

BALTIMORE, MD DISTRICT

This district comprises the watershed of Susquehanna River and its tributaries from headquarters in south central New York State through central Pennsylvania to its mouth in Chesapeake Bay; watershed of the Potomac River and its tributaries from headquarters in Maryland, eastern West Virginia, and Northern Virginia to its

mouth in Chesapeake Bay; District of Columbia; and southwestern portion of Delaware. It includes that portion of Chesapeake Bay and its tributaries north of Smith Point, MD, on western shore of the bay, and includes that portion of Maryland between Chesapeake Bay and Atlantic Ocean.

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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 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 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 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 20.2 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 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 new 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 of which 25 miles are industrially developed. There are 94 covered and open overseas piers for the loading and discharging of 173 ships, providing 84 general cargo, 65 specialized cargo, and 24 public bulk cargo berths. The existing ground storage is equivalent to 53,700 railroad cars of cargo. There are

31 public general merchandise warehouses, with 4.9 million square feet of storage space and 4.7 million cubic feet of cold storage space. Eight ship-building, ship-repair, and ship-dismantling yards are available for handling up to 90 vessels. The two grain elevators in the port have a capacity of about 8 million bushels. 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 made. Dredged material testing of the Maryland channels was initiated in September 2002 and was in progress at the end of the calendar year. Dredge monitoring studies were initiated in December 2002 and are scheduled for completion in the spring of 2003. Maintenance dredging, by contract, of the Craighill Entrance and Craighill Angle commenced on September 23, 2001 and was completed on January 27, 2002. A total of 624,261 cubic yards of material were dredged and deposited in the Poplar Island Environmental Restoration Project in the Chesapeake Bay at a cost of \$2,387,697. Maintenance dredging, by contract, of the Fort McHenry Channel, Ferry Bar Channel, Riverview Anchorage No. 1 and Riverview Anchorage No. 2 is being performed in conjunction with new work dredging of the Baltimore Harbor Anchorage & Channels project. Dredging commenced on March 18, 2002 and is expected to be completed by April 2003. A total of 268,074 cubic yards have been dredged to date and placed at the Hart-Miller Island Containment Facility at a cost of \$1,527,967. A contract in the amount of \$7,308,400 was awarded on September 17, 2002 to dredge an estimated 1.1 million cubic yards from the Craighill Entrance, Craighill Channel, Cutoff Angle, and Brewerton Channel Eastern Extension and to deposit the material at the Poplar Island Environmental Restoration Project in the Chesapeake Bay. Dredging commenced on November 13, 2002 and is scheduled for completion in late January 2003.

Maintenance, Norfolk District. Condition surveys were made of the Rappahannock Shoal and Atlantic Ocean Channels. Maintenance dredging, by contract, of the Cape Henry Channel and York Spit Channel commenced on September 17, 2001 and was completed on November 4, 2002. A total of 2,488,563 cubic yards of material were dredged from the Cape Henry Channel and deposited at the approved Dam Neck Ocean Placement Area in the Atlantic Ocean and a total of 957,811 cubic yards were dredged from the York Spit Channel and deposited at the Wolf Trap Alternate open

water placement site in the Chesapeake Bay at a cost of approximately \$8,040,000.

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. Existing anchorages and branch channels are not of sufficient depth, length and width to accommodate vessels now in operation. The recommended 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 3.9 million cubic yards of material will be dredged for these improvements. The current project cost estimate is \$24.8 million including \$18.3 million Federal and 6.5 million non-Federal. Following completion of the project, the state of Maryland will reimburse an additional \$1.4 million over 30 years to the Federal government.

Local cooperation. The PCA with the State of Maryland was executed December 19, 2001. The sponsor is 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 is considered contaminated by law, and will be placed in a containment site, the expanded capacity at Hart-Miller Island, to be provided by the non-Federal sponsor. The State will receive 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: Plans and specifications for project construction were completed in early 2001. A limited re-evaluation report was completed in November 2001 to address design changes and the project's economic justification. Construction started February 2002 and completed in April 2003.

**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 9,720 cubic feet of driftwood, ranging from small blocks up to timbers of large dimensions.

4. CHESTER RIVER, MD

Location. Rises in Kent County, DE, and flows 50 miles generally southwesterly and empties into the Chesapeake Bay. Kent Island Narrows is a passage connecting Chester River and Eastern Bay. Wells Cove is an indentation on the easterly side of Kent Island Narrows about 0.4 mile south of the highway bridge crossing the Narrows. (See Coast and Geodetic Survey Charts 12266 and 12270.)

Previous project. For detail see page 262 of the 1960 Annual Report.

Existing project. Provides for a channel 6 feet deep at mean low water and 60 feet wide from Crumpton to Jones Landing, section included in project is about 5.5 miles long with the lower end of the section being about 37 miles above mouth of river; for a channel 7 feet deep at mean low water and 75 feet wide from Chester River to Eastern Bay through Kent Island Narrows; and a channel 7 feet deep at mean low water and 75 feet wide extending from 7-foot deep curve in Kent Island Narrows 800 feet into Wells Cove with a basin of same depth and 300 feet square at head of channel. Mean range of tide is 2.4 feet. Cost of new work for completed project was \$32,454, exclusive of amounts expended on previous projects. Widening 7-foot deep channel from 75 to 100 feet from Chester River to Eastern Bay through Kent Island Narrows was deauthorized and is excluded from the foregoing estimate.

Local cooperation. Fully met except local interests are to furnish disposal areas for future maintenance.

Terminal facilities. There are two bulkhead wharves on Chester River section. Facilities on the Kent Island Narrows section of the existing project consist of about 10,000 linear feet of timber pile bulkheaded wharf. About 1,350 linear feet of the wharf is owned and operated by the Queen Anne's County; the remainder is privately owned. The privately owned bulkheaded wharf is operated mostly by the seven marinas located on the Narrows with the remainder being owned and operated by the seafood packing houses in the area. In addition to the slips of the marinas, there are marine railways, launching ramps, and travel-lifts. All of these facilities are in good condition and are located adjacent to the proposed improvements. In Wells Cove there is a small wharf, a small marine railway, and a public landing. All facilities are privately owned except the public landing on Wells Cove. Facilities are considered adequate for existing commerce.

Operations and results during fiscal year. Maintenance: In May of 2002, elected officials and interested parties, in conjunction with the National Aquarium and the Corps, planted about 6 acres of salt marsh on the dredged material.

5. CRISFIELD HARBOR, MD

Location. Along western limits of the town of Crisfield on east bank of Little Annemessex River, an estuary of Tangier Sound on east side of Chesapeake Bay. (See Coast and Geodetic Survey Chart 1224.)

Previous project. For details see page 279 of Annual Report for 1962.

Existing project. A channel 12 feet deep at mean low water, 425 feet wide from the 12-foot depth curve in Tangier Sound to Somers Cove Light, thence 266 feet wide to the bend about 1,800 feet southwest of railroad pier, and thence of irregular width to a point opposite Consumers Ice Co.; a spur channel 10 feet deep and 100 feet wide from the ice plant to Hop Point; a channel 7 feet deep and 60 feet wide from the 7-foot depth curve in Little Annemessex River via Cedar Creek, a landcut, and Daugherty Creek Canal to Big Annemessex River; a mooring basin 7 feet deep, 160 feet wide and about 875 feet long roughly parallel to Brick Kiln Road, with a channel 7 feet deep and 100 feet wide leading therefrom to 7-foot project channel connecting Little Annemessex and Big Annemessex Rivers; and an anchorage basin in Somers Cove 10 feet deep, 600 feet wide, and 1,000 feet long, with an approach channel 10 feet deep and 60 feet wide from the 10-foot depth curve in Little Annemessex River through the present entrance to Somers Cove. Mean range of tide at Crisfield is about 1.9 feet.

Local cooperation. Local interests furnished disposal areas for future maintenance dredging.

Terminal facilities. Waterfront of Crisfield Harbor is built up principally with solid-bulkhead wharves and pile-and-timber piers. Most wharves are privately owned, but are open to the public for transaction of business with the owners. Few of the terminals have mechanical freight-handling devices, but most of the freight is transferred by hand. There are three boat-repair yards with marine railways having capacities up to 250 tons. Existing terminals are adequate for present and reasonably prospective commerce. Sufficient areas are available north of Hop Point and on Somers Cove for construction of additional terminals as needed.

Operations and results during fiscal year. Maintenance: Engineering and design work was accomplished for future maintenance dredging.

6. DUCK POINT COVE, MD

Location. A tidal cove about 4,000 feet long on east shore of Fox Creek, about 2.5 miles above mouth. Fox Creek is a shallow tidal estuary about 4 miles long entering Honga River about 4 miles above its junction with Hooper Strait, which, in turn, connects with Chesapeake Bay on east side, at a point about 15 miles north of mouth of Potomac River. (See Coast and Geodetic Survey Chart 1224.)

Existing project. A channel 60 feet wide and 6 feet deep, from that depth in Fox Creek to a mooring basin of same depth, 100 feet wide and 300 feet long, roughly parallel to county road at head of waterway. Cost of new work for completed project was \$25,289.

Local cooperation. Complied with except local interests must, for future maintenance, hold the United States free from damages to oyster beds and furnish spoil-disposal areas. Assurances were accepted by the Chief of Engineers October 26, 1949.

Terminal facilities. There are three privately owned packing-house wharves on north bank of Duck Point Cove which are open to the public for transaction of business with the owners. Facilities area adequate for present needs. The commissioners of Dorchester County constructed a public terminal. Sufficient areas are available for construction of additional terminals if, and when, necessary.

Operations and results during fiscal year. Maintenance: Engineering and design work was accomplished for future maintenance dredging.

7. FISHING CREEK, MD

Location. A narrow winding tidal stream which enters Chesapeake Bay from the west 56 miles south of Baltimore and about 26 miles south of Annapolis, MD. (See U.S. Coast and Geodetic Survey Chart 12266.)

Existing project: A channel 7 feet deep with widths of 100 and 60 feet from deep water in the Chesapeake Bay to an anchorage of same depth, 120 feet wide and 400 feet long, located in marsh 500 feet above mouth of creek, and twin stone jetties at entrance; north jetty is about 1,050 feet long, and south jetty about 1,100 feet long. The mean range of tide is about 1 foot. Cost of new work for the completed project was \$111,242.

Local cooperation. Fully complied with except that local interests are to furnish disposal areas as needed for future maintenance.

Terminal facilities. Seven hundred feet of bulkhead wharf are available on the south side of the entrance channel running west from bay shore, and the U.S. Navy Department constructed a pile-and-timber wharf on west side of basin.

Operations and result during fiscal year. Maintenance: Engineering & design activities were performed for future maintenance dredging of the project.

8. HERRING BAY AND ROCKHOLD CREEK, MD

Location. Herring Bay is a wide-mouthed indentation on the westside 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 is about 1.5 feet and extreme tidal range about 4 feet. The Federal cost of new work for completed project was \$50,591.

Local cooperation. Fully met except local interests 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: A contract in the amount of \$438,374 was awarded on January 9, 2002 to dredge 38,651 cubic yards from the project and placed in an upland

placement site. Maintenance dredging commenced on February 12, 2002 and was completed on April 1, 2002.

9. 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 and 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 new work for the completed project was \$66,119.

Local cooperation. Local interests furnished 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: Engineering and design activities were performed to identify a suitable placement site for future maintenance dredging of the Back Creek portion of the project. The local sponsor has been unable to identify a suitable placement site for the dredged material.

10. MUDDY HOOK/TYLER COVE, MD

Location. Muddy Hook Cove is a small indentation about 0.7 mile south of Hoopersville on the east side of Middle Hooper Island. Middle Hooper Island is one of a chain of islands separating Honga River from Tar Bay and Chesapeake Bay on the Eastern Shore of Maryland. Tyler Cove is a small tidal indentation on the north side of Fishing Creek which separates Hooper Islands from the mainland. (See Coast and Geodetic Survey Chart 12230.)

Existing project. An entrance channel 60 feet wide and 6 feet deep from that depth in Honga River to an anchorage basin of the same depth, 160 feet wide and 400 feet long, in Muddy Hook Cove. Project also

provides an entrance channel, 60 feet wide and 6 feet deep, from the existing channel in Fishing Creek (See Honga River and Tar Bay project) into Tyler Cove and includes an anchorage basin 200 feet wide, 250 feet long, and 6 feet deep. Federal cost of new work for the completed project was \$61,917. Existing project was approved for accomplishments under general authority provided by section 107, River and Harbor Act of 1960.

Local cooperation. Local interests must furnish lands, pay for dike construction and provide rights-of-way for new work and future maintenance; hold the United States free from damages; build and maintain a suitable public landing with adequate approaches thereto at each location; accomplish alterations, relocations, and removal, as required, of sewer, water supply, drainage and other utility facilities, and piers and stakes.

Terminal facilities. Local interests have, under terms of local cooperation, provided a public landing at Tyler Cove. A few privately owned piers are on Muddy Hook Cove. Local interests provided a public landing at Muddy Hook Cove, in accordance with the terms of local cooperation.

Operations and results during fiscal year. Maintenance: Engineering and design was accomplished in connection for future maintenance dredging.

11. NANTICOKE RIVER, MD

Location. The Nanticoke River flows in a south-westerly direction to Tangier Sound, Chesapeake Bay, and is about 50 miles long. The town of Nanticoke, MD, is on the east side of the river, about 3 miles from the mouth, just north of Roaring Point. (See Coast and Geodetic Survey Chart 567.)

Existing project. Provides for a small-boat harbor 7 feet deep, 120 feet wide, and 400 feet long in the marsh at Nanticoke, with an entrance channel of the same depth and 60 feet wide, protected by twin stone jetties in the river, the north jetty being about 870 feet long and the south jetty being about 770 feet long. The mean range of tide is about 2.6 feet. The cost of new work for the completed project was \$73,243.

Local cooperation. Fully met except that local interests are to furnish placement sites as required for subsequent maintenance and guarantee the United States and its contractors against claims for damages to oyster beds attributable to subsequent maintenance.

Terminal facilities. There are three privately owned wharves open to the general public.

Operations and results during fiscal year. Maintenance: A contract in the amount of \$490,467 was awarded on August 14, 2002, to dredge 23,918

cubic yards from the project and placed in an upland placement site.

12. NANTICOKE RIVER, DE AND MD

Location. Headwaters of Nanticoke River consist of numerous branches rising mainly in the northern portion of Sussex County, DE. The river is about 50 miles long and flows southwesterly from its source to Tangier Sound.

Northwest Fork is a branch of Nanticoke River which rises in Kent County, DE, and flows past Federalsburg, MD, generally southerly through Dorchester County, MD, to its junction with the main river opposite Riverton, MD. It is about 30 miles long. (See Coast and Geodetic Survey Chart 77.)

Existing project. Nanticoke River: Channel 12 feet deep and 100 feet wide from the 12-foot depth curve in Tangier Sound to the highway bridge at Seaford, DE, with a turning basin at the upper end. Disjointed sections included in the project is about 4 miles long, extending over 32 miles of river; lower end of the first section of the project is about 8 miles above the mouth of the river. Mean range of tide is 3.4 feet, and the extreme tidal range is 4.3 feet.

Northwest Fork: Dredging a channel 6 feet deep and 60 feet wide at mean low water from upper Browns wharf to within one-half mile of the southern boundary of town of Federalsburg, with a turning basin at the upper end. Section included in the project is about 4 miles long, and its lower end is 11.75 miles above the mouth of the river. Mean range of tide is 2.6 feet.

Local cooperation. Local interests must furnish disposal areas for future maintenance dredging.

Terminal facilities. Waterfront at Seaford consists largely of unconnected pile-and-timber bulkhead wharves with earthfills. One public wharf is used as a launching ramp. Remaining wharves are privately owned. A rail siding extends along a considerable portion of waterfront and offers facilities for interchange of rail and water traffic. Existing terminals are reasonably adequate for present and prospective commerce.

Terminal facilities on Northwest Fork are all privately owned and open to general public use. They consist of one solid bulkhead wharf of 80-foot frontage and three landings each with 60-foot frontages. Depths of water are from 2 to 8 feet. Landings are log revetments backed by earthfill and are in poor condition.

Operations and results during fiscal year. Local sponsor was unable to identify a suitable placement site for dredge material; therefore, all engineering and design work was suspended pending identification of a site and future funding.

13. NEALE SOUND, MD

Location. Along the Potomac River between Cobb Island and the mainland of Charles County, Maryland, near the confluence with Wicomico River, 70 miles downstream of Washington, D.C. (See U.S. Coast Guard and Geodetic Survey Chart. (See Coast and Geodetic Survey Chart 12286.)

Existing Project. A channel 7 feet deep and 100 feet wide at the lower entrance to Neale Sound, from deep water within the Sound to deep water in the Wicomico River; a channel 6 feet deep and 80 feet wide in the Potomac River to deep water within the sound at the upper entrance. Plane of reference is mean low water. Total project length is 5,000 feet. Tidal range is 1.9 feet. The project was adopted by the River and Harbor Act of August 26, 1937, and constructed in 1939. The upper channel has been maintained five times, the lower channel has not required maintenance. In July 1999, the project was modified by Section 107 of the River and Harbor Act of 1960 to provide for a 1,650 foot stone jetty to protect the upper channel from shoaling.

Local Cooperation. Charles County has completed their cost-sharing requirements, pending project financial closeout, which is anticipated in spring 2001. Charles County has provided 50 percent of the cost of the feasibility study, including in-kind services, that was completed in February 1997, and sufficient cash and credits to satisfy the requirements of Section 107 for plans and specifications and construction.

Operations During Fiscal Year. Maintenance: A contract in the amount of \$344,000 was awarded on June 24, 2002, to dredge 22,939 cubic yards from the project and the dredged material was used to create an oyster bar. Maintenance dredging commenced on July 24, 2002 and was completed on August 12, 2002. Upon completion of the dredged material placement, 2,500 cubic yards of clamshell material and 2,500 cubic yards of oyster shell were placed on top of the dredged material. Oyster clutch was then placed on top of the oyster shell material.

14. OCCOQUAN RIVER, VA

Location. Occoquan Creek is formed by the junction of Bull and Broad Runs, about 5 miles southeast of Manassas, VA, and flows about 13 miles in a southeasterly direction, emptying into the Potomac River about 26 miles below Washington, D.C. (See Coast and Geodetic Survey Chart 560.)

Previous project. The original project was adopted by the River and Harbor Act of March 3, 1873. For further details see page 1792, Annual Report for 1915, and page 363, Annual Report for 1936.

Existing project. Provides for a channel 6 feet deep and 150 feet wide from deep water in the Potomac River to Taylors Point, and thence 100 feet wide to the town of Occoquan 6 miles from the mouth, and the protection of the channel above Taylors Point by riprap stone dikes 2,200 feet long. Mean range of tide is 2.0 feet.

Local cooperation. None required.

Terminal facilities. There are 10 landings or wharves in Occoquan Creek. The principal terminal is a solid fill and open pile structure; all the other wharves or landings are solid bulkhead structures.

Operations and results during fiscal year. New Work: The Defense Appropriations Act of 2002 modified the authorization and directed the Secretary of the Army to (1) deepen the project to a depth of 9 feet and (2) widen the project between channel marker number 2 and the bridge at U.S. Route 1 to a depth of 200 feet. Feasibility phase investigations began to determine if this modification was economically justified and if a non-federal sponsor can be identified to cost-share construction of the project modification.

15. 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. Federal cost of new work for the completed project was \$1,190,530, exclusive of \$500,000 contributed by local interests and exclusive of \$3,700,000 for rehabilitating the south jetty.

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: Construction began on the south jetty rehabilitation contract in April 2002 and is anticipated to be completed in January 2003.

16. POCOMOKE RIVER, MD

Location. Pocomoke River is a tributary of Pocomoke Sound, a tidal estuary on the east side of Chesapeake Bay about 40 miles north of Cape Charles, VA.

Existing project. Provides for a channel 11 feet deep at mean low water and 150 feet wide from the 11-foot depth in Pocomoke Sound to Tulls Point, thence 100 feet wide to deep water in Pocomoke River above Williams Point, and for construction of a dike along the offshore side of channel between Tulls Point and the end of the existing dike; and a channel 9 feet deep at mean low water and 100 to 130 feet wide from Shad Landing to the bridge at Snow Hill. Length of project is about 8.7 miles from Pocomoke Sound to Williams Point, and about 4.5 miles from Shad Landing to Snow Hill, MD. Shad Landing is about 25.7 miles above the mouth of the river.

Mean range of tide is 2.4 feet in Pocomoke Sound and 2.5 feet in the river at Snow Hill. Prolonged high winds on Chesapeake Bay frequently cause greater fluctuations. Estimated cost (1969) for new work is \$1,071,458 exclusive of amounts expended under previous projects. Extensions of channel above the

bridge at Snow Hill, 100 feet wide, 9 feet deep and widened to 150 feet to form a turning basin at upper end was de-authorized and is excluded from the foregoing estimate.

Local cooperation. Compiled with for section of project from Pocomoke Sound to Pocomoke River and from Shad Landing to the highway bridge at Snow Hill, authorized by acts of June 3, 1986, and August 30, 1935, except local interests must furnish releases from damage to oyster beds and spoil disposal areas as required for future maintenance. Terms for the section of the project above the highway bridge at Snow Hill, authorized by act of March 2, 1945, required local interests to furnish all lands, easements, rights-of-way, and spoil disposal areas for initial work and future maintenance, hold the United States free from damages resulting from the improvement; and contribute one-half the initial cost of that portion of project, but not to exceed \$4,250. This portion was de-authorized. Terms for the 11-foot depth channel from Pocomoke Sound to deep water in Pocomoke River above Williams Point, authorized by act of September 3, 1954, and de-authorized in December 1989 required local interests to provide all lands, easements, rights-of-way, and spoil disposal areas for construction and future maintenance of the project; and hold the United States free from damages due to construction and maintenance, including such damages as may occur to the public or leased oyster beds.

Terminal facilities. Waterfronts at Pocomoke City and Snow Hill are built up principally with earthfilled timber bulkheads, the majority of which are privately owned. A few of the warehouses and factories on the river at these communities have railroad sidings and mechanical freight-handling facilities. Any appreciable increase in commerce at Pocomoke City or Snow Hill would necessitate construction of new facilities and repair of existing structures. Adequate space is available for development of additional terminals.

Operations and results during fiscal year. Maintenance: Engineering and design activities were performed for future maintenance dredging of the project.

17. 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 22 of this text.

Operations and results during fiscal year. Maintenance: Operations by hired labor consisted of collection and disposal of 58,320 cubic feet of driftwood, ranging from small blocks up to timbers of large dimensions.

18. POTOMAC RIVER AT MOUNT VERNON, VA

Location. Mount Vernon lies in Fairfax County, VA, about 14 1/2 miles below Washington, DC on the right bank of the Potomac River, which flows in a southeasterly direction into the Chesapeake Bay, 93 1/2 miles downstream from Mount Vernon. (See U.S. Coast and Geodetic Survey Chart No. 560.)

Existing project. This provides for dredging a channel 200 feet wide and 9 to 10 feet deep, at mean low water, between the main channel of the Potomac River and the Mount Vernon wharf, a distance of about 2,200 feet, with a turning basin of the same depth and a radius of 200 feet at the wharf. Tidal ranges are: mean, 2.2 feet; irregular, 3 feet; and extreme, 9.7 feet.

The cost estimate of the project to the Federal Government made in 1888 was \$26,000. There is no approved estimate for annual cost of maintenance.

Local cooperation. None required.

Terminal facilities. There is one privately owned and operated wharf on the Mount Vernon estate at the head of the channel.

Operations and results during fiscal year. Maintenance: A contract in the amount of \$1,519,727 was awarded on September 13, 2001 to dredge 39,173 cubic yards from the project. The material was dredged mechanically, unloaded at Marshall Hall, and trucked to a surface mining site. Dredging was completed on January 24, 2002.

19. POTOMAC RIVER BELOW WASHINGTON, DC

Location. Potomac River is formed 21 miles below Cumberland, MD, and flows southeasterly about 285 miles and enters Chesapeake Bay, about 80 miles from Atlantic Ocean. Washington, DC is 108 miles upstream of mouth, and head of tidewater is at mile 117. (See Coast and Geodetic Survey Charts No., 12233, 12286, 12287, 12288, and 12289.)

Existing project. Provides for a channel 24 feet deep and 200 feet wide between the mouth of the river and Giesboro Point at Washington, DC--a distance of 108

miles. Plane of reference is mean low water. Tidal ranges are: mean, 1.3 feet at mouth, 2.9 feet at Washington; irregular, 2 feet at mouth, 4.5 feet at Washington; extreme, about 6 feet at mouth, 10.7 feet at Washington. Federal cost of new work for the completed project was \$153,836.

Local cooperation. None required.

Terminal facilities. In general, the improvement is a main river channel, and terminal facilities are only served where the channel runs close to either bank of river.

Operations and results during fiscal year. Maintenance: Engineering and design activities were performed for future maintenance dredging of the project. A contract was issued to locate placement sites.

20. PREVENTION OF OBSTRUCTIONS AND INJURIOUS DEPOSITS, MD

Location. Project applies to tidal waters of the harbor of Baltimore and its adjacent and tributary waters and to all tidal waters of Chesapeake Bay and in Maryland.

Existing project. Patrol and inspection throughout the project location to detect violations of sections 13 and 15 of the River and Harbor Act of March 3, 1899 and to investigate obstructions to navigation pursuant to Federal regulations (33 CFR 209.109).

Local cooperation. None required.

Operations and results during fiscal year. Maintenance: Operations, by Supervisor of Harbor of Baltimore included inspections of approximately 81 Federal navigation channels within the project location to insure channels are not obstructed to general navigation by debris, sunken vessels/wrecks, and fishing appurtenances. There were 103 investigations of obstructions or sunken vessels/wrecks.

21. 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. Maintenance: A contract in the amount of \$2,849,187.28 was awarded on December 19, 2001 to dredge 220,000 cubic yards from Rhodes Point to Tylerton and Twitch Cove & Big Thorofare. The Rhodes Point to Tylerton portion of 104,000 cubic yards was completed in April 2002. A portion of the material was used to seal a breach at the Martin Wildlife Refuge.

22. ST. JEROME CREEK, MD

Location. St. Jerome Creek is a tidal estuary in St. Marys County, MD, 2.5 miles long flowing in a southeasterly direction and entering the western shore of the Chesapeake Bay, 6 miles north of Point Lookout, at the mouth of the Potomac River. The creek is 86 miles northerly of Norfolk, VA. (See Coast and Geodetic Survey Chart 12233.)

Existing project. Provides for a channel 100 feet wide and 7 feet deep from Chesapeake Bay to the Vicinity of Airedele, thence 60 feet wide to deep water in the creek, with a turning basin of the same depth 200 feet wide and 300 feet long opposite Airedele. The project is 4,900 feet long. The plane of reference is mean low water. The tidal ranges are: Mean 1.3 feet, and extreme, approximately 7 feet. The cost of the Federal Government for new work, for the completed project was \$17,857, exclusive of amounts expended under previous projects.

Local cooperation. Fully complied with, except that local interests are to furnish spoil disposal areas for future maintenance as needed.

Terminal facilities. There are numerous privately-owned wharves, 2 of which are open to the public. It is

considered that the present terminal facilities are adequate for present and prospective commerce.

Operations and results during fiscal year. Maintenance: Engineering and design activities were performed for future maintenance dredging of the project. The local sponsor has been unable to provide a suitable placement site for the dredged material.

**23. 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. The project provides for constructing a new straight channel 35 feet deep, 600 feet wide, and 2 miles long to replace the existing Tolchester Channel S-Turn, which has several turns within a 3-mile long reach of channel. 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".

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 & Channels, MD and VA, Federal navigation project.

Operations and results during fiscal year. Dredging of the Tolchester S-Turn, by contract, commenced on October 3, 2001 and was completed on January 27, 2002. A total of 2,844,564 cubic yards of material were dredged and deposited in the Poplar Island Environmental Restoration Project in the Chesapeake Bay at a cost of \$10,502,968.

**24. 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 project 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 Tylers River. Mean range of tide is 1.7 feet, and extreme tidal range is 3 feet. Federal cost of new 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. Maintenance: A contract in the amount of \$2,849,187.28 was awarded on December 19, 2001 to dredge 220,000 cubic yards from Rhodes Point to Tylerton and Twitch Cove & Big Thorofare. The Rhodes Point to Tylerton portion was completed in April 2002. Dredging of Twitch Cove & Big Thorofare, which is estimated to be 110,000 cubic yards, will be accomplished in FY 2003 during the next environmental window.

25. UPPER THOROFARE, MD

Location. Natural waterway lying between Deal Island and mainland of Somerset County, MD, on eastern shore of Chesapeake Bay. (See U.S. Coast and Geodetic Survey Chart 1224.)

Previous project. For details see page 277 of Annual Report for 1962.

Existing project. Entrance channel from Tangier Sound 9 feet deep and 100 feet wide, thence of irregular width to and along south shore of Thorofare, protected

by two stone breakwaters at entrance, north breakwater is about 410 feet long and south breakwater about 310 feet long, with a turning basin at inner end 9 feet deep on south side of channel to within 50 feet of bulkhead along south shore, an anchorage area 6 feet deep and 150 feet wide extending across waterway parallel to highway bridge to within 50 feet of bulkhead on south shore, and an anchorage area 650 feet long, 300 feet wide, and 9 feet deep on north side of channel between breakwater and 6-foot anchorage. Mean range of tide is about 2 feet.

Local cooperation. Fully complied with.

Terminal facilities. A small packing-house wharf on shore of Tangier Sound south of project channel: two small packing houses along approach channel at which seafood is landed; and a public wharf at turning basin with a suitable road connecting it with the road system.

Operations and results during fiscal year. Maintenance: Engineering and design activities were performed for future maintenance dredging of the project.

26. 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 new 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 is 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.

27. 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 567 and 1224.)

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 low water. Mean range of tide is about 3 feet, and extreme tidal range is 4.4 feet. Cost of new 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 earthfills. Some wharves have warehouses and factories with mechanical freight-handling facilities and rail sidings. 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 future maintenance dredging of the project.

**28. RECONNAISSANCE AND
CONDITION SURVEYS**

(See Table 4-H at end of chapter.

**29. NAVIGATION WORK UNDER
SPECIAL AUTHORIZATION**

Fiscal year cost were \$166,186 for Coan River, VA; \$95,971 for Rockhold Creek, MD; \$10,330 for Section 107 Coordination; \$12,613 for Tedious Creek; \$9,493 for Webster's Cove, Somerset County, MD; \$268,740 for Ocean City Harbor and Inlet, MD; \$102,973 for Rhodes Point, MD; and \$38,861 for Tall Timbers, MD.

Non-Federal contributed costs for the fiscal year were; \$50,236 for Rockhold Creek.

SHORE PROTECTION

**30. SHORE PROTECTION
WORK UNDER SPECIAL
AUTHORIZATION**

Shore Protection pursuant to Sec. 103 of Public Law 727, as amended (pre-authorization). None.

31. 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. The short-term restoration plan includes dredging of approximately 1.4 million cubic 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 and a low storm berm will be 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. 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.

Operations and results during fiscal year. New Work: Memorandum of Agreement executed between Corps and the National Park Service. Short-term costs will be 100% Corps funded and Long-term costs will be 50% Corps and 50% National Park Service. The construction contract for the short-term portion was awarded September 2001 to Weeks Marine, Inc. in the amount of \$9,675,000. Construction started in July 2002 and continued through the fiscal year.

**32. 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 sheetpile bulkhead along the oceanward 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. New Work: Beach monitoring continued throughout the fiscal year. A construction contract for the second beach re-nourishment project was awarded to Weeks Marine, Inc. on April 11, 2002 in the amount of \$4,559,666. Placement of approximately 700,000 cubic yards of sand started May 30, 2000 and was completed on June 27, 2002.

33. COLONIAL BEACH, VA

Location. Colonial Beach, Westmoreland County, VA, is located on the right bank of the Potomac River 40 miles upstream from its mouth at Chesapeake Bay and 69 miles downstream from Washington, DC. (See U.S. Coast and Geodetic Survey Chart No. 12286.)

Existing project. On May 29, 1980, the Chief of Engineers under authority of Section 103 of the River and Harbor Act, as amended, authorized construction of the following work: extending the existing Central Beach area and beach at Castlewood Park; off shore breakwaters; and one terminal groin at Castlewood Park. The Central Beach extension begins downstream from Hawthorne Street and continues southward for 1,570 feet, with a maximum width of 120 feet, and provides 107,200 square feet of area, stabilized with vegetation about 200 feet of embankment behind the beachfill. There are four 200-foot breakwaters to stabilize this beach area. At Castlewood Park there are: a 59,300 square foot beach area; three breakwaters; and one 100-foot terminal groin to reduce shoaling to the entrance channel to Monroe Creek. The breakwaters are two each at 200 feet in length and one at 300 feet. The beach will have periodic nourishment when needed.

Local cooperation. The May 4, 1981 Local Cooperation Agreement with the Town of Colonial Beach, in brief, requires the local sponsor to: provide all lands, easements, and rights-of-way; hold and save U.S. from damages; assure public ownership; assure maintenance and repair of the breakwaters; provide 50 percent of the initial construction cost; provide 50 percent of the cost of periodic beach nourishment.

Operations and results during fiscal year. Maintenance: The periodic beach re-nourishment was completed in the fall of 2000. Future re-nourishment will be completed as necessary.

FLOOD CONTROL

34. BROAD TOP REGION, PA

Location. The project is located in South Central Pennsylvania, and includes portions of Bedford, Fulton, and Huntingdon Counties. (See Geological Survey Quadrangle sheets Saltillo, PA, and Saxton, PA.)

Existing project. Section 304 of the Water Resources Development Act of 1992, as amended provides for a pilot project to develop and carry out a watershed reclamation and protection, and wetlands creation and restoration project using innovative reclamation technologies for the purposes of restoring, maintenance and protecting surface and ground water, including municipal water supplies, from adverse impacts related to acid mine draining and other runoff. A Master Plan, prepared at a cost of \$400,000 identified many potential projects in the Broad Top Region. The Wood-Broad Top-Wells Water Supply and Environmental Restoration project was developed as the initial pilot project. The project consists of two components--replacement and upgrade of the Water Supply System for the villages of Wood and Robertsdale and the restoration of abandoned mine sites at Rocky Ridge South and Defiance North. The current estimated total project cost is \$6,975,000, which includes a future inflation allowance through project completion. Federal funds allocated for the project are \$5,000,000.

Local cooperation. The Wood-Broad Top-Wells Joint Municipal Authority is the non-Federal sponsor for the project. The local sponsor is required to provide 25% of the cost of the project, 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. Final actions to document completed work were accomplished during fiscal year 2002.

35. 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. Federal cost of new work for the completed project is \$15,633,970, which includes \$49,998 emergency relief funds and is exclusive of \$197,513 public works acceleration funds. Estimated cost to local interests is \$2,900,000 of which \$1,402,001 is contributed funds and \$1,497,999 is for lands and damages.

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 re-build and rewater up to 1.1 miles of the historic C&O 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. The project is currently authorized at \$15M.

Local cooperation. Fully met for the project. The City of Cumberland is the non-Federal sponsor for the new 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.

Operations and results during fiscal year. New Work: Rewatering design is 75 percent complete and a value engineering study has been completed. Maintenance: Normal operation and maintenance of the project continued.

36. 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 damsite 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 control storage of 36,200 acre-feet is provided. Storage available for low flow augmentation for 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 continued. Federal funding totaling \$960,000 was provided to construct beach and support facilities on the WV side of the lake. Construction is scheduled to be complete in summer 2003.

37. 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., 2d Sess.). The Basin includes an area of 346 square miles in northeastern Pennsylvania.

37A. 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 earthfill 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 control 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 new work was \$2,268,200 of which \$2,153,559 was for construction and \$114,641 for lands and damages. In addition \$52,200 Federal and \$52,200 non-Federal funds were expended for construction of bathhouse facilities under the recreation facilities for completed projects program.

Local cooperation. None required. The Aylesworth Creek Reservoir Park Authority, representing the Boroughs of Archbald and Jermyn, operate and maintain limited day use facilities including a small beach.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

38. MOOREFIELD, WV

Location. Moorefield, WV, is located at the junction of the South Fork (Moorefield River) of the South Branch of the Potomac River, 57 miles upstream from the mouth of the South Branch of the Potomac River, and 233 miles upstream from Washington, DC. (See Geological Survey Quadrangle sheets, Moorefield, WV).

Existing project. Provides for a flood warning system, 21,600 feet of earth levee, 1,360 linear feet of floodwall, highway bridge replacement of one span of a railroad bridge, environmental mitigation, and appurtenant project features such as ramps, closures,

riprap, relocations, and ponding areas for local drainage. The current estimated total project cost is \$26,925,000 which includes a future inflation allowance through project completion.

Project cooperation. The Town of Moorefield is the sponsor for the project. The Project Cooperation Agreement was signed May 12, 1994. The local sponsor is required to: provide lands, easements, rights-of-way; modify or relocate buildings, utilities, roads, bridges, and other facilities; pay 5% of the cost allocated to flood control; and bear all costs of operations, maintenance and replacement of flood control; and facilities after construction. (The cash contribution is deemed satisfied in consideration of the transfer of Grandview State Park to the Federal Government.) The Water Resources Development Act of 1999 waived the non-Federal requirement to pay its unpaid balance on the project.

Operations and results during fiscal year. New Work: The District has begun monitoring of a mechanically stabilized earthen wall that appears to be shifting.

39. NEABSCO CREEK, VA

Location. Neabsco Creek is located in Woodbridge, Prince William County, Virginia. A tidal estuary approximately three miles long, enters the west side of the Potomac River about 83 miles above its mouth and about 27 miles south of Washington, D.C. (See Coast and Geodetic Survey Chart 560.)

Existing project. Silt and debris build-up has dammed the lower reach of Neabsco Creek between US Route 1 and its confluence with the Potomac River. The new hydraulic flow regime is inefficient and leads to frequent flooding of US Route 1 and local businesses. Any project constructed in the area would have the intent of reopening an efficient stream channel to reduce flood frequency upstream. This area was studied in 1995 under Section 208 of the Flood Control Act of 1954 and was found to lack economic justification. Section 576 of the Water Resources Development Act of 1996 directed the Secretary of the Army to carry out a project for flood control in the Neabsco Creek Watershed, Prince William County, Virginia, at an estimated cost of \$1,500,000.

Local cooperation. The sponsor for the project is the Board of County Supervisors of Prince William County which will be required to provide all lands, easements and rights-of-way and relocations and contribute a total of 25 percent of project costs.

Operations and results during fiscal year. Limited coordination occurred to bring closure to the project.

**40. 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 authorized project will provide 100-year level of protection and will include 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. Since authorized by WRDA 1992, the project has undergone a number of changes in scope and cost which have increased the project cost above the limitation prescribed in Section 902 of WRDA 1986. As a result of these changes, the project cost has increased from \$15,400,000 (as authorized in 1998) to an estimated \$19 million. The levee and floodwall portion of the project was awarded in January 2002 and will be completed in the fall 2003. However, the interior drainage structures along Garfield Avenue can not be constructed because the cost would exceed the 902 maximum funding limit for the project. In response to this problem, the District prepared a Limited Reevaluation Report (LRR) and submitted it to higher authority for review and approval in June 2002. The LRR will serve as the basis for a post authorization change request. If re-authorized and funded, the Garfield Avenue portion will be constructed.

Local cooperation. The Borough of Olyphant is the sponsor for the project. The local sponsor is required to: provide lands, easements, and rights-of-way; modify or relocated buildings, utilities, roads, bridges, and other facilities; pay 5% of the costs allocated to flood control; and bear all costs of operation, maintenance, and replacement of flood control facilities after construction.

Operations and results during fiscal year. With the exception of the Pinkus/Korb property, the Borough of Olyphant has completed the necessary real estate acquisitions for the project. Construction of the levee and floodwall is currently underway by Tri-State Design Construction/KC and will be completed in the fall 2003.

41. DICKSON CITY, (OLYPHANT), PA

Location. Dickson City is located on the Lackawanna River across from the Borough of Olyphant. (See Geological Survey Quadrangle sheets, Olyphant, PA.)

Existing project. The Energy and Water Development Appropriations Act of 1998 provided 1 million for the Corps to undertake activities leading to construction of flood control measures at Dickson City with the same levels of protection (100-year) as provided to Olyphant, PA.

Local cooperation. Dickson City is the sponsor for the project. The 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 control; and bear all costs of operation, maintenance, and replacement of flood control facilities after construction.

Operations and results during fiscal year. New Work: Additional funds are required to continue engineering and design work to determine if there is federal interest in a flood control project at Dickson City.

**42. 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 earthfill 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 control, 476,000 acre-feet for recreation and water quality control, and the balance for sediment reserve. At full flood control 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 new 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. Federal funding totaling \$1,213,000 were provided to Juniata College for construction of facilities and structures at the Juniata College field station. Dedication of new facilities is scheduled for spring 2003.

**43. 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 Albright Ave. portion of the project 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. The Energy and Water Development Appropriations Act of 1999 provided funding to construct 100-year level flood protection for two additional communities: the Green Ridge Section and the Plot neighborhood. The current estimated total project cost is \$55,459,000 which includes \$20,934,000 for the Albright Ave. portion, \$14,672,000 for the Plot portion and \$19,853,000 for the Green Ridge portion of the project.

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 control; and bear all costs of operation, maintenance, and replacement of flood control facilities after construction.

Operations and results during fiscal year. New Work: Construction by the Corps continued on the Albright Ave. portion of the project. Design continued on the Plot and Green Ridge portions of the project. The Albright Ave. portion of the project is scheduled for completion in November 2003. The overall project is scheduled to be completed in September 2006.

44. OCEAN PINES, WORCESTER COUNTY, MD

Location. Ocean Pines is a large residential development located in eastern Worcester County along the mainland shoreline of Isle of Wight Bay. The project site is located on a peninsula formed by Herring and Turville Creeks.

Existing project. For detailed project description, see Annual Report for FY01.

Local cooperation. The PCA was executed in January of 2001. The local sponsor is Worcester County. All local requirements have been fulfilled.

Operations and results during fiscal year. Project construction was completed in October 2001, more than two months ahead of schedule. Construction was completed for a total of \$851,000. Activities during the first three quarters of FY02 involved monitoring for stability, appropriate tidal inundation, and vegetative success.

A Dedication/Memorial Ceremony was held in May. In addition to the District Engineer, more than 100 citizens and numerous local, state and federal elected officials and agency representatives attended. All Congressional interests were represented. The completed marsh was dedicated to the memory of A. J. Corts, an employee of the Baltimore District who served as Construction Manager for the project. Mr. Corts died suddenly on the day the project was completed.

45. WILLIAMSPORT, PA - HAGERMAN'S FLUME

Location. Williamsport, the county seat of Lycoming County, PA, is located on the left bank of the West Branch of the Susquehanna River, 40 miles above its mouth. (See U.S. Geological Survey Quadrangle sheets, "Trout Run and Williamsport, PA.")

Existing project. The plan of improvement provides for the construction of a system of levees and concrete floodwalls and appurtenant structures, consisting of the following features: about 26,200 feet of earth levee and 3,060 feet of concrete floodwall along the left bank of the West Branch of the Susquehanna River, extending from high ground near Sheridan Street, generally parallel to and on the right bank of Millers Run to the Susquehanna River, thence extending upstream along the left bank of the river and Lycoming Creek; about 29,900 feet of earth levee and 860 feet of concrete floodwall along the left bank of the West Branch of the Susquehanna River, extending from high ground and Bottle Run generally parallel to and on the right bank of Lycoming Creek to the Susquehanna River, thence extending upstream along the left bank of the river to Carothers Lane, thence to high ground along the Pennsylvania Railroad; about 11,400 feet of earth levee and 880 feet of concrete floodwall along the right bank of the West Branch of the Susquehanna River in South Williamsport, extending from high ground at Central Avenue and Charles Street, along Charles Street to the river, thence upstream along the river to high ground at Maynard Street; a reinforced concrete pressure culvert about 1,390 feet along and a flume 470 feet along to provide for control of Hagerman's Run; 10 pumping stations for the disposal of interior drainage; and appurtenant closure and drainage structures. The improvement provides protection for the City of Williamsport and the Borough of South Williamsport and part of Old Lycoming Township against a flood discharge equal to the maximum flood of record, which occurred in March 1936. The Federal costs of new work for the completed project are \$12,964,893, which includes \$1,887 emergency relief funds. The estimated local cost of lands and damages and utility relocations, revised in 1955, is \$2,158,500. The Energy and Water

Development Appropriations Act of 1998 directed the Corps to use \$225,000 to construct necessary repairs to the flume and conduit for flood control at the Hagerman's Run, Williamsport, Pennsylvania flood control project.

Local cooperation. Fully complied with on the completed work.

Operations and results during fiscal year. Construction began on the repairs necessary to the flume and conduit for flood control at Hagerman's Run.

46. WEST VIRGINIA AND PENNSYLVANIA FLOOD CONTROL

Location. The eight projects within the Baltimore District are located in the City of Altoona, Logan Township and Allegheny Township; Carbon Township; Coalmont Borough; Rock Hill Furnace Borough; the Borough of Everett; Bedford County; Newton Hamilton Borough; and Huntingdon Borough in Pennsylvania.

Existing project. Section 581 of the Water Resources Development Act of 1996, as amended, provides for design and construction of structural and non-structural flood control, streambank protection, stormwater management and channel clearing and modification measures in the Lower Allegheny and Lower Monongahela (Pittsburgh District) and West Branch Susquehanna River and Juniata River basins, Pennsylvania at a level of protection that is sufficient to prevent any future losses to communities in the basins from flooding such as occurred in January 1996, but no less than a 100-year level of flood protection with respect to measures that incorporate levees or floodwalls. The current estimated total project cost is \$16,532,000 which includes a future inflation allowance through project completion.

Local cooperation. Local sponsors identified to date include the Borough of Everett, Logan Township/Altoona, Coalmont Borough and Carbon Township. Huntingdon Borough, Newton Hamilton Borough and Rock Hill Furnace Borough are not going forward with projects. The sponsors are required to: provide lands, easements, and rights-of-way; modify or relocate utilities, roads, bridges, and other facilities; provide cash contributions such that their total share, including LERRDS, is a minimum of 25 percent; and bear all costs of operation and maintenance.

Operations and results during fiscal year. New Work: Final Design for the Logan Township/Altoona (Mill Run), Coalmont Borough (Coalbank Run) and Carbon Township (Shoups Run) projects were

completed. Preliminary design for the Borough of Everett (Bloody Run) project was completed.

47. SOUTHERN NEW YORK FLOOD CONTROL PROJECTS

Authorized plan provides for construction of reservoirs and related flood control works for protections are located in the upper watershed of the Susquehanna River to and including the Chemung River.

47A. 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.

47B. 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 earthfill 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.

47C. 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 earthfill 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.

47D. 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 new 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.

47E. 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; new 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 pumphouse 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; new 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 new 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 new 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 new 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 control 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.

47F. 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 new 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.

47G. 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 Control 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.

47H. 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 earthfill 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 operations and maintains all the 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.

47I. 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.

47J. 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. Improvement, supplemented by Arkport and Almond Reservoirs above the area, provides 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.

47K. 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.

47L. 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.

47M. WHITNEY POINT LAKE, NY

Location. Dam is located near Whitney Point, NY, on the Otselic River about 0.7 mile upstream from its confluence with Tioughnioga River. (See Geological Survey map for Whitney Point and Willet, NY.)

Existing project. The dam is an earthfill 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. Maintenance: Normal operation and maintenance of the project continued.

47N. 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.

48. 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 earthfill 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 control 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 new 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.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued.

49. 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 control program for Southern New York and Northern Pennsylvania which included the Southern New York flood control project and Stillwater, Genegantslet, and South Plymouth Reservoirs.

49A. 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 earthfill 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 control storage is 82,000 acre-feet. Relocation of the Town of Nelson to a new townsite was authorized by Section 121 of the Water Resources Development Act of 1976. The Federal cost of this new 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 Control Act of 1944, as amended. The modification provides for reallocating 25,600 acre-feet of present flood control 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 control 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 townsite, appropriate non-Federal interests shall furnish binding contractual commitments that all lots in the new townsite 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. Update of the project master plan was completed in August 2002.

49B. 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 damsite, about 3.3 miles above its mouth and less than one mile from the Village of Brooklyn. (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 rockfill 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 is for completed construction and \$60,591,000 is for lands and damages and relocations. Estimated Federal cost (October 1988) of Mill Creek recreation facilities (inactive) is \$7,500,000.

Local cooperation. None required.

Operations and results during fiscal year.

Operations and results during fiscal year. Maintenance: Normal operation and maintenance of the project continued. Update of project master plan was completed in Aug 2002. New Ranger Station and Visitor Center completed in May 2002.

50. WEST BRANCH OF SUSQUEHANNA RIVER, PA

A system of three flood control 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 control 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.

50A. 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 earthfill 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.

50B. 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. 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.

Local cooperation. The 1992 project modification requires 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.

50C. 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 earthfill 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.

**51. WYOMING VALLEY, PA
(LEVEE RAISING)**

Location. The Wyoming Valley flood control projects are located in Northeastern Pennsylvania on the Susquehanna River in Luzerne County and are the four contiguous existing Federal flood control projects at Plymouth, Kingston-Edwardsville, Swoyersville-Forty Fort, and Wilkes-Barre/Hanover Township, which together function as a flood control 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 control system. The proposed project also includes a plan to reduce project-related adverse impacts. The current estimated total project is \$175,000,000 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 control and pay 50% of costs allocated to recreation; and bear all costs of operations, maintenance and replacement of flood control and recreation facilities after construction.

Operations and results during fiscal year. Work continued on the Mechanical and Electrical Upgrades to the Stormwater Pump Stations, the construction contracts for the Wilkes-Barre/Hanover Township

reach, the Plymouth levee raising contract, and modifications to the Sunbury project. Engineering and design work continues as well as feasibility analysis of possible additions to the overall project.

52. 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 rockfill 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 will control 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 will increase 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 new 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.

**53. INSPECTION OF COMPLETED
FLOOD CONTROL PROJECTS**

Projects in New York, Pennsylvania, Maryland, District of Columbia, and Virginia were inspected during the period by hired labor. See table 4-1.

**54. SCHEDULING FLOOD CONTROL
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 control benefits from the system operation. Costs during the period were \$1,895,437.

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 \$136,039.

55. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Cost for the period was \$349,777 for the Disaster Preparedness Program; \$43,175 for Mobilization, Continuity of Government and Emergency Water Preparedness Programs; \$5,187 for Emergency Operations; \$50,032 for Rehabilitation; \$732,014 for the Nationwide Civil Works Activities. Federal year costs were \$9,453 for Section 205 Coordination; \$253,795 for Elkton, MD; \$3,030 for Gwynns Falls, Baltimore, MD; \$144,144 for Lycoming County Flood Warning System, PA; \$2,909 for Paxton Creek Harrisburg, PA; \$5,064 for North Branch at Westernport, MD; \$5,257 for Middle North Branch, MD; \$56,723 for Heshbon to Hepburnville, Lycoming Count; \$2,744 for Wills Creek, Allegheny County, MD; \$24,214 for Montoursville Lycoming County, PA; \$30,056 for Mill Creek, PA; and \$218,445 for Soloman Creek Wilkes-Barre, PA.

Non-Federal contributed costs were: \$1,424 for Paxton Creek Harrisburg, PA; \$8,895 for Lycoming County Flood Warning System; and \$15,821 for Solomon Creek PA; and \$38,270 for Elkton 205 Feasibility.

Flood control activities pursuant to Section 14, Public Law 526, 79th Congress, as amended (pre-authorization).

Fiscal year costs were \$9,453 for Section 14 Coordination; \$79,287 for Hooper Island Causeway, MD; \$16,948 for Deep Run, Race Road, MD; \$44,309 for Loyalsock Creek, Warrensville Road, PA; \$3,000 for Mahonoy Creek Market Street, PA; \$127,373 for Newton Creek Newton Avenue, NY; \$7,000 for Potomac River Thomas Road, MD; \$188,697 for Pine Creek Township Road 566, PA; \$80,749 for Chesapeake Bay Punch Island Road, MD; \$73,277 for Patuxent River Patuxent Beach Road, MD; \$8,400 for North River, VA.

Non-Federal contributed costs were: \$12,578 for Hooper Island Causeway, MD; and \$14,365 for Hudson Branch, Colored Schoolhouse, MD.

MULTIPLE-PURPOSE PROJECTS INCLUDING POWER - None

ENVIRONMENTAL

56. 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 stormwater 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. Project design continued for work in Montgomery County and the District of Columbia.

57. CHESAPEAKE BAY OYSTER RECOVERY, MD

Location. The project is located in the Maryland portion of the Chesapeake Bay.

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. Phase I of the project has an estimated total cost of \$3,334,000. Phase II of the project, which will extend into the waters of Virginia, has an estimated project cost of \$23,333,000.

Local cooperation. The State of Maryland is the sponsor for the Maryland action 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.

Operations and results during fiscal year. New Work: The Phase I project construction was completed in September 2000, with monitoring activities continuing through September 2004. Planning for the long-term Phase II project was initiated in January 2001 and will continue through 2003. Short-term construction activities for the Phase II project will be conducted in the summer of 2002 and 2003.

58. 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 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, protection of essential public works, wastewater treatment and related facilities, water supply and related facilities, and beneficial uses of dredged material, and other related projects that may enhance the living resources of the estuary. At least one project shall be established in each of the states of Maryland, Virginia and Pennsylvania. The Maryland projects include Tylerton, Smith Island Martin Wildlife Refuge Shoreline Protection Project, and upgrade of Smith Island Wastewater Treatment Plants, the Virginia project is an oyster restoration project being handled by Norfolk District and the Pennsylvania project will be upgrade of the Scranton Wastewater Treatment Plant to include nitrogen removal.

Local cooperation. The sponsors for the project include the Maryland Department of Natural Resources, Maryland Department of the Environment, Somerset County, and Dorchester County, Maryland, and the Virginia Marine Resources Commission.

Operations and results during fiscal year. Design work completed on the Smith Island Wastewater Treatment Plants. Construction work completed on the Lower Rappahannock project and on the Tylerton Shoreline Protection Project.

59. DENTS RUN, PA

Location. The Dents Run watershed is located in Benazette Township, Elk County, Pennsylvania. The lower 4.5 miles of Dents Run is devoid of aquatic life due to acid mine drainage 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. On March 11, 2002, the Chief of Engineer, under the authority provided by Section 206 of the Water Resources Development Act of 1996, as amended, authorized construction of aquatic ecosystem restoration and protection measures. The work consists of mining of 500,000 tons of limestone and remediation work at PA 1934 which is located on Winslow Hill Road off Route 555. The estimated implementation cost is \$9,000,000 of which \$5,000,000 is Federal and \$4,000,000 is non-Federal, including \$1,300,000 which is being voluntarily provided as work-in-kind by the local sponsor to ensure a functionally complete project.

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. New Work. A Final Detailed Project Report Statement and Integrated Environmental Impact Statement was completed in October 2001 and approved in March 2002. The Project Cooperation Agreement was executed on July 23, 2002. The initial construction contract was awarded in December 2002.

60. 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 1,140 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 to its approximate 1847 configuration and will consist of 570 acres of upland habitat at an elevation up to +20 feet MLLW and 570 acres of wetland habitat that would be further divided into approximately 444 acres of low marsh and 111 acres of high marsh. The current estimated total project cost is \$340 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.

Operations and results during fiscal year. New Work: Phase II construction was completed in March 2002. The second inflow of dredged material (3.5 million cubic yards) started in September 2001 and was completed in January 2002.

61. 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, Mifflin, Snyder, and a portion of Cambria 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 \$180 million to carry out the program, including \$90 million within the Chesapeake Bay watershed area. From FY 94 through FY02, Congress has added \$65,016,000 to the Corps budget for 47 projects in the Baltimore District. This includes two Master Plans; 15 Projects for water supply and distribution; 22 for wastewater collection and treatment; 6 combined improvements for water, wastewater and stormwater; and two for stormwater and flood control.

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. Of the 52 projects in the Baltimore District, 18 were completed prior to FY 02. With carryover funds for 34 active projects, we completed construction of 6 projects, continued or initiated sponsor construction of 9 projects, continued sponsor design of 19 projects, continued a Corps water supply study for McConnellsburg. In support of these actions, 4 construction agreements were executed in FY 01.

REGULATORY PROGRAM

62. REGULATORY PROGRAM

The Regulatory Program began FY02 with 671 applications pending from FY01. During FY02, 4670 new applications were received; 3997 permits were issued; 1 application was denied and 14 were withdrawn; for activities in regulated waterways and wetlands in MD, Washington, DC and part of PA. At the beginning of the FY, 188 enforcement cases were pending. During FY02, 186 violations were resolved and 77 new violations were discovered/reported. 470 Jurisdictional determinations were requested and verified. Total FY02 Regulatory Program costs were \$4,922,434.

WATER SUPPLY

63. 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 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. Purified water was furnished to the District of Columbia; Arlington County, and Falls Church, VA; and to Federal Establishments in the District of Columbia, Arlington County, VA, and Montgomery County, MD. Total consumption for fiscal year 2002 was 65.12 billion gallons. The average amount furnished Arlington County and Falls Church, VA was 42.8 million gallons per day. The Corps of Engineers was reimbursed \$25,120,283 for operations and maintenance of which \$9,562,180 was from Virginia.

GENERAL INVESTIGATIONS

64. SURVEYS

Federal costs for the fiscal year were \$2,770,076 including \$228,917 for flood damage prevention studies, \$1,667,114 for special studies, \$297,124 for special investigations, \$17,977 for interagency water resource development, \$2,023 for National estuary studies, and \$428,814 for coordination with other agencies and non-Federal interests.

Non-Federal contributed costs for the fiscal year were \$3,014,730 of which \$2,203,275 was for navigation studies, \$464,842 for flood damage prevention studies, and \$346,613 for special studies and non-Federal interest.

65. AQUATIC ECOSYSTEM RESTORATION

Fiscal year costs were \$10,116 for Section 206 Coordination; \$309,048 for Isle of Wight Bay, MD; \$13,581 for Lackawanna, PA; \$316,903 for Nanticoke Creek Luzerne, PA; \$58,855 for Easton, MD; \$661,070 for Blackwater, MD; \$204,518 for Lower Anacostia Park, DC; \$295,608 for Ft. Chaplin/Ft. Dupont, DC; \$69,299 for Eastonbrook Reservoir, NY; \$33,386 for Loyalsock Creek-Dushore; PA; \$51,597 for North Beach, MD; \$109,206 for Northwest Branch Anacostia; \$7 2,504 for St. Martin's River Ocean City, MD; \$430,121 for Western Branch Patuxent; MD; \$33,572 for Parsons Creek; MD; \$336,723 for Kettle Creek, PA; \$323,205 for Fall Brook, PA; \$243,083 for Powderly Creek, PA; \$7,000 for Dog Island Shoals, MD; \$13,454 for Chenango Lake, NY; \$8,963 for Six Mile Run, PA; \$8,932 for Sandy Run, PA; \$8,872 for Longs Run, PA; \$5,827 for Great Cypress Swamp, DE; \$4,196 for Paint Branch Fish Passage, MD; \$9,395 for Sweet Arrow Lake, PA; \$6,120 for Lower Gwynns Falls, MD; \$3,308 for Delaware Forested Wetlands, DE; \$9,373 for Codorus Creek, PA; \$4,694 for Forestville, MD; \$3,500 for Brubaker Run, PA; \$8,410 for Wright's Creek, MD; and \$8,297 for Betterton, MD.

Fiscal year costs were \$73,933 for Aquatic Plant Control. Fiscal year costs were \$9,525 for Section 1135 Coordination; \$664,400 for Hart-Miller Island, MD; \$385,626 for Whitney Point Reservoir, NY; \$43,539 for Kitzmiller, MD; \$118,688 for Heritage Island, DC; \$31,049 for Little Falls Fish Passage #2; \$9,800 for Rooster Island Restoration, MD; \$133,981 for Lower Kingman Island; \$9,763 for York Restoration Project, PA; and \$5,000 for Jennings Randolph Lake, MD & WV Nitroge.

Fiscal year miscellaneous costs were \$9,965 for Coordination Account Funds and \$2,618 for Initial Appraisals.

66. COLLECTION AND STUDY OF BASIC DATA

Costs for flood plain management activities and general planning guidance during the period was \$149,694. 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.

67. PRECONSTRUCTION ENGINEERING AND DESIGN

Smith Island Environmental Restoration--Smith Island is Maryland's only inhabited offshore island

having been settled in the mid 1600's. There are three towns on the island Ewell, Rhodes Point and Tylerton, with harbors that are used by the oystering and crabbing industries. In the past 100 years, 1,200 acres of Smith Island have eroded into the Chesapeake Bay, and future erosion will destroy the island if unchecked. There are existing Federal navigation channels being maintained for the island, all of which were formulated and constructed prior to today's recognition of fish and wildlife values. The recommended projects include construction of environmental restoration measures including protection/restoration of SAV habitat and protection/creation of wetlands and navigation improvements. Total costs during the fiscal year were \$166,055. Estimated pre-construction planning cost is \$600,000.

**FORMERLY UTILIZED SITES
REMEDIAL ACTION PROGRAM
(FUSRAP)**

**68. 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. Contamination at the site consists of radioactively-contaminated slabs and other surfaces impacted by the thorium extraction process in Building 23 and the Radioactive Waste Disposal Area to the east of the plant property. The W.R. Grace Site has been separated into 2 distinct work components: Building 23 and the Radioactive Waste Disposal Area. The overall project cost is estimated at \$50 million.

Local Cooperation. Not applicable.

Operation and results during fiscal year. New Work: Feasibility Studies for the Radioactive Waste Disposal Area and Building 23 continued throughout the fiscal year. Total cost for the fiscal year was \$900K ±.

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 | |
|---------------------------|--|-------------|------------|------------|------------|------------|------------|------------------------------|--|
| 1. | Baltimore Harbor and Channels, MD and VA | New Work | | | | | | | |
| | | Approp. | (80,000) | (110,000) | 1,714,000 | 4,900,000 | 129,000 | 151,605,712 ¹ | |
| | | Cost | (192,418) | 3,810 | 432,753 | 5,460,858 | 861,825 | 151,570,823 ¹ | |
| | | Maint. | | | | | | | |
| | | Approp. | 16,288,000 | 17,155,000 | 22,016,323 | 17,325,481 | 10,730,464 | 257,940,937 ² | |
| | | Cost | 15,267,157 | 17,162,474 | 22,071,927 | 17,332,787 | 10,416,822 | 256,839,622 ² | |
| | | Contributed | | | | | | | |
| | | Approp. | 527,674 | 47,500 | 0 | 0 | 5,141 | 67,722,255 | |
| | | Cost | 497,983 | 18,496 | 0 | 49,890 | 477,634 | 67,348,371 | |
| 2. | Baltimore Harbor, Anchorage & Channels, MD | New Work | | | | | | | |
| | | Approp. | -- | -- | -- | 314,000 | 6,891,000 | 7,205,000 | |
| | | Cost | -- | -- | -- | 182,741 | 7,020,722 | 7,203,463 | |
| | | Contributed | | | | | | | |
| | | Approp. | -- | -- | -- | -- | 3,500,000 | 3,500,000 | |
| | | Cost | -- | -- | -- | -- | 2,207,072 | 2,207,072 | |
| 3. | Baltimore Harbor, MD, Collection & Removal of Drift | Maint. | | | | | | | |
| | | Approp. | 348,000 | 373,000 | 419,100 | 498,022 | 490,000 | 9,049,821 | |
| | | Cost | 344,122 | 373,555 | 423,940 | 498,209 | 489,226 | 9,059,123 | |
| 4. | Chester River | Maint. | | | | | | | |
| | | Approp. | -- | -- | 0 | 829,468 | 34,780 | 864,248 ³ | |
| | | Cost | -- | -- | 0 | 829,465 | 34,690 | 864,155 ³ | |
| 5. | Crisfield Harbor | Maint. | | | | | | | |
| | | Approp. | -- | -- | -- | -- | 27,752 | 27,752 ⁴ | |
| | | Cost. | -- | -- | -- | -- | 27,749 | 27,749 ⁴ | |
| 6. | Duck Point Cove, MD | Maint. | | | | | | | |
| | | Approp. | -- | -- | -- | -- | 19,476 | 19,476 ⁵ | |
| | | Cost | -- | -- | -- | -- | 19,308 | 19,308 ⁵ | |
| 7. | Fishing Creek, MD | Maint. | | | | | | | |
| | | Approp. | -- | -- | -- | -- | 50,735 | 50,735 ⁶ | |
| | | Cost | -- | -- | -- | -- | 50,545 | 50,545 ⁶ | |
| 8. | Herring Bay and Rockhold Creek, MD | Maint. | | | | | | | |
| | | Approp. | -- | -- | 0 | 23,443 | 536,578 | 560,021 ⁷ | |
| | | Cost | -- | -- | 0 | 23,392 | 529,284 | 552,676 ⁷ | |
| 9. | Honga River & Tar Bay, MD | New Work | | | | | | | |
| | | Approp. | -- | -- | -- | 0 | 0 | 66,119 | |
| | | Cost | -- | -- | -- | 0 | 0 | 66,119 | |
| | | Maint. | | | | | | | |
| | | Approp. | 354,000 | 790,933 | 850,497 | 25,882 | 55,840 | 7,835,287 | |
| | | Cost | 352,828 | 789,570 | 853,101 | 25,222 | 56,074 | 7,868,303 | |
| 10. | Muddy Hook & Tyler Cover | Maint. | | | | | | | |
| | | Approp. | -- | -- | -- | -- | 22,788 | 22,788 | |
| | | Cost | -- | -- | -- | -- | 22,787 | 22,787 | |

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------|---|----------|---------|-----------|-----------|-----------|------------|------------------------|
| 11. | Nanticoke River, MD | Maint. | | | | | | |
| | | Approp. | -- | -- | -- | 15,082 | 408,565 | 423,647 ⁹ |
| | | Cost | -- | -- | -- | 14,917 | 406,101 | 421,018 ⁹ |
| 12. | Nanticoke River, Northwest Fork, MD | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 73,243 ¹⁰ |
| | | Cost | -- | -- | 0 | 0 | 0 | 73,243 ¹⁰ |
| | | Maint. | | | | | | |
| | | Approp. | -- | 47,000 | 14,003 | 52,444 | 70,858 | 1,301,146 |
| | Cost | -- | 46,961 | 14,042 | 51,788 | 71,030 | 1,319,507 | |
| 13. | Neale Sound, MD | New Work | | | | | | |
| | | Approp. | -- | -- | -- | -- | -- | 73,243 ²⁴ |
| | | Cost | -- | -- | -- | -- | -- | 73,243 |
| | | Maint. | | | | | | |
| | | Approp. | -- | 0 | 0 | 29,783 | 511,691 | 541,474 ²⁵ |
| | Cost | -- | 0 | 0 | 29,781 | 489,223 | 519,004 | |
| 14. | Occoquan River, VA | Maint. | | | | | | |
| | | Approp. | -- | 0 | 0 | 19,850 | 327,457 | 347,307 ¹¹ |
| | | Cost | -- | 0 | 0 | 19,850 | 322,676 | 342,526 ¹¹ |
| 15. | Ocean City Harbor and Inlet and Sinepuxent Bay, MD | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 362,193 ¹² |
| | | Cost | -- | -- | 0 | 0 | 0 | 362,193 ¹² |
| | | Maint. | | | | | | |
| | | Approp. | 49,000 | 338,000 | 267,000 | 702,131 | 2,671,733 | 15,895,664 |
| | Cost | 46,713 | 339,515 | 248,170 | 721,814 | 2,661,697 | 15,885,454 | |
| 16. | Potomac River, MD | Maint. | | | | | | |
| | | Approp. | -- | -- | -- | -- | 72,315 | 72,315 ¹³ |
| | | Cost | -- | -- | -- | -- | 71,681 | 71,681 ¹³ |
| 17. | Potomac and Anacostia Rivers, DC, Collection Removal of Drift | Maint. | | | | | | |
| | | Approp. | 831,000 | 764,000 | 709,700 | 981,703 | 717,120 | 17,455,898 |
| | | Cost | 828,458 | 762,184 | 715,626 | 982,650 | 716,444 | 17,454,921 |
| 18. | Potomac River at Mt. Vernon, MD | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 17,000 ¹⁴ |
| | | Cost | -- | -- | 0 | 0 | 0 | 17,000 ¹⁴ |
| | | Maint. | | | | | | |
| | | Approp. | -- | 17,452 | 47,900 | 572,216 | 947,961 | 1,928,994 |
| | Cost | -- | 9,842 | 55,508 | 572,211 | 947,965 | 1,926,137 | |
| 19. | Potomac River Below Washington, DC | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 254,036 |
| | | Cost | -- | -- | 0 | 0 | 0 | 244,858 |
| | | Maint. | | | | | | |
| | | Approp. | 176,000 | 193,000 | 1,918,417 | 105,595 | 130,876 | 4,867,182 |
| | Cost | 145,553 | 233,584 | 1,919,978 | 105,315 | 131,182 | 5,376,356 | |
| 20. | Prevention of Obstructions & Injurious Deposits, | Maint. | | | | | | |
| | | Approp. | 551,000 | 559,000 | 605,600 | 678,904 | 624,000 | 12,187,549 |
| | | Cost | 544,192 | 562,412 | 609,935 | 678,916 | 623,782 | 12,187,434 |

BALTIMORE, MD DISTRICT

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------|----------------------------------|-------------|-----------|---------|---------|-----------|-----------|-------------------------|
| 21. | Rhodes Point to Tylerton, MD | Maint. | | | | | | |
| | | Approp. | -- | 0 | 0 | 62,259 | 944,062 | 1,006,321 ¹⁵ |
| | | Cost | -- | 0 | 0 | 61,805 | 944,514 | 1,006,319 ¹⁵ |
| 22. | St. Jerome Creek, MD | Maint. | | | | | | |
| | | Approp. | -- | 0 | 0 | 41,263 | 17,145 | 58,408 ¹⁶ |
| | | Cost | -- | 0 | 0 | 41,262 | 17,146 | 58,408 ¹⁶ |
| 23. | Tolchester Channel, MD | Maint. | | | | | | |
| | | Approp. | -- | 100,000 | 120,300 | 1,537,405 | 9,338,828 | 11,096,533 |
| | | Cost | -- | 67,869 | 152,383 | 1,536,961 | 9,339,317 | 11,096,530 |
| 24. | Twitch Cove & Big Thorofare, MD | New Work | | | | | | |
| | | Approp. | -- | 0 | 0 | 0 | 0 | 0 |
| | | Cost | -- | 0 | 0 | 0 | 0 | 424,800 |
| | | Maint. | | | | | | |
| | | Approp. | 844,100 | 671,000 | 549,296 | 63,686 | 1,126,263 | 8,089,356 |
| | | Cost | 849,728 | 670,772 | 553,039 | 63,687 | 1,106,150 | 8,029,325 |
| 25. | Upper Thorofare, Deal Island, MD | New Work | | | | | | |
| | | Approp. | -- | 0 | 0 | 0 | 0 | 0 |
| | | Cost | -- | 0 | 0 | 0 | 0 | 62,446 |
| | | Maint. | | | | | | |
| | | Approp. | -- | -- | -- | 31,681 | 38,751 | 70,432 |
| | | Cost | -- | -- | -- | 31,679 | 28,398 | 60,077 |
| 26. | Washington Harbor, DC | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 3,191,077 |
| | | Cost | -- | -- | 0 | 0 | 0 | 3,191,077 |
| | | Maint. | | | | | | |
| | | Approp. | 21,000 | 13,000 | 29,900 | 36,454 | 45,723 | 5,317,760 |
| | | Cost | 19,518 | 16,557 | 29,806 | 36,657 | 45,721 | 5,317,658 |
| 27. | Wicomico River, MD | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 471,609 |
| | | Cost | -- | -- | 0 | 0 | 0 | 471,609 |
| | | Maint. | | | | | | |
| | | Approp. | 78,000 | 272,000 | 220,228 | 893,419 | 212,035 | 13,443,197 |
| | | Cost | 76,464 | 272,802 | 219,794 | 896,227 | 200,531 | 13,434,869 |
| 31. | Assateague Island | New Work | | | | | | |
| | | Approp. | -- | -- | 200,000 | 484,560 | 5,344,000 | 6,028,560 |
| | | Cost | -- | -- | 77,561 | 367,011 | 4,252,217 | 4,496,789 |
| | | Contributed | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 0 |
| | | Cost | -- | -- | 0 | 7,337 | 0 | 7,337 |
| 32. | Atlantic Coast of Maryland | New Work | | | | | | |
| | | Approp. | 4,301,000 | 393,000 | 172,000 | 155,000 | 3,000,000 | 35,331,000 |
| | | Cost | 3,760,164 | 891,050 | 143,953 | 76,860 | 2,928,362 | 35,081,522 |
| | | Contributed | | | | | | |
| | | Approp. | 5,018,670 | 393,000 | 237,249 | 94,420 | 2,518,420 | 24,934,141 |
| | | Cost | 4,234,108 | 891,050 | 169,279 | 189,412 | 2,463,878 | 24,503,551 |

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------|--|-------------|-----------|-----------|-----------|-----------|-----------|-------------------------|
| 33. | Colonial Beach, MD | New Work | | | | | | |
| | | Approp. | -- | 0 | 0 | 6,600 | 34,600 | 41,200 ^{21,22} |
| | | Cost | -- | 0 | 0 | 6,587 | 34,613 | 41,200 ^{21,22} |
| 34. | Broad Top Region, PA (RESEARCH) | New Work | | | | | | |
| | | Approp. | 0 | 0 | 0 | 0 | 0 | 100,000 |
| | | Cost | 2,747,659 | 1,107,840 | 78,098 | 17,157 | 1,998 | 4,537,43 |
| 35. | Cumberland, MD and Ridgeley, WV (RESEARCHED) | New Work | | | | | | |
| | | Approp. | -- | 0 | 0 | 0 | 493,000 | 16,127,070 |
| | | Cost | -- | 94,963 | 181,884 | 13,811 | 383,474 | 16,308,202 |
| | | Maint. | | | | | | |
| | | Approp. | 352,000 | 87,000 | 112,200 | 112,345 | 135,414 | 2,265,472 |
| | | 57,148 | 92,950 | 112,594 | 112,402 | 135,441 | 1,972,824 | |
| 36. | Jennings Randolph Lake, MD and WV | New Work | | | | | | |
| | | Approp. | 150,000 | 146,100 | 23,035 | 0 | 0 | 176,644,435 |
| | | Cost | 11,648 | 187,512 | 119,471 | 0 | 0 | 176,652,364 |
| | | Maint. | | | | | | |
| | | Approp. | 2,301,000 | 1,574,000 | 1,549,150 | 2,334,295 | 4,318,289 | 33,731,306 |
| | | Cost | 2,286,156 | 1,572,976 | 1,574,734 | 2,334,161 | 2,364,805 | 31,776,147 |
| | | Contributed | | | | | | |
| | | -- | -- | 0 | 0 | 0 | 6,350 | |
| | | -- | -- | 0 | | | 6,350 | |
| 37A. | Aylesworth Creek Lake, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 2,320,410 |
| | | Cost | -- | -- | 0 | 0 | 0 | 2,320,410 |
| | | Maint. | | | | | | |
| | | Approp. | 199,000 | 226,000 | 234,100 | 202,736 | 211,676 | 3,671,035 |
| | | 199,220 | 225,578 | 231,582 | 205,551 | 211,111 | 3,670,279 | |
| 38. | Moorefield, WV | New Work | | | | | | |
| | | Approp. | 1,580,000 | (800,000) | 86,000 | 0 | 85,000 | 19,159,100 |
| | | Cost | 2,245,941 | 483,826 | 391,998 | 80,985 | 27,074 | 19,068,229 |
| | | Contributed | | | | | | |
| | | Approp. | 473 | 0 | 0 | 0 | | 1,205,602 |
| | | 14,013 | 5,855 | 0 | 0 | | 1,199,461 | |
| 39. | Neabsco Creek, VA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | (428,000) | (428,000) ²³ |
| | | Cost | -- | -- | 207,271 | 39,409 | 32,951 | 279,63 |
| 40. | Lackawanna River, Olyphant, PA | New Work | | | | | | |
| | | Approp. | 400,000 | 6,800,000 | 0 | 0 | 0 | 9,047,000 |
| | | Cost | 403,825 | 369,335 | 125,487 | 368,350 | 2,225,114 | 4,965,325 |
| 41. | Dickson City, (Olyphant), PA | New Work | | | | | | |
| | | Approp. | 1,000,000 | 0 | 0 | 0 | 0 | 1,000,000 |
| | | Cost | 45,377 | 309,152 | 371,455 | 188,815 | 263,338 | 1,178,137 |

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------------|--|-------------|-----------|------------|-----------|-----------|-----------|------------------------------|
| 42. | Raystown Lake, Raystown Branch, Juniata River, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 77,418,770 |
| | | Cost | -- | -- | 0 | 0 | 0 | 77,418,770 |
| | | Maint. | | | | | | |
| | | Approp. | 4,750,800 | 4,563,000 | 3,844,000 | 4,656,922 | 3,817,999 | 75,005,336 |
| | | Cost | 5,674,106 | 4,653,854 | 3,948,300 | 4,663,903 | 3,775,871 | 74,962,376 |
| | | Contributed | | | | | | |
| | | Approp. | 3,050 | 5,000 | 4,264 | 7,020 | 1,500 | 28,334 |
| | | Cost | 650 | 10,629 | 2,025 | 1,500 | 5,321 | 20,125 |
| 43. | Lackawanna River, Scranton, PA | New Work | | | | | | |
| | | Approp. | 5,425,000 | 38,651,000 | 0 | 0 | 0 | 45,792,000 |
| | | Cost | 1,131,921 | 704,343 | 1,263,132 | 454,158 | 9,478,736 | 14,607,743 |
| | | Contributed | | | | | | |
| | | Approp. | 12,200 | -- | 0 | 0 | 400,000 | 441,000 |
| | | Cost | 0 | -- | 0 | 40,728 | 339,017 | 379,745 |
| 44. | Ocean Pines, Worcester County, MD | New Work | | | | | | |
| | | Approp. | -- | 0 | 0 | 480,600 | 342,700 | 823,300 |
| | | Cost | -- | 0 | 0 | 495,817 | 342,089 | 837,906 |
| | | Contributed | | | | | | |
| | | Approp. | -- | -- | 0 | 156,961 | 20,000 | 176,961 |
| | | Cost | -- | -- | 0 | 48,140 | 121,484 | 169,624 |
| 45. | Williamsport Hagerman Flume | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 374,000 | (500,000) | (126,000) |
| | | Cost | -- | -- | 20,028 | 24,490 | 9,757 | 54,275 |
| | | Contributed | | | | | | |
| | | Approp. | -- | -- | 21,000 | 0 | 0 | 21,000 |
| | | Cost | -- | -- | 6,242 | 2,374 | 7,505 | 16,121 |
| 46. | WV and PA Flooding Program | New Work | | | | | | |
| | | Approp. | -- | 250,000 | 727,000 | 838,000 | (783,000) | 1,032,000 |
| | | Cost | -- | 25,942 | 47,648 | 50,264 | 107,874 | 231,728 |
| | | Contributed | | | | | | |
| | | Approp. | -- | -- | 0 | 20,950 | 18,855 | 39,805 |
| | | Cost | -- | -- | 0 | 10,334 | 15,801 | 26,135 |
| 47A. | Addison, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 827,050 |
| | | Cost | -- | -- | 0 | 0 | 0 | 827,050 |
| | | Maint. | | | | | | |
| | | Approp. | 5,010 | 11,500 | 21,200 | 14,260 | 18,855 | 384,880 |
| | | Cost | 5,740 | 7,998 | 24,014 | 14,949 | 18,849 | 384,876 |
| 47B. | Almond Lake, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 5,760,211 |
| | | Cost | -- | -- | 0 | 0 | 0 | 5,760,211 |
| | | Maint. | | | | | | |
| | | Approp. | 427,000 | 422,000 | 432,620 | 450,624 | 455,593 | 9,197,518 |
| | | Cost | 425,001 | 424,163 | 427,918 | 455,343 | 451,981 | 9,165,773 |
| 47C. | Arkport Dam, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 1,910,000 ²⁶ |
| | | Cost | -- | -- | 0 | 0 | 0 | 1,910,000 |

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------------|-----------------------------|----------|---------|---------|---------|---------|---------|------------------------------|
| | Maint. | Approp. | 213,000 | 199,000 | 232,900 | 240,360 | 240,427 | 4,590,499 |
| | | Cost | 214,078 | 198,655 | 228,366 | 245,376 | 240,364 | 4,590,528 |
| 47D. | Avoca, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 436,374 ²⁷ |
| | | Cost | -- | -- | 0 | 0 | 0 | 0 |
| | | Maint. | | | | | | |
| | | Approp. | 6,100 | 9,500 | 16,800 | 17,960 | 25,039 | 634,560 |
| | | Cost | 10,491 | 9,132 | 17,187 | 17,987 | 25,037 | 634,456 |
| 47E. | Binghamton, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 3,460,000 ²⁸ |
| | | Cost | -- | -- | 0 | 0 | 0 | 3,460,000 |
| | | Maint. | | | | | | |
| | | Approp. | 101,600 | 41,000 | 54,500 | 96,313 | 79,234 | 1,177,028 |
| | | Cost | 97,670 | 45,089 | 54,913 | 96,351 | 79,226 | 1,177,020 |
| 47F. | Canisteo, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 1,183,111 ²⁹ |
| | | Cost | -- | -- | 0 | 0 | 0 | 1,183,111 |
| | | Maint. | | | | | | |
| | | Approp. | 10,200 | 40,000 | 46,900 | 35,654 | 35,372 | 1,242,161 |
| | | Cost | 18,142 | 39,079 | 47,790 | 35,753 | 35,371 | 1,242,171 |
| 47G. | Corning, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 3,322,000 ³⁰ |
| | | Cost | -- | -- | 0 | 0 | 0 | 3,322,000 |
| | | Maint. | | | | | | |
| | | Approp. | 47,280 | 41,000 | 31,500 | 44,730 | 54,160 | 1,393,668 |
| | | Cost | 52,762 | 40,218 | 32,319 | 44,740 | 54,160 | 1,394,659 |
| 47H. | East Sidney Lake, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 6,049,504 |
| | | Cost | -- | -- | 0 | 0 | 0 | 6,049,504 |
| | | Maint. | | | | | | |
| | | Approp. | 479,000 | 436,000 | 580,700 | 494,183 | 465,104 | 11,343,758 |
| | | Cost | 464,032 | 452,920 | 580,171 | 494,912 | 456,111 | 11,404,794 |
| 47I. | Elmira, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 6,883,305 |
| | | Cost | -- | -- | 0 | 0 | 0 | 6,883,305 |
| | | Maint. | | | | | | |
| | | Approp. | 1,760 | 18,000 | 20,400 | 14,127 | 26,010 | 503,346 |
| | | Cost | 7,446 | 18,004 | 20,343 | 14,184 | 26,010 | 503,346 |
| 47J. | Hornell, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 4,558,698 ³¹ |
| | | Cost | -- | -- | 0 | 0 | 0 | 4,558,698 |
| | | Maint. | | | | | | |
| | | Approp. | 147,030 | 167,100 | 194,400 | 312,579 | 164,481 | 10,638,166 |
| | | Cost | 148,312 | 157,880 | 203,720 | 312,827 | 163,913 | 10,637,794 |

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------------|--|-------------|-----------|-----------|-----------|-----------|-----------|------------------------------|
| 47K. | Lisle, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 661,199 ³² |
| | | Cost | -- | -- | 0 | 0 | 0 | 661,199 |
| | | Maint. | | | | | | |
| | | Approp. | 22,550 | 28,000 | 37,100 | 35,719 | 26,668 | 1,140,559 |
| | | Cost | 28,115 | 27,389 | 38,007 | 35,764 | 26,668 | 1,140,460 |
| 47L. | Oxford, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 131,000 ³³ |
| | | Cost | -- | -- | 0 | 0 | 0 | 131,000 |
| | | Maint. | | | | | | |
| | | Approp. | (2,230) | 19,000 | 15,000 | 16,051 | 28,284 | 437,437 |
| | | Cost | 6,592 | 19,027 | 14,985 | 16,066 | 28,280 | 437,435 |
| 47M. | Whitney Point Lake, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 5,421,540 |
| | | Cost | -- | -- | 0 | 0 | 0 | 5,421,540 |
| | | Maint. | | | | | | |
| | | Approp. | 596,800 | 515,000 | 703,800 | 707,227 | 582,793 | 16,391,816 |
| | | Cost | 547,990 | 566,990 | 693,742 | 717,392 | 573,585 | 16,545,602 |
| 47N. | Whitney Point Village, NY | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 424,196 |
| | | Cost | -- | -- | 0 | 0 | 0 | 424,196 |
| | | Maint. | | | | | | |
| | | Approp. | 14,700 | 4,900 | 35,800 | 18,040 | 29,765 | 656,686 |
| | | Cost | 24,040 | 5,226 | 35,914 | 18,116 | 26,679 | 653,802 |
| 48. | Stillwater Lake, Lackawanna River, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 5,725,700 |
| | | Cost | -- | -- | 0 | 0 | 0 | 5,725,700 |
| | | Maint. | | | | | | |
| | | Approp. | 328,000 | 343,000 | 408,300 | 368,149 | 332,090 | 7,090,529 |
| | | Cost | 334,136 | 343,025 | 407,946 | 369,313 | 329,115 | 7,087,368 |
| 49A. | Cowanesque Lake, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 107,470,700 |
| | | Cost | -- | -- | 0 | 0 | 0 | 107,470,751 |
| | | Maint. | | | | | | |
| | | Approp. | 1,459,000 | 2,317,000 | 1,701,600 | 2,118,469 | 1,821,295 | 29,504,545 |
| | | Cost | 1,416,058 | 2,359,014 | 1,698,550 | 2,131,176 | 1,817,584 | 28,513,689 |
| | | Contributed | | | | | | |
| | | Approp. | -- | 124,068 | 141,591 | 0 | 0 | 13,760,935 |
| | | Cost | -- | 124,067 | 126,366 | 15,226 | 0 | 13,780,934 |
| | | | | | | | | |
| 49B. | Tioga-Hammond Lakes, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 186,244,800 |
| | | Cost | -- | -- | 0 | 0 | 0 | 186,244,800 |
| | | Maint. | | | | | | |
| | | Approp. | 2,615,200 | 2,089,000 | 2,007,703 | 3,110,180 | 2,918,856 | 41,338,882 |
| | | Cost | 2,355,484 | 2,356,276 | 2,029,549 | 3,120,402 | 2,866,426 | 41,304,620 |

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------|---|-------------|------------|------------|------------|------------|------------|--------------------------|
| 50A. | Alvin R. Bush Dam, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 7,103,001 |
| | | Cost | -- | -- | 0 | 0 | 0 | 7,103,001 |
| | | Maint. | | | | | | |
| | | Approp. | 493,000 | 639,000 | 707,000 | 639,410 | 570,840 | 14,043,326 |
| | Cost | 492,083 | 640,001 | 703,924 | 642,677 | 563,244 | 14,044,782 | |
| 50B. | Curwensville Lake, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 20,406,060 |
| | | Cost | -- | -- | 0 | 0 | 0 | 20,406,060 |
| | | Maint. | | | | | | |
| | | Approp. | 636,000 | 624,000 | 752,600 | 654,525 | 645,169 | 16,589,470 |
| | Cost | 625,265 | 629,459 | 754,830 | 658,672 | 632,202 | 16,575,423 | |
| | Contributed | Approp. | 35,000 | 21,143 | 37,500 | 0 | | 1,333,653 |
| | | Cost | 53,285 | 13,474 | 20,518 | 16,507 | | 1,408,493 |
| | | | | | | | | |
| 50C. | Foster Joseph Sayers Dam, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 30,887,063 ³⁴ |
| | | Cost | -- | -- | 0 | 0 | 0 | 30,887,063 |
| | | Maint. | | | | | | |
| | | Approp. | 701,000 | 771,000 | 685,000 | 691,812 | 707,351 | 17,252,471 |
| | Cost | 721,185 | 776,771 | 685,383 | 691,612 | 699,991 | 6,804,070 | |
| 51. | Wyoming Valley, PA (Levee Raising) | New Work | | | | | | |
| | | Approp. | 8,596,000 | 10,919,000 | 8,875,000 | 13,980,000 | 19,319,000 | 73,351,048 |
| | | Cost | 11,543,597 | 9,641,663 | 10,503,210 | 13,412,414 | 21,850,803 | 75,666,138 |
| | | Contributed | | | | | | |
| | | Approp. | 1,000,000 | 5,950,000 | 0 | 5,000,000 | 9,000,000 | 21,450,000 |
| | Cost | 852,321 | 2,845,621 | 1,623,010 | 5,756,344 | 9,839,345 | 21,099,076 | |
| 52. | York, Indian Rock Dam, PA | New Work | | | | | | |
| | | Approp. | -- | -- | 0 | 0 | 0 | 5,601,167 ³⁵ |
| | | Cost | -- | -- | 0 | 0 | 0 | 5,601,167 |
| | | Maint. | | | | | | |
| | | Approp. | 505,410 | 446,000 | 552,000 | 640,041 | 543,906 | 18,547,737 ³⁶ |
| | Cost | 504,286 | 429,924 | 569,543 | 641,146 | 511,430 | 18,519,872 | |
| 56. | Anacostia River & Tributaries, MD & DC (RESEARCH) | New Work | | | | | | |
| | | Approp. | 2,401,000 | (868,000) | 3,757,000 | 2,811,000 | (573,000) | 7,528,000 |
| | | Cost | 750,516 | 445,639 | 4,112,045 | 1,340,481 | 1,055,120 | 7,703,801 |
| 57. | Chesapeake Bay Oyster Recovery, MD | New Work | | | | | | |
| | | Approp. | 509,000 | 705,000 | 365,000 | 389,000 | 536,000 | 3,431,000 |
| | | Cost | 450,813 | 811,901 | 317,947 | 70,096 | 917,920 | 3,430,094 |
| 58. | Chesapeake Bay Environmental Program, MD (RESEARCH) | New Work | | | | | | |
| | | Approp. | -- | -- | 114,000 | 749,000 | 98,000 | 961,000 |
| | | Cost | -- | -- | 301,186 | 985,525 | 1,146,395 | 2,433,106 |
| | | Contributed | | | | | | |
| | | Approp. | -- | -- | 400,000 | 266,666 | 12,500 | 679,166 |
| | Cost | -- | -- | 11,461 | 277,256 | 377,659 | 666,376 | |

TABLE 4-A COST AND FINANCIAL STATEMENT

| See Section in Text | Project | Funding | FY98 | FY99 | FY00 | FY01 | FY02 | Total to Sep. 30, 2002 |
|---------------------|--|--------------|------------|------------|------------|------------|------------|------------------------|
| 59. | Dents Run, PA | New Work | | | | | | |
| | | Approp. | | -- | -- | -- | 148,300 | 149,478 |
| | | Cost | | | | | 148,858 | 148,858 |
| 60. | Poplar Island, MD | New Work | | | | | | |
| | | Approp. | 13,542,000 | 20,518,000 | 14,606,000 | 36,482,000 | 18,243,000 | 104,148,000 |
| | | Cost | 8,512,844 | 25,017,546 | 14,824,205 | 36,090,147 | 18,729,738 | 103,918,094 |
| | | Contributed | | | | | | |
| | | Approp. | 2,975,000 | 9,300,000 | 6,175,000 | 13,500,000 | 8,100,000 | 40,100,000 |
| | | Cost | 1,386,474 | 10,471,436 | 5,518,176 | 13,979,114 | 6,646,012 | 38,001,212 |
| 61. | South Central Environmental Restoration Infrastructure and Resource Protection Development Pilot, PA | New Work | | | | | | |
| | | Approp. | 15,350,000 | 23,566,775 | 0 | 4,880,000 | 1,404,000 | 57,300,775 |
| | | Cost | 1,550,027 | 8,639,568 | 9,555,699 | 10,408,290 | 12,969,239 | 48,929,248 |
| | | Contribution | | | | | | |
| | | Approp. | (240,825) | (15,552) | 0 | 0 | | 5,672,923 |
| | | Cost | (29,884) | (8,076) | 0 | 0 | | 5,772,925 |

1. Includes \$8,467,003 for previous projects.
2. Includes \$399,802 for previous projects.
3. Includes \$638,844 for previous projects.
4. Excludes \$1,890,750 for previous project and excludes \$64,994 in contributed funds.
5. Excludes \$378,477 for previous projects.
6. Excludes \$2,292,427 for previous projects.
7. Includes \$1,105,148 for previous projects.
8. Excludes \$2,200 contributed funds and includes \$27,668 emergency relief funds.
9. Includes \$604,441 for previous projects.
10. Includes \$5,000 for previous project.
11. Includes \$203,198 for previous projects.
12. Includes \$283,008 public works funds and \$67,185 emergency relief funds; excludes \$500,000 contributed funds.
13. Excludes \$3,667,075 for previous projects.
14. Unconstructed portion of the project was deauthorized November 2, 1979.
15. Includes \$2,368,946 for previous projects.
16. Includes \$756,360 for previous projects.
17. Includes \$913,753 for previous projects.
18. Includes \$3,029,001 for previous project.

19. Excludes \$1,831,609 for previous project.
20. Excludes \$4,000 for emergency dredging under provisions of Section 3, 1945 River and Harbor Act.
21. Includes \$649,957 for previous projects.
22. Excludes \$414,977 contributed funds.
23. Includes \$114,712 for previous project.
24. Includes \$12,000 for previous project and excludes \$1,000 contributed funds.
25. Excludes \$903,450 contributed funds.
26. Includes \$62,577 emergency relief funds.
27. Includes \$109,944 emergency relief funds.
28. Excludes \$163,096 contributed funds.
29. Includes \$207,520 rehabilitation funds.
30. Excludes \$34,729 contributed funds.
31. Includes \$250,899 emergency relief funds and excludes \$15,000 contributed funds.
32. Includes \$71,557 emergency relief funds.
33. Includes \$73,465 emergency relief funds.
34. Excludes \$263,900 contributed funds in accordance with the Tri-party Agreement for construction of a sanitary system for public use.
35. Includes \$11,588 emergency relief funds.
36. Includes \$15,000 for deferred maintenance.

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, widen 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., 1st 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., 1st 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, 85th Cong., 1st 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. Ordnance 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, 79th Cong., 2nd 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, 85th Cong., 1st 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 | H. Doc. 181, 94th Cong., 1st Sess. |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|---------------------|----------------------|---|--|
| | | <p>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 Branch--East 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 Branch--West 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.</p> | |
| 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. | | CHESTER RIVER, MD | |
| | Mar. 3, 1873 | A channel 7 feet deep at mean low water and 100 feet wide from Chester River to Eastern Bay through Kent Island Narrows. | H. Doc. 381 80th Cong., 1st Sess. |
| | Jun 30, 1948 | A channel 7 feet deep at mean low water and 75 feet wide extending from the 7-foot depth in Kent Island Narrows 800 feet into Wells Cove with a basin of the same depth and 300 feet square at the head of the channel. | H. Doc. 380, 80th Cong., 1st Sess. ² |
| | Sep. 19, 1980 | A channel 6 feet deep at mean low water and 60 feet wide from Crumpton to Jones Landing. | H. Dox. 595 |
| 5. | | CRISFIELD HARBOR, MD | |
| | Mar. 3, 1925 | A 12-foot channel of varying widths to opposite Consumers Ice Co., thence 10 feet deep and 100 feet wide from ice plant to Hop Point. | H. Doc. 355, 68th Cong., 1st Sess. |
| | Aug. 26, 1937 | 7-foot channel 100 feet wide from opposite Hop Point to an anchorage parallel to Brick Kiln Road. | Rivers and Harbors Committee Doc. 2, 75th Cong., 1st Sess. |
| | Aug. 26, 1937 | For the 7-foot x 60-foot channel in Little Annemessex River... | H. Doc. 72, 75th Cong., 1st Sess. |
| | Mar. 3, 1945 | A mooring basin 7 feet deep, 160 feet wide, and about 875 feet long roughly parallel to Brick Kiln Rd., with a channel 7 feet deep and 100 feet wide leading from there to the 7-foot project channel connecting Little Annemessex and Big Annemessex Rivers. | H. Doc. 457, 76th Cong., 1st Sess. |
| | Sep. 3, 1954 | An anchorage basin in Somers Cove 10 feet by 600 feet by 1,000 feet with an approach channel 10 feet by 100 feet from 10-foot depth in Little Annemessex River through a land cut in Jersey Island to south side of basin. | H. Doc. 435, 81st Cong., 2d Sess. |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|---------------------|----------------------|--|---|
| | Aug. 14, 1958 | Change location and dimensions of approach channel to Somers Cove to plan No. 2 through the present entrance, at no increase in Federal cost of modification. | H. Doc. 435, 81st Cong., 2d Sess. |
| 6. | | DUCK POINT COVE, MD | |
| | Mar. 2, 1945 | A channel 60 feet wide and 6 feet deep, from that depth in Fox Creek to a mooring basin of same depth, 100 feet wide and 300 feet long, roughly parallel to county road at head of waterway. | H. Doc. 241, 76th Cong., 1st Sess. |
| 7. | | FISHING CREEK, MD | |
| | Aug. 26, 1937 | A channel 7 feet deep with widths of 100 feet and 60 feet from deep water in Chesapeake Bay to an anchorage of the same depth, 120 feet wide and 400 feet long, located in the marsh 500 feet above the mouth of the creek and twin stone jetties at the entrance. | H. Doc. 241, 75th Cong., 1st Sess. |
| 8. | | HERRING BAY AND ROCKHOLD CREEK, MD | |
| | 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, 71st Cong., 2nd 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 75th Cong., 3rd Sess. ² |
| 9. | | HONGA RIVER AND 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, 74th Cong., 1st 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, 80th Cong., 2nd Sess. |
| 10. | | MUDDY HOOK & TYLER COVE, MD | |
| | Dec. 4, 1964 | An entrance channel 60 feet wide and 6 feet deep from that depth in Honga River to and including an anchorage basin of same depth, 160 feet wide and 400 feet long, in Fishing Creek into Tyler Cove and includes an anchorage basin 200 feet wide, 250 feet long and 6 feet deep. | Detailed Project Report, May 1964 |
| | Jul. 14, 1960 | | |
| 11. | | NANTICOKE RIVER, MD | |
| | Aug. 30, 1937 | A small boat harbor 7 feet dep, 120 feet wide, and 400 feet long in the marsh at Nanticoke with an entrance channel of the same depth and 60 feet wide protected on either side by stone jetties in the river. | H. Doc. 242, 75th Cong., 1st Sess. ² |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|---------------------|---|--|--|
| 12. | NANTICOKE RIVER, DE AND MD | | |
| | Jun. 3, 1896 | A 9-foot channel, 100 feet wide up to Seaford, DE, with a turning basin. | H. Doc. 333, 53rd Cong., 3rd Sess., and Annual Report, 1985, p. 1165. |
| | Jun. 25, 1910 | Slight widening between bridges in harbor at Seaford, DE. | H. Doc. 674, 61st Cong., 2nd Sess. |
| | Jun. 25, 1910 | A channel 6 feet deep, 60 feet wide in Northwest Fork, together with turning basin. | H. Doc. 869, 60th Cong., 1st Sess. |
| | Mar. 2, 1945 | A channel 12 feet deep, 100 feet wide from 12-foot contour in Tangier Sound to highway bridge at Seaford, DE. | S. Doc. 69, 77th Cong., 1st Sess. |
| 13. | NEALE SOUND, MD | | |
| | Aug. 26, 1937 | Channel 7 feet deep and 100 feet wide through lower entrance into Wicomico River and a second channel 6 feet deep at upper entrance extending from deep water within the sound through a marshy barrier at head of Cobb Island to deep water in the Potomac with widths of 60 feet within the sound and 80 feet elsewhere. | H. Doc. 159, 75th Cong., 1st Sess. |
| | Jul. 13, 1999 Sec. 107 | A channel 7 feet deep and 100 feet wide at the lower entrance to Neale Sound, from deep water within the Sound to deep water in the Wicomico River; a channel 6 feet deep and 80 foot wide in the Potomac River to deep water within the sound at the upper entrance. This project provides for a 1,650 foot stone jetty to protect the upper channel from shoaling. | Detailed Project Report, Feb. 28, 1997 |
| 14. | OCCOQUAN CREEK, VA | | |
| | Dec. 5, 1980 | Channel 6 feet deep and 100 to 150 feet wide through four bars and construction of dikes. | Annual Report for 1801, p. 1254 |
| | Mar. 2, 1907 | Extending channel 6 feet deep and 150 feet wide through outer bar. | H. Doc. 190, 59th Cong., 1st Sess. (The latest published map is in H. Doc. 190, 63d Cong., 2d Sess.) |
| 15. | 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, 72nd Cong., 1st Sess. |
| | Aug. 30, 1935 | 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, 74th Cong., 1st Sess. |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|---------------------|--|---|--|
| | Sep. 3, 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, 82nd Cong., 2nd Sess. |
| 16. | POCOMOKE RIVER, MD | | |
| | Jun. 3, 1896 | A 9-foot channel from Shad Landing to Snow Hill. | Annual Report for 1895, p. 1167. |
| | Aug. 30, 1935 | A channel 7 feet deep and 100 feet wide from Pocomoke Sound to Pocomoke River. | H. Doc. 227, 74th Cong., 1st Sess. ² |
| | Mar. 2, 1945 | Extend channel above bridge at Snow Hill, 100 feet wide, 9 feet deep, widened to 150 feet to form a turning basin at upper end. | H. Doc. 429, 76th Cong., 1st Sess. ² |
| | Sep. 3, 1954 | Channel 11 feet deep by 150 feet wide from Pocomoke Sound to Tulls Point, thence a channel of the same depth and 100 feet wide to deep water in Pocomoke River above William Point, and dike construction along south side of channel from existing dike to Tulls Point. | H. Doc. 486, 81st Cong., 2nd Sess. ² |
| 17. | 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, 89th Cong., 1st Sess. |
| 18. | POTOMAC RIVER AT MT. VERNON, MD | | |
| | Mar. 3, 1879 | Channel 6 to 7 feet deep, 150 feet wide, from Potomac River channel to Mount Vernon wharf, with turning basin at wharf. | Annual Report, 1879, vol. 1, p. 83. |
| | | Channel increased to 9- to 10-foot depth, 200-foot width, turning basin to have 200-foot radius. | Annual Report, 1888, vol. 1, p. 814. |
| 19. | POTOMAC RIVER BELOW WASHINGTON, DC | | |
| | Mar. 3, 1899 | A channel 24 feet deep and 200 feet wide between mouth at Chesapeake Bay and Giesboro Point at Washington, DC, a distance of 108 miles. | H. Doc. 33, 52nd Cong., 1st Sess. |
| 20. | PREVENTION OF OBSTRUCTIONS AND INJURIOUS DEPOSITS, BALTIMORE HARBOR, MD | | |
| | Aug. 30, 1935 | Continuous patrol and inspection of Baltimore Harbor, Chesapeake Bay, and its tributaries to prevent and detect violations, and issue permits as required for transporting and despositing waste materials in navigable waters. (The project is limited to the tidal waters of Chesapeake Bay and its tributaries that lie within the State of Maryland.) | River and Harbor Act, June 28, 1888 as amended by Public Law 85-802, dated August 29, 1959 |
| 21. | RHODES PT TO TYLERTON, MD | | |
| | Jan. 22, 1982 | 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 dis- | Detailed Project Report, |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|----------------------------|------------------------------|--|--|
| | Sec. 107 Jul. 14, 1960 | tance of about one-mile, through Sheel Pen Gut to deep water in the Chesapeake Bay. | 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 82nd Cong., 1st Sess. ² |
| | Aug. 1, 1968 | 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 | Detailed Project Report, February 1968 |
| | Sec. 107 Jul. 14, 1960 | 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. | |
| 22. | | ST. JEROME CREEK, MD | |
| | Aug. 26, 1937 | A channel 7 feet deep and 100 feet wide at Airedele, thence 7 feet deep and 60 feet wide to deep water in the creek, with a turning basin of the same depth 200 feet wide and 300 feet long opposite Airedele. | H. Doc. 174, 75th Cong., 1st Sess. ¹ |
| 23. | | TOLCHESTER CHANNEL S-TURN, MD | |
| | 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 |
| 24. | | TWITCH COVE AND 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, 62nd Cong., 2nd Sess. |
| 25. | | UPPER THOROFARE DEAL ISLAND, MD | |
| | Aug. 30, 1935 | A 9-foot channel 75 feet wide protected by breakwater at entrance, with turning basin at inner end and anchorage area 6 feet deep and 150 foot wide. | Rivers and Harbors Committee Doc. 37, 72nd Cong., 1st Sess. |
| | Aug. 26, 1937 | Widen entrance channel to 100 feet, extend 9-foot turning basin an 6-foot anchorage, and dredging an additional anchorage area on north side of channel. | H. Doc. 76, 75th Cong., 1st Sess. |
| 26. | | 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, 74th Cong., 1st Sess. |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|---------------------|-----------------------------------|--|--|
| 27. | WICOMICO RIVER, MD | | |
| | Sep. 19, 1890 | Channel 9 feet deep from Main Street Bridge to about 2 miles below. | H. Doc. 20, 51st Cong., 1st 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, 61st Cong., 2nd 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, 63rd Cong., 3rd 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, 75th Cong., 3rd Sess. ² |
| | 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, 81st Cong., 2nd Sess. ² |
| 31. | 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 |
| 32. | ATLANTIC COAST OF MARYLAND | | |
| | Nov. 17, 1986 | Consists of a dune beginning at 27th Street extending north to the Delaware line; a steel sheetpile 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 1989 |
| 33. | COLONIAL BEACH, VA | | |
| | Sep. 15, 1980 | Extending and widening the existing Central Beach area, stabilizing the bank behind the beachfill with vegetation, and constructing four segments of offshore breakwater; and extending and widening of the existing Castle Beach area, constructing three segments of offshore breakwater, removing debris in the beachfill area, and constructing a 100-foot long terminal groin at the southern end of Castlewood Park beachfill. | Detailed Project Report, May 1980 |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|---------------------|--|---|--|
| 34. | BROAD TOP REGION, PA | | |
| | Oct. 31, 1992 | Pilot program to develop and carry out a watershed reclamation and protection, and wetlands creation and restoration project using innovative reclamation technologies for the purposes of restoring, maintaining and protecting surface and ground water, including municipal water supplies, from adverse impacts related to acid mine drainage and other runoff. | P.L. 102-580 |
| | Oct. 12, 1996 | 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 grant or reimbursement of project costs. | P.L. 104-303 |
| 35. | 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, 73rd Cong., 1st 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 |
| 36. | JENNINGS RANDOLPH LAKE, MD AND WV | | |
| | Oct. 23, 1962 | Construction of Bloomington Lake project. | H. Doc. 469, 87th Cong., 2nd Sess. |
| 37. | 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, 87th Cong., 2nd Sess. |
| 38. | MOOREFIELD, WV | | |
| | Nov. 28, 1990 | Levee, floodwall, closures, relocations, and improvements to the flood warning system. | Report of the Chief of Engineers dated July 23, 199 |
| 39. | NEABSCO CREEK, VA | | |
| | Oct. 12, 1996 | Provides for a flood control project in the Neabsco Creek Watershed in Prince William County. | P.L. 104-303 |
| 40. | 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 |
| 41. | DICKSON CITY, PA | | |
| | Oct. 13, 1997 | Provides for Corps to undertake activities leading to construction of flood control measures at Dickson City, with the same level of protection as Olyphant, PA. | P.L. 105-62 |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents | |
|--|----------------------|--|---|--|
| 42. | | RAYSTOWN LAKE, RAYSTOWN BRANCH, JUNIATA RIVER, PA | | |
| | | | Construction of dam and appurtenant facilities. | H. Doc. 565, 87th Cong., 2nd Sess. |
| 43. | | LACKAWANNA RIVER, SCRANTON, PA | | |
| | | | 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 |
| 44. | | OCEAN PINES, WORCESTER COUNTY, MD | | |
| | | | Restoration of 6.3 acres of filled salt marsh to tidal salt marsh. | Ecosystem Restoration Report |
| 45. | | WILLIAMSPORT, PA - HAGERMAN'S RUN | | |
| | | | Directs the Secretary of the Army to use \$225,000 to construct necessary repairs to the flume and conduit for flood control at the Hagerman's Run project. | P.L. 105-62 |
| 46. | | WV & PA FLOODING PROGRAM | | |
| | | | Provides for design and construction of structural and non-structural flood control, streambank protection, stormwater management and channel clearing and modification measures in the West Branch Susquehanna River and Juniata River Basins in Pennsylvania. | P.L. 104-303 |
| | | | Requires flood protection not less than 100-year level for measures that incorporate levees or floodwalls. | P.L. 106-53 |
| 47. | | SOUTHERN NEW YORK FLOOD CONTROL 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 control works for protection of Binghamton, Hornell, Corning and other towns in New York and Pennsylvania. | H. Doc. 702, 77th Cong., 2nd Sess. |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|---------------------|--|--|---|
| 48. | STILLWATER LAKE, LACKAWANNA RIVER, PA | | |
| | Aug. 18, 1941 | Construction of a flood control reservoir. | H. Doc. 702, 77th Cong., 2nd Sess. |
| 49. | SUSQUEHANNA RIVER FLOOD CONTROL PROJECTS, NY AND PA | | |
| | Jul. 3, 1958 | Construction of Cowanesque and Tioga-Hannond reservoirs, local flood protection works at Elkland, PA, and Nichols, NY and channel improvement at Cortland, NY. | H. Doc. 702, 77th Cong., 2nd Sess. |
| | 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, 84th Cong., 2nd Sess. |
| | Mar. 1, 1983 | Modification of Cowanesque Lake to include water supply as provided by Section 4 of the Flood Control Act of 1944 (PL 78-534) and Section 301 of Water Supply Act of 1958 (PL 85-500). | |
| 50. | WEST BRANCH OF SUSQUEHANNA RIVER, PA | | |
| | Sep. 3, 1954 | Construction of three flood control reservoirs. | H. Doc. 29, 84th Cong., 1st Sess. |
| 51. | 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 control 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 |
| 52. | YORK, INDIAN ROCK DAM, PA | | |
| | Jun. 22, 1936 | Construction of Indian Rock Dam and channel improvements on Codorus Creek. | H. Doc. 702, 77th Cong., 2nd Sess. |
| 56. | 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 |

TABLE 4-B AUTHORIZING LEGISLATION

| See Section in Text | Date Authorizing Act | Project and Work Authorized | Documents |
|----------------------------|-----------------------------------|---|--|
| 57. | | 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. | 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. | P.L. 106-541 Sec. 342 |
| 58. | | CHESAPEAKE BAY ENVIRONMENTAL RESTORATION | |
| | 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 |
| 59. | | 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 |
| 60. | | 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 |
| 61. | | 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 |

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 Public Works Administration program September 16, 1993. The site chosen for the inlet under this authorization was opened just south of Ocean City by natural forces during a severe storm in August 1933. This eliminated the necessity for an 8-foot channel from the inlet to Ocean City.

4. Included in Emergency Relief Program 1935.

5. Raising of the north jetty to an elevation of 9 feet above mean low water was accomplished with maintenance funds in 1956.

TABLE 4-C OTHER AUTHORIZED NAVIGATION PROJECTS

| Project | Status | For Last Full Report See Annual Report | Cost to September 30, 2002 | |
|--|-----------|---|----------------------------|------------------------------|
| | | | Construction | Operation and Maintenance |
| Accotink Creek, VA ¹ | Completed | 1878 | \$ 5,000 | \$ --- |
| Anacostia River and Flats ² | Deferred | 1953 | 3,910,582 | --- |
| 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 | 1993 | 202,200 ⁵ | 468,464 |
| Branson Cove, Lower Machodoc River, VA | Completed | 1950 | 15,755 | 35,684 |
| Breton Bay, MD ⁶ | Completed | 1950 | 47,924 ⁶ | 47,593 |
| Broad Creek River, DE | Completed | 1964 | 64,510 ⁷ | 167,952 |
| Cambridge Harbor, MD | Completed | 1993 | 195,974 ⁸ | 946,934 |
| 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 |
| Corsica River, MD | Completed | 1948 | 39,071 ¹¹ | 134,770 |
| Cypress Creek, MD | Completed | 1947 | 3,057 | 14,729 |
| Elk and Little Elk Rivers, MD ¹² | Completed | 1932 | 90,121 ¹³ | 53,808 ¹⁴ |
| Fishing Bay, MD | Completed | 1998 | 34,074 | 2,161,260 |
| Goose Creek, MD | Completed | 1973 | 75,900 | 22,013 |
| Herring Creek, MD ¹⁶ | Completed | 1989 | 1,506,259 | 1,124,317 |
| Herring Creek, Tall Timbers, MD | Completed | 1998 | 1,504,297 | 216,265 |
| Hudson Branch, Howard County, MD | Completed | 2002 | 1,406,838 | |
| Isle of Wight Bay, MD | Completed | 2002 | 1,300,298 | |
| Knapps Narrows, MD | Completed | 2001 | 23,836 | 1,207,831 |
| LaTrappe, MD | Completed | 1980 | 8,064 ¹⁸ | 40,475 |
| Little Creek, Kent Island, MD | Completed | 1958 | 23,000 | 7,327 |
| Little Falls Dam Fish Passage #2, MD | Completed | 2001 | 1,407,918 | 404,755 |
| Little Wicomico River, MD | Completed | 2002 | 81,886 | 2,882,531 |
| Loch Haven, PA | Completed | 2001 | 55,323,950 | 6,878,038 |
| 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 ¹⁶ | Completed | 1977 | 125,550 | 42,643 |
| Manokin River, MD ¹⁹ | Completed | 1919 | 34,788 | 43,534 |
| Middle River and Dark Head Creek, MD | Completed | 1947 | 38,715 | 96,785 |
| Monroe Bay and Creek, VA | Completed | 1994 | 22,434 | 483,685 |
| Muddy Hook Tyler Coves, MD | Completed | 1996 | 64,001 | 687,568 |
| Nan Cove, MD ⁴ | Completed | 1965 | 34,861 ²² | 33,138 |
| Nanticoke River at Bivalve, MD | Completed | 1983 | 240,817 | 142,131 |
| Neabsco Creek, VA | Completed | 1998 | 57,841 | 1,947,744 |
| Neale Sound, MD | Completed | 1991 | 12,600 ²³ | 945,585 |
| Neavitt Harbor, MD ¹⁶ | Completed | 1968 | 36,500 | 45,019 |
| Nomini Bay and Creek, VA ²⁴ | Completed | 1946 | 78,446 | 42,063 |
| Northeast River, MD | Completed | 2002 | 28,489 | 1,816,146 |
| Parish Creek, MD | Completed | 1988 | 19,170 ²⁶ | 533,808 |
| Patuxent River, MD ¹² | Completed | 1905 | 14,000 ²⁷ | --- |
| Petersburg, WV | Completed | 2001 | 18,554,009 ²⁹ | 0 |
| 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 |

TABLE 4-C OTHER AUTHORIZED NAVIGATION PROJECTS

| Project | Status | For Last Full Report See Annual Report | Cost to September 30, 2002 | |
|---|-----------|--|----------------------------|---------------------------|
| | | | Construction | Operation and Maintenance |
| Potomac River and Tributaries at and below Washington, DC, Elimination of Waterchestnut | Completed | 1977 | --- | 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 ²⁸ | 27,461 ²⁹ |
| Queenstown Harbor, MD | Completed | 1985 | 72,858 ³⁰ | 321,803 |
| Rock Hall Harbor, MD | Completed | 1998 | 1,072,500 ³¹ | 457,157 |
| Shad Landing State Park, MD | Completed | 1966 | 33,531 | 19,198 |
| Shallow Creek, MD | Completed | 2002 | 1,137,692 | 523,792 |
| Slaughter Creek, MD | Completed | 1994 | 4,140 ³³ | 682,983 |
| St. Catherine's Sound, MD | Completed | 1989 | 29,947 | 659,369 |
| St. George's Creek, MD | Completed | 1985 | 147,650 ³⁴ | --- |
| St. Jerome's Creek, MD | Completed | 1991 | 44,357 | 756,360 |
| St. Michael's Harbor, MD ¹⁶ | Completed | 1964 | 16,723 | 35,666 |
| St. Patrick's Creek, MD | Completed | 1987 | 15,752 | 151,849 |
| St. Peter's Creek, MD ¹⁶ | 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 ¹⁶ | 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 ³⁸ | 0 |
| 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 | 54,302 |
| Upper Machodoc Creek, VA | Completed | 1971 | 20,281 | 34,777 |
| Warwick River, MD | Completed | 1984 | 22,041 ⁴¹ | 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 project.
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. Includes \$30,000 for previous projects.
12. Unconstructed portion of the project was deauthorized November 2, 1979.
13. Includes \$79,626 for previous project and excludes \$8,414 contributed funds.
14. Includes \$24,321 for previous projects.
15. Includes \$2,840 for previous projects.
16. Authorized by Chief of Engineers.
17. Excludes \$10,306 contributed funds.
18. Excludes \$1,100 contributed funds.
19. Abandonment recommended in 1926 (H. doc. 467, 69th Cong., 1st Sess.)
20. Includes \$2,000 expended outside project limits.
21. Excludes \$111,581 expended by Navy Department and \$52,000 from contributed funds.
22. Excludes \$565 contributed funds.
23. Excludes \$1,000 contributed funds.
24. Unconstructed portion of the project was deauthorized November 6, 1977.
25. Includes \$25,000 for previous projects.
26. Includes \$19,170 Works Progress Administration funds.
27. Includes \$10,617 for previous projects.
28. Excludes \$389,000 contributed funds.
29. Excludes \$101,162 Public Health Service funds expended for waterchestnut removal.
30. Includes \$19,000 for previous projects.
31. Excludes \$672,880 contributed funds.
32. Excludes \$24,125 contributed funds.
33. Excludes \$600 contributed funds.
34. Includes \$26,500 for previous projects.
35. Excludes \$6,984 contributed funds.
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 \$10,158 contributed funds.
39. Includes \$6,000 for previous projects.
40. Excludes \$344,952 contributed funds.
41. Excludes \$80,000 contributed funds.

TABLE 4-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS

| Project | Status | For Last Full Report See Annual Report | Cost to September 30, 2002 | |
|--|-----------|--|----------------------------|---------------------------|
| | | | 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 | --- |
| Bainbridge, NY ^{3,4} | Completed | 1959 | 382,000 | --- |
| Bath, NY ⁵ | Completed | 1970 | 638,332 | --- |
| Bayard, WV ⁴ | Completed | 1965 | 55,218 ⁶ | --- |
| Black Walnut Point, MD | Completed | 1985 | 200,500 | --- |
| Bridgewater, VA ⁴ | Completed | 1953 | 136,500 | --- |
| Bull Run, PA | Completed | 1984 | 2,742,000 | --- |
| Chesapeake Bay at Hoopersville Road, MD | Completed | 1993 | 156,491 ⁷ | --- |
| Conklin-Kirkwood, NY ⁴ | Completed | 1955 | 71,000 | --- |
| Cortland, NY ⁸ | Completed | 1970 | 324,486 | --- |
| Elkland, PA | Completed | 1971 | 1,297,850 | --- |
| Endicott Johnson City and Vestal, NY | Completed | 1979 | 7,034,534 ⁹ | --- |
| Forest Heights, MD ⁴ | Completed | 1964 | 430,000 ¹⁰ | --- |
| Fourmile Run, VA | Completed | 1987 | 52,480,000 | --- |
| Hills Point Road, Dorchester Co., MD ³ | Completed | 1989 | 186,077 | --- |
| Greene, NY ⁴ | Completed | 1951 | 37,000 | --- |
| Kingston-Edwardsville, PA | Completed | 1979 | 4,731,394 ¹¹ | --- |
| Kitzmilller, MD | Completed | 1965 | 501,500 ¹² | --- |
| Isle of Wight Bay, Ocean City, MD ⁴ | Completed | 1992 | 972,988 | --- |
| Latta Brook Rd., NY | Completed | 1984 | 115,500 | --- |
| McCready's Point Road, MD | Completed | 1993 | 74,019 ¹³ | --- |
| Middle Hooper Island, MD | Completed | 1993 | 327,165 ¹⁴ | --- |
| Nichols, NY | Completed | 1974 | 1,487,800 | --- |
| Norwich, NY ⁴ | Completed | 1950 | 94,500 | --- |
| Painted Post, NY ⁵ | Completed | 1970 | 414,181 | --- |
| Paxton Creek, Harrisburg, PA | Completed | 1998 | 48,509 ¹⁵ | --- |
| Plymouth, PA | Completed | 1958 | 1,911,689 ¹⁶ | --- |
| Rooster Island, Dorchester County, MD | Completed | 1998 | 753,791 ¹⁷ | --- |
| Savage River Dam, MD | Completed | 1954 | 2,271,939 ¹⁸ | 33,999 |
| Scranton, PA ¹⁹ | Completed | 1971 | 2,006,800 | --- |
| Spring Brook Creek, Pittston Township, PA | Completed | 1993 | 425,960 ²⁰ | --- |
| Solomon Creek, Ashley Borough, Luzerne County, PA | Completed | 1993 | 70,441 ²¹ | --- |
| Solomons Island, Calvert County, MD | Completed | 1993 | 126,049 ²² | --- |
| Sunbury, PA | Completed | 1953 | 6,063,000 ²³ | --- |
| Swoyersville-Forty Fort, PA | Completed | 1968 | 2,728,113 | --- |
| Tunkhannock Creek, Tunkhannock, PA | Completed | 1991 | 174,491 ²⁴ | --- |
| Tyrone, PA ²⁵ | Deferred | 1980 | 6,401,016 | --- |
| Unadilla, NY | Completed | 1970 | 1,000,000 ²⁶ | --- |
| Upper Marlboro, MD ⁴ | Completed | 1965 | 590,013 | --- |
| Verona Lake, VA ²⁷ | Deferred | 1978 | 992,000 | --- |
| Washington, DC and Vicinity | Completed | 1953 | 331,927 ²⁸ | --- |
| Wilkes-Barre, Hanover Township, PA | Completed | 1958 | 3,853,457 ²⁹ | --- |
| Williamspport, PA | Completed | 1979 | 12,964,893 ³⁰ | --- |
| Wyoming Valley, PA | Completed | 1987 | 25,549,098 | --- |

TABLE 4-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS

- | | |
|---|--|
| <ol 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 Control 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 Control 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 \$14,917 contributed funds. | <ol style="list-style-type: none"> 16. Includes \$4,357 emergency relief funds. 17. Excludes \$278,801 contributed funds. 18. Includes \$200,000 expended from contributed funds. 19. Unit of Lackawanna River Basin Projects. 20. Excludes \$126,255 contributed funds. 21. Excludes \$25,014 contributed funds. 22. Excludes \$51,666 contributed funds. 23. Excludes \$140,504 contributed funds. 24. Excludes \$53,383 contributed funds. 25. The unconstructed portion of the project was reclassified to the deferred category January 8, 1981. 26. Excludes \$132,578 contributed funds. 27. Authorized for the design memorandum state of advanced. Cost of previous project. Includes \$106,500 emergency relief funds. 29. Includes \$872,715 emergency relief funds. Excludes \$36,375 emergency relief funds expended for new work before adoption of project. 30. Includes \$1,887 emergency relief funds and excludes \$110,835 contributed funds. |
|---|--|

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 | --- |
| Baltimore Harbor & Channels, MD (Ferry Bar & Spring Garden Channel) | 1920 | Nov. 17, 1986 1966 Water Res. Dev. Act | 787,710 | --- |
| Betterton Harbor, MD | 1960 | Dec. 31, 1989 1986 Water Res. Dev. Act | 3,482 | --- |
| Breton Bay, MD (1902 River & Harbor Act) | 1950 | Dec. 31, 1989 1986 Water Res. Dev. Act | 10,424 | --- |
| Broadwater Creek, MD | 1949 | Nov. 6, 1977 1974 Water Res. Dev. Act | 212 | --- |
| Cadle Creek, MD ² | 1949 | Nov. 6, 1977 1974 Water Res. Dev. Act | --- | --- |
| Cambridge Harbor, MD (1948 River & Harbor Act) | 1989 | Dec 31, 1989 1986 Water Res. Dev. Act | --- | --- |
| Channel Connecting Plain Dealing Creek and Oak | 1940 | Aug. 5, 1977 1974 Water Res. Dev. Act | 112 | --- |
| Chester River, MD (1873 River & Harbor Act) | 1988 | Dec. 31, 1989 1986 Water Res. Dev. Act | 25,419 | --- |
| Coan River, VA | 1937 | Aug. 5, 1977 1974 Water Res. Dev. Act | --- | --- |
| Copes Corner Lakes, NY ² | 1970 | May 6, 1981 1974 Water Res. Dev. Act | 106,700 ³ | --- |
| Cuckold Creek, MD | 1978 | Jan 22, 1979 1960 River and Harbor Act | 5,720 | --- |
| Cunninghill Cove, MD | 1977 | Jan. 22, 1979 1960 River and Harbor Act | 11,200 | --- |
| Curwensville Lake (WaterLine), PA ⁵ | --- | Nov. 18, 1991 1986 Water Res. Dev. Act | --- | --- |
| Davenport Center Lake, NY ² | 1970 | May 6, 1981 1974 Water Res. Dev. Act | 286,400 ³ | --- |
| Endicott, Johnson City, and Vestal (Remedial), NY ⁵ | --- | Nov. 18, 1991 1986 Water Res. Dev. Act | --- | --- |
| Fall Brook Lake, PA ⁶ | 1970 | May 6, 1981 1974 Water Res. Dev. Act | 46,100 | --- |

TABLE 4-G 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 | --- |
| Governors Run, MD | 1950 | Aug. 5, 1977 1974 Water Res. Dev. Act | --- | --- |
| Harpers Ferry, WV | 1937 | Aug. 5, 1977 1974 Water Res. Dev. Act | --- | --- |
| Hellens Creek, MD | 1950 | Nov. 6, 1977 1974 Water Res. Dev. Act | --- | --- |
| Lake Ogleton, MD | 1950 | Nov. 6, 1977 1974 Water Res. Dev. Act | --- | --- |
| Marsh Creek Bridge, Foster Joseph Sayers Dam, PA ⁵ | --- | Nov. 18, 1991 1986 Water Res. Dev. Act | --- | --- |
| Mill Creek, MD | 1949 | Nov. 6, 1977 1974 Water Res. Dev. Act | --- | --- |
| Moorefield, WV | 1941 | Oct. 3, 1978 1974 Water Res. Dev. Act | 7,928 ³ | --- |
| Neabsco Creek, VA (1881 River & Harbor Act) | 1978 | Dec. 31, 1989 1986 Water Res. Dev. Act | 14,600 | --- |
| Ocean City Harbor and Inlet and Sinepuxent Bay, MD (1954 River & Harbor Act) | 1989 | Dec. 31, 1989 1986 Water Res. Dev. Act | --- | --- |
| Pocomoke River, MD (1945 River & Harbor Act) | 1989 | Dec. 31, 1989 1986 Water Res. Dev. Act | --- | --- |
| Pocomoke River, MD & VA (1954 River & Harbor Act) | 1989 | Dec. 31, 1989 1986 Water Res. Dev. Act | --- | --- |
| Saint Georges Creek, MD | 1971 | Sep. 23, 1986 1974 Water Res. Dev. Act | --- | --- |
| Sixes Bridge Lake, MD & PA ⁷ | 1974 | Dec. 29, 1981 1974 Water Res. Dev. Act | --- | --- |
| South Plymouth Lake, NY | 1953 | May 6, 1981 1974 Water Res. Dev. Act | 100,036 | --- |
| Susquehanna River, Sunbury Closure Structure, PA ⁷ | --- | Nov. 18, 1991 1986 Water Res. Dev. Act | --- | --- |
| Tyrone, PA | 1980 | Nov. 1, 1997 1992 Water Res. Dev. Act | 6,401,016 | --- |

TABLE 4-G 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 | --- |
| West Oneonta Lake, NY ² | 1970 | May 6, 1981 1974 Water Res. Dev. Act | 189,100 ³ | --- |

TABLE 4-H RECONNAISSANCE AND CONDITION SURVEYS

| Project | Date Survey Completed |
|--|------------------------------|
| MARYLAND | |
| Breton Bay | September 2002 |
| Cambridge Harbor | November 2001 |
| Corsica River | August 2002 |
| Herring Creek | February 2002 |
| Knapps Narrows | September 2002 |
| Madison Bay | September 2002 |
| Nanticoke River at Bivalve | August 2002 |
| Neavitt Harbor | September 2002 |
| Northeast River | April 2002 |
| Queenstown Harbor | August 2002 |
| Shad Landing State Park | February 2002 |
| Slaughter Creek | November 2001 |
| St. Catherine Sound | September 2002 |
| St. Patricks Creek | September 2002 |
| Susquehanna River Above and Below Havre De Grace | November 2001 |
| Town Creek | September 2002 |
| Tred Avon River | September 2002 |

TABLE 4-I INSPECTION OF COMPLETED PROJECTS

| Project | Date Inspected |
|--------------------------------|-----------------------|
| MARYLAND | |
| Anacostia River Basin | October 2002 |
| Cumberland | October 2002 |
| Forest Heights | October 2002 |
| Kitzmilller | October 2002 |
| Upper Marlboro | October 2002 |
| NEW YORK | |
| Addison | October 2002 |
| Avoca | October 2002 |
| Bainbridge-Newton Creek | October 2002 |
| Bath-Cohocton River | October 2002 |
| Binghamton | October 2002 |
| Canisteo | October 2002 |
| Cincinnatus | October 2002 |
| Conklin-Kirkwood | October 2002 |
| Corning-Monkey Run | October 2002 |
| Cortland | October 2002 |
| Elmira | October 2002 |
| Endicott-Johnson City & Vestal | October 2002 |
| Greene | October 2002 |
| Hornell | October 2002 |
| Latta Brook | October 2002 |
| Lisle | October 2002 |
| Nichols | October 2002 |
| Norwich | October 2002 |
| Owego | October 2002 |
| Oxford | October 2002 |
| Painted Post | October 2002 |
| Port Dickinson | October 2002 |
| Sherburne | October 2002 |
| Unadilla | October 2002 |
| Whitney Point | October 2002 |
| PENNSYLVANIA | |
| Ashley | October 2002 |
| Elkland | October 2002 |
| Hanover | October 2002 |
| Kingston-Edwardsville | October 2002 |
| Lock Haven | October 2002 |
| Loyalsock | October 2002 |
| Milton | October 2002 |
| Pittston | October 2002 |
| Plymouth | October 2002 |
| Scranton | October 2002 |
| Solomon Creek | October 2002 |
| South Williamsport | October 2002 |
| Sunbury | October 2002 |
| Swoyersville-Forty Fort | October 2002 |
| Tunkhannock | October 2002 |
| Tyrone | October 2002 |
| Wilkes-Barre-Hanover Twp. | October 2002 |
| Williamsport | October 2002 |

TABLE 4-I (Continued) INSPECTION OF COMPLETED PROJECTS

| Project | Date Inspected |
|------------------------------------|-----------------------|
| VIRGINIA | |
| Bridgewater | May 2002 |
| Fourmile Run | October 2002 |
| District of Columbia & MD Projects | October 2002 |
| Anacostia River | October 2002 |
| Washington, DC & Vicinity | October 2002 |
| WEST VIRGINIA | |
| Bayard | November 2002 |
| Moorefield | October 2002 |
| Petersburg | October 2002 |
| Ridgeley | November 2002 |