channel to approach channel to Chesapeake and Delaware Canal; and for three disjointed sections of channels of same depth and width in Chesapeake Bay leading to Chesapeake and Delaware Canal; and to provide Federal maintenance of 39-foot depth in Northwest Branch, in areas dredged to that depth by local interests.	H. Doc. 86, 85 th Cong., 1 st Sess.
	Dec 31, 1970	Deepening of the Cape Henry Channel to 50 feet at the existing width of 1,000 feet, with widening at bends; deepening of the Spit Channel to 50 feet at the existing width of 1,000 feet, with widening at bends; enlargement of the Rappahannock Shoal Channel to a depth of 50 feet and a width of 1,000 feet; deepening of the main ship channel from Chesapeake Bay to Fort McHenry to a depth of 50 feet at the existing width of 800 feet, with widening at bends and at the Craighill Entrance; deepening of the Curtis Bay Channel to a depth of 50 feet at the existing width of 600 feet, and deepening of the 950-foot wide and 980-foot long turning basin at the head of channel to the same depth; deepening of the Northwest Branch0East Channel to a depth of 49 feet from the depth existing at the time of construction at a width of 600 feet, and deepening of the 950-foot wide and 950-foot long turning basin at the head of the channel to the same depth; and deepening and extension of the Northwest Branch0West Channel to a depth of 40 feet from the depth existing at the time of construction, at a width of 600 feet, and with an irregularly shaped turning basin at the head of the channel 40 feet deep and about 2,000 feet long with a maximum width of 1,150 feet.	H. Doc. 181, 94 th Cong., 1 st Sess.
	Aug 5, 1999	Dredge a new straight channel 35 feet deep, 600 feet wide, and 2 miles long to replace the existing Tolchester Channel S-Turn off Tolchester Beach.	Water Resources Dev. Act of 1999

TABLE 4-B (Continued)

AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
2.		BALTIMORE HARBOR ANCHORAGES AND CHANNELS, MD	
	Aug 17, 1999	Widen and deepen two existing Federal anchorages; widen several connecting channels; provide a new turning basin near Fort McHenry; and provide a new branch channel within the Port of Baltimore.	Chief of Engineers Report dated Jun 8, 1998
3.		BALTIMORE HARBOR, MD, COLLECTION AND REMOVAL OF DRIFT	
	Jun 30, 1948	Collection and removal of drift from Baltimore Harbor and its tributary waters.	River and Harbor Act of 1948
4.		GOOSE CREEK, MD	
	Oct 11, 1967 July 14, 1960	Channel 60 feet wide and 6 feet from that depth in the Manokin River to and including a basin 100 feet wide and 200 feet long in Goose Creek.	Detailed Project Report, October 1966
5.		HERRING BAY AND ROCKHOLD CREEK	
	Jul 3, 1930	A channel 60 feet wide, 5 feet deep, from the 6-foot contour in Herring Bay to the 3-foot contour in Rockhold Creek.	Rivers and Harbors Committee Doc 34, 71 st Cong., 2 nd Sess.
	Jun 20, 1938	For the present project channel dimensions, 7 feet deep and 60 feet wide, the turning basin 7 feet deep and a stone breakwaters 900 feet long.	H. Doc 595, 75 th Cong., 3 rd Sess.
6.		HONGA RIVER & TAR BAY, MD	
	Aug 30, 1935	Channel 60 feet wide and 7 feet deep from the 7-foot contour in Chesapeake Bay through Tar Bay and Fishing Creek to the 7-foot contour in Honga River.	Rivers and Harbors Committee Doc. 35, 74 th Cong., 1 st Sess.
	Jun 30, 1948	Modification providing for a channel in Back Creek 7 feet deep and 60 feet wide from the 7-foot depth curve in Honga River to a point near the head of Back Creek, with a turning basin of the same depth, 150 feet long and 200 feet wide.	H. Doc. 580, 80 th Cong., 2 nd Sess.
7.		LITTLE WICOMICAO RIVER, MD	
	Aug. 30, 1935	A channel 8 feet deep and 150 feet wide from Potomac River to deep water in Little Wicomico River; two stone jetties 1,000 feet and 1,300 feet long at the entrance; and 1,004 linear feet of timber bulkhead to stabilize the dredged inner channel.	Rivers and Harbors Committee Doc. 24, 72 nd Cong., 1 st Sess.
8.		OCEAN CITY HARBOR AND INLET AND SINEPUXENT BAY, MD	
	Aug 30, 1935	Construction of an inlet between the Atlantic Ocean and Sinepuxent Bay, 10 feet deep and 200 feet wide, protected by jetties; a channel 8 feet deep and 100 feet wide from the inlet to Ocean City, 6 feet deep and 150 feet wide to Green Point, and 100 feet wide into Chincoteague Bay.	Rivers and Harbors Committee Doc. 38, 72 nd Cong., 1 st Sess. ³
	Aug 30, 1935 ³	Modification providing a 10-foot by 100-foot channel from the inlet to the west side of the bay with two turning basins; a channel 6 feet deep and 125 feet wide from the inlet to Ocean City, 6 feet deep and 150 feet wide to Green Point feet wide into Isle of Wight Bay.	Rivers and Harbors Committee Doc. 60, 74 th Cong., 1 st Sess. ⁴
	Sep 3, ⁴ 1945	Modification providing for raising the north jetty to an elevation 9 feet above mean low water, and a channel 300 feet wide and 16 feet deep from the ocean through the inlet to the Isle of Wight Bay Channel, thence 200 feet to the project harbor, and a depth of 14 feet in the project harbor. Channel depths refer to project datum.	H. Doc. 444, 82 nd Cong., 2 nd Sess.
9.		PARISH CREEK, SHADY SIDE, MD	
	Aug 30, 1935	Provide a channel 8 feet deep and 50 feet wide, widened at its ends, from deep water in West River to the head of the south fork of Parish Creek and an anchorage basin at the junction with the north fork of Parish Creek, having a depth of 6 feet and an area not exceeding 1.5 acres.	H. Doc. 185, 72 nd Cong., 1 st Sess.
	Aug 30, 1935	Modification to reduce the length of the western boundary of the turning basin by 100 feet.	Rivers and Harbors 49 Stat. 1031 1 st Sess.

TABLE 4-B (Continued) AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
10.		POTOMAC & ANACOSTIA RIVERS, DC, COLLECTION & REMOVAL OF DRIFT	
	Oct 27, 1985	Collection and removal of drift from waters of the Potomac and Anacostia Rivers and their tributaries in the Washington, DC area from the head of the tidewater to Mount Vernon. VA.	H. Doc. 286, 89 th Cong., 1 st Sess.
11.		RHODES POINT TO TYLERTON, MD	
	Jan 22, 1982 Sec. 107 Jul 14, 1960	A channel 6 feet deep and 50 feet wide at mean low water from Tylerton to limit of existing Rhodes Point to Tylerton Federal navigation channel, a distance of about one-mile, through Sheel Pen Gut to deep water in the Chesapeake Bay.	Detailed Project Report June 1981
	Sep 3, 1954	A channel 4 feet deep at mean low water and 50 feet wide from Tylerton to Rhodes Point via Rhodes Point Gut.	H. Doc. 51 82 nd Cong., 1 st Sess. ²
	Aug 1, 1968 Sec. 107 Jul 14, 1960	Modification providing for a channel 6 feet deep and 50 feet wide from that depth in Tyler Creek to and including an anchorage basin of the same depth 150 feet wide and 400 feet long at Tylerton; channel 6 feet deep and 50 feet wide from that depth in Shanks Creek to and including an anchorage basin of the same depth 100 feet wide and 400 feet long at Rhodes Point; channel 6 feet deep and 50 feet wide from that depth in Big Thorofare River to Tylerton; channel 6 feet deep and 50 feet wide from Rhodes Point to Tylerton.	Detailed Project Report, February 1968
12.		TWITCH COVE & BIG THOROFARE, MD	
		A channel 4 feet deep and 25 feet wide from Tangier Sound into Big Thorofare River, and one of same dimensions around point between said river and Tyler River.	H. Doc. 285, 62 nd Cong., 2 nd Sess.
13.		WASHINGTON HARBOR, DC	
	Aug 30, 1935	Provides for: (a) Virginia Channel, from Giesboro Point to area for 25,000 square feet; (b) Washington Channel, from Haines Point to head of Washington Channel, 24 feet deep and 400 feet wide; (c) Anacostia River from Giesboro Point to Anacostia Bridge, 24 feet deep and 400 feet wide, with turning basin 800 feet wide and about 2,400 feet long of same depth opposite Naval Weapons Plant, (d) Anacostia River from Anacostia Bridge 24 feet deep and 200 feet wide to turning basin 400 feet square of same depth at foot of 15th Street SE Channel lengths including turning basins are: Virginia Channel, 25,000 feet; Washington Channel, 10,000 feet; and Anacostia River, 15,000 feet; and (e) operation and maintenance of inlet gates and lock and outlet gates of Tidal Basin constructed under a previous project to flush Washington Channel.	Rivers and Harbors Committee Doc. 22, 74 th Cong., 1 st Sess. ¹
14.		WICOMICO RIVER, MD	
	Sep 19, 1890	Channel 9 feet deep from Main Street Bridge to about 2 miles below.	H. Doc. 20, 51 st Cong., 1 st Sess., and Annual Report 1890, p. 947
	Jun 25, 1910	Extend 9-foot depth into north prong from Main Street Bridge to the Salisbury Dam and turning basin.	H. Doc. 569, 61 st Cong., 2 nd Sess.
	Mar 2, 1919	Extend 9-foot depth into south prong to head of navigation at Cathell Street, including a turning basin, and extend project down to mouth of river in Monie Bay.	H. Doc. 1509, 63 rd Cong., 3 rd Sess.
	Jul 3, 1930	A 12-foot channel below the Main Street Bridge.	
	Aug 26, 1937	A 14-foot channel, 150 feet wide; depths of 14 feet in the north and south prongs and a basin 6 feet deep at Webster Cove and approach channel thereto of the same depth.	Senate Committee Print, 75 th Cong., 3 rd Sess.

TABLE 4-B (Continued)

AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
	Sep 3, 1954	Enlarge existing basin at Webster Cove, by dredging an extension 6 feet deep, 100 feet wide, and 200 feet long on each side of existing basin to form a T-shaped harbor.	H. Doc. 619, 81 st Cong., 2 nd Sess.
17.		ASSATEAGUE ISLAND, MD	
	Oct 12, 1996	Provides for expediting the Assateague Island restoration feature of the Ocean City, Maryland and vicinity study with a Federal appropriation limit of \$35 million.	P.L. 104-303
18.		ATLANTIC COAST OF MARYLAND	
	Nov 17, 1986	Consists of a dune beginning at 27th Street extending north to the Delaware line; a steel sheet pile bulkhead from 27th Street south to Fourth Street; and widened and raised beach from Third Street to just beyond the Delaware line.	Report of the Chief of Engineers dated Sept. 29, 1981 Energy Water Dev. Approp. Act
	Sep 29, 1989	Modification reauthorized the project at a higher project cost determined by Section 902 of the Water Resources Development Act of 1986.	District Engineer's Post Authorization Notification Report
20.		CHARLESTOWN, MD	
	Nov 8, 2007	Authorized for a new effort to consider non-structural flood damage reduction and ecosystem restoration. Mentions land acquisition and Conversion to habitat.	PL 110-114 Sec. 5087
21.		CUMBERLAND, MD, AND RIDGELEY, WV	
	Jun 22, 1936	Levees, retaining walls, movable dam, and channel clearing for Cumberland, West Cumberland and South Cumberland, MD and Ridgeley, WV.	H. Doc. 101, 73 rd Cong., 1 st Sess.
	Jul 24, 1946	Levees, wall, channel improvement, remove Chesapeake and Ohio Canal Dam and construct new industrial dam.	Report on file in Office, Chief of Engineers
	Oct 12, 1996	Secretary may provide, technical, planning and design assistance for Restoration of C&O Canal	P.L. 104-303 Sec. 535
	Aug 17, 1999	Authorized project for restoration of historic C&O Canal at total cost of \$15,000,000.	P.L. 106-53 Sec. 580
	Nov 8, 2007	Increases authorization limit to \$25,750,000	P.L. 110-114 Sec. 3086
22.		JENNINGS RANDOLPH LAKE, MD AND WV	
	Oct 23, 1962	Construction of Bloomington Lake project.	H. Doc. 469, 87 th Cong., 2 nd Sess.
23.		LACKAWANNA RIVER BASIN, PA	
	Oct 23, 1962	Construction of Aylesworth Creek Lake, Fall Brook Lake, and local protection works on Lackawanna River at Scranton, Pennsylvania	S. Doc. 141, 87 th Cong., 2 nd Sess. Authorized by Detailed Project Report, Dec 2001
24.		OLYPHANT, LACKAWANNA RIVER, PA	
	Oct 31, 1992	Provides for 3,800 feet of earth levee, 1,400 feet of concrete floodwall, a closure structure, interior drainage facilities, 1,500 feet of gabion slope protection and associated cultural mitigation and environmental restoration.	Report of the Chief of Engineers dated June 29, 1992
	Dec 1, 2003	Increases project authorization to \$23,000,000.	P.L. 108-137

TABLE 4-B (Continued)

AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
25.		RAYSTOWN LAKE, RAYSTOWN BRANCH, JUNIATA RIVER, PA	
	Oct 23, 1962	Construction of dam and appurtenant facilities.	H. Doc. 565,
	Nov 8, 2007	Authorize to take action to prevent shoreline erosion on east shore of Raystown Lake	P.L. 110-114 Sec. 3140
26.		LACKAWANNA RIVER, SCRANTON, PA	
	Oct 31, 1992	Provides for 5,800 feet of earth levee, 1,700 feet of concrete floodwall, 3 closure structures, interior drainage facilities, 2,700 feet of gabion slope protection, an improved flood warning system, removal of a railroad bridge, access ramp, and associated cultural mitigation.	Report of the Chief of Engineers dated June 29, 1992
	Modified by Act of Oct 12, 1996	Directs Secretary to carry out the project for Plot and Green Ridge sections and allows non-Federal interest to participate in the financing of the project in accordance with Section 903(c) of WRDA 86.	P.L. 104-303
27.		SOUTHERN NEW YORK FLOOD DAMAGE REDUCTION PROJECTS	
	Jun 22, 1936 modified by Acts of Jun 28, 1938 Aug 18, 1941; Dec 22, 1944; May 17, 1950; and Jul 3, 1958	Construction of detention reservoirs and related Flood Damage Reduction works for protection of Binghamton, Hornell, Corning and other towns in New York and Pennsylvania.	pro-H. Doc. 702, 77 th Cong., 2 nd Sess.

TABLE 4-B (Continued) AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
28.		STILLWATER LAKE, LACKAWANNA RIVER, PA	
	Aug 18, 1941	Construction of a Flood Damage Reduction reservoir.	H. Doc. 702, 77 th Cong., 2 nd Sess.
29.		SUSQUEHANNA RIVER FLOOD DAMAGE REDUCTION PROJECTS, NY AND PA	
	Jul 3, 1958	Construction of Cowanesque and Tioga-Hammond reservoirs, local flood protection works at Elkland, PA, and Nichols, NY and channel improvement at Cortland, NY.	H. Doc. 702, 77 th Cong., 2 nd
	Oct 22, 1976	Modification in connection with the construction of Cowanesque Lake to relocate the Town of Nelson, PA, to a new townsite.	H. Doc. 394, 84 th Cong., 2 nd Sess.
	Mar 1, 1983	Modification of Cowanesque Lake to include water supply as provided by Section 4 of the Flood Damage Reduction Act of 1944 (PL 78-534) and Section 301 of Water Supply Act of 1958 (PL 85-500).	
30.		WEST BRANCH OF SUSQUEHANNA RIVER, PA	
	Sep 3, 1954	Construction of three Flood Damage Reduction reservoirs.	H. Doc. 29, 84 th Cong., 1 st Sess.
31.		WYOMING VALLEY, PA (LEVEE RAISING)	
	Nov 17, 1986	Modification provides for raising existing levees and floodwalls between 3 and 5 feet, modifying closure structures, relocating utilities and providing some new floodwalls and levees to maintain the integrity of the existing Flood Damage Reduction system.	Report of the Chief of Engineers dated October 19, 1983
	Oct 12, 1996	Modification to include as part of the construction of the project mechanical and electrical upgrades to stormwater pumping stations. The second modification is for the non-Federal sponsor to carry out mitigation measures that the Secretary would otherwise be authorized to carry out.	PL 104-303 Sec. 346
	Nov 8, 2007	Modify project to include Solomon's Creek as project element.	P.L. 110-114 Sec. 3142
	Nov 8, 2007	Coordinate with non-Federal interest to review opportunities for increase public access	P.L. 110-114 Sec. 3144
32.		YORK, INDIAN ROCK DAM, PA	
	Jun 22, 1936	Construction of Indian Rock Dam and channel improvements on Codorus Creek.	H. Doc. 702, 77 th Cong., 2 nd Sec
36.		ANACOSTIA RIVER AND TRIBUTARIES, MD AND DC	
	Oct 12, 1996	The project consists of two wetland restoration sites in the District of Columbia, one stream restoration site and one stormwater wetland site in Prince George's County, and nine stream restoration and stormwater wetland sites in Montgomery County. The project will restore a total of 80 acres of tidal and non-tidal freshwater wetlands, 5 miles of piedmont streams, and 33 acres of bottomland hardwood forest within the highly urbanized Anacostia River watershed	Report of the Chief of Engineers, dated November 15, 1994

BALTIMORE, MD DISTRICT

TABLE 4-B (Continued)

AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
37.		CHESAPEAKE BAY OYSTER RECOVERY, MD	
	Nov 17, 1986	Contributes to multi-agency and private efforts to restore oyster populations in the Maryland portion of the Chesapeake Bay. Up to \$5M authorized for Construction. Established project cost-sharing as 75 percent Federal, 25 Percent non-Federal.	P.L. 99 - 662
	Oct 12, 1996	Modification by inserting "and Virginia" after "Maryland" and increased program Authorization to \$7 million.	P.L. 104-303
	Dec 11, 2000	Increased program authorization to \$20 million. Changed project type to "the construction of reefs and related clean shell substrate for fish habitat, including Manmade 3-dimensional oyster reefs, in the Chesapeake Bay and its tributaries In Maryland and Virginia...". Added provision about permanent sanctuaries By the non-Federal interests, consistent with the June 1999 Oyster Consensus Document. Added provision that use of commercial watermen was acceptable.	P.L. 106-541 Sec. 342
	2002	Allows in-kind service credits for the entire non-Federal share, including Provision of shell stock material. Effective for credits after October 1, 2000. Credits must be integral to the project.	P.L. 107-66 Sec. 113
	Nov 19, 2006	Increases authorization limit to \$30M.	P.L. 109-103
	Nov 8, 2007	Increases authorization limit to \$50M. Identifies five specific types of activities For oyster restoration – adds construction/upgrading of hatcheries, allows Use of appropriate alternative substrate. Identifies that the purpose for the oyster restoration activities is for establishing permanent sanctuaries and harvest management areas. Identifies that these activities are to be consistent with other restoration plans and strategies.	P.L 110-114 Sec. 5021
38.		CHESAPEAKE BAY ENVIRONMENTAL PROGRAM, MD AND VA	
	Oct 12, 1996	Establishes a pilot program to provide environmental design and construction assistance to new Federal interests in the Chesapeake Bay watershed.	P.L. 104-303
	Nov 8, 2007	Increases authorization limit to \$40,000,000 and adds submerged aquatic vegetation as project purpose.	P.L. 110-114 Sec. 5020
39.		BALTIMORE METROPOLITIAN WATER RESOURCES, GWYNNS FALLS, MD	
	Sep 30, 2004	The Secretary of the Army shall implement the project for ecosystem restoration, Gwynns Falls, Maryland, in accordance with the Baltimore Metropolitan Water Resources-Gwynns Falls Watershed Feasibility Report prepared by the Corps of Engineers and the City of Baltimore, Maryland.	P.L 108-357 Sec 123

TABLE 4-B (Continued) AUTHORIZING LEGISLATION

See Section in Text	Date Authorizing Act	Project and Work Authorized	Documents
40. NORTHEAST COUNTIES, PA			
	Oct 31, 1992	Establishes a pilot program for water-related environmental infrastructure and resource protection and development projects, including waste water treatment and related facilities and water supply, storage, treatment, and distribution facilities. Such assistance may be in the form of technical and planning and design assistance.	P.L. 102-580 Sec. 580
	Aug 17, 1999	Provides construction assistance of \$20,000,000 for water related infrastructure in the counties of Lackawanna, Lycoming, Susquehanna, Wyoming, Pike, Wayne, Sullivan, Bradford, and Monroe, PA, including assistance for the Montoursville Regional Sewer Authority, Lycoming Country, PA.	P.L. 106-53 Sec. 502(f)(11)
	Nov 8, 2007	Adds Northumberland, Union, Snyder and Luzerne Counties.	P.L. 110-114 Sec. 5125
41. POPLAR ISLAND, MARYLAND			
	Oct 12, 1996	The project consists of reconstructing Poplar Island to its approximate size in 1847 (1,110 acres), using an estimated 38 million cubic yards of uncontaminated dredged material from maintenance dredging of the southern approach channels of the Baltimore harbor and Channels navigation project.	Report of the Secretary of the Army, dated September 3, 1996
	Dec 11, 2000	Modification that the non-Federal share of the cost of a project may be provided in cash or in the form of In-kind-services or materials.	P.L. 106-541
	Nov 19, 2005	Renames project Paul S. Sarbanes Ecosystem Restoration project at Poplar Island.	P.L. 109-103
	Nov 8, 2007	Authorizes construction of expansion at total cost of \$260,000,0F00.	P.L. 110-114 Sec. 3087
42. SOUTH CENTRAL PA ENVIRONMENTAL IMPROVEMENT PROGRAM			
	Oct 31, 1992	Pilot program for providing environmental assistance to non-Federal interests in South Central Pennsylvania.	P.L. 102-580
	Modified by Acts of Nov 13, 1995	Expanded scope to include 15 counties; increased program authorization limits to \$50 million; provided for non-Federal sponsor credit for design and construction prior to PCA execution; allowed for Federal share of project costs to be provided in the form of grants or reimbursement of project costs; and provided the non-Federal sponsors to receive credit for reasonable interest to provide non-Federal share of project's cost.	P.L. 104-46
	Nov 8, 2007	Increases authorization limit to \$200,000,000 and deletes Clearfield, Mifflin and Snyder Counties.	P.L. 110-114 Sec. 3143
44. DENTS RUN, PA			
	Oct 12, 1996	An aquatic ecosystem restoration and protection project if the Secretary determines that the project will improve the quality of the environment and is in the public interest.	Detailed Project Report, Oct. 2001

1. Exclusive of portion considered inactive. Inactive portion is widening 35-foot depth channel from 150 to 400 feet from Port Covington to Ferry Bar, widening 27-foot depth channel from 150 to 250 feet to Hanover Street Bridge, and providing a channel 127 feet deep by 250 feet wide to Western Maryland Railway Bridge with an anchorage and turning

basin at the upper end.
 2. Contains latest published maps.
 3. Included in Emergency Relief Program 1935.
 4. Raising of the north jetty to an elevation of 9 feet above mean low water was accomplished with maintenance funds in 1956.

BALTIMORE, MD DISTRICT

TABLE 4-C OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report	Cost to September 30, 2009	
			Construction	Operation and Maintenance
Accotink Creek, VA ¹	Completed	1878	\$ 5,000	\$ 0
Anacostia River and Flats ²	Deferred	1953	3,910,582	0
Annapolis Harbor, MD	Completed	1993	34,250 ³	51,366
Aquia Creek, VA	Inactive	1928	52,465 ⁴	11,770
Back Creek, MD	Completed	1946	23,061	41,378
Black Walnut Harbor, MD	Completed	1982	32,631	431,478
Bonum Creek, VA	Completed	2005	202,200 ⁵	915,264
Branson Cove,				
Lower Machodoc River, VA	Completed	1950	15,755	35,684
Breton Bay, MD	Completed	1950	47,924 ⁶	47,593
Broad Creek, River, DE	Completed	1964	65,510 ⁷	
Cambridge Harbor, MD	Completed	1993	195,974 ⁸	946,934
Chester River, MD	Completed	2003	70,495	864,155 ⁹
Chester River, Bodkin Island, MD	Deferred	2000	67,000	0
Choptank River, MD ¹⁰	Completed	1979	96,796	104,230
Claiborne Harbor, MD ¹	Deferred	1987	42,974	709,047
Chester River, MD	Completed	2005	1,210,071	32,067
Coan River, VA	Completed	2004	1,210,104	32,067
Crisfield Harbor, MD	Completed	2005	416,736	1,941,384 ¹¹
Corsica River, MD	Completed	1948	39,071 ¹²	134,770
Cypress Creek, MD	Completed	1947	3,057	14,729
Duck Point Cove, MD	Completed	2003	25,289	23,418
Elk and Little Elk Rivers, MD ¹³	Completed	1932	90,121 ¹⁴	53,808 ¹⁵
Fishing Bay, MD	Completed	1998	34,074 ¹⁶	2,161,260
Fishing Creek, MD	Completed	2005	0	603,735
Herring Creek, MD	Completed	1989	1,506,259	1,124,317
Hudson Branch, Howard County, MD	Completed	2002	1,406,838	
Knapps Narrow, MD	Complete	2007	23,836	1,131,731 ¹⁸
LaTrappe, MD	Completed	1980	8,064 ¹⁹	40,475
Little Creek, Kent Island, MD	Completed	1958	23,000 ²⁰	7,327
Lowes Wharf, MD	Completed	1986	2,100	327,530
Lower Machodoc Creek, VA	Completed	1904	9,916	30,432
Lower Thorofare, Deal Island, MD	Completed	2000	1,832,411	1,264,372
Madison Bay, MD ¹⁷	Completed	1977	125,550	42,643
Manokin River, MD ²¹	Completed	1919	34,788 ²²	43,534
Middle River and Dark Head Creek, MD	Completed	1947	38,715 ²³	96,785
Monroe Bay and Creek, VA	Completed	2003	22,434	497,685
Muddy Hook Tyler Coves, MD	Completed	1996	64,001	687,568
Nan Cove, MD	Completed	1965	34,861 ²⁴	33,138
Nanticoke River, MD	Completed	2003	73,242	1,381,194
Nanticoke River at Bivalve, MD	Completed	1983	240,817	142,131
Nanticoke River, DE and MD	Completed	2007	73,243	375,305
Neale Sound, MD	Completed	2001	73,243 ²⁵	945,585
Neavitt Harbor, MD ¹⁷	Completed	1968	36,500	45,019
Nomini Bay and Creek, VA ²⁶	Completed	1946	78,446	42,063
Northeast River, MD	Completed	2001	28,489	1,816,146
Occoquan River, VA	Completed	2005	178,390	1,870,834 ²⁷
Patuxent River, MD ¹³	Completed	1905	14,000 ²⁸	0
Pocomoke River, MD	Completed	2005	0	1,017,914 ²⁹
Potomac River at Mount Vernon, MD	Completed	2003	17,000	1,926,137
Potomac River at Alexandria, VA	Completed	2001	95,214	1,957,668
Potomac River - Aquatic Plant Control, MD, VA, and DC	Completed	1998	2,363,589	292,116
Potomac River Below Washington, DC	Completed	2004	244,858	5,170,619
Potomac River and Tributaries at and below Washington, DC, Elimination of Waterchestnut	Completed	1977	0	184,394
Potomac River at Lower Cedar Point, MD	Completed	1920	10,234	6,216
Potomac River North Side of Washington Channel, DC ¹	Completed	1956	1,744,692 ³⁰	27,461 ³¹
Queenstown Harbor, MD	Completed	2005	0	23,614
Rock Hall Harbor, MD	Completed	1998	1,072,500 ³²	457,157
Rockhold Creek	Completed	2006	\$7,340,740	492,014
Shad Landing State Park, MD	Completed	1966	33,531	19,198
Shallow Creek, MD	Completed	2001	1,137,692	523,792
Slaughter Creek, MD	Completed	1994	4,140	682,983
St. Catherine's Sound, MD	Completed	1989	29,947 ³³	659,369

TABLE 4-C (Continue) OTHER AUTHORIZED NAVIGATION PROJECTS

Project	Status	For Last Full Report See Annual Report	Cost to September 30, 2009	
			Construction	Operation and Maintenance
St. Jerome's Creek, MD	Completed	2006	46,712	1,153,240
St. George's Creek, MD	Completed	1985	147,650	0-
St. Michael's Harbor, MD ¹⁷	Completed	1964	16,723 ³⁴	35,666
St. Patrick's Creek, MD	Completed	1987	15,752	151,849
St. Peter's Creek, MD ¹⁷	Completed	1963	46,740 ³⁵	41,223
Smith Creek, MD	Completed	1936	5,252	16,448
Susquehanna River above and below Havre De Grace, MD	Completed	1985	293,570 ³⁶	859,051
Susquehanna River at Williamsport, PA ¹⁷	Completed	1974	57,031 ³⁷	41,437
Tilghman Island Harbor, MD	Completed	1996	424,800	464,788
Tedious Creek, MD	Completed	1998	2,330,013 ³⁶	0
Tilghman Island Harbor, MD	Completed	2007	424,800	786,701 ³⁸
Town Creek, MD	Completed	1950	43,220	62,386
Tred Avon River, MD	Completed	1994	523,310	927,949
Tuckahoe River, MD	Completed	1980	9,727	23,489
Tyaskin Creek, MD	Completed	1923	19,297 ⁴⁰	54,302
Upper Machodoc Creek, VA	Completed	1971	20,281	34,777
Upper Thorofare, MD	Completed	2005	0	1,507,819 ⁴¹
Warwick River, MD	Completed	1984	22,041 ⁴²	148,728

1. Unconstructed portion of the project was deauthorized August 5, 1977.
2. Project deferred for restudy.
3. Includes \$8,476 for previous projects.
4. Includes \$31,065 for previous projects.
5. Excludes \$3,998 contributed funds.
6. Includes \$37,500 for previous projects.
7. Includes \$50,000 for previous projects.
8. Excludes \$3,998 contributed funds and includes \$61,321 for previous projects.
9. Includes \$40,041 for previous projects.
10. Authorization for the unconstructed portion of the project was withdrawn by the Chief of Engineers January 22, 1979.
11. Excludes \$64,994 contributed funds.
12. Includes \$30,000 for previous projects.
13. Unconstructed portion of the project was deauthorized November 2, 1979.
14. Includes \$79,626 for previous project and excludes \$8,414 contributed funds.
15. Includes \$24,321 for previous projects.
16. Includes \$2,840 for previous projects.
17. Authorized by Chief of Engineers.
18. Excludes \$3,822,977 in previous projects.
19. Excludes \$10,306 contributed funds.
20. Excludes \$1,100 contributed funds.
21. Abandonment recommended in 1926 (H. doc. 467, 69th Cong., 1st Sess.)
22. Includes \$2,000 expended outside project limits.
23. Excludes \$111,581 expended by Navy Department and \$52,000 from contributed funds.
24. Excludes \$565 contributed funds.
25. Excludes \$1,000 contributed funds.
26. Unconstructed portion of the project was deauthorized November 6, 1977.
27. Includes \$203,198 for previous projects. Excludes \$227,751 contributed funds.
28. Includes \$10,617 for previous projects.
29. Excludes \$3,454,849 for previous projects.
30. Excludes \$389,000 contributed funds.
31. Excludes \$101,162 Public Health Service funds expended for water chestnut removal.
32. Excludes \$672,880 contributed funds.
33. Excludes \$600 contributed funds.
34. Includes \$26,500 for previous projects.
35. Excludes \$464,788 for previous projects.
36. Unconstructed portion of the project was deauthorized November 6, 1977. Includes \$22,905 Works Progress funds and \$97,390 for previous projects.
37. Excludes \$40,000 contributed funds.
38. Excludes \$464,788 for previous projects.
39. Excludes \$10,158 contributed funds.
40. Includes \$6,000 for previous projects.
41. Excludes \$864,205 for previous projects.
42. Excludes \$80,000 contributed funds.

TABLE 4-D **OTHER AUTHORIZED BEACH
EROSION CONTROL PROJECTS**

Project	Status	For Last Full Report See Annual Report	Cost to September 30, 2009	
			Construction	Operation and Maintenance
Colonel Beach, VA	Complete	2003	41,200	189,711
Hart Miller Island, MD	Complete	2007	3,962,850 ¹	0-
Oxford, MD ²	Complete	1978	97,750 ³	0-
Punch Island Road, MD	Complete	1996	199,105	0-
Town of North Beach, MD	Complete	1995	450,610 ⁴	0-

- 1.. Excludes \$321,554 contributed funds.
2. Authorized by Chief of Engineers.
3. Excludes \$80,648 contributed funds.
4. Excludes \$245,262 contributed funds.

TABLE 4-E OTHER AUTHORIZED FLOOD DAMAGE REDUCTION PROJECTS

Project	Status	For Last Full Report See Annual Report	Cost to September 30, 2009	
			Construction	Operation and Maintenance
Anacostia River and Tributaries Flood Protection and Navigation Improvements, DC and MD	Completed	1995	\$ 6,042,325	\$3,735,979 ¹
Anacostia River and Tributaries, Prince Georges Co., MD ²	Completed	1977	1,000,000 ³	0-
Bainbridge, NY ^{3,4}	Completed	1959	382,000	0-
Bath, NY ⁵	Completed	1970	638,332	0-
Bayard, WV ⁴	Completed	1965	55,218 ⁶	0-
Black Walnut Point, MD	Completed	1985	200,500	0-
Bridgewater, VA ⁴	Completed	1953	136,500	0-
Broad Top Region, PA	Completed	2006	4,897,761	0-
Bull Run, PA	Completed	1984	2,742,000	0-
Chesapeake Bay at Hoopersville Road, MD	Completed	1993	156,491 ⁷	0-
Conklin-Kirkwood, NY ⁴	Completed	1955	71,000	0-
Cortland, NY ⁸	Completed	1970	324,486	0-
Dickson City, (Olyphant), PA	Completed	2003	1,000,000	1,178,137
Elkland, PA	Completed	1971	1,297,850	0-
Endicott Johnson City and Vestal, NY	Completed	1979	7,034,534 ⁹	0-
Forest Heights, MD ⁴	Completed	1964	430,000 ¹⁰	0-
Fourmile Run, VA	Completed	1987	52,480,000	0-
Hills Point Road, Dorchester Co., MD ³	Completed	1989	186,077	0-
Greene, NY ⁴	Completed	1951	37,000	0-
Kingston-Edwardsville, PA	Completed	1979	4,731,394 ¹¹	0-
Kitzmilller, MD	Completed	1965	501,500 ¹²	0-
Latta Brook Rd., NY	Completed	1984	115,500	0-
Lock Haven, PA	Completed	2001	55,323,950	6,878,038
Loyalsock Creek, Warrensville Road, PA	Completed	2006	497,267	0-
Lycoming County Flood Warning System, PA	Completed	2006	230,904	0-
McCready's Point Road, MD	Completed	1993	74,019 ¹³	0-
Middle Hooper Island, MD	Completed	1993	327,165 ¹⁴	0-
Moorefield, WV	Completed	2008	19,165,234 ¹⁵	0-
Neabsco Creek, VA	Completed	2003	57,841	2,227,375
Nichols, NY	Completed	1974	1,487,800	0-
Norwich, NY ⁴	Completed	1950	94,500	0-
Ocean Pines, Worcester County, MD	Completed	2003	1,003,798	0-
Painted Post, NY ⁵	Completed	1970	414,181	0-
Paxton Creek, Harrisburg, PA	Completed	1998	48,509 ¹⁶	0-
Petersburg, WV	Completed	2001	18,554,009 ¹⁷	0
Plymouth, PA	Completed	1958	1,911,689 ¹⁸	0-
Savage River Dam, MD	Completed	1954	2,271,939 ¹⁹	33,999
Scranton, PA ²⁰	Completed	1971	2,006,800	0-
Spring Brook Creek, Pittston Township, PA	Completed	1993	425,960 ²¹	0-
Solomon Creek, Ashley Borough, Luzerne County, PA	Completed	1993	70,441 ²²	0-
Solomons Island, Calvert County, MD	Completed	1993	126,049 ²³	0-
Sunbury, PA	Completed	1953	6,063,000 ²⁴	0-
Swoyersville-Forty Fort, PA	Completed	1968	2,728,113	0-
Tunkhannock Creek, Tunkhannock, PA	Completed	1991	174,491 ²⁵	0-
Tyrone, PA ²⁶	Deferred	1980	6,401,016	0-
Unadilla, NY	Completed	1970	1,000,000 ²⁷	0-
Upper Marlboro, MD ⁴	Completed	1965	590,013	0-
Verona Lake, VA ²⁸	Deferred	1978	992,000	0-
Washington, DC and Vicinity	Completed	1953	331,927 ²⁹	0-

TABLE 4-E (Continue) OTHER AUTHORIZED FLOOD DAMAGE REDUCTION PROJECTS

Project	Status	For Last Full Report See Annual Report	Cost to September 30, 2009	
			Construction	Operation and Maintenance
Wilkes-Barre, Hanover Township, PA	Completed	1958	3,853,457 ³⁰	0-
WV and PA Flood Damage Reduction	Completed	2008	454,589 ³¹	0-
Williamsport, PA	Completed	1979	12,964,893 ³²	0-
Williamsport, PA Hagerman's Flume	Completed	2005	128,724	0-
Wyoming Valley, PA	Completed	1987	25,549,098	0-

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|--|---|
| <ul style="list-style-type: none"> 1. Includes \$49,998 emergency relief funds. 2. Local interests will not accept operation and maintenance responsibility of the project until the severe erosion and sedimentation of the project caused by tropical storm Eloise is corrected and the project is restored to design condition. 3. Excludes \$357,022 contributed funds. 4. Authorized by Chief of Engineers. 5. Unit of Southern New York Flood Damage Reduction Projects. 6. Excludes \$182,672 Public Works Acceleration funds and \$4,290 contributed funds. 7. Excludes \$67,954 Contributed funds. 8. Unit of Susquehanna River Flood Damage Reduction Projects. 9. Excludes \$154,694 contributed funds. 10. Excludes \$87,720 contributed funds. 11. Includes \$1,162,548 emergency relief funds and excludes \$225,877 emergency relief funds expended prior to adoption of project. 12. Excludes \$6,616 contributed funds. 13. Excludes \$42,081 contributed funds. 14. Excludes \$137,900 contributed funds. 15. Excludes \$1,199,461 contributed funds. | <ul style="list-style-type: none"> 16. Excludes \$14,917 contributed funds. 17. Excludes \$80,000 contributed funds. 18. Includes \$4,357 emergency relief funds. 19. Includes \$200,000 expended from contributed funds. 20. Unit of Lackawanna River Basin Projects. 21. Excludes \$126,255 contributed funds. 22. Excludes \$25,014 contributed funds. 23. Excludes \$51,666 contributed funds. 24. Excludes \$140,504 contributed funds. 25. Excludes \$53,383 contributed funds. 26. The unconstructed portion of the project was reclassified to the deferred category January 8, 1981. 27. Excludes \$132,578 contributed funds. 28. Authorized for the design memorandum state of advanced. 29. Cost of previous project includes \$106,500 emergency relief funds. 30. Includes \$872,715 emergency relief funds. Excludes \$36,375 emergency relief funds expended for new work before adoption of project. 31. Excludes \$56,666 contributed funds. 32. Includes \$1,887 emergency relief funds and excludes \$110,835 contributed funds. |
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REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 4-G DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report For	Date and Authority	Federal Funds Expended	Contributed Funds Expended
Almond Village, NY ^{1,2}	1970	May 26, 1953 1941 Flood Control Act	\$ 24,622 ³	0-
Baltimore Harbor & Channels, MD (Ferry Bar & Spring Garden Channel)	1920	Nov. 17, 1986 1966 Water Res. Dev. Act	787,710	0-
Betterton Harbor, MD	1960	Dec. 31, 1989 1986 Water Res. Dev. Act	3,482	0-
Breton Bay, MD (1902 River & Harbor Act)	1950	Dec. 31, 1989 1986 Water Res. Dev. Act	10,424	0-
Broadwater Creek, MD	1949	Nov. 6, 1977 1974 Water Res. Dev. Act	212	0-
Cadle Creek, MD ²	1949	Nov. 6, 1977 1974 Water Res. Dev. Act	0-	0-
Cambridge Harbor, MD (1948 River & Harbor Act)	1989	Dec 31, 1989 1986 Water Res. Dev. Act	0-	0-
Channel Connecting Plain Dealing Creek and Oak	1940	Aug. 5, 1977 1974 Water Res. Dev. Act.	112	0-
Chester River, MD (1873 River & Harbor Act)	1988	Dec. 31, 1989 1986 Water Res. Dev. Act	25,419	0-
Coan River, VA	1937	Aug. 5, 1977 1974 Water Res. Dev. Act	0-	0-
Copes Corner Lakes, NY ²	1970	May 6, 1981 1974 Water Res. Dev. Act	106,700 ³	0-
Cuckold Creek, MD ⁴	1978	Jan 22, 1979 1960 River and Harbor Act	5,720	0-
Cunninghill Cove, MD ⁴	1977	Jan. 22, 1979 1960 River and Harbor Act	11,200	0-
Curwensville Lake (WaterLine), PA ⁵	0-	Nov. 18, 1991 1986 Water Res. Dev. Act	0-	0-
Davenport Center Lake, NY ²	1970	May 6, 1981 1974 Water Res. Dev. Act	286,400 ³	0-
Endicott, Johnson City, and Vestal (Remedial), NY ⁵	0-	Nov. 18, 1991 1986 Water Res. Dev. Act	0-	0-
Fall Brook Lake, PA ⁶	1970	May 6, 1981 1974 Water Res. Dev. Act	46,100	0-

BALTIMORE, MD DISTRICT

TABLE 4-G (Continue)

DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report For	Date and Authority	Federal Funds Expended	Contributed Funds Expended
Genegantslet Lake, NY	1954	May 6, 1981 1974 Water Res. Dev. Act	214,578 ³	0-
Governors Run, MD	1950	Aug. 5, 1977 1974 Water Res. Dev. Act	0-	0-
Harpers Ferry, WV	1937	Aug. 5, 1977 1974 Water Res. Dev. Act	0-	0-
Hellens Creek, MD	1950	Nov. 6, 1977 1974 Water Res. Dev. Act	0-	0-
Lake Ogleton, MD	1950	Nov. 6, 1977 1974 Water Res. Dev. Act	0-	0-
Marsh Creek Bridge, Foster Joseph Sayers Dam, PA 5	0-	Nov. 18, 1991 1986 Water Res. Dev. Act	0-	0-
Mill Creek, MD	1949	Nov. 6, 1977 1974 Water Res. Dev. Act	0-	0-
Moorefield, WV	1941	Oct. 3, 1978 1974 Water Res. Dev. Act	7,928 ³	0-
Neabsco Creek, VA (1881 River & Harbor Act)	1978	Dec. 31, 1989 1986 Water Res. Dev. Act	14,600	0-
Ocean City Harbor and Inlet and Sinepuxent Bay, MD (1954 River & Harbor Act)	1989	Dec. 31, 1989 1986 Water Res. Dev. Act	0-	0-
Pocomoke River, MD (1945 River & Harbor Act)	1989	Dec. 31, 1989 1986 Water Res. Dev. Act	0-	0-
Pocomoke River, MD & VA (1954 River & Harbor Act)	1989	Dec. 31, 1989 1986 Water Res. Dev. Act	0-	0-
Saint Georges Creek, MD	1971	Sep. 23, 1986 1974 Water Res. Dev. Act	0-	0-
Sixes Bridge Lake, MD & PA ⁷	1974	Dec. 29, 1981 1974 Water Res. Dev. Act	0-	0-
South Plymouth Lake, NY	1953	May 6, 1981 1974 Water Res. Dev. Act	100,036 ³	0-
Susquehanna Basin at Harrisburg, PA	1991	1986 Water Res. Dev. Act	2,952,875	0-
Susquehanna River, Sunbury Closure Structure, PA ⁷	0-	Nov. 18, 1991 1986 Water Res. Dev. Act	0-	0-
Tyrone, PA	1980	Nov. 1, 1997 1992 Water Res. Dev. Act	6,401,016	0-

TABLE 4-G (Continue) DEAUTHORIZED PROJECTS

Project	For Last Full Report See Annual Report For	Date and Authority	Federal Funds Expended	Contributed Funds Expended
Waterway from Little Choptank River to Choptank River, MD	1939	Aug. 5, 1977 1974 Water Res. Dev. Act	305	0-
West Oneonta Lake, NY ²	1970	May 6, 1981 1974 Water Res. Dev. Act	189,100 ³	0-

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- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Local cooperation withdrawn, project authorization expired May 26, 1958. 2. Unit of Southern New York Flood Damage Reduction Projects. 3. Cost for preliminary work only. 4. Project authorization was withdrawn by the Chief of Engineers. | <ol style="list-style-type: none"> 5. Project deauthorized by Section 100(A) of Public Law 99-662. 6. Unit of Lackawanna River Basin Projects. 7. Authorized for the design memorandum stage of advanced engineering and design. |
|---|---|

BALTIMORE, MD DISTRICT

TABLE 4-H RECONNAISSANCE AND CONDITION SURVEYS

Project	Date Survey Completed
MARYLAND	
Cambridge Harbor	April 2009
Chester River, Kent & Queen Anne's	October 2008
Corsica River	August 2009
Cypress Creek	February 2009
Fishing Creek	October 2008
Kent Narrows	October 2008
Knapp's Narrows	July 2009
Lower Thorofare, Deal Island	August 2009
Mattawomen Bar	August 2009
Middle River	October 2009
Neale Sound Upper/Lower	August 2009
Northeast River	July 2009
Pocomoke Sound	July 2009
Queenstown	July 2009
St. Catherine Sound	July 2009
St. Jerome Creek	March 2009
St. Patrick's Creek	July 2009
St. Peters Creek	November 2009
Sandy Point to Quantico	September 2009
Shallow Creek	August 2009
Upper Thorofare, Deal Island	August 2009
Warwick River	April 2009
DC	
Potomac River below Washington	September 2009
Washington Tidal Basin	November 2008
VA	
Monroe Bay & Creek	July 2009
Occoquan Creek	August 2009

TABLE 4-I INSPECTION OF COMPLETED PROJECTS – FY 2009

Project		Date Inspected
NOTE: Dates in <i>italics indicate no FY 2009 inspection</i> for this project - the most recent ICW inspection date and rating is listed. Ratings are either A – Acceptable, M – Minimally Acceptable, or U – Unacceptable. Two levee projects are comprised of levee systems in different states – Kitzmiller (1 system in MD and 1 system in WV), and Cumberland-Ridgeley (2 systems in MD and 1 system in WV). Channel or bank stabilization projects are indicated with the word channel after the project name.		
MARYLAND		
Project Name	Levee System Name	Date Inspected & Rating
Anacostia River	Bladensburg	April 2009 M
	Brentwood	April 2009 M
	Colmar Manor	April 2009 M
	Hyattsville-Riverdale	April 2009 M
Cumberland-Ridgeley	Cumberland	April 2009 M
	West Cumberland	April 2009 M
Forest Heights	Forest Heights	April 2009 M
Kitzmiller	Kitzmiller	<i>June 2008 M</i>
Upper Marlboro	Collington Branch	April 2009 M
	Western Branch	April 2009 M
NEW YORK		
Project Name	Levee System Name	Date Inspected & Rating
Addison	North Addison	August 2009 M
	South Addison	August 2009 M
Avoca	Avoca	<i>September 2007 A</i>
Bainbridge-Newton Creek (Channel)		June 2009 M
Bath	Bath	August 2009 M
Binghamton	Northeast Binghamton	August 2009 M
	Northwest Binghamton	August 2009 M
	South Binghamton	August 2009 M
Canisteo	North Canisteo	August 2009 M
	South Canisteo	August 2009 A
Cincinnatus (Channel)		June 2009 M
Conklin-Kirkwood (Channel)		June 2009 A
Corning-Monkey Run (Channel)		<i>August 2008 M</i>
Corning-Painted Post	Corning	August 2009 M
	Painted Post	August 2009 M
	South Corning	August 2009 M
Cortland		June 2009 M
Elmira	North Elmira	August 2009 M
	South Elmira	August 2009 M
Endicott-Johnson City & Vestal	Endicott	September 2009 M
	Johnson City	September 2009 M
	Vestal	September 2009 M
Greene	East Greene	June 2009 M
	West Greene	June 2009 M
Hornell	Northwest Hornell	<i>September 2008 M</i>
	North Hornell	<i>September 2008 M</i>
	Northeast Hornell	<i>September 2008 M</i>
	Southeast Hornell	<i>September 2008 M</i>
	Southwest Hornell	<i>September 2008 M</i>
	West Hornell	<i>September 2008 M</i>
Latta Brook		<i>August 2008 A</i>
Lisle	Lisle	June 2009 M
Nichols	Nichols	June 2009 A
Norwich (Channel)		June 2009 A
Owego (Channel)		June 2009 M

TABLE 4-I INSPECTION OF COMPLETED PROJECTS – FY 2009

Project		Date Inspected
NEW YORK (con't)		
Project Name	Levee System Name	Date Inspected & Rating
Oxford	Oxford	June 2009 A
Port Dickinson (Channel)		September 2008 A
Sherburne (Channel)		June 2009 M
Unadilla (Channel)		June 2009 M
Whitney Point	Whitney Point	June 2009 M
PENNSYLVANIA		
Project Name	Levee System Name	Date Inspected & Rating
Bull Run	Bull Run	October 2008 M
Elkland	Elkland	October 2008 M
Lock Haven	Lock Haven	October 2008 M
Milton		N/A, unlisted
Olyphant	Olyphant	October 2008 M
Scranton-Albright Avenue	Albright Avenue	October 2008 M
Scranton-Plot Section	Plot	
Scranton-South Side	South Side	October 2008 M
Sunbury	Sunbury	October 2008 M
Tyrone (Channel)		October 2008 M
Williamsport-South Williamsport	Northeast Williamsport	October 2008 M
	Northwest Williamsport	October 2008 M
	South Williamsport	October 2008 M
Wyoming Valley	Kingston to Exeter	October 2008 M
	Plymouth	October 2008 M
	Wilkes-Barre-Hanover Township	October 2008 M
VIRGINIA		
Project Name	Levee System Name	Date Inspected & Rating
Bridgewater	Bridgewater	April 2009 M
Fourmile Run	Alexandria	August 2009 U
	Arlington	August 2009 U
WEST VIRGINIA		
Project Name	Levee System Name	Date Inspected & Rating
Bayard	East Bayard	March 2009 M
	West Bayard	March 2009 M
Moorefield	North Moorefield	April 2009 M
	South Moorefield	April 2009 M
Petersburg	North Petersburg	April 2009 M
	South Petersburg	April 2009 M
Cumberland-Ridgeley	Ridgeley (other 2 systems in MD)	April 2009 M
Kitzmilller	Blaine (other system in MD)	June 2008 M
WASHINGTON, D.C.		
Project Name	Levee System Name	Date Inspected & Rating
Anacostia River	National Park Service	September 2006 U
	Naval Air Station	September 2006 U
Washington DC	Potomac Park (Reflecting Pool) / P&Canal Streets	September 2006 U
	<ul style="list-style-type: none"> • Current rating of (A) Acceptable or (MA) Minimally Acceptable. • Projects that were (U) Unacceptable and have been rectified. • Projects with current ratings of (U) Unacceptable 	

NORFOLK, VA DISTRICT

The district comprises the State of Virginia, except the Potomac, Roanoke, and Ohio River Basins; the entire area on the eastern shore of Virginia except for the project for Pocomoke River, Maryland and Virginia. On the west shore of Chesapeake Bay, all waterways south of Smith Point, VA, at the mouth of the Potomac River except the project for Little Wicomico River, VA. North Carolina, only the Chowan River Basin downstream to and including the mouth of the Meherin River, and the Dismal Swamp Canal Route of the Atlantic Intracoastal Waterway to the Albemarle Sound. West Virginia, only the James River Basin.

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NAVIGATION

1. APPOMATTOX RIVER, VA

Location. This river rises in Appomattox County, VA, flows northeasterly 137 miles, and empties into the James River at Hopewell, VA. The portion under improvement extends from its mouth to Petersburg, VA, a distance of 11 miles, which is the length of the tidal and navigable reach. (See National Ocean Service Chart No. 12251.)

Existing project. This project provides for a channel 60 to 80 feet wide and 10 feet deep from the mouth of the river to a point 400 feet above Lieutenant Run; thence 80 feet wide and of such depth, not exceeding 10 feet, as can be obtained without rock excavation to the head of navigation at Petersburg; including a turning basin at the mouth of Lieutenant Run 410 feet long, 80 to 140 feet wide, and 10 feet deep. All depths are referred to mean low water.

The project also provides for a dam at Petersburg and the excavation for a width of from 200 to 300 feet of a diversion channel connecting the river above the dam with the river at a point 2.5 miles below; for about 1.7 miles of levees on the low grounds between the navigable and the diversion channels; for a highway bridge and a railway bridge across the diversion channel; and for other work incidental to the diversion channel.

Under ordinary conditions the mean tidal range is 2.9 feet and the extremes 2.4 and 3.3 feet. There are no records available of the heights of stage due to ordinary

floods. These are estimated at 6 to 8 feet above mean low water at Petersburg, where the extremes are from 15.6 feet to 17.1 feet.

Local cooperation. Fully complied with. City of Petersburg, VA is the local sponsor. For details, see page 212 of Annual Report for 1969.

Terminal facilities. There are about 2,500 feet of wooden bulkheads and a shore landing in Petersburg Harbor. These facilities are in an abandoned, dilapidated condition and have not been used by commercial traffic on the river since 1950. There are two large recreational facilities now in operation on the Appomattox River. One is located about 2 miles downstream from Petersburg, VA and the other is at Hopewell, VA near the confluence of the Appomattox and the James. There is also a sand and gravel loading facility at Puddledock, located about 3 miles downstream from Petersburg, VA.

Operations during fiscal year. Fiscal year 2009 Federal funds in the amount of \$365,000 were used to supplement the Environmental Assessment, perform environmental analysis, perform engineering, and coordinate with the stakeholders and interested parties to ensure readiness of the project when construction funds are appropriated.

2. ATLANTIC INTRACOASTAL WATERWAY, BETWEEN NORFOLK, VA, AND ST. JOHNS RIVER, FL (Includes Albermarle and Chesapeake Canal and Dismal Swamp Canal Routes)

Location. Two inland water routes approximately paralleling Atlantic coast south of Norfolk, VA, between a point in Southern Branch of Elizabeth River, VA, 2,500 feet upstream of Norfolk & Western Railway bridge and Virginia-North Carolina state line in North Landing River, a distance of 27.2 miles; and 64.6 miles between mouth of Deep Creek, VA, and mouth of Pasquotank River, NC. These routes are shown on National Ocean Service Chart 12206.

Existing project. A channel 12 feet deep at mean low water and 90 to 250 feet wide following southern Branch of Elizabeth River, 5.2 miles, Virginia Land Cut, 8.3 miles, and North Landing River, 13.7 miles; and construction of tidal guard lock at Great Bridge, VA. It also provides channels 10 feet deep at mean low water and 90 to 100 feet wide in Deep Creek, 3.1 miles, Turners Cut, 4.3 miles and Pasquotank River, 35.1 miles; maintaining Dismal Swamp Canal, 22.1 miles, to about 9 feet deep mean canal level over a width of 50 feet; protection of banks in Turners Cut with sheet piling, and cutting curtain sharp points in Pasquotank River to shorten its course. Project includes operating and care of completed locks, spillways, and bridges. Southern Branch of Elizabeth River and Deep Creek sections of the two routes are tidal, mean range being about 3 feet with extremes of minus 3.5 and plus 9.6 feet. Remaining sections are non-tidal with fluctuations of 1 to 2 feet in level due to winds.

Local cooperation. None required.

Terminal facilities. Existing facilities are considered adequate. See Annual Report for FY 1970.

Operations during fiscal year.

Fiscal year 2009 regular funds in the amount of \$2,845,000 were used to operate the navigation locks, bridges, and canals. ARRA funds in the amount of \$298,000 were used to refurbish North Landing Bridge structures, bridge surface, and other project upgrades. Contract combined with traffic control repairs.

3. ATLANTIC INTRACOASTAL WATERWAY, BRIDGE AT DEEP CREEK, VA

Location. Deep Creek, located in southeastern Virginia within the City of Chesapeake, is the northern terminus of the Dismal Swamp Canal (DSC). The DSC is a portion of the Atlantic Intracoastal Waterway (AIW) that connects the Southern Branch of the Elizabeth River at Deep Creek to the Pasquotank River at South Mills, North Carolina, via Turner's Cut, covering a distance of 64.6 miles. The route of the AIW, extending from New Jersey to Florida, passes through the harbor of Baltimore, Maryland; Norfolk Harbor, Virginia; and down the Southern Branch of the Elizabeth River, to the tidal river Deep Creek, a tributary to the Southern Branch, down to the Deep Creek Locks where the DSC begins. The canal is generally oriented north-south.

Existing project. Atlantic Intracoastal Waterway Bridge at Deep Creek, Virginia, is federally owned and Corps operated facility that is functionally obsolete because of its narrow roadway and poor alignment with the connection roads, compounded by increasing traffic volumes. This project is to replace the existing structure in conjunction with the city's and the Commonwealth of

Virginia's plans to improve the road system in this area. The new bridge will be a split leaf pit bascule consisting of a 2-lane leaf (eastbound) and a 3-lane leaf (westbound). Once completed, the local sponsor will assume ownership of the bridge and take over operation and maintenance.

Local cooperation. Complied with except that the entire project through construction will be federally funded. Upon completion of construction, the bridge will be turned over to the City of Chesapeake, Virginia, for operation and maintenance. Project Authorized for Construction in Section 1001 (44) of WRDA 2007.

Operations during fiscal year. FY 2009 regular funds in the amount of \$216,305 and ARRA funds in the amount of \$113,000 were used to design the replacement bridge and associated roadways.

4. BROAD CREEK, VA

Location. The project is located near Stingray Point in Deltaville, VA.

Existing project. The Federal channel provides access between Broad Creek and deep water in the Rappahannock River. The waterway is 7 feet deep at mean low water and 100 feet wide. The project's local sponsor is Middlesex County.

Terminal facilities. Broad Creek is one of the busiest harbors in the Chesapeake Bay region. The project serves as a Critical Harbor of Refuge and supports boatbuilding and repair yards, law enforcement, and

numerous transient vessels seeking harbor of refuge. The local sponsor and commercial activities along the creek continue to make harbor infrastructure improvements that depend upon maintenance of the Broad Creek channel. Dredged material within the placement site is used beneficially after it is dried.

Operations during fiscal year. Fiscal year 2009 funds in the amount of \$96,000 were used to prepare for dredging the channel to restore the 7' project depth.

5. CHINCOTEAGUE BAY CHANNEL, VA

Project maintenance dredging operations were undertaken by contract with Recovery Act funds at a cost of \$244,000 through 30 Sep 2009 with completion scheduled in FY10.

6. CHINCOTEAGUE HARBOR OF REFUGE, VA

Location. This critical harbor of refuge is located on the southern tip of Chincoteague Island, Virginia about 3 miles from the Atlantic Ocean where it is accessed by the Chincoteague Inlet Federal Navigation Project.

Existing project The strategic location of this critical harbor of refuge is important to the many commercial vessels based at the island of Chincoteague.

Terminal facilities. Without this safe haven, many of the commercial seafood

harvesters would be at risk from sudden storms, and suffer damages or losses. State marine patrol vessels, Coast Guard vessels, dredging vessels engaged in dredging other nearby navigation channels such as the Chincoteague Inlet ocean inlet channel, and transient pleasure craft also use the harbor

Operations during fiscal year.

Fiscal year 2009 in the amount of \$33,000 were used to perform surveys, engineering and administration.

7. CHINCOTEAGUE INLET, VA

Location. Chincoteague Inlet at the southern end of Assateague Island provides access to the Atlantic Ocean from the inland waterway near the town of Chincoteague, VA. (See National Ocean Service Chart 12211.)

Existing project. Provides for a channel 12 feet deep and 150 feet wide across the ocean bar in the Atlantic Ocean and to the mouth of the inlet, a channel 9 feet deep and 100 feet wide from the inlet through the canal, and then along Chincoteague Channel to a point approximately 2,000 feet north of the state highway bridge to Chincoteague, a distance of about 6.6 miles. Mean range of tide is about 3 feet. All depths are referred to mean low water.

Local cooperation. Fully complied with. For details see Annual Report for 1974.

Terminal facilities. Existing facilities at Chincoteague are considered adequate for current and prospective traffic.

Operations during fiscal year.

Fiscal year 2009 funds in the amount of \$327,000 were used to perform maintenance dredging of the Inlet's outer bar channel, surveys, engineering and administration.

8 GREENVALE CREEK, VA

Project maintenance dredging operations were undertaken by contract with Recovery Act funds at a cost of \$382,000 and removal of approximately 18,000 cubic yards.

9. HAMPTON CREEK, VA

Project maintenance dredging operations were undertaken by contract with Recovery Act funds at a cost of \$18,000 through 30 Sep 2009 with completion scheduled in FY10.

**10. HAMPTON ROADS, VA
COLLECTION AND REMOVAL OF
DRIFT**

Location. Hampton Roads is a natural harbor 300 miles south of New York and 180 miles south of Washington, DC. Its principal tributaries are the James River, affording a natural deep harbor at Newport News, VA; Elizabeth River, with its Southern, Eastern, and Western Branches providing harbors for Norfolk and Portsmouth, VA; and Hampton Creek, serving the harbor at Hampton, VA. (See National Ocean Service Chart Nos. 12248, 12245 and 12253.)

Existing project. Collection and removal of drift in Hampton Roads and its tributary waters authorizes the Secretary of

NORFOLK, VA, DISTRICT

the Army to allot necessary amounts of work from Appropriations for main-other available Appropriations and that this work shall be carded on as a separate and distinct project. It is wholly a work of maintenance. The purpose of work is to afford relief from variable conditions of obstruction. No advance estimate of the amount of work is required.

Local cooperation. None required.

Terminal facilities. See Norfolk Harbor, VA, and Channel to Newport News, VA.

Operations during fiscal year.

Fiscal year 2009 regular funds in the amount of \$931,000 and ARRA funds in the amount of \$57,000 were used to remove and dispose of floating debris.

**11. HAMPTON ROADS, VA
(PREVENTION OF OBSTRUCTIVE
AND INJURIOUS DEPOSITS)**

The District Engineer, Norfolk District, was designated Supervisor of the harbor of Hampton Roads under the provisions of the River and Harbor Act of June 29, 1888 (33 U.S.C. 441-451), as amended July 12, 1952. Under this Act, the Supervisor of the harbor of Hampton Roads is charged with the mission of preventing the deposit of obstructive and injurious materials in the tidal waters of the harbors of Norfolk, Portsmouth, Newport News, Hampton Roads, and their adjacent and tributary waters, so much of the Chesapeake Bay and its tributaries as lies within the state of Virginia, and so much of

the Atlantic Ocean and its tributaries as lies within the jurisdiction of the United States within or to the east of the State of Virginia. The River and Harbor Act of March 3, 1899 (33 U.S.C. 403,407,409), as amended, prohibits obstructions to navigable waters such as unauthorized structures, unauthorized fill, deposit of refuse, and sinking of vessels. Other laws relating to the supervision of Norfolk Harbor and its tributary waters are the Clean Water Act, The Marine Protection, Research and Sanctuaries Act of 1972, the Coastal Zone Management Act of 1969, the Fish and Wildlife Act of 1956, the Federal Power Act of 1920, the National Historic Prevention Act of 1966, the Endangered Species Act of 1973, the Deepwater Port Act of 1972, the Wild and Scenic Rivers Act, and the Land and Water Conservation Fund Act. Direct supervision of the waters under the jurisdiction of the Norfolk District was accomplished by means of two patrol vessels performing inspections, removing debris and investigating navigational hazards and sunken abandoned vessels. A derrick boat and crane barge performs removal of sunken vessels and navigational hazards and supports federal dredging projects. In addition, surveillance of the harbor was performed regarding the Corps' regulatory program, using also two small outboard craft, motor vehicles from land and occasional chartered aerial reconnaissance. This regulatory surveillance involved compliance surveys of permitted activities and evaluation of navigational impacts of proposed piers and other structures.

Operations during fiscal year.

This project received \$0 funds in FY 2009. Operations were ceased and the personnel

and floating plant were assigned to Hampton Roads, VA, Collection And Removal Of Drift. Operations will resume in FY 2010 upon appropriation of funds.

12. HOSKINS CREEK, VA

Project maintenance dredging operations were undertaken by contract with Recovery Act funds at a cost of \$233,000 through 30 Sep 2009 with completion scheduled in FY10.

13. JAMES RIVER, VA

Location. The river is formed by the junction of the Cowpasture and Jackson Rivers in Botetourt County, VA, flows east 340 miles and empties into Hampton Roads at Newport News, VA. (See National Ocean Service Chart Nos. 12248 and 12251.)

Existing project. A channel 25 feet deep and 300 feet wide from the mouth to Hopewell, 25 feet deep and 200 feet from Hopewell to the Richmond Deepwater Terminal, and a channel 18 feet deep and 200 feet wide from the Deepwater terminal to Richmond Lock; a turning basin at Richmond Deepwater Terminal to 500 feet wide, 2,770 feet long and 25 feet deep; a turning basin in Richmond Harbor 200 feet wide, 600 feet long and 18 feet deep; and construction of spur and training dikes. Depth of channels is referred to mean lower low water. Total length of channel included in the project is 91 miles, which is the navigable section. Mean tidal ranges under ordinary conditions for different parts of the river are: mouth, 2.6 feet; Jamestown, 2.0 feet; City Point, 2.6 feet; and Richmond, 3.2 feet. Spring tide ranges under ordinary conditions at the same localities are mouth, 3.1 feet; Jamestown, 2.4

feet; City Point, 3.0 feet; Richmond, 3.2 feet. Ordinary fluctuations of stage at Richmond, due to floods are 6 to 12 feet above mean low water. Extreme fluctuations are 16 to 32 feet. Flood heights below Richmond diminish rapidly. The extreme according to available information is about 11 feet lower at Dutch gap, 14 miles below Richmond, and 17 to 18 feet lower, 20 miles below Richmond. For previous projects, see Annual Report for 1938.

Local cooperation. Fully complied with for conditions imposed by River and Harbor Act of 1962. However, the local sponsor (City of Richmond) is required to furnish cost sharing in accordance with the provisions described in the Water Resources Development Act of 1986, as amended. Deepening the project from 25 feet to 35 feet, and the widening, authorized by the River and Harbor Act of 1962 has not been started.

Terminal facilities. There are city-owned wharves at Richmond Harbor and at Richmond Deepwater Terminal, and numerous private facilities elsewhere on the James River. The Deepwater Terminal is at the head of the 25-foot deep improved channel, and it serves oceangoing vessels and larger ships engaged in coast-wide trading. For detailed information on the terminal facilities on the James River, see Port Series No. 11, (Revised 1993) on Ports of Hampton Roads, prepared by the Water Resources Support Center. Existing terminal facilities are adequate for present commerce.

Operations during fiscal year. Fiscal year 2009 maintenance funds in the amount of \$3,929,000 were used to: perform dredging at Dancing Point-Swann Point Shoal, Goose Hill Shoal, and Tribell Shoal; perform condition surveys of Richmond

Deepwater Terminal to Hopewell shoal channel; perform engineering studies; prepare design documents; prepare plans for dredging; perform environmental compliance testing; perform placement site preparation; obtain permit renewals; and perform supervision and administration of the dredging contract. ARRA funds in the amount of \$2,016,000 were also used to complete the dredging of the aforementioned shoals to a maintained depth of 25 feet by contract.

14. LYNNHAVEN INLET, VA

Location. Lynnhaven Inlet is located on the Chesapeake Bay within the City of Virginia Beach.

Existing project The navigation project provides access to the Chesapeake Bay and Atlantic Ocean for commercial fishing vessels, pilot vessels, charter fishing boats, head boats, and a wide range of private recreational vessels.

Local cooperation The City has fulfilled all requirements of the project under the cooperation agreement, including the provision of adequate dredged material facilities.

Terminal facilities. The project is used by the pilot boats for both the Virginia and Maryland Pilot stations based inside the inlet, to transport pilots from their dock to deep draft ships entering the Chesapeake Bay. The project requires maintenance dredging on intervals of about three years

Operations during fiscal year: Fiscal year 2009 funds in the amount of \$241,000 were used to perform maintenance dredging within the most critically shoaled areas of the channel and associated surveys, engineering and administration. Work was in progress as of 30 Sep 2009 with completion scheduled in FY10.

15. NORFOLK HARBOR AND CHANNELS (Deepening), VA

Location: The Norfolk Harbor and Channels project serves the Port of Hampton Roads, Virginia, a 25-square mile natural harbor serving the ports of Norfolk, Newport News, Portsmouth, Chesapeake, and Hampton, VA.

Existing project: The project consists of a system of two-way, full-width channels that are authorized for construction to a depth of 55 feet in Norfolk Harbor and Thimble Shoal Channels and 60 feet in the Atlantic Ocean Channel. The project is being constructed in separable elements based on the ongoing navigation needs of and financial capability of the non-Federal sponsors. The 50-Foot Outbound Element was completed in 1989. The 50-Foot Anchorage was completed in 1999. The 50-Foot Inbound Element was completed in 2007. Programmed work encompasses deepening 2.5 miles of the Southern Branch of the Elizabeth River to 40 feet, deepening 6.3 miles of the Southern and Main Branch to 45 feet, and the update of the Navigation Management Plan.

Local cooperation: The non-Federal sponsor has expressed the need and support for the construction of the 45-foot authorized project in the main branch of the Elizabeth River and the 40-foot authorized project into the Southern Branch of the river. The non-Federal sponsor also supports the update of the Navigation Management Plan which was completed in February 2000.

Terminal facilities. Programmed work encompasses deepening 2.5 miles of the Southern Branch of the Elizabeth River to 40 feet, deepening 6.3 miles of the Southern and Main Branch to 45 feet, and the update of the Navigation Management Plan.

Operations during fiscal year: Fiscal year 2009 funds in the amount of \$723,000 were used to initiate the investigation of the Elizabeth River 45-foot and Southern Branch 40-foot navigation projects; to execute a design agreement with the non-Federal sponsor for the update of the Navigation Management Plan; and to initiate the update of the Navigation Management Plan.

16. NORFOLK HARBOR AND CHANNELS (Maintenance), VA.

Location. Norfolk, VA, is 187 miles south of Baltimore, MD, and 30 miles from entrance to Chesapeake Bay at Cape Charles and Cape Henry. Harbor extends 18.3 miles from 55-foot contour in the Chesapeake Bay to a point 0.8 miles above the interstate 64 high level bridge in the Southern Branch of the Elizabeth River. (See National Ocean Service Chart Nos. 12245 and 12253.)

Previous projects. For details see

Annual Report for 1938.

Existing project. For details see Annual Report for 1993.

Local Cooperation. Fully complied with for dredging to an intermediate depth of 50 feet: (1) the outbound channel completed December 1988; (2) the Anchorage completed October 2000; and (3) the inbound channel completed November 2006. The non-Federal sponsor (Virginia Port Authority) is required to furnish cost sharing in accordance with the provisions described in the Water Resources Development Act of 1986, as amended for additional deepening.

CRANEY ISLAND DREDGED

MATERIAL AREA: A dredge material placement area of about 2,500 acres adjacent to and north of Portsmouth, Virginia, enclosed by stone-faced levee of sand; re-handling basin, approach and exit channels connecting re-handling basin and Norfolk Harbor 55-foot channel.

Operations during the fiscal year. Fiscal year 2009 regular funds in the amount of \$7,765,000 were used to perform critical maintenance dredging in Thimble Shoal Channel, Norfolk Harbor and Craney Island Reach, and work associated with the Craney Island Dredged Material Management Area (CIDMMA). ARRA funds in the amount of \$3,955,000 were used to install and repair Ft Norfolk Seawall by contract, environmental compliance for erosion and repair security fence at Craney Island.

Terminal facilities. See Port Series No. 11 (revised 1993) on Ports of Hampton Roads, prepared by the Water Resources Support Center.

17. NORFOLK HARBOR, CRANEY ISLAND EXPANSION, VA

Location. The Craney Island Dredged Material Management Area (CIDMMA) is a man-made dredge containment area located along the south bank of the James River in Portsmouth, Virginia.

Existing project. Authorized in 1946 and constructed between 1956 and 1958, provides a 2,500 acre dredge disposal site for the deposition of dredge spoils from the Hampton Roads inner harbor. The site is owned by the Federal government and operated by the Corps of Engineers, Norfolk District. Project is operated and maintained by the collection of tolls from users. Feasibility study was authorized by a 1997 resolution of the U.S. House of Representatives Committee on Transportation and Infrastructure. Purpose of the study is to investigate an eastward expansion of Craney Island giving specific attention to rapid filling to accommodate anticipated port expansion and to the operation of the existing facility while extending the useful life of Craney Island, and shall take into account all relevant environmental issues and the subsequent transfer of the expanded area to the Commonwealth of Virginia. The feasibility study and the Chief's of Engineers Report were approved in 2006. The Record of decision was issued in 2007. The project was authorized by WRDA 2007 at a cost of \$712M to be equally cost shared between the Federal government and the Commonwealth of Virginia.

Local cooperation.

Commonwealth of Virginia funded 50% of the feasibility study cost and 25% of the design cost.

Terminal facilities. Existing facilities require expansion to meet future dredge material placement needs of the Hampton Roads Port.

Operations during fiscal year.

Fiscal year 2009 funds in the amount of \$2,089,000 and \$933,000 of VPA funds were used to design the first construction element.

18. ONANCOCK RIVER, VA

Location. The project provides access from the Chesapeake Bay to the Town of Onancock, VA.

Existing project A channel 200 feet wide and 12 feet deep across Onancock Bar, thence a minimum width of 100 feet to a point roughly 1,200 feet above the mouth of the North Branch, widened at the upper end to form a turning basin 200 feet square. A turning basin of about 2.3 acres and 12 feet deep at Onancock. A channel 6 feet deep and 100 feet wide in the lower 500 feet of Joynes Branch and an anchorage basin 6 feet deep and 3.9 acres in area at the mouth of Titlow Creek. All depths referred to mean low water. The project's local sponsor is the Town of Onancock.

Terminal facilities. This project serves a harbor that supports the Tangier subsistence harbor. It is also home to gravel, sand, oil, and grain facilities, commercial watermen, and tourism operations. Five year average of commercial tonnage for this project is approximately 60,000 tons.

Operations during fiscal year: Fiscal year 2009 funds in the amount of \$148,000 were used for engineering in preparation for maintenance dredging.

19. PAGAN RIVER, VA

Project maintenance dredging operations were undertaken by contract with Recovery Act funds at a cost of \$40,000 through 30 Sep 2009 with completion scheduled in FY10.

20. PROJECT CONDITION SURVEYS, VA

Location. The Norfolk District is responsible for maintaining over 73 shallow and deep draft navigation projects and the inland navigation system channel.

Existing project. Project condition surveys are performed over project areas to determine the present condition of these coastal and inland navigation channels, underwater features, river or flood control structures. These surveys are used to determine if conditions have changed enough to warrant future construction and maintenance.

Local cooperation. None required

Terminal facilities. The maintenance of navigation projects,

condition surveys of these projects become increasingly important to monitor shoaling and dangerous conditions so that current conditions may be reported to the users for planning their operations to reduce personal injury and property damage when transiting the project.

Operations during fiscal year FY 2009 funds in the amount of \$693,000 were utilized to perform 18 condition surveys of navigation channels that are utilized by USCG for search and rescue operations, subsistence harbors, and critical harbors of refuge.

21. QUEENS CREEK, VA

Project maintenance dredging operations were undertaken by contract with Recovery Act funds at a cost of \$29,000 through 30 Sep 2009 with completion scheduled in FY10.

22. RUDEE INLET, VA

Location. On the Atlantic Coast of Virginia, within the City of Virginia Beach, approximately 5 miles south of Cape Henry. (See National Ocean Service Chart No. 12205.)

Existing Project. An entrance channel 10 feet deep, 100 to 72 feet wide and 1,605 feet long; an inner channel 7 feet deep, 72 to 53 feet wide and 2,495 feet long, including a safety area 7 feet deep, and approximately 1.9 acres in size and a turning basin 7 feet deep, 175 feet wide and 1,570 feet long; a sand trap 18 feet deep and approximately 3.3 acres in size; and a weir and jetty system at the mouth of the inlet. Mean tidal range is about 3.3 feet.

Local cooperation. Fully complied with. The City of Virginia Beach as local sponsor is required to financially participate in continued annual maintenance as described in the Local Cooperation Agreement, and has fully participated through the current fiscal year.

Terminal facilities. Existing terminal facilities are considered adequate for present commerce.

Operations during fiscal year. Fiscal year 2009 funds in the amount of \$395,000 were used to perform maintenance dredging of critical shoals of the project's entrance channel. Funds were also used to perform surveys, engineering and administration of the project.

23. TYLERS BEACH, VA

Location. A channel 6 feet deep and 50 feet wide from that depth in the James River shoreward approximately 2,660 feet to a harbor of refuge of the same depth 150 feet wide and 300 feet long and two 370-foot placed stone revetment/jetty structures.

Existing project: A channel 6 feet deep and 50 feet wide from that depth in the James River shoreward approximately 2,660 feet to a harbor of refuge of the same depth 150 feet wide and 300 feet long and two 370-foot placed stone revetment/jetty structures. All depths referred to mean low water.

Local cooperation: The project's local sponsor is Isle of Wight County.

Terminal facilities: The project is designated as a critical harbor of refuge and supports 6,000 vessel trips per year. Tylers Beach is a major part of the county's Comprehensive Development Plan and a launch point for security and public health patrol boats because of limited commercial fishing boat launch facilities in the region. Landings average 250 tons of blue crab and 25 tons of finfish per year.

Operations during fiscal year: Fiscal year 2009 funds in the amount of \$56,000 were used engineering and design, supervision and administration contract for construction of the upland dredged material site.

24. WATER AND ENVIRONMENTAL CERTIFICATIONS, VA

Location. The location includes all potential navigation maintenance dredging projects within Norfolk District area of operations.

Existing project: Provides funding for coordination and renewal of water quality and other environmental certifications for navigation projects not otherwise included in the budget. Projects that are supported by this program include active navigation projects that are due for maintenance but not funded in budget cycle for maintenance dredging.

Local cooperation: Not required.

Terminal facilities. Water and Environmental Certifications is a relatively new program supported by the USACE

budget guidance for Operations and Maintenance, General. The program recognizes that there is essential advance work needed to support the maintenance of critical navigation projects during the years before the projects are funded for maintenance dredging.

Operations during fiscal year:

Fiscal year 2009 in the amount of \$50,000 were used to perform coordination and permit renewal for a limited number of shallow draft channels that were due for maintenance dredging and environmental efforts for other important navigation channels.

25. WATERWAY ON THE COAST OF VIRGINIA, VA

Location. The channel in Virginia is 6 feet deep and 60 feet wide from the Maryland-Virginia line in Chincoteague Bay to Chesapeake Bay, about 90 miles long. It is a portion of the 145 mile channel from Delaware Bay at Roosevelt Inlet, Delaware, to Chesapeake Bay, Virginia.

Existing project: The channel in Virginia is 6 feet deep and 60 feet wide from the Maryland-Virginia line in Chincoteague Bay to Chesapeake Bay, about 90 miles long. It is a portion of the 145 mile channel from Delaware Bay at Roosevelt Inlet, Delaware, to Chesapeake Bay, Virginia. All depths referred to mean low water. Its primary functions are to provide transient vessels a protected north-south route, connect eastern shore harbors to each other and to the Atlantic Ocean.

Operations during fiscal year:

Fiscal year 2009 funds in the amount of \$5,000 were used to finish dredging contract supervision and administration that started in FY2008.

26. WINTER HARBOR, VA

Project maintenance dredging operations were undertaken by contract with Recovery Act funds at a cost of \$36,000 through 30 Sep 2009 with completion scheduled in FY10.

27. YORK RIVER, VA

Location. The York River Entrance Channel is the only deep draft active maintenance dredging project on the river and consists of a channel 37 feet deep 750 feet wide and approximately 23 miles long. The channel begins at the 38-foot contour in the Chesapeake Bay and ends at a point adjacent to the piers at the Yorktown U.S. Naval Weapons Station approximately 8 miles above the river mouth.

Existing project: The York River Entrance Channel is the only deep draft active maintenance dredging project on the river and consists of a channel 37 feet deep 750 feet wide and approximately 23 miles long. The channel begins at the 38-foot contour in the Chesapeake Bay and ends at a point adjacent to the piers at the Yorktown U.S. Naval Weapons Station approximately 8 miles above the river mouth. Dredged material is placed in the Wolf Trap (Alternate) Placement Area.

Terminal facilities. The York River Entrance Channel is dredged periodically to accommodate large, deep-draft, 950 ft long 'Suezmax' Shuttle Tankers, U.S. Navy and

NORFOLK, VA, DISTRICT

U.S. Coast Guard Vessels, and other commercial vessels. The York River provides a home base for a U.S Naval Supply Center and Weapons Station, U.S. Coast Guard Reserve Training Center, and the Yorktown Oil Refinery owned by Western Refining and co-occupied by Dominion Virginia Power. The five year average for the York River indicates about 6.5 million tons of freight with about 4,500 vessels leaving and entering the River annually.

Operations during fiscal year: FY 2009 funds in the amount of \$177,000 were used to for coordination to resolve the complex environmental and resource issues and performed engineering and design associated with the Regional Sediment Management Program and maintenance dredging planned for FY 2011.

28. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

FY2009 funds of \$109,000 were spent on navigation work under authority of Section 107.

BEACH EROSION CONTROL

29. VIRGINIA BEACH, VA (HURRICANE PROTECTION)

Location. The city of Virginia Beach is located on the southeastern coast of Virginia bordered by the Atlantic Ocean on the east, Chesapeake Bay on the north, the cities of Norfolk and Chesapeake on the west, and North Carolina on the south (See National Ocean Service Chart 12207.)

Existing project. The plan of improvement includes construction of a vertical steel sheet-pile wall with concrete cap extending from Rudee Inlet to 58th Street (about 4 miles), enhancement of the existing dune system between 58th Street and 89th Street (about 2 miles), construction and periodic re-nourishment of a widened and raised beach berm between Rudee Inlet and 89th Street (about 6.2 miles), a new boardwalk integrated with the vertical wall which will be placed seaward of the existing boardwalk extending from Rudee Inlet to approximately 40th Street (about 3 miles), a storm water runoff system consisting of the offshore discharge by pumped flow through submarine pipelines, and appropriate beach access structures consisting of ramps, stairs and dune crossover facilities. Periodic beach nourishment will maintain the beach and dune system over the 50 year project life. The Project Cooperation Agreement was executed in June 1996 and the first construction contract was underway in October 1996. Initial construction of the project is scheduled for completion in November 2008.

Local cooperation. The local sponsor (city of Virginia Beach) is required to furnish cost sharing in accordance with the provisions described in The Water Resources Development Act of 1986.

Operations during fiscal year. Fiscal year 2009 funds in the amount of \$2,330,000 were used to complete contracts for the repair of the stormwater outfall pipes at the 42nd Street Pump Station and completion of a new stormwater ocean outfall at the 79th Street Pump Station.

**30. BEACH EROSION CONTROL
WORK UNDER SPECIAL
AUTHORIZATION**

FY2009 funds of \$5,000 were spent on beach erosion projects under section 103.

FLOOD CONTROL

**31. EMERGENCY FLOOD
CONTROL ACTIVITIES**

During FY 2009, a total of \$20,000 was spent on Catastrophic Disaster Preparedness Program (Approp. 96X3123), and \$468,000 on Flood Control and Coastal Emergencies including Emergency Operations (Approp. 96X3125).

**32. GATHRIGHT DAM AND LAKE
MOOMAW, VA**

Location. Gathright Dam is on the Jackson River, a tributary of James River at mile 43.4 in Allegheny County. Gathright Dam site is in the reach of the Jackson River known as the Gorge, about 19 miles upstream from Covington, VA. At the elevation of the top of the conservation pool, the lake extends upstream about 9 miles. (See Falling Spring and Mountain Grove, Virginia-West Virginia quadrangles of geological survey.)

Existing project. Gathright Dam consists of a 1,172-foot long, rolled-rock-fill dam with an impervious core, with the top at elevation 1,684.5; outlet works consisting of a concrete intake structure located in the right bank 500 feet upstream from the axis of the dam: a 1,075-foot long outlet tunnel through the right abutment and a stilling basin; and a 2,450-foot long fixed-crest emergency spillway excavated in a low saddle in the

divide at Fortney Branch about 2.5 miles south of the dam. Discharges through the maximum conservation port elevation 1,582 will be provided for water quality control. The reservoir area at elevation 1,582 will be 2,530 acres. A total of 302,000 acre-feet of storage between elevation 1,582 and the spillway crest (elevation 1,663.5) will be reserved for flood control. At the spillway crest the reservoir will have an area of 4,540 acres. A Section 216 Project is being pursued by the Commonwealth of Virginia in FY08 to alleviate environmental issues downstream within the Jackson River.

Local cooperation. None required.

Operations during fiscal year. Fiscal year 2009 regular funds in the amount of \$1,826,000 were used for continued operations and maintenance in support of the project and conduct periodic inspection with division participants. ARRA funds in the amount of \$60,000 were used to pave stilling basin road.

**33. INSPECTION OF COMPLETED
WORKS, VA**

Expenditures for FY09 were \$111,000 for the evaluations and inspections. The flood damage reduction projects were constructed by the Corps, and are operated/maintained by the local interests.

**34. LAKE MERRIWEATHER, GOSHEN
DAM AND SPILLWAY, VA**

Location: Lake Merriweather, a 425-acre impoundment created by a 38 foot

high dam known as the Goshen Dam, is located in the western part of Virginia, 30 miles northwest of Lexington, Virginia.

Existing project: The Goshen Dam is an earthen structure with a reinforced concrete overflow spillway 158 feet wide equipped with a series of 10, 14' wide by 9.5' high crest control gates. The National Capital Area Council of the Boy Scouts of America owns the lake and dam and its purpose is to provide recreation and flood control. The dam's existing spillway capacity does not meet National Dam Safety Regulations and the spillway's crest gates are susceptible to damage during flood events and raise serious concerns about possible dam overtopping or failure during a large flood event. A technical study recommending fixing (setting) the existing spillway crest at elevation 1369 and roller compacted concrete armor of the dam embankment was approved by HQUSACE in February 2000. An update to the technical study was approved by the ASA(CW) on December 11, 2006.

Local cooperation: The non-Federal Sponsor is the Commonwealth of Virginia acting on behalf of the National Capital Area Council of the Boy Scouts of America, the dam's owner.

Operations during fiscal year: Fiscal year 2009 funds in the amount of \$189 were used to complete design activities started in prior fiscal years.

35. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

FY2009 funds of \$88,000 were spent on flood control projects under Section 205.

ENVIRONMENTAL

36. CHESAPEAKE BAY ENVIRONMENTAL PROGRAM, MD and VA (VA Portion)

Location: The entire Chesapeake Bay watershed covers about 64,000 square miles, which includes portions of six states and the District of Columbia. The Chesapeake Bay encompasses a total of 2,200 square miles, is approximately 200 miles in length and consists of about 4,000 miles of shoreline, 2,400 miles of which are within Virginia.

Existing project: The Chesapeake Bay is a relatively shallow estuary, with an average water depth of about 20 feet, although there are areas up to 174 feet in depth. The Virginia portion of the Chesapeake Bay is about 35 miles wide near the Virginia/Maryland border and about 15 miles wide at its mouth where it empties into the Atlantic Ocean.

Operations during fiscal year: FY2009 funds in the amount of \$337,000 were used to complete a draft programmatic EIS evaluating options for native oyster recovery.

37. CHESAPEAKE BAY OYSTER RECOVERY, VA (VA Portion Only)

Location. Lynnhaven River, Great Wicomico River and Tangier Sound.

Existing Projects. Project is authorized by WRDA 1986 as amended. Construction of 150 acres of low relief reefs and 8 acres of 3-D reefs in the Tangier Sound were completed Sep 2002. These reefs were seeded with disease tolerant oyster seed in April 2003. Construction of 90 acres of medium relief reefs in the Great Wicomico was completed in September 2004 and seeded with disease tolerant broodstock oysters in 2005 and 2006. Recent monitoring of the Great Wicomico sites indicates that these reefs and newly seeded oysters are doing very well. The next restoration project is the Lynnhaven River. Native oysters have been identified as an important component to the Bay eco-system due to its natural ability to filter water. Oyster population has declined to a dangerous level due to years of over harvesting, diseases, and pollution.

Local cooperation.

Commonwealth of Virginia is funding 25% of the project cost through in-kind services.

Operations during fiscal year.

Fiscal year 2009 funds in the amount of \$2,079,000 were used for oversight of VIMS monitoring of project sites in the Rappahannock River, Great Wicomico River and Tangier Sound, and construction of 30 acres of reefs in the Lynnhaven River.

38. RAPPAHANNOCK RIVER, EMBRY DAM REMOVAL, VA

Location: The project area encompasses the upstream limits of the Rappahannock River through City of Fredericksburg and Spotsylvania and Stafford counties, Virginia. This is in the vicinity of the river fall line.

Existing project: The project will

provide for fish passage by removal of the Embry Dam located at approximately river mile 109. Also included in the project are sediment removal, bank stabilization and riparian restoration behind the dam and preservation of the historic Rappahannock canal.

Local cooperation: The City of Fredericksburg, Stafford County, and state environmentalists support the restoration of this beautiful river to its more natural state of a free flowing river.

Terminal facilities: The Project Cooperative Agreement (PCA) was executed on 2 December 2002. The contract for sediment removal was awarded in March 2003 and was completed in January 2004. The contract for removal of the Embry Dam was awarded in May 2004 and completed in May 2005. The final contract for the intake structure and pump station for providing water to the historic Rappahannock Canal was initiated in September 2007 and was completed in September 2008. Deepening of the Rappahannock River at the City Docks is not included in the authorized project.

Operations during fiscal year: FY 2006 funds in the amount of \$647,000 were used to complete the project.

39. ENVIRONMENTAL WORK UNDER SPECIAL AUTHORIZATION

FY2009 funds in the amount of \$107,000 were spent on environmental restoration projects, under Section 206; \$10,000 under Section 204; and \$31,000 under Section 1135.

GENERAL INVESTIGATIONS

40. GENERAL INVESTIGATION SURVEYS

FY 2009 total federal cost of surveys during the fiscal year amounted to \$749,000 including Interagency Water Resources Development \$12,000; and Special Investigations, \$24,000.

41. COLLECTION AND STUDY OF BASIC DATA, INCLUDING FLOOD PLAIN MANAGEMENT SERVICES AND PLANNING ASSISTANCE TO STATES

FY2009 funds in the amount of \$84,000 were spent on collective and study of basic data, including Flood Plain Management Services. FY2009 funds of \$203,000 were spent on Planning Assistance to States (Section 22), and an equal amount expended by local sponsors.

Section 22 of the Water Resources Development Act (WRDA) of 1974, as amended, provides authority for the Corps of Engineers to assist the States, local governments, and other non-Federal entities, in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources. Section 208 of the Water Resources Development Act of 1992 amended the WRDA of 1974 to include Native American Tribes as equivalent to a State.

The Planning Assistance to States program is funded annually by Congress. Federal allotments for each State or Tribe from the nation-wide appropriation are limited to

\$2,000,000 annually, but typically are much less. Individual studies, of which there may be more than one per State or Tribe per year, generally cost \$25,000 to \$75,000. These studies are cost shared on a 50 percent Federal - 50 percent non-Federal basis.

The Norfolk District is the lead Corps of Engineers District in Virginia with respect to the Section 22 program (work is also performed by the Wilmington, Nashville, Huntington, and Baltimore Districts).

42. PRECONSTRUCTION ENGINEERING AND DESIGN

FY2009 funds in the amount of \$2,567,000 were spent on Preconstruction Engineering and Design, including \$2,089,000 on Norfolk Harbor Craney Island Expansion, and \$201,000 on Willoughby Spit.

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 5-A		COST AND FINANCIAL STATEMENT						
See Section In Text	Project	Funding	FY2006	FY2007	FY2008	FY2009	Total Cost to Sep 30, 2009	
1.	Appomattox River, VA	Maintenance						
		Approp	450,000	0	1,402,000	527,000		
		Cost	294,272	292,107	618,609	365,000		
2.	Atlantic Intracoastal Waterway Between Norfolk, VA & St. Johns River, FL (Regular Funding)	New Work						
		Approp					1,645,024	
		Cost					1,642,085	
		Maintenance						
		Approp	2,353,000	2,273,000	3,174,000	2,590,000	41,386,969	
		Cost	2,317,650	2,601,266	3,084,326	2,844,814	42,428,746	
	(Regular Funds)							
	(Recovery Act Funds)							
		Approp				3,324,000		
		Cost				297,398		
3.	Atlantic Intracoastal Waterway At Deep Creek, VA (Regular Funding)	New Work						
		Approp	49,000		45,000	478,000		
		Cost	47,724	45,372	73,239	216,305		
		New Work						
	(Recovery Act Funds)							
		Approp						
		Cost						
4.	Broad Creek, VA (Regular Funds)	Maintenance						
		Approp	0	0	328,000	0		
		Cost	0	0	21,003	96,034		
		Approp				670,000		
	(Recovery Funds Act)							
		Cost				29,637		
5.	Chincoteague Bay Channel, VA	Maintenance						
		Approp	0	0	0	0		
		Cost	0	0	0	0		
		Approp				320,700		
		Cost				243,690		
6.	Chincoteague Harbor of Refuge, VA (Regular Funding)	Maintenance						
		Approp	0	213,000	0	247,000		
		Cost	0	40,000	0	33,181		

NORFOLK, VA, DISTRICT

TABLE 5-A (Continued)		COST AND FINANCIAL STATEMENT					
See Section in Text	Project	Funding	FY2006	FY2007	FY2008	FY2009	Total Cost to Sep. 30, 2009
7.	Chincoteague Inlet, VA	New Work					
	(Regular Funds)	Approp					227,000
		Cost					227,000
		Maintenance					
	(Regular Funds)	Approp	810,000	852,000	601,000	192,000	12,951,639
		Cost	730,319	337,184	874,645	327,351	10,472,088
	(Recovery Act Funds)	New Work					
		Approp					3,850
		Cost					3,850
8.	Greenvale Creek, VA	Maintenance					
	(Regular Funds)	Approp	0	0	0	0	
		Cost	0	0	0		
	(Recovery Act Funds)	Approp				459,600	
		Cost				382,308	
9.	Hampton Creek, VA	Maintenance					
	(Regular Funding)	Approp	0	0	0	0	
		Cost	0	0	0	0	
	(Recovery Act Funds)	Approp				926,500	
		Cost				17,810	
10.	Hampton Roads, VA						
	Collection and Removal of Drift	Maintenance					
	(Regular Funds)	Approp	743,000	920,000	830,000	1,029,000	15,011,399
		Cost	736,000	1,092,766	835,231	931,415	14,396,956
	(Recovery Act Funds)	Approp				145,000	
		Cost				57,254	
11.	Hampton Roads, VA						
	(Prevention of Obstructive & Injurious Deposits)	Maintenance					
	(Regular Funds)	Approp	0	221,000	194,000	0	
		Cost	0	40,000	194,000	0	
12.	Hoskins Creek, VA	Maintenance					
	(Regular Funds)	Approp	0	0	0	0	
		Cost	0	0	0		
	(Recovery Act Funds)	Approp				1,140,950	
		Cost				232,816	

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 5-A(Continued)		COST AND FINANCIAL STATEMENT					
See Section in Text	Project	Funding	FY2006	FY2007	FY2008	FY2009	Total Cost to Sep. 30, 2009
13.	James River, VA (Regular Funds)	New Work					
		Approp Cost				766,000	1,081,053
	(Regular Funds)	Maintenance					
		Approp Cost	2,966,000	3,043,000	4,655,000	3,404,000	61,013,501
(Recovery Act Funds)	Approp Cost	2,780,328	3,725,740	3,205,260	3,929,004	55,714,812	
	Approp Cost				3,005,500	2,016,262	
14.	Lynnhaven Inlet, VA (Regular Funds)	New Work					
		Approp Cost					445,354
	(Regular Funds)	Maintenance					
		Approp Cost	0	0	0	982,000	9,550,426
(Recovery Act Funds)	Approp Cost	1,046,954	54,044	87,060	241,315	4,848,489	
	Approp Cost				1,069,450	2,500	
15.	Norfolk Harbor & Channels (Deepening), VA (Regular Funds)	New Work					
		Approp Cost	3,189,000	0	745,000	478,000	
	(Contributed Funds)	New Work					
		Approp Cost	2,637,356	123,018	224,006	722,670	
16.	Norfolk Harbor and Channels (Maintenance), VA (Regular Funds)	Maintenance					
		Approp Cost	13,205,000	9,771,000	11,756,000	9,808,000	215,712,964
	(Recovery Funds Act)	Approp Cost	11,708,844	11,879,061	10,730,143	7,765,255	223,320,841
		Approp Cost				11,817,700	3,954,612
17.	Norfolk Harbor, Craney Island Expansion, VA (Regular Funds)	New Work					
		Approp Cost	147,000	3,175,000	2,765,000	0	
				104,646	2,770,595	2,089,162	
18.	Onancock River, VA (Regular Funds)	Maintenance					
		Approp Cost	0	0	641,000	0	
			0	0	57,416	147,619	

NORFOLK, VA, DISTRICT

TABLE 5-A(Continued)		COST AND FINANCIAL STATEMENT					Total Cost to Sep. 30, 2009
See Section in Text	Project	Funding	FY06	FY07	FY08	FY09	
19.	Pagan River, VA	Maintenance					
	(Regular Funds)	Approp Cost	0 0	0 0	0 0	0 0	
	(Recovery Act Funds)	Approp Cost				2,499,200 39,658	
20.	Project Condition Surveys, VA	Cost					
21.	Queens Creek, VA	Maintenance					
	(Regular Funds)	Approp Cost	0 0	0 0	0 0	0 0	
	(Recovery Act Funds)	Approp Cost				443,400 28,535	
22.	Rudee Inlet, VA	New Work					
	(Regular Funds)	Approp Cost					
	(Regular Funds)	Maintenance Approp Cost	1,148,000 489,835	953,000 275,608	947,000 558,226	344,000 395,260	
	(Contributed Funds)	New Work Approp Cost					
23.	Tylers Beach, VA	Maintenance					
	(Regular Funds)	Approp Cost	0 0	0 0	1,001,000 25,367	0 56,213	
24.	Water & Environmental Certifications, VA	Maintenance					
	(Regular Funds)	Approp Cost				49,000 48,946	49,000 48,946
25.	Waterway on the Coast Of Virginia, VA	New Work					
	(Regular Funds)	Approp Cost					850,498 850,498
	(Regular Funds)	Maintenance Approp Cost	180,000 177,000	0 103,164	175,000 217,492	241,000 4,769	14,428,059 12,683,571

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

TABLE 5-A(Continued)		COST AND FINANCIAL STATEMENT					Total Cost to Sep. 30, 2009	
See Section in Text	Project	Funding	FY2006	FY2007	FY2008	FY2009		
26.	Winter Harbor, VA (Regular Funds)	Maintenance						
		Approp	0	0	0	0		
	(Recovery Act Funds)	Cost	0	0	0	0		
		Approp					779,800	
		Cost				35,606		
27.	York River, VA (Regular Funds)	Maintenance						
		Approp	0	0	46,000	232,000		
		Cost	0	0	13,500	117,290		
28.	Navigation Work Under Special Authorization	Cost				109,483		
29.	Virginia Beach, VA (Hurricane Protection) (Regular Funds)	New Work						
		Approp	8,461,000	9,300,000	2,808,000	1,340,000		
	(Contributed Funds)	Cost	2,599,933	4,936,690	8,677,438	2,329,649		
		New Work						
		Approp				1,250,481		
		Cost				3,076,216		
30.	Beach Erosion Control Work Under Special Authorization	Cost				5,025		
FLOOD CONTROL								
31.	Emergency Flood Control Activities	Cost				488,708		
32.	Gathright Dam & Lake Moomaw, VA (Regular Funds)	New Work						
		Approp					80,970,511	
	(Regular Funds)	Cost					80,970,511	
		Maintenance						
			Approp	1,876,000	2,082,000	1,868,000	1,877,000	25,422,810
			Cost	1,888,801	1,872,313	1,667,598	1,826,233	25,685,243
	Recovery Act Funds)	Approp				359,950		
		Cost				60,166		
33.	Inspection of Completed Work	Cost						
34.	Lake Merriweather, Goshen Dam & Spillway, VA (Regular Funds)	New Work						
		Approp	2,970,000				3,150,000	
		Cost	158,910	94,895	14,124	190	682,227	

NORFOLK, VA, DISTRICT

TABLE 5-A(Continued)		COST AND FINANCIAL STATEMENT					Total Cost to Sep. 30, 2009
See Section in Text	Project	Funding	FY2006	FY2007	FY2008	FY2009	
35.	Flood Control Work Under Special Authorization	Cost				87,798	
36.	Chesapeake Bay Environmental Program, MD & VA (VA Portion)	Cost				336,833	
37.	Chesapeake Bay Oyster Recovery, MD & VA (VA Portion Only)	Cost				2,079,220	
38.	Rappahannock River, Embry Dam Removal, VA	New Work					
		Approp	1,485,000	300,000			5,875,000
		Cost	277,973	90,199	1,023,665	646,723	4,985,631
39.	Environmental Work Under Special Authorization	Cost				148,345	
	GENERAL INVESTIGATIONS						
40.	General Investigation Survey	Cost				370,121	
41.	Collection & Study of Basic Data, including Flood Plain Management Services & Planning Assistance to States	Cost				291,500	
42.	Preconstruction Engineering & Design	Cost				2,566,954	

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

Table 5-B OTHER AUTHORIZED BEACH EROSION CONTROL PROJECTS

Project	For Last Full Report, See Annual Report For:	Cost to Sept 30, 2009		Additional Expenditure For New Work Expended From Contributed Funds
		Construction	Maintenance	
Anderson Park, Newport News, VA	1979	471,474	1,254	176,671
Hampton Institute, VA	1976	156,906	1,589	175,845
Rapidan River, Orange, VA	1984	45,000	-	-
Saxis Island, VA	1987	273,600	-	3,145
Tangier Island Shore Protection, VA	1990	2,481,815	2008	1,379,371

NORFOLK, VA, DISTRICT

Table 5-C OTHER AUTHORIZED FLOOD CONTROL PROJECTS

Project	For Last Full Report, See Annual Report For:	Cost to Sept 30, 2009		Additional Expenditure For New Work Expended From Contributed Funds
		Construction	Maintenance	
Newmarket Creek, VA	1970	1,000,000	47,562	550,097
Norfolk Floodwall, VA	1973	1,851,933	51,827	516,256
Scottsville, VA	1989	3,431,746	19,010	32,954
Virginia Beach Canal No. 2, VA	1990	4,708,587	54,380	216,596

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2009

Table 5-D RECONNAISSANCE AND CONDITION SURVEYS

<u>PROJECT NAME</u>	<u>MONTH/YEAR</u>	<u>TYPE OF SURVEY</u>
Cape Charles/Harbor of Refuge/Mud Creek	06/2009	Condition
Chincoteague Channel	11/2008	Condition
Chincoteague Harbor of Refuge	04/2009	Condition
Cranes Creek	04/2009	Condition
Davis Creek	08/2009	Condition
Deep Creek, Newport News	10/2008	Condition
Horn Harbor	04/2009	Condition
Jackson Creek	12/2008	Condition
Joynes Creek	06/2009	Condition
Little River	08/2009	Condition
Nandua Creek	05/2009	Condition
Occohannock Creek	06/2009	Condition
Onancock River	06/2009	Condition
Oyster Channel	05/2009	Condition
Quinby Creek	04/2009	Condition
Tangier Channel	06/2009	Condition
Tylers Beach	07/2009	Condition
Wachapreague Channel	05/2009	Condition
WCV Bogues Bay	03/2009	Condition
WCV Bradford Bay	04/2009	Condition
WCV Burtons Bay	06/2009	Condition
WCV Gargathy Inlet	06/2009	Condition
WCV Hog Creek	02/2009	Condition
WCV Hog Neck Creek	01/2009	Condition
WCV Wire Passage	11/2008	Condition
Whitings Creek	04/2009	Condition
Willoughby Channel	05/2009	Condition
York River Entrance Channel	08/2009	Condition