

# WILMINGTON, N.C., DISTRICT

This district comprises central and eastern North Carolina and a portion of south-central Virginia, embraced in drainage basins tributary to the Atlantic Ocean from the southern boundary of Virginia to the Shallotte River, inclusive, with exception of the Meherrin River Basin above Murfreesboro, N. C., the Chowan River Basin above the confluence of the Nottaway and Blackwater Rivers, and the Pasquotank

River and its tributaries for navigation only. Also included are those portions of the Yadkin-Pee-Dee and Catawba River basins within the State of N. C. as well as a portion of the Atlantic Intracoastal Waterway from the northern boundary of North Carolina to Little River, S.C., and a portion of the waterway from Norfolk, VA., to the Sounds of North Carolina, south of the north shore of Albemarle Sound.

## IMPROVEMENTS

	<i>Page</i>	<i>Page</i>
<b>Navigation</b>		
1. Atlantic Intracoastal Waterway Between Norfolk, VA. and St. Johns River, Fl., (Wilmington District) ...	6-2	
2. Beaufort Harbor, N.C. ....	6-3	
3. Cape Fear River, N.C. Above Wilmington .....	6-4	
4. Lockwoods Folly River, N.C. ....	6-4	
5. Manteo (Shallowbag) Bay, N.C. ....	6-5	
6. Morehead City Harbor, N.C. ....	6-6	
7. Rollinson Channel, N.C. ....	6-6	
8. Far Creek, N.C. ....	6-7	
9. Silver Lake Harbor, N.C. ....	6-7	
10. Waterway Connecting Pamlico Sound & Beaufort Harbor, N.C. ....	6-8	
11. Wilmington Harbor, N.C. ....	6-8	
12. Project Condition Surveys .....	6-10	
13. Navigation Works Under Special Authorization. ....	6-10	
<b>Flood Damage Reduction</b>		
14. Cape Fear River Basin, N.C. ....	6-10	
14-A. B. Everett Jordan Dam and Lake, N.C. ....	6-10	
15. Neuse River Basin, N.C. ....	6-11	
15-A. Falls Lake, N.C. ....	6-11	
16. Roanoke River Upper Basin, VA.-Headwaters Area	6-12	
17. Yadkin River Basin, N.C. and S.C. ....	6-12	
17-A. W. Kerr Scott Dam and Reservoir, N.C. ....	6-13	
18. Inspection of Completed Flood Damage Reduction & Coastal Storm Damage Reduction Projects .....	6-13	
19. Flood Damage Reduction Works Under Special Authorization .....	6-13	
<b>Coastal Storm Damage Reduction</b>		
20. Brunswick County Beaches, N.C. (Cape Fear to North Carolina - South Carolina State Line) .....	6-14	
21. Carolina Beach and Vicinity, N.C. ....	6-14	
22. Dare County Beaches, N.C. (Bodie Island) .....	6-15	
23. West Onslow Beach and New River Inlet, N.C. ....	6-16	
24. Wrightsville Beach, N.C. ....	6-16	
<b>Multi-Purpose Projects, Including Power</b>		
25. Roanoke River Basin, VA. and N.C. ....	6-17	
25-A. John H. Kerr Dam and Reservoir, VA. and N.C. ....	6-17	
25-B. Philpott Lake, VA. ....	6-17	
26. Scheduling Flood Damage Reduction Reservoir Operations .....	6-18	
<b>Miscellaneous</b>		
27. Roanoke Island Festival Park, Dare County, N.C. (CAP Section 206) .....	6-18	
28. Wilson Bay Restoration, Jacksonville, N.C. (CAP Section 206) .....	6-19	
29. Wanchese Marsh Creation and Protection, Dare County, N.C. (CAP Section 204) .....	6-19	
30. Morehead City Harbor, N.C. Section 933 (CAP Section 933).....	6-20	
31. Stanly County Wastewater Infrastructure, N.C (Section 219) .....	6-20	
32. Regulatory Program.....	6-21	
<b>General Investigations</b>		
33. Surveys .....	6-21	
34. Collection and Study of Basic Data .....	6-21	
35. Preconstruction Engineering and Design .....	6-21	
<b>Tables</b>		
Table 6-A Cost and Financial Statement .....	6-21	
Table 6-B Authorizing Legislation.....	6-29	
Table 6-C Other Authorized Navigation Projects .....	6-32	
Table 6-D Other Authorized Coastal Storm Damage Reduction Projects .....	6-33	
Table 6-E Other Authorized Environmental Restoration Projects.....	6-33	
Table 6-E Other Authorized Flood Damage Reduction Projects.....	6-34	
Table 6-G Deauthorized Projects .....	6-36	
Table 6-H Dams and Reservoirs.....	6-37	
Table 6-I Reconnaissance and Condition Surveys .....	6-38	
Table 6-J Navigation Work Under Special Authorization.....	6-39	
Table 6-K Environmental Restoration Work Under Special Authorization .....	6-40	
Table 6-L Flood Damage Reduction Work Under Special Authorization.....	6-40	

## Navigation

### 1. ATLANTIC INTRACOASTAL WATERWAY BETWEEN NORFOLK, VA, AND ST. JOHNS RIVER, FL. (WILMINGTON DISTRICT)

**Location.** The project is located on the east coast of the United States, between Norfolk, Va., and St. Johns River, Florida. The section within Wilmington District begins at the Virginia-North Carolina State line and extends generally southerly and southwestwardly to Little River, S.C., a total of 308 statute miles. (See Coast and Geodetic Survey Charts 830 to 842, inclusive.)

**Previous projects.** For details see Annual Reports for 1915, 1926, 1932, and 1938.

**Existing project.** The authorized project provides for a waterway, 12 feet deep, with widths varying from 90 feet in land cuts to 300 feet in open waters; the construction, operation and maintenance of suitable bridges; saltwater intrusion preventive measures in the vicinity of Fairfield, N.C.; a channel in Peltier Creek, 6 feet deep and 50 feet wide from the Intracoastal Waterway in Bogue Sound to and including a basin in Peltier Creek, 6 feet deep, 200 feet wide, and 600 feet long; a channel, 6 feet deep and 90 feet wide between the Intracoastal Waterway and the gorge in Bogue Inlet, then 8 feet deep and 150 feet wide across the ocean bar; a channel, 12 feet deep and 90 feet wide to a turning basin, 200 feet wide and 350 feet long, at Swansboro; a channel, 6 feet deep and 90 feet wide in New River Inlet, and a connecting channel of the same dimensions to the Intracoastal Waterway near the mouth of New River; a channel, 10 feet deep, and 90 feet wide in New River, between the Intracoastal Waterway and the Seaboard Coastline Railroad bridge at Jacksonville, N.C.; a channel through New Topsail Inlet, 8 feet deep and 150 feet wide and a channel from New Topsail Inlet to the Intracoastal Waterway by way of Old Topsail Creek, 7 feet deep and 80 feet wide; a channel, 7 feet deep and 80 feet wide, in Banks Channel, from New Topsail Inlet, paralleling the barrier beach, to the Atlantic Intracoastal Waterway; a channel, 14 feet deep and 400 feet wide, across the ocean bar at Masonboro Inlet, with suitable jetties at the entrance, thence 12 feet deep and 90 feet wide to the channel of the Intracoastal Waterway at Wrightsville Beach by way of Banks and Motte Channels; a turning basin, 15 feet deep, 300 feet wide, and 700 feet long, on the east side of Banks Channel near Masonboro Inlet, with three 15-pile dolphins therein; a channel, 8 feet deep and 150 feet wide across the ocean bar at Carolina Beach Inlet to the Atlantic Intracoastal Waterway; a channel, 6 feet deep, 80 feet wide, and 8,000 feet long, to and including a turning basin of the same depth, 130 feet wide and 180

feet long, at Carolina Beach; a yacht basin, 230 feet wide, 450 feet long, and 12 feet deep, at the town of Southport, connected to the waterway by a suitable channel of the same depth; and maintenance of the general navigation features of the North Carolina State Ports Authority Small Boat Harbor at Southport, consisting of an entrance channel, 150 feet wide and 400 feet long, an eastern harbor access channel, 70 feet wide and 430 feet long, a western harbor-access channel, 60 feet wide and 185 feet long, to a turning basin, 180 feet wide and 550 feet long, all to a depth of 6 feet. A modification providing for the replacement of five federally owned and operated highway bridges was authorized in December 1970. A modification providing for 100 percent Federal funding for Walter B. Jones (formerly Wilkerson Creek) and Joseph P. Knapp (formerly Coinjock) bridges was authorized in October 1976. A modification providing for 100 percent Federal funding at Core Creek, Gene A. Potter (formerly Hobucken), and Fairfield Bridges was authorized in November 1986. Estimated Federal cost is \$70,200,000 (2000). The tidal lock at Snow's Cut was deauthorized September 23, 1986, under authority of Sec. 12, PL 93-251. The 12-foot-deep channel in Peltier Creek was deauthorized by the Water Resources Development Act of 1986. The 12-foot deep channel modification to New River was deauthorized January 1, 1990, under Sec. 1002, PL 99-662. The jetties at Masonboro Inlet are complete except for the training wall, which was deauthorized April 5, 1999. A Section 111 project to mitigate damages caused by the north jetty was authorized in October 1980 and was completed in April 1981. Length of channels and basins total 347.7 miles. Plane of reference is mean low water. In the waterway north of Neuse River, variations in water surface due to winds seldom exceed 2 feet above or below mean stage. Between Beaufort and the Cape Fear River, normal tidal range varies from 3.5 feet at the inlets to 1 foot at points between. Average range of tide is 4 feet on the ocean side of Bogue Inlet and 2.5 feet just inside the inlet. At New River, tidal range varies from 3.5 feet at the inlet to 1 foot at the head of the marshes and zero at Tar Landing, 31 miles upstream. From Cape Fear River, N. C., to Little River, S. C., mean tidal range varies between 4.7 feet in Cape Fear River and 4 feet at the intermediate inlets, and 2 feet at points midway between the inlets. On October 15, 1954 (Hurricane Hazel), the tide at Holden Beach reached an elevation of 17.6 feet. (See Table 6-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date except for the uncompleted modifications. The State of North Carolina agreed to keep the bridges toll free and upon completion of each bridge, accept maintenance, replacement, and ownership responsibilities. They withdrew their offer to contribute 25 percent of first

## WILMINGTON, N.C. DISTRICT

cost. Water Resources Development Acts of 1976 and 1986 modified the terms of local cooperation to delete the non-Federal cost-sharing requirement for all five bridges.

**Operations and results during fiscal year.**  
**Maintenance:** During intermittent periods, the U.S. debris boat *Snell* conducted clearing and snagging operations and maintained dredging ranges and mooring facilities at a cost of \$90,487 in Operation and Maintenance funds. Also, conducted Project Condition Surveys at a cost of \$246,300. Contract dredge *Wilco* dredged 310,000 cubic yards from Shallotte to Lockwood Folly River Crossing at a cost of \$780,842 and the related Engineering, Design and construction management at a cost of \$185,362 in FY 2006 Emergency Supplemental funds mosquito control in disposal areas at a cost of \$158,858; real estate support for easements and audit at a cost of \$18,895; plans and specifications at a cost of \$244,349; economic update and miscellaneous planning activities at a cost of \$6,252; Dredged Material Management Plan at a cost of \$150,891; water control management at a cost of \$14,000; and condition and operations studies and project operation and management at a cost of \$595,543 in Operation and Maintenance funds. Geotechnical survey contract for FY 2010 dredging contract at a cost of \$113,714 in American Recovery and Reinvestment Act funds.

**Carolina Beach Inlet** – During intermittent periods, the U.S. sidecasting dredge *Merritt* removed 192,650 cubic yards from shoals in Carolina Beach Inlet at a cost of \$313,500 of Operation and Maintenance funds, and \$95,000 of FY 2009 Emergency Supplemental funds. At intermittent periods, the U.S. sidecasting dredge *Fry* removed 90,580 cubic yards from shoals in Carolina Beach Inlet at a cost of \$28,500 of Operation and Maintenance funds, and \$104,500 of FY 2009 Emergency Supplemental funds. During intermittent periods, the U.S. debris boat *Snell* conducted clearing and snagging at a cost of \$38,760. Project condition surveys were conducted at a cost of \$18,200 and project operations at a cost of \$18,725. **New River Inlet** – During intermittent periods, the U.S. sidecasting dredge *Merritt* removed 167,190 cubic yards from shoals in New River Inlet at a cost of \$161,500 of Operation and Maintenance funds and \$199,500 of FY 2009 Emergency Supplemental funds. During intermittent periods, the U.S. sidecasting dredge *Fry* removed 221,450 cubic yards from shoals in New River Inlet at a cost of \$501,500 in Operation and Maintenance funds, and \$21,000 of FY 2006 Emergency Supplemental funds. During intermittent periods, the U.S. debris boat *Snell* conducted clearing and snagging at a cost of \$24,140. Project condition surveys were conducted at a

cost of \$15,905 and project operations at a cost of \$20,520. **New Topsail Inlet** – At intermittent periods, the sidecasting dredge *Fry* removed 80,117 cubic yards from shoals in New Topsail Inlet at a cost of \$76,000. During intermittent periods, the U.S. sidecasting dredge *Merritt* removed 127,060 cubic yards from shoals in New Topsail Inlet at a cost of \$66,500. In February 2009, The U.S. debris boat *Snell* conducted vibracore sampling at a cost of \$20,400 in Operations and Maintenance funds. Project condition and geotechnical surveys were conducted at a cost of \$6,489 and project operations at a cost of \$341,960. **Bogue Inlet** – Between September 8, 2009 and September 19, 2009, the U.S. sidecasting dredge *Fry* removed 46,000 cubic yards from shoals in Bogue Inlet at a cost of \$132,200 of FY 2009 Emergency Supplemental funds. At intermittent periods, the U.S. debris boat *Snell* conducted clearing and snagging at a cost of \$8,160 in Operations and Maintenance funds. Surveys were conducted at a cost of \$14,248 and project operations at a cost of \$3,416. **Masonboro Inlet** – The south jetty area was analyzed at a cost of \$47,151.

**Condition at end of fiscal year.** The project was completed in September 1997 except for three tie-up dolphins at Masonboro Inlet and the replacement of Fairfield Bridge. Fairfield Bridge was the last of the AIWW bridges to be replaced and was opened to traffic on March 12, 2001. Total cost of existing project to September 30, 2009, was \$352,182,694; of which \$88,917,536 was for new work including \$86,851 in contributed funds and \$263,265,158 for maintenance, including \$2,425,140 in contributed funds.

## 2. BEAUFORT HARBOR, N. C.

**Location.** The project is just inside Beaufort Inlet, adjacent to Morehead City Harbor. (See Coast and Geodetic Survey Chart 420.)

**Previous project.** For details see Annual Reports for 1915 and 1938.

**Existing project.** The authorized project provides for stopping erosion at Beaufort Inlet by jetties and sand fences at Fort Macon and Shackleford points and other shore protection; channels 15 feet deep at mean low water and 100 feet wide in Bulkhead and Gallants Channels, except for a depth of 12 feet in the upper 5,000 feet of Gallants Channel; a harbor of refuge in Town Creek 12 feet deep, 400 feet wide, and 900 feet long connected to Gallants Channel by a channel 12 feet deep, 150 feet wide, and 1,400 feet long; a basin 12 feet deep, 600 feet wide in front of the town of Beaufort except for a channel 15 feet deep, 100 feet wide through the basin; a stone bulkhead from Town Marsh across Bird Shoal to the west end of Carrot Island; a channel

14 feet deep, 70 feet wide, and 1,900 feet long from Bulkhead Channel to a turning basin 14 feet deep, 150 feet wide, and 300 feet long near the upper end of Morgan Creek; and a channel in Taylors Creek 15 feet deep, 100 feet wide, extending about 2.6 miles easterly from about opposite Marsh Street in Beaufort to Lennoxville Point at North River except for an 800-foot-long section at the east end, which is 12 feet deep. Total length of channels is 7.3 miles. Average tidal range is 2.5 feet at Beaufort and 3.5 feet at the inlet. (See Table 6-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** There are fifty waterfront facilities with a total frontage of 2,000 feet. These facilities are adequate for present commerce.

**Operations and results during fiscal year. Maintenance:** From 27 February until 6 March 2009, the contract dredge *Currituck* removed 18,220 cubic yards of material from Beaufort Harbor at a cost of \$99,840 in FY 2009 Emergency Supplemental funds. \$14,430 in FY 2006 Emergency Supplemental funds were expended to complete dredging work from FY2008.

**Condition at end of fiscal year.** The project was completed in October 1965 except for the Morgan Creek modification which was completed on November 12, 1983. Total cost of the existing project to September 30, 2009, was \$6,711,452 of which \$818,040 was for new work, including \$34,000 in contributed funds and \$5,859,412 was for maintenance including \$326,225 in contributed funds. (For further details see Annual Report for 1962.)

### 3. CAPE FEAR RIVER, N. C. ABOVE WILMINGTON

**Location.** The river is formed by confluence of the Deep and Haw Rivers at Moncure, Chatham County, N.C., and empties into the Atlantic Ocean at Cape Fear, near the southern extremity of the state. (See Coast and Geodetic Survey Chart 426.)

**Previous project.** For details see Annual Reports for 1915 and 1938.

**Existing project.** The authorized project provides for a channel 25 feet deep and 200 feet wide from Wilmington to a turning basin 400 feet wide and 550 feet long at Navassa (2.9 miles); a channel 12 feet deep and 140 feet wide from Navassa to mile board 30 at Acme, with five channel cutoffs, 12 feet deep and 150 feet wide to eliminate sharp bends; a channel 8 feet deep from mile board 30 to Fayetteville by constructing three locks and dams and by dredging river shoals; and recreational facilities at the locks and dams. Total length

of the project channels is 113.9 miles. The project was authorized by River and Harbor Acts of June 25, 1910; June 26, 1934; August 30, 1935; August 26, 1937; October 27, 1965; and Section 4, Flood Control Act of 1944. (For further details see Annual Reports for 1962 and 1970.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** There are twelve waterfront facilities on the river, with a total frontage of 1,190 feet.

**Operations and results during fiscal year. Maintenance:** During intermittent periods, the U.S. debris boat *Snell* conducted clearing and snagging, dredging operations at a cost of \$224,400. Also, maintenance of the three locks and dams was conducted at a cost of \$428,723. American Recovery and Reinvestment Act funds in the amount of \$47,180 were expended to award and administer contracts for facility improvements and repair of a scour hole located at Lock 1.

**Condition at end of fiscal year.** The project was completed in June 1970. Total cost of existing project to September 30, 2009, was \$33,970,877 of which \$3,759,573 (including \$1,226,385 public works) was for new work and \$30,211,304 was for maintenance.

### 4. LOCKWOODS FOLLY RIVER, N. C.

**Location.** The project is located on the south coast of North Carolina about 12 miles west of Cape Fear River. (See Coast and Geodetic Survey Chart 1236 and Geological Survey Map of North Carolina.)

**Existing project.** The authorized project provides for a channel 100 feet wide and 6 feet deep at low water from the ocean to the bridge at Supply 12.5 miles upstream, to be obtained by dredging through oyster rocks and mudflats. The completed river portion of the project above the waterway was reclassified to the active category in 1971. Lunar tidal ranges in Lockwoods Folly River are 4.5 feet at the inlet and 2 feet at the head of navigation at Supply. The existing project was authorized by the 1890 River and Harbor Act. (See Annual Report for 1887, page 1099.) A modification to enlarge the channel from 6 to 12 feet deep and from 100 to 150 feet wide across the ocean bar for a distance of 4,700 feet was approved by the Chief of Engineers on June 3, 1980, under Section 107 of the 1960 River and Harbor Act. During dredging operations it became apparent that establishment of the 12-foot project would not be possible with currently available equipment. Therefore, the Chief of Engineers, on December 20, 1983, approved the District's recommendation that further construction activity for the Lockwoods Folly Inlet project be suspended until

suitable equipment becomes available and that the project be maintained at an 8-foot project depth in the interim.

**Local cooperation.** For the new modification local interests must: (a) pay, contribute in kind, or repay with interest, one-half of the first costs of construction allocated to recreational boating; (b) hold and save the United States free from damages resulting from changes in ground water levels, saltwater intrusion, or wave action due to the construction works, except damages due to the fault or negligence of the United States or its contractor; (c) provide without cost to the United States all lands, easements, and rights-of-way necessary for the construction and maintenance of the project and for aids to navigation upon request of the Chief of Engineers, and (d) provide depths in berthing areas commensurate with project depths and provide service facilities.

**Terminal facilities.** There are thirty-one piers and wharves on the Atlantic Intracoastal Waterway at Holden Beach, about 1.25 miles west of Lockwoods Folly Inlet, with a total frontage of about 1,980 feet available. At Dixons Landing, about 2 miles upstream of the inlet, there are five wharves with a total frontage of 240 feet. Numerous natural landings are used for loading and unloading small boats. Berthing space in the vicinity of Lockwoods Folly River Inlet totals about 2,220 feet. Facilities are considered adequate for present commerce.

**Operations and results during fiscal year.**  
**Maintenance:** – During intermittent periods, the U.S. sidecasting dredge *Fry* removed 131,661 cubic yards from shoals in Lockwoods Folly River Inlet at a cost of \$285,024. During intermittent periods, the U.S. sidecasting dredge *Merritt* removed 326,100 cubic yards from shoals in Lockwoods Folly River Inlet at a cost of \$683,975, and the debris boat *Snell* conducted clearing and snagging operations at a cost of \$28,560. Also, condition and operation studies and project operation and management were performed at a cost of \$8,909.

**Condition at end of fiscal year.** The active portion of the project was completed in June 1965 except for the latest modification. Work was initiated on the latest modification on September 23, 1982, with a depth of 8 feet being reached in October 1982. The project will be maintained at the 8-foot depth until suitable equipment for deepening to 12 feet becomes available. Total cost of the existing project to September 30, 2009, was \$18,700,220 of which \$241,272 was for new work, including \$92,650 in contributed funds and \$18,366,298 was for maintenance.

**5. MANTEO (SHALLOWBAG) BAY, N. C.**

**Location.** The project is located on the northeastern side of Roanoke Island, North Carolina. (See Coast and Geodetic Survey Chart 1229.)

**Existing project.** The authorized project provides for a channel 14 feet deep and 400 feet wide from the Atlantic Ocean through Oregon Inlet with connecting 12-foot channels, 100 feet wide, to Pamlico Sound, Manteo, and Wanchese; and a channel 6 feet deep and 100 feet wide connecting the Manteo-Oregon Inlet Channel with Albemarle Sound. Length of channels is 25.4 miles. The project modification authorized in 1970 provided for stabilization of Oregon Inlet with a dual rubble-mound jetty system, including means for sand transfer to the down drift beach; a channel, 20 feet deep and 400 feet wide, through the ocean bar at Oregon Inlet; a channel, 14 feet deep and 120 feet wide, from the gorge in Oregon Inlet to and through Roanoke Sound to and including a 15-acre basin of the same depth at Wanchese; and a channel 10 feet deep and 100 feet wide from the 12-foot-deep channel in Manteo (Shallowbag) Bay through Roanoke and Albemarle Sounds to deep water near the northern end of Croatan Sound. In FY 2003, after years of controversy, the Oregon Inlet stabilization project was referred to the President's Council on Environmental Quality, which directed the Corps of Engineers to a) develop alternative approaches for improving navigation; b) implement the channel widener project; and c) survey navigation channels more frequently and make the data available directly to the public and through NOAA's Electronic Navigational Charts. As a result, the Corps of Engineers agreed to terminate plans to construct jetties at Oregon Inlet. The unconstructed portion of the 1970 project was reclassified as deferred September 23, 2003. The State of N.C. has constructed the Wanchese Harbor portion and was reimbursed under Sec. 215, PL 90-483. The project was authorized by River and Harbor Acts of June 25, 1910; October 17, 1940; May 17, 1950; and December 31, 1970; and under Section 107 of the 1960 River and Harbor Act, as amended.

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** The project is served by thirty-three waterfront facilities with a total frontage of 3,320 feet. Additional wharves and facilities will be provided with the enlarged basin at Wanchese.

**Operations and results during fiscal year.**  
**Maintenance:** At intermittent periods, the U.S. sidecasting dredge *Fry* removed 419,812 cubic yards and the U.S. hopper dredge *Currituck* removed 9,230 cubic yards at a combined cost of \$883,500; and the U.S. sidecasting dredge *Merritt* removed 261,920 cubic yards of material at a cost of \$1,402,856 from shoals in Oregon Inlet. During intermittent periods, the debris

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

boat *Snell* conducted clearing and snagging and repairs to the dolphins at a cost of \$117,980. Also other contract work initiated in FY 2009 was completed at a cost of \$6,659,192. Also, engineering and design for FY 2009 was conducted at cost of \$353,441 and contract management at a cost of \$194,004; The contract dredge *Marion* removed 335,677 cubic yards at a cost of \$1,238,085; the contract dredge *Lexington* removed 32,027 cubic yards at a cost of \$114,658; and the contract dredge *Richmond* removed 465,715 cubic yards at a cost of \$3,203,875; environmental and sea turtle monitoring at a cost of \$173,711; condition and operation studies and project operation and management was conducted at a cost of \$234,436; and Island H disposal area repairs at a cost of \$614,709 in contributed funds. The contract dredge *Alaska* completed maintenance dredging at Oregon Inlet at a cost of \$9,303,150 using American Recovery and Reinvestment Act funds. Engineering, design, monitoring, and construction management was conducted at a cost of \$247,026 of American Recovery and Reinvestment Act funds.

**Condition at end of fiscal year.** The project is complete except for the latest modification. Environmental mitigation for the constructed 15 acre basin at Wanchese remains to be implemented. Total cost of the existing project to September 30, 2009, was \$191,553,004 of which \$10,099,515 was for new work, and \$181,453,489 was for maintenance including \$6,321,717 in contributed funds and \$9,550,176 in American Recovery and Reinvestment Act funds.

(For further detail, see Annual Report of 1962.)

### 6. MOREHEAD CITY HARBOR, N. C.

**Location.** The project is located on the northern shore of Bogue Sound, adjacent to Beaufort Inlet. (See Coast and Geodetic Survey Chart 420.)

**Previous project.** For details see page 470 of Annual Report for 1935.

**Existing project.** A channel 47 feet deep and 450 feet wide from deep water in the Atlantic Ocean through the ocean bar at Beaufort Inlet with three widenings; a cutoff channel 400 feet wide and a depth of 45 feet in the east leg of the basin, including a 1,350 foot diameter turning area; a channel 12 feet deep, 100 feet wide from the turning basin to Sixth Street, Morehead City, then 12 feet deep, 200 to 400 feet wide to Tenth Street; then 6 feet deep, 75 feet wide, to Bogue Sound. Project also includes assumption of maintenance in the northwest leg and the east leg extension. The Corps of Engineers also assumed maintenance of the West Turning Basin as part of the Morehead City Harbor Project, in accordance with Section 509(a)(17) of WRDA 1996 and ASA (CW) approval on September 20, 2002, and as constructed by

the State of North Carolina. Jetties at Beaufort Inlet were reclassified to the "active" category on March 8, 1972. The jetties were deauthorized by the Water Resources Development Act of 1986. The project was authorized by the 1958 River and Harbor Act (S.D. 54, 84th Cong., 1st sess.), the River and Harbor Act of December 31, 1970, the Water Resources Development Act of 1992, and Section 519(a)(17) of the Water Resources Development Act of 1996. (For further details see Annual Report for 1962.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Twenty-six waterfront facilities serve the port, with a total frontage of 1,250 feet. Marine terminals provide 5,300 feet of berthing space, with a depth alongside of 35 feet, and facilities for transfer of cargoes between rail and water carriers. Improvements to facilities were completed in 1969. (For further details see Port Series No. 12, revised 1987, Corps of Engineers.)

**Operations and results during fiscal year.**  
**Maintenance:** The contract bucket and barge *519* removed 598,540 cubic yards at a cost of \$1,908,874 in Operation and Maintenance funds. The U.S. hopper dredge *McFarland* removed 655,468 cubic yards at a cost of \$3,807,000 (\$3,007,000 of FY 2009 Emergency Supplemental funds and \$800,000 of Operation and Maintenance funds) and the U.S. debris boat *Snell* performed clearing and snagging at a cost of \$27,200. Updated the Dredged Material Management Plan at a cost of \$811,547. Also, conducted project condition surveys at a cost of \$231,915; environmental coordination at a cost of \$10,352; plans and specifications at a cost of \$218,938; condition and operations studies at a cost of \$1,352; construction management at a cost of \$212,330 and project operation and management at a cost of \$202,283 in Operation and Maintenance funds.

**Condition at end of fiscal year.** The project is complete with the latest modification being physically completed in April 1994. (For further details, see Annual Report of 1962.) Total cost of the existing project to September 30, 2009, was \$147,126,253 of which \$15,936,703 was for new work, including \$2,731,996 contributed funds (including \$553,477 public works funds) and \$131,189,550 for maintenance, including \$3,896,074 contributed funds.

### 7. ROLLINSON CHANNEL, N. C.

**Location.** The project is located about 3.5 miles northeast of Hatteras Inlet. (See Coast and Geodetic Survey Chart 1232.)

**Existing project.** The authorized project provides for a channel 12 feet deep, 100 feet wide, and about 5.1

## WILMINGTON, N.C. DISTRICT

miles long from deep water in Pamlico Sound to and including a basin of the same depth, 80 to 150 feet wide, and 1,450 feet long at Hatteras; a rubble-mound breakwater on each side of the channel at the entrance to the basin; and a channel 10 feet deep and 100 feet wide from that depth in Hatteras Inlet gorge to Rollinson Channel, in the vicinity of the basin at Hatteras. The project was authorized by the River and Harbor Acts of August 30, 1935; March 2, 1945; September 3, 1954; and October 23, 1962. (For further details see Annual Report for 1961.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Six waterfront facilities serve the channel, with a total frontage of 926 feet. Existing facilities are adequate for present commerce.

**Operations and results during fiscal year.**  
**Maintenance:** Completed the FY08 dredging contract at a cost of \$67,854. Completed breakwater repair using the U.S. debris boat *Snell* at a cost of \$191,339 in FY 2009 Emergency Supplemental funds. Also, performed condition and operation studies, construction management, and project operation and management at a cost of \$75,300.

**Condition at end of fiscal year.** The project was completed August 22, 1966. Total costs of the existing project to September 30, 2009, was \$5,740,753 of which \$589,105 was for new work, and \$5,151,648 was for maintenance, including \$41,142 in contributed funds.. (For further details see Annual Report for 1961.)

### 8. FAR CREEK, N.C.

**Location.** Flows easterly from Engelhard into Pamlico Sounds, about 95 miles south Norfolk, Va. (See Coast and Geodetic Survey Chart 1231.)

**Existing project.** A channel 12 feet deep and 80 to 100 feet wide from Pamlico Sound to highway bridge at Engelhard, with a turning basin 12 feet deep, 200 feet wide and 900 feet long at the head. Project was authorized by the River and Harbors Acts of July 3, 1930, and May 17, 1950.

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Project is served by 12 waterfront facilities with a total frontage of 2,300 feet, all privately owned. Existing facilities are adequate for present commerce.

**Operations and results during fiscal year.**  
**Maintenance:** Continued maintenance dredging at a cost of \$954,648 in FY 2006 Emergency Supplemental funds.

**Condition at end of fiscal year.** The project was completed June 1957. Total costs of the existing project

to September 30, 2009, was \$3,447,471 of which \$164,642 was for new work, and \$3,282,829 was for maintenance including \$11,181 in contributed funds. (For further details see Annual Report for 1961.)

### 9. SILVER LAKE HARBOR, N. C.

**Location.** The project is located at the southwest end of Ocracoke Island, a portion of the Outer Banks on the southeast coast of North Carolina, separating Pamlico Sound from the Atlantic Ocean. (See Coast and Geodetic Survey Chart No. 1232.)

**Existing project.** The authorized project provides for basin depths of 12 feet in Silver Lake Harbor; an entrance channel 12 feet deep and 60 feet wide, from the basin to Teaches Hole Channel; a channel, 12 feet deep and 150 feet wide, from the entrance channel through Big Foot Slough Bar to the 12-foot contour in Pamlico Sound; a channel, 12 feet deep and 150 feet wide, from the entrance channel through Teaches Hole Channel to the gorge in Ocracoke Inlet; a channel, 12 feet deep and 150 feet wide, across Bluff Shoal; and for rubble-mound training walls on the north and south sides of the entrance channel, 300 feet and 400 feet long, respectively. Mean tidal ranges are 1.9 feet in the throat of Ocracoke Inlet and 1 foot at Ocracoke. Variations in the water surface of Pamlico Sound are generally due to winds and seldom exceed 1 or 2 feet above or below mean stage. Severe storms have raised the water surface as much as 7 feet above normal water level at Ocracoke. (See Table 6-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Twelve waterfront facilities serve the harbor. These facilities are adequate for existing commerce.

**Operations and results during fiscal year.**  
**Maintenance:** The FY 2008 contract dredge *Marion* removed 105,850 cubic yards of material at a cost of \$611,235 in Operations and Maintenance funds. Between January 22, and February, 2009, the U.S. dredge Merritt removed 64,320 cubic yard using \$142,500 in FY 09 Emergency Supplemental funds. During intermittent periods, the U.S. debris boat *Snell* performed maintenance at a cost of \$37,060 in funds (\$29,920 of Operations & Maintenance and \$7,140 of FY 09 Emergency Supplemental funds). Between May 13 and May 22, 2009, the U.S. sidecasting dredge *Fry* removed 32,910 cubic yards from shoals in the channel at a cost of \$218,500 in Operation and Maintenance funds. Break water repairs were initiated using American Recovery and Reinvestment Act funds with

costs of \$12,921. Also, condition and operations studies, construction management, and project management were conducted at a cost of \$140,766 in Operation and Maintenance funds.

**Condition at end of fiscal year.** The project was completed in July 28, 1970. Total cost of the existing project to September 30, 2009, was \$15,998,034 of which \$184,284 was for new work, and \$15,813,750 was for maintenance including \$75,000 in contributed funds and \$12,921 in American Recovery and Reinvestment Act funds. (For further details see Annual Report for 1961.)

#### 10. WATERWAY CONNECTING PAMLICO SOUND AND BEAUFORT HARBOR, N. C.

**Location.** The project is located in Core Sound, west of the outer banks of eastern North Carolina. (See Coast and Geodetic Survey Charts Nos. 420 and 1233.)

**Existing project.** The authorized project provides for a through channel to Core Sound 7 feet deep and 75 feet wide from Pamlico Sound to Beaufort Harbor; an alternative route of the same dimensions through Back Sound by way of channels at the east and west ends of Harkers Island; a channel 7 feet deep and 70 feet wide from the through channel to the local harbor at Cedar Island, including the authorized passage and future maintenance of a channel through the existing private basin, and an access channel 6 feet deep, 50 feet wide and about 400 feet long to a basin the same depth, 60 feet by 100 feet; a channel 7 feet deep and 75 feet wide from the through channel to Atlantic; a channel 7 feet deep and 75 feet wide, with a basin 200 feet by 500 feet, the same depth, at Sea level; a channel 5 feet deep and 75 feet wide, with basin 150 feet by 130 feet, the same depth, at Davis; a channel 6 feet deep and 60 feet wide with a basin 100 feet by 600 feet, the same depth, at Marshallberg; an entrance channel 6 feet deep and 60 feet wide, from Back Sound to harbor of refuge 120 feet by 250 feet, the same depth in Brooks Creek at the west end of Harkers Island; and a channel 7 feet deep and 70 feet wide, from the existing side channel at Atlantic, N.C., to the mouth of Little Port Brook; thence 7 feet deep and 50 feet wide, along the Brook to a basin 600 feet long, 180 feet wide, and 7 feet deep, with a breakwater, beginning at a point between the mouth of Little Port Brook and White Point, running along the channel approximately 2,000 feet. Plane of reference is mean low water. The length of the authorized channels is about 50.6 miles. (See Table 6-B for authorizing legislation.)

**Local cooperation.** Fully complied with to date for completed portion.

**Terminal facilities.** Sixteen small wharves serve the waterway. Additional facilities are needed along Core Sound.

**Operations and results during fiscal year.**  
**Maintenance:** Produced contract plans and specifications for future maintenance dredging of the Atlantic Harbor of Refuge at a cost of \$28,103 of FY 2006 Emergency Supplemental funds.

**Condition at end of fiscal year.** The project was completed in September 1972. Total cost of the existing project to September 30, 2009, was \$6,632,791 of which \$502,567 was for new work, and \$6,130,224 was for maintenance including \$17,252 in contributed funds. (For further details, see Annual Report for 1961.)

#### 11. WILMINGTON HARBOR, N. C.

**Location.** The project is located on the Cape Fear River, on southeast coast of North Carolina, between the Atlantic Ocean and Wilmington, North Carolina. (See Coast and Geodetic Survey Chart No. 426.)

**Previous projects.** For details, see page 1804 of Annual Report for 1915, page 533 of Annual Report for 1938, and page 6-8 of the Annual Report for 1996.

**Existing project.** The project was authorized by River and Harbor Acts of July 3, 1930; March 2, 1945; May 17, 1950; October 23, 1962; and March 10, 1964; and under the continuing authority of Section 107 of the 1960 River and Harbor Act, Water Resources Development Acts of November 17, 1986 (PL 99-662) and October 12, 1996 (PL 104-303) and the Energy and Water Development Appropriations Act, 1998. The project consists of two separable elements, the portion for deepening of the existing project and the portion for raising the dikes on Eagle Island dredged material disposal facility (DMDF) for maintenance of the existing 38 foot project until the deepening is completed. Features constructed to date include deepening the ocean bar and entrance channels from the authorized depth of 40 feet to 44 feet; deepening the authorized 38-foot project to 42 feet up to and including the anchorage basin immediately upriver from the State Ports Authority dock, and extending the anchorage basin northward by 300 feet; widening the existing 400-foot wide channel to 600 feet over a total length of 6.2 miles including Lower and Upper Midnight and Lower Lilliput reaches; widening five turns and bends by 100 to 200 feet providing a total average channel width of 500 to 675 feet; and widening the Fourth East Jetty Channel to 500 feet over a total length of 1.5 miles. Features yet to be completed include deepening the 32-foot channel between Castle Street and the Hilton

## WILMINGTON, N.C. DISTRICT

Railroad Bridge, the 32-foot turning basin just above the mouth of the Northeast Cape Fear river on the west side, and the 25-foot channel from the Hilton Railroad Bridge to 750 feet upstream all to a depth of 38 feet; deepening the 25-foot channel from 750 feet upstream of the Hilton Railroad Bridge to the turning basin near the upstream limits of the project to 34 feet, along with widening of the channel from 200 to 250 feet; and widening the turning basin from 700 to 800 feet. Mitigation requirements are partially complete with the acquisition of, by fee title, 30 acres of upland areas and construction of an embayment. Acquisition of about 800 acres of existing marsh and upland areas for preservation of habitat to offset losses of wetlands and primary nursery areas are underway. Improvement to the dredged material disposal facility is also underway by incrementally raising the dikes of three cells on Eagle Island dredged material disposal facility from their current elevations to an ultimate elevation of 40 feet. A new construction start for the latest modification was received in FY 1998, with the first disposal area construction contract awarded in May 1999 and completed in October 1999 and the mitigation contract awarded in August 1999 and completed in November 2000 and the first deepening contract awarded in August 2000. The interim milestone of providing deep water to the State Ports was reached in January 2004. Completion of the 6.2 mile passing lane was achieved in May 2006 thus rendering a fully functional portion of the project up to and including the Anchorage and Turning Basins immediately adjacent to the N.C. State Ports Facility. The Brunswick County Section 933 beneficial use of dredged material was completed in FY 2007. The estimated Federal cost is \$284,000,000 (2009) for the deepening project separable element and \$32,500,000 (2009) for the dredged material disposal facility separable element. (For further details of authorization, see 1962 Annual Report.)

**Local cooperation.** Fully complied with to date except for latest modification. Cost sharing and financing are in accordance with concepts reflected in the Water Resources Development Act of 1986. For the deepening project separable element the non-Federal sponsor must (1) provide all lands, easements, rights-of-way, and dredged material disposal area lands presently estimated at \$2,193,000 and bear all operation and maintenance costs presently estimated at \$6,000 annually; (2) modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project, presently estimated at \$22,929,000; (3) pay 25 percent of the costs allocated to deep draft navigation during construction presently estimated at \$103,352,000 4) pay 35 percent of costs allocated to the Section 933 portion during construction, for at cost of \$5,380,000

and reimburse an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction which is partially offset by a credit allowed for the value of lands, easements, rights-of-way, relocations (except utility relocations), and dredged material disposal areas, for a total cost of \$39,000,000; and (4) provide and maintain, at its own expense, the local service facilities necessary to realize the benefits of the general navigation features, presently estimated at \$6,146,000. For the dredged material disposal facility separable element the non-Federal sponsor must (1) pay 25 percent of the costs allocated to deep draft navigation during construction, presently estimated at \$12,500,000; and (2) reimburse an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction, presently estimated at \$5,000,000.

**Terminal facilities.** Forty-three principal wharves, piers, and docks at the port of Wilmington, with a berthing space of about 20,000 linear feet, serve the harbor. These facilities handle general cargo and petroleum products. (For further details, see Port Series No. 12, revised 1987, Corps of Engineers.)

### Operations and results during fiscal year.

**New Work:** Conducted engineering and design and construction management in connection with the harbor deepening project at a Federal cost of \$1,633,219 and a contributed funds cost of \$672,910 for a total cost of \$2,306,129; United States Fish and Wildlife Service sediment evaluation at a cost of \$168,795; monitoring/mitigation at a cost of \$1,205,164 and disposal area construction in connection with the harbor deepening project resulted in a Federal cost of \$337,717 and \$101,198 in contributed funds.

**Maintenance:** During 2009, the hopper contract dredge *Padre Island* removed 855,082 cubic yards at a cost of \$2,838,872 (\$2,490,000 FY 2008 Emergency Supplemental funds and \$348,872 Operation and Maintenance funds) from the Outer Bar. The pipeline contract dredge *Illinois* removed 1,075,247 cubic yards from the area of Smith Island channel at a Federal cost of \$9,730,985 (\$7,494,985 in Operation and Maintenance funds and \$2,236,000 FY 2008 Emergency Supplemental funds). During intermittent periods, the U.S. debris boat *Snell* conducted clearing and snagging operations at a cost of \$112,633. FY 2009 dredging contract at a cost of \$8,460,850. Also, conducted engineering and design in connection with Anchorage Basin and ocean bar at a cost of \$146,970; environmental coordination at a cost of \$29,177; mosquito control at a cost of \$200,661; contract

management at a cost of \$348,873; and condition and operation studies and project operation and management at a cost of \$1,044,602.

**Condition at end of fiscal year.** The most recent authorization of the project was completed May 2006 except for the portion yet to be completed including the 38-foot and 32-foot channels and some mitigation features. Total cost of existing project to September 30, 2009, was \$588,192,648 of which \$366,654,333 was for new work, including \$89,958,781 in contributed funds and \$221,538,315 was for maintenance, including \$12,907,181 in contributed funds.

**12. PROJECT CONDITION SURVEYS**

To determine the extent of shoaling and pinch points at various locations along the AIWW and coastal North Carolina survey vessels collected reconnaissance and condition surveys from the following locations in FY 2009: Beaufort Harbor, Backsound-Lookout, Pamlico Sound-Beaufort Harbor, Rodanthe, Far Creek, Stumpy Point Channel, Ocracoke Inlet, Smith Creek Pamlico, Silver Lake Harbor, New Topsail Inlet, New River Inlet, Belhaven Harbor, Bogue Banks, Lockwoods Folly, Masonboro Inlet, Shallotte Inlet, Drum Inlet, and Rollinson Channel at a cost of \$621,762 in Operation and Maintenance funds.

**13. NAVIGATION WORKS UNDER SPECIAL AUTHORIZATION**

*Navigation activities pursuant to CAP Section 107, Public Law 645, 86th Congress, as amended (preauthorization). (See Table 6-J.)*

*“Emergency Removal of Sunken Vessels” pursuant to “Section 20” of the River and Harbor Act of 1899 as amended.*

**Flood Damage Reduction**

**14. CAPE FEAR RIVER BASIN, N. C.**

**Location.** Work covered by this project consists of a series of dams and reservoirs on tributaries of the Cape Fear River in North Carolina within a radius of 100 miles from Raleigh, North Carolina. (See Geological Survey Map of North Carolina.)

**Existing project.** Public Law 88-253, approved December 30, 1963, authorized three principal dams and reservoirs and a series of smaller reservoirs on tributaries of the Cape Fear River in accordance with the comprehensive plans in House Document 508, 87th Congress, 2d session. The act also provides that the appropriate agencies of the Departments of the Army and Agriculture shall conduct joint investigations and surveys and prepare a report on the upper tributaries of

the Cape Fear River in the interest of watershed protection and flood damage reduction, and the conservation, development, utilization, and disposal of water. The report was prepared in compliance with provisions of Public Law 87-639. The study was unfavorable and has been submitted to Congress. No further action will be taken. B. Everett Jordan Dam and Lake, Randleman Lake, and Howards Mill Lake were included in the comprehensive plan and were authorized for construction in accordance with the above authorization. Howards Mill Lake was deauthorized in July 1995 due to the current lack of economic justification. Randleman Lake was reclassified to the "deferred" category in April 1992, due to the current lack of economic justification, and was deauthorized in April 2002. See Table 6-H on Dams and Reservoirs. Estimates of cost as given are based on 1960 price levels, except for B. Everett Jordan Dam and Lake which was revised in 1994 and Randleman Lake, which was revised in 1990.

**Local cooperation.** Requirements are given in the individual project reports.

**14-A. B. EVERETT JORDAN DAM AND LAKE, N. C.**

**Location.** The project is located on the Haw River, N.C., 4.3 miles above its mouth, and 2.5 miles north of Moncure, N. C.

**Existing project.** The project provides for an earth dam 1,330 feet long with a maximum height of 112 feet above the streambed, an uncontrolled, unpaved chute spillway, and a controlled 19-foot diameter outlet structure. Some saddle dikes are required beyond the spillway. The reservoir has a gross storage capacity of 753,500 acre-feet, of which 538,400 acre-feet is for flood damage reduction and a conservation pool of 215,100 acre-feet for water-quality control, water supply, and sedimentation. The reservoir will be operated as a unit of a coordinated system for flood damage reduction in the Cape Fear River Basin and for water supply, water-quality control, and other purposes. Estimated Federal cost for new work is \$147,600,000 (1994), consisting of \$89,186,000 for construction, and \$58,414,000 for lands and damages, including highway, railroad, and utility relocations. The existing project was authorized by Public Law 88-253 approved December 30, 1963 (H.D.508, 87th Cong., 2d Session).

**Local cooperation.** Local interests must protect downstream channels from encroachments and obstructions which would adversely affect operation of the project; reimburse the Federal Government for all costs allocated to municipal and industrial water supply, presently estimated at \$3,700,000 and bear all annual costs for operation, maintenance, and major

replacements allocated to municipal and industrial water supply, an amount presently estimated at \$46,000 annually; and contribute toward the cost of the ranger security buildings, an amount presently estimated at \$44,000. A contract between the State of N. C. and the United States for water supply storage space was executed by ASA (CW) on April 10, 1988. In addition, the State of N. C. has leased the project for a public park, recreational, fish, wildlife, and other natural resource management purposes and the estimated cost to the state for operation and maintenance under this lease is \$806,000 annually.

**Operations and results during fiscal year.**  
**Maintenance:** FY 2009 costs include Operation and Maintenance costs of \$1,665,159, Maintenance and Operation of Dams costs of \$89,454 and American Recovery and Reinvestment Act (ARRA) costs of \$111,824. Hydropower add-on maintenance at a cost of \$28,185; normal operation and maintenance cost of dam and reservoir at cost of \$727,753; periodic inspections at a cost of \$2,098; natural and cultural resource management at a cost of \$257,809; operation and maintenance of recreational facilities at a cost of \$565,690; water control management at a cost of \$195,914; and activities associated with real estate at a cost of \$88,989. Receipts in connection with miscellaneous collections are no longer reflected by project.

**Condition at end of fiscal year.** Impoundment was completed in February 1982, with dedication on May 1, 1982. The project was completed in June 1999. Total cost of existing project to September 30, 2009, was \$185,063,659 of which \$151,680,379 was for new work, including \$1,764,735 in contributed funds and \$33,383,280 for maintenance.

**15. NEUSE RIVER BASIN, N. C.**

**Location.** Works covered by this project consist of a series of dams and reservoirs in the Neuse River Basin in North Carolina within a radius of 50 miles from Raleigh, North Carolina. (See Geological Survey Map of North Carolina.)

**Existing project.** The Flood Control Act of 1965 authorized construction of the Falls Lake project as the key project in the recommended general plan of development of the Neuse River Basin. The plan will serve as a guide for immediate and future development of the basin's water resources as set forth in House Document 175, 89<sup>th</sup> Congress, 1st Session. A list of projects included in the general plan of development follows. (See Table 6-J on Dams and Reservoirs.) Estimated costs as given are based on 1963 price levels, except for Falls Lake, which was revised in 1989.

**15-A. FALLS LAKE, N. C.**

**Location.** The project is on the Neuse River about 10 miles north of the city of Raleigh, North Carolina.

**Existing project.** The authorized project provides for an earth dam 1,915 feet long with a maximum height of 95 feet above streambed. The dam has a 30-foot top width. An uncontrolled chute spillway, 100 feet wide, is located in the east abutment. The reservoir has a gross storage capacity of 374,450 acre-feet, of which 243,050 acre-feet is for flood damage reduction, 45,000 acre-feet for water supply for the city of Raleigh, 61,330 acre-feet for water quality control, and 25,070 acre-feet for sediment storage. The reservoir will be operated as the initial unit of a coordinated system for flood damage reduction in the Neuse River Basin for water supply, water quality control, recreation, and other purposes. Estimated cost of new work is \$183,000,000 (1996) consisting of \$91,334,000 for construction and \$91,666,000 for lands and damages, including highway, railroad, and utility relocations. The project was authorized by the 1965 Flood Control Act (H.D. 175, 89<sup>th</sup> Cong., 1st sess.).

**Local cooperation.** Local interests must prevent encroachment on downstream channels that would interfere with the operation of the reservoir; pay the United States in accordance with the Water Supply Act of 1958, as amended, the entire amount of construction cost allocated to water supply, presently estimated at \$13,637,000 and entire amount of operation, maintenance, and replacement costs allocated to water supply, presently estimated at \$116,000 annually, the final amounts to be determined after actual costs are known; administer project land and water areas for recreation and fish and wildlife enhancement; pay, contribute in kind, or repay (which may be through user fees), with interest, one-half of the separable cost of the project allocated to recreation and one-fourth of the separable cost allocated to fish and wildlife enhancement, the amount involved currently being estimated at \$21,595,000, and bear all costs of operation, maintenance, and replacement of recreation and fish and wildlife lands and facilities, the amount involved currently being estimated at \$1,544,000 on an average annual basis. Formal assurances have been received. The N.C. Department of Natural and Economic Resources has been authorized by an act of legislation to assure payment of all non-Federal costs allocable to water supply in all Federal projects as required by law. The state will require repayment of water supply costs by the users. A contract between the city of Raleigh and the United States for water-supply storage space was approved by the Secretary of the Army on September 11, 1972. A contract agreement for cost sharing of recreational lands and facilities in

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

accordance with PL 89-72 was approved by the Secretary of the Army on September 11, 1972. A contract agreement in accordance with Section 221 of PL 91-611 was executed on October 10, 1972.

**Operations and results during fiscal year. New Work:** FY 2009 costs include Contributed Funds costs of \$1,189 which was used for facility security physical improvements.

**Maintenance:** FY 2009 costs include Operation and Maintenance costs of \$1,957,509 and American Recovery and Reinvestment Act (ARRA) costs of \$87,159. Completed periodic inspections at a cost of \$71,014; normal operation and maintenance at a cost of \$538,227; archaeological survey at a cost of \$177; operation and maintenance of recreational facilities at a cost of \$884,893; natural and cultural resources at a cost of \$248,961; water control management at a cost of \$274,785; and activities associated with real estate at a cost of \$26,611. Receipts in connection with miscellaneous collections are no longer reflected by project.

**Condition at end of fiscal year.** Reservoir filling was completed on December 7, 1983. Dedication ceremonies were held on April 30, 1983. The real estate audit was completed in January 2000. The project was completed in March 2000. Total cost of existing project to September 30, 2009, was \$217,102,624 of which \$184,709,632 was for new work, including \$260,913 in contributed funds and \$32,392,992 was for maintenance.

### 16. ROANOKE RIVER UPPER BASIN, VIRGINIA, HEADWATERS AREA

**Location.** The project is located on the Roanoke River in the city of Roanoke, Va. (See USGS quadrangle sheet, Roanoke, Va.)

**Existing project.** The authorized plan which has been partially constructed includes about 6.2 miles of channel widening along the 10-mile project reach through the city of Roanoke, Va. Channel widening will be accomplished with the construction of a benched channel above the elevation of the average stream flow. Other flood damage reduction features include flood proofing at two locations, training walls to prevent floodwater intrusion into low areas along the river (total length 6,120 feet), replacement of two low-level bridges that constrict stream flows, and a flood warning system. Recreation facilities consist of a 9.5-mile recreation trail along the project reach and access and parking areas. Approved estimated Federal cost for new work is \$46,700,000 (2009). The project was authorized by the Water Resources Development Act of 1986 (H.R. 6, PL 99-662), Section 110 of the Energy and

Water Development Appropriations Act of 1990, Section 102 (cc) of the Water Resource Development Act of 1990, and Section 148 of the Energy and Water Development Appropriations Act of 2004.

**Local cooperation.** Local interests must provide all lands, easements, and rights-of-way including spoil disposal areas presently estimated at \$7,968,000; modify or relocate buildings, utilities, roads and other facilities except railroad bridges, where necessary for construction of the project presently estimated at \$6,559,000; pay 25 percent of the cost of the flood warning system (partially offset by a credit for lands, easements, rights-of-way, and relocations) presently estimated at \$10,000; pay 5 percent of the total cost allocated to flood damage reduction in cash in addition to all lands, easements, rights-of-way and relocations presently estimated at \$2,215,700, and bear all costs of operation, maintenance, and replacement of flood damage reduction facilities presently estimated at \$101,000, annually; pay one-half of the separable cost allocated to recreation presently estimated at \$6,180,300, (partially offset by a credit for land, easements, rights-of-way and relocations) and bear all costs of operation, maintenance and replacement of recreation facilities presently estimated at \$9,000, annually; pay 25 percent of the cost of non-structural flood proofing (partially offset by a credit for lands, easements, rights-of-way and relocations) presently estimated at \$367,000. Fully complied with to date.

**Operations and results during fiscal year. New work:** Conducted water quality monitoring at a cost of \$161,198; stream geomorphology monitoring at a cost of \$102,083; log perch monitoring at a cost of \$55,141; engineering and design and construction continued at a cost of \$5,563,867; and cultural resources at a cost of \$3,757. Began scoping of architectural/ engineering contract at a cost of \$4,966 in American Recovery and Reinvestment Act funds.

**Condition at end of fiscal year.** The contract for the flood warning system was completed in January 1991. The contract for the sewage treatment plant flood proofing was awarded in August 1991 and completed in February 1993. Two hazardous material sites have been cleaned by the owners. Sponsor initiated land acquisition for channel improvement in FY 1998 and completed land acquisition for the downstream half of the project in October 2003. As of September 30, 2009 nine bench cuts between the wastewater treatment plant and Wasena Park are substantially complete and four miles of recreational trails are complete. Project completion is scheduled for September 2013. Total cost of existing project to September 30, 2009, was \$38,124,513 including \$3,493,079 in contributed funds, and \$4,966 in American Recovery and Reinvestment Act funds.

**17. YADKIN RIVER BASIN, N. C. AND S.C.**

**Location.** The river rises on the eastern slope of the Blue Ridge Mountains in western North Carolina, flows generally easterly about 100 miles to the vicinity of Donnah, North Carolina, thence southeasterly 104 miles to its confluence with Uwharrie River near Badin, North Carolina, where its name changes to Great Pee Dee River. (See U.S. Geological Survey map of North Carolina.)

**Existing project.** The Flood Control Act of July 24, 1946, authorized construction of four flood damage reduction dams in the Upper Yadkin River Basin, two on the Yadkin River above Wilkesboro, North Carolina, and two on Reddies River, a tributary stream. Studies made subsequent to authorization established the economic advantage of providing needed flood damage reduction storage in only two reservoirs. W. Kerr Scott Dam and Reservoir was constructed in 1962 on the Yadkin River and was transferred to the Wilmington District from Charleston District in Fiscal Year 1980. Reddies River Lake and Roaring River Lake were deauthorized in April 2002. (See Table 6-H on Dams and Reservoirs.)

**17-A. W. KERR SCOTT DAM AND RESERVOIR, N. C.**

**Location.** W. Kerr Scott Dam and Reservoir is on Yadkin River, North Carolina, about 6 miles upstream from Wilkesboro. At full flood damage reduction pool elevation (1,075 feet mean sea level), the reservoir extends 15.7 miles upstream to the Wilkes-Caldwell County line.

**Existing project.** The project consists of a rolled earth-fill dam 1,740 feet long, with top of dam at elevation 1,107.5 feet mean sea level or about 148 feet above streambed elevation; a spillway near the north abutment of the dam in a rock cut with crest elevation 1,075; and outlet works consisting of an intake structure, control tower, and a circular concrete conduit 12.25 feet in diameter through the base of the dam near the south abutment. The reservoir has a gross capacity of 153,000 acre-feet of which 112,000 acre-feet are reserved for flood damage reduction, 33,000 acre-feet will be used as required for water supply, and 8,000 acre-feet being contained in the minimum pool. Estimated cost is \$9,110,000 (1983) for new work. The existing project was authorized by the 1946 Flood Control Act.

**Local cooperation.** Requirements fully satisfied. For details, see page 413 of Annual Report for 1963.

**Operations and results during fiscal year.**  
**Maintenance:** FY 2009 costs include Operation and Maintenance costs of \$3,190,296 and American

Recovery and Reinvestment Act (ARRA) costs of \$483,612. Conducted normal operation and maintenance at a cost of \$899,631; water control management at a cost of \$233,584; shoreline Management Plan update at a cost of \$22,554; activities associated with real estate at a cost of \$33,833; master plan update at a cost of \$5,596; periodic inspection at a cost of \$59,677; natural and cultural resource management at a cost of \$337,936; and normal operation and maintenance of recreation facilities at a cost of \$2,081,100. Federal timber sales and other miscellaneous collections are no longer reflected by project.

**Condition at end of fiscal year.** The project commenced in August 1960 and placed in operation for flood damage reduction and water storage purposes in August 1962. Total cost of existing project to September 30, 2009, was \$75,188,521 of which \$8,841,326 was for new work, and \$66,347,195 was for maintenance.

**18. INSPECTION OF COMPLETED FLOOD DAMAGE REDUCTION AND COASTAL STORM DAMAGE REDUCTION PROJECTS**

To determine the extent of compliance with approved regulations for maintenance and operation, review and inspections were made for the following projects during Fiscal Year 2009: Ararat River, N.C.; (CAP Sec 205); Danville Waste Water Protection, VA. (CAP Sec 14); Clinton Waste Water Protection, N.C. (CAP Sec 205); Deep Creek N.C. (CAP Sec 205); Moravian Creek (CAP Sec 205); Princeville, N.C.; Roanoke Storm Sewer Treatment, VA.; Brunswick County Beaches, Ocean Isle Beach, Brunswick County, N.C.; Carolina Beach and Vicinity, N.C.; Carolina Beach Area South, N.C. (Kure Beach); and Wrightsville Beach, N.C. Responsible local officials were advised of inadequacies in maintenance and operation on local flood damage reduction works, where appropriate. Cost for the period was \$153,066. Total cost to September 30, 2009, was \$1,011,374, charged to operations.

**19. FLOOD DAMAGE REDUCTION WORKS UNDER SPECIAL AUTHORIZATION**

*Flood damage reduction activities pursuant to Section 205, Public Law 858, 80th Congress, as amended (preauthorization). (See Table 6-L.)*

*Emergency flood damage reduction activities and coastal storm damage reduction activities at Federally authorized projects (Public Law 99, 84th Congress, and antecedent legislation).*

Catastrophic Disaster Preparedness Program cost \$22,579.

## Coastal Storm Damage Reduction

### 20. BRUNSWICK COUNTY BEACHES, N.C. (CAPE FEAR TO NORTH CAROLINA- SOUTH CAROLINA STATE LINE)

**Location.** The project is in Brunswick County, on the south Atlantic coast of North Carolina, between the mouth of the Cape Fear River and the North Carolina-South Carolina State Line. (See Coast and Geodetic Survey Charts 1236 and 1237.)

**Existing Project.** The project was authorized by the 1966 Flood Control Act (H.D. 511, 89<sup>th</sup> Congress, 2d session). The project was rejected by a public referendum in 1974 and was reclassified inactive in February 1976. The project was reclassified to active in 1985 due to renewed local interest caused by continuing erosion and repeated storm damage, with the exception of Sunset Beach, which remains inactive. The General Reevaluation Report for Ocean Isle Beach was approved May 15, 1998. The authorized project for the Ocean Isle Beach portion provides a continuous vegetated dune and berm stabilized by periodic re-nourishment. The dune crown width is 25 feet at elevation 9.5 feet NGVD fronted by a berm 50 feet wide at 7 feet NGVD for a distance of 5,150 feet, then a berm with crown width of 50 feet at 7 feet NGVD for a distance of 2,600 feet, then a berm with crown width of 25 feet at 7 feet NGVD for a distance of 2,400 feet. Transitions will be 4,200 feet on the eastern end and 2,800 feet on the western end. Total length of the beach segment including transitions is 17,150 feet. A General Reevaluation is underway for the Oak Island (formerly Long Beach and Yaupon Beach), Caswell Beach, and Holden Beach portion. Sunset Beach remains inactive. The estimated Federal cost is \$74,791,000 (2009) for the Ocean Isle beach portion and \$232,000,000 (2009) for the Oak Island, Caswell Beach, and Holden Beach portion.

**Local Cooperation.** The PCA executed January 9, 2001, for the Ocean Isle Beach portion provides that the non-Federal sponsor shall: (a) provide all lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas; (b) perform required relocations; (c) during initial construction, contribute 35 percent of construction costs assigned to coastal storm damage reduction, with credit allowed for (a) and (b), currently estimated at \$3,157,000; (d) during periodic re-nourishment, contribute 35 percent of construction costs assigned to coastal storm damage reduction, with credit allowed for (a) and (b), currently estimated at \$37,080,000; (e) participate in and comply with applicable Federal

floodplain management and flood insurance programs; (f) not less than once a year inform affected interests of the extent of protection afforded by the project; (g) enforce floodplain regulations; (h) provide and maintain public ownership, during the economic life of the project, of an adequate width of beach for public use, with acceptable beach access, parking areas, and other facilities necessary for realization of the benefits upon which Government participation is based; (i) adopt and enforce ordinances to provide for preservation of the project and its protective vegetation; (j) control water pollution to the extent necessary to safeguard the health of bathers; and (k) operate, maintain, repair, and rehabilitate the project. The non-Federal sponsor share of total project costs for the Oak Island, Caswell Beach, and Holden Beach portion is currently estimated to be \$121,200,000.

**Operations and results during fiscal year. New Work:** Conducted engineering and design in connection with the Brunswick County General Reevaluation at a Federal cost of \$532,442 and engineering and design for the Ocean Isle Beach portion for the FY 2010 nourishment cycle at a cost of \$76,522 in Construction funds, \$220,168 in FY 2006 Emergency Supplemental funds, and a cost of \$190,778 in FY 2009 Emergency Supplemental funds for a total cost of \$487,468.

**Condition at end of fiscal year.** For the Ocean Isle Beach portion, a new construction start was approved in FY 2000, the PCA was executed January 9, 2001, the construction contract was awarded February 26, 2001, and initial project construction was substantially complete and the project was operational May 15, 2001. The first nourishment cycle was awarded in FY 2006 and was completed in December 2007. The next nourishment cycle is scheduled for FY 2010. The General Reevaluation Report is continuing for the Oak Island, Caswell Beach, and Holden Beach portion. Sunset Beach remains inactive. Total cost of existing project to September 30, 2009, was \$15,397,563 including \$4,328,080 in contributed funds.

### 21. CAROLINA BEACH AND VICINITY, N.C.

**Location.** The project is in New Hanover County, about 15 miles southeast of Wilmington, N. C., on the peninsula which separates lower Cape Fear River from the Atlantic Ocean. (See Coast and Geodetic Survey Map 834.)

**Existing project.** The authorized project consists of two separable elements, the Carolina Beach Portion and the Area South of Carolina Beach and extends about 32,000 feet from the northern limits of Carolina Beach to the southern limits of Kure Beach. Federal participation in the cost of periodic beach nourishment will be for a period not to exceed 50 years from the year

of initial placement. The project provides for construction of a dune with a crown width of 25 feet at elevation 13.5 feet National geodetic vertical datum (NGVD), a berm with a crown width of 50 feet at elevation 10.5 feet NGVD for Carolina Beach and 9 feet NGVD for the Area South, and for Carolina Beach a rock revetment at elevation 10.5 feet NGVD along the northern 2,050 feet fronted by a 130-foot wide berm at elevation 6.5 feet NGVD. The Area South of Carolina Beach was reclassified to the active category, June 1985. The estimated Federal cost for the Carolina Beach Portion is \$28,900,000 (2009) and for the Area South is \$89,000,000 (2009). The project was authorized by the 1962 Flood Control Act (H.D.418, 87th Cong. 2d sess.). The Water Resources Development Act of 1986 authorized Federal participation in future nourishment for 50 years. For the Carolina Beach portion, renourishment is authorized until FY 2014. For the Area South portion, nourishment is authorized until FY 2047.

**Local cooperation.** For the **Carolina Beach portion**, as originally authorized and constructed, local interests must (a) provide lands, easements, and rights-of-way for construction; (b) make required relocations and alterations of streets, utilities, or structures; (c) contribute 37.9 percent of the total first cost, with credit allowed for (a) and (b); (d) hold the United States free from damages; (e) maintain all works and undertake periodic beach nourishment after completion, with specified Federal contributions for 10 years after completion; and (f) additional provisions in the agreement executed August 17, 1981. Subsequently, WRDA 86 extended Federal participation to 50 years from initial construction (1964-2014). A PCA was executed July 29, 1994 that addressed periodic nourishment through the project life and provided that local interests shall (a) provide all lands, easements, relocations, rights-of-way, and suitable borrow and dredged or excavated material disposal areas (b) pay 35 percent of the total costs of each periodic nourishment assigned to coastal storm damage reduction; with credit for (a) above; and (c) operate, maintain, repair, replace, and rehabilitate coastal storm damage reduction facilities. For the **Area South portion**, local interests must: (a) provide lands, easements, relocations, rights-of-way, including suitable borrow and dredged or excavated material disposal areas; (b) pay 35 percent of the total costs of initial construction and of each periodic nourishment assigned to coastal storm damage reduction with credit for (a) above; and (c) bear all costs of operation, maintenance and replacement of coastal storm damage reduction facilities; and additional provisions in the PCA executed September 26, 1995.

**Operations and results during fiscal year.** **New Work:** Completed engineering and design for the FY 2010 nourishment cycle at a cost of \$233,766 in FY 2009 Emergency Supplemental funds.

**Condition at end of fiscal year.** Initial project construction for the Carolina Beach portion was completed August 12, 1982, except for grassing which was completed in September 1983. The latest cycle of periodic nourishment for the Carolina Beach portion and Area South was completed in February and March of FY 2007 respectively. The contract for the initial construction of the Area South portion was awarded August 1996 with dredging completed in January 1998, and final contract completion in December 1999. The contract for the first cycle of periodic nourishment for Area South was awarded in January 2001 and completed in June 2001. Total cost of existing project to September 30, 2009, was \$54,251,877 including \$20,476,217 in contributed funds.

## 22. DARE COUNTY BEACHES, N.C. (BODIE ISLAND PORTION)

**Location.** The project is in Dare County on the north coast of North Carolina, about 40 miles south of the North Carolina-Virginia state line. (USGS quadrangle sheets Kitty Hawk, Manteo, and Roanoke Island NE.)

**Existing Project.** The project was authorized by the Water Resource Development Act of 2000. (Chief of Engineers Report dated December 29, 2000) The authorized project consists of a 25 foot wide dune at elevation 13 feet National Geodetic Vertical Datum (NGVD) and a 50 foot wide berm to be constructed at elevation 7 feet NGVD along two separate stretches of shoreline starting at Kitty Hawk and ending at Nags Head. Total length is about 14.1 miles. The estimated Federal cost is \$832,000,000 (2009).

**Local Cooperation.** The PCA has not been executed, but in accordance with changed cost sharing and financing requirements, the non-Federal sponsor must provide: a) all lands, easements and rights-of-way, including suitable borrow and spoil disposal areas, presently estimated at \$7,600,000; b) required relocations; c) 35 percent of the initial construction cost allocated to coastal storm damage reduction, with credit for a) and b) above, presently estimated at \$99,134,000, and d) 50 percent of periodic re-nourishment costs allocated to coastal storm damage reduction, presently estimated at \$758,000,000 and e) bear all costs of operation, maintenance, repair, rehabilitation, and replacement of coastal storm damage reduction facilities, estimated at \$110,000.

**Operations and results during fiscal year. New Work:** Conducted engineering and design and preconstruction physical and biological monitoring at a Federal cost of \$4,131 in Construction funds.

**Condition at end of fiscal year.** A new construction start was approved in FY 2004. Execution of a PPA to construct the project is on hold subject to the availability of funds. Total cost of existing project to September 30, 2009, was \$3,787,677.

### 23. WEST ONSLOW BEACH AND NEW RIVER INLET, N.C.

**Location.** The project is in the town of Topsail Beach at the southern end of Topsail Island in Pender County on the central North Carolina coast. Topsail Island is a barrier island located approximately 40 miles northeast of Wilmington, North Carolina. (See USGS quadrangle sheets Hampstead and Holly Ridge.)

**Existing Project.** The project was authorized by Title I, Section 101 (15) of the Water Resources Development Act of 1992. (H.D. 102-393, 102<sup>nd</sup> Congress, 2d session). Funds to initiate preconstruction engineering and design were appropriated in FY 1990. The project received a new construction start for FY 1994; however, no Construction, General appropriation funds were expended. The project cooperation agreement was not executed due to the Sponsor's inability to fund their share of the project cost. The project was placed in inactive status in July 1994 due to lack of local support. The town of Topsail Beach has experienced severe beach erosion, heavy property damage, and damage to or destruction of the primary dune system as a result of storm surges from hurricanes in 1996 and 1999 and northeasters over recent years. Local interests are now able to finance their share and support the project. In FY 2001, a design agreement was executed and a General Reevaluation was initiated to reevaluate the authorized project and the adjacent shoreline. The authorized project consists of a sand dune constructed to an elevation of 13 feet above mean sea level (MSL) fronted by a storm berm constructed to an elevation of 9 feet above mean sea level and a beach (natural) berm constructed to an elevation of 7 feet above MSL along 9,500 feet of shoreline; two transition sections constructed to elevation 7 feet above MSL along 2,400 feet on the southern end and along 6,860 feet on the northern end; and renourishment of the project at approximately two year intervals. The borrow areas, located in offshore, will be dredged to depths of 35-55 feet below mean low water. The estimated Federal cost for new work is \$144,000,000 (2009).

**Local Cooperation.** The authorizing document provides that the non-Federal sponsor shall (a) provide all lands, easements, rights-of-way, and suitable borrow

and dredged or excavated material disposal areas; (b) perform required relocations; (c) during initial construction, contribute 35 percent of construction costs assigned to coastal storm damage reduction, with credit allowed for (a) and (b) including 100 percent of the additional incremental costs of the locally preferred plan estimated at \$320,000; currently estimated at \$13,407,000; (d) during periodic re-nourishment, contribute 50 percent of construction costs assigned to coastal storm damage reduction, with credit allowed for (a) and (b), currently estimated at \$119,593,000; (e) hold and save the Government free from damages; (f) comply with the Uniform Relocations Assistance and Real Property Acquisition Act of 1970; (g) publicize flood plain information for the area; (h) provide and maintain public ownership and use, during the economic life of the project, of an adequate width of beach for public use, with acceptable beach access, parking areas, and other facilities necessary for realization of the benefits upon which Government participation is based; (i) at least once a year inform affected interests of the limitations of the protection provided by the project; (j) adopt and enforce regulations to prevent encroachment and preserve the project.; and (k) operate, maintain, repair, and rehabilitate the project.

**Operations and results during fiscal year. New Work:** The General Reevaluation Report was continued at a Federal cost of \$29,321 in FY 2006 Emergency Supplemental funds.

**Condition at end of fiscal year.** The Chief's Report based on the General Reevaluation Report was approved in September 2009. Total cost of existing project to September 30, 2009, was \$3,699,470 including \$1,023,448 in contributed funds.

### 24. WRIGHTSVILLE BEACH, N. C.

**Location.** An island 10 miles east of Wilmington, N. C. (See Coast and Geodetic Survey Map p. 834.)

**Existing Project.** A dune with a base bordering at or near the building line, with a crown width of 25 feet at elevation 15 feet above mean low water, together with a beach berm with a crown width of 50 feet at elevation 12, extending about 14,000 feet from Moores Inlet on the north to Masonboro Inlet on the south. Existing project was authorized by 1962 Flood Control Act (H.D. 511, 87<sup>th</sup> Cong., 2d sess.). The estimated Federal cost for new work is \$25,000,000 (2009).

**Local cooperation.** Fully complied with to date.

**Operations and results during fiscal year. New Work:** Conducted engineering and design for the FY 2010 renourishment at a Federal cost of \$183,877 in FY 2006 Emergency Supplemental funds. The General

Reevaluation Report was continued at a Federal cost of \$174,919 in Construction funds.

**Condition at end of fiscal year.** All work under the initial authorization has been completed. Initial construction was completed May 1970. The latest periodic renourishment was completed in FY 2006, with the next cycle scheduled for FY 2010. Total cost of existing project to September 30, 2009, was \$13,467,902 including \$4,977,203 in contributed funds.

## Multi-Purpose Projects, Including Power

### 25. ROANOKE RIVER BASIN, VA. AND N.C.

**Location.** The project is on the Roanoke River and its tributaries in Virginia and North Carolina within a radius of 100 miles from Danville, Virginia.

**Existing project.** The Flood Control Act of 1944 approved a general plan for the comprehensive development of the Roanoke River Basin for flood damage reduction and other purposes, and authorized construction of John H. Kerr and Philpott Reservoirs. (See Table 6-H for a list of dams and reservoirs included in the comprehensive plan.)

**Local cooperation.** None required. John H. Kerr and Philpott Reservoirs are the only projects in the comprehensive plan that have been authorized and constructed. (See Table 6-H on Dams and Reservoirs.)

#### 25-A. JOHN H. KERR DAM AND RESERVOIR, VA. AND N.C.

**Location.** The project is on Roanoke River, about 178.7 river miles above its mouth, in Mecklenburg County, Virginia, and 20.3 miles downstream from Clarksville, Virginia. The reservoir extends upstream on the Roanoke River 56 miles and on the Dan River 34 miles.

**Existing project.** The authorized project provides for a concrete gravity dam with wing and saddle dikes on the right and left banks, with a total length of about 22,285 feet. The reservoir is operated as a unit of a coordinated system of reservoirs in the Roanoke River Basin for reduction of floods, generation of hydroelectric power, regulation of low-water flow, and for other purposes. The power installation is 204,000 kilowatts. (For further details see Annual Report for 1962.) The existing project was authorized by the 1944 Flood Control Act.

**Local cooperation.** None required.

**Operations and results during fiscal year. New Work:** Major rehabilitation of power facilities at a cost

of \$14,844,375 including engineering and design, construction management, and construction contract earnings.

**Maintenance:** FY 2009 costs include Operation and Maintenance costs of \$11,827,009, Maintenance and Operation of Dams costs of \$147,468, American Recovery and Reinvestment Act (ARRA) costs of \$179,766 and contributed funds costs of \$37,901. The Station Service rehabilitation was continued at a cost of \$420,184; and normal operation and maintenance was conducted at a cost of \$11,857,160. Contract modifications resulted in a negative cost adjustment of \$85,200.

**Condition at end of fiscal year.** Project is complete. Reduced flood risk and production of power are provided by the project. Major rehabilitation of power facilities, with a new construction start in FY 2000, is scheduled for completion in FY 2011. Total cost of existing project to September 30, 2009, was \$422,231,730 of which \$94,402,927 was for new work; \$72,411,872 was for the Major Rehab; and \$255,416,931 was for maintenance.

#### 25-B. PHILPOTT LAKE, VA.

**Location.** The project is located on the Smith River, Virginia, 44.3 miles above its junction with Dan River, and 35 miles upstream from the Virginia-North Carolina State line in Franklin and Henry Counties.

**Existing project.** The authorized project provides for a concrete gravity dam 892 feet long and with a maximum height of 220 feet. Reservoir is operated as a unit of a coordinated reservoir system for flood damage reduction in the Roanoke River Basin, generation of hydroelectric power, regulation of low-water flow, and for other purposes. The powerhouse has a total installation of 14,000 kilowatts. (For further details see Annual Report for 1962). Existing project was authorized by 1944 Flood Control Act.

**Local cooperation.** None required.

**Operations and results during fiscal year. Maintenance:** FY 2009 costs include Operation and Maintenance costs of \$5,009,363 and American Recovery and Reinvestment Act (ARRA) costs of \$175,812. Conducted normal operation and maintenance of the hydropower facilities at a cost of \$1,963,683; normal operation and maintenance at a cost of \$534,995; natural and cultural resource management at a cost of \$244,266; environmental monitoring at a cost of \$4,200; operation and maintenance of recreational facilities at a cost of \$2,259,553; and water control management at a cost of \$178,478. Federal

timber sells and other miscellaneous are no longer reflected by project.

**Condition at end of fiscal year.** The project is complete except for additional recreational facilities, and is providing power and flood damage reduction. Total cost of existing project to September 30, 2009, was \$97,244,810 of which \$14,796,384 was for new work and \$82,448,426 was for maintenance.

**26. SCHEDULING FLOOD DAMAGE REDUCTION RESERVOIR OPERATIONS**

Five reservoir projects were operated in Wilmington District in FY 2009. All provided some measure of flood damage reduction while two, John H. Kerr Dam and Reservoir and Philpott Lake, additionally provided hydropower generation and revenue. A summary of each project follows.

**B. Everett Jordan Dam and Lake** is located in the Cape Fear River Basin, North Carolina. Flood damages reduced during FY 2009 were \$4,076,250 for a cumulative total of \$272,334,350 since inception of the project in 1983.

**John H. Kerr Dam and Reservoir** is located in the Roanoke River Basin, Virginia and North Carolina. Gross power generation for the fiscal year was 320,398,000 kilowatt-hours (kwh), compared to a period of record (1953-2009) average of 402,900,114 kwh and net marketed power revenue was \$6,190,458, making the cumulative total \$249,848,240 since inception of the project in 1952. The Southeastern Power Administration (SEPA) did not purchase replacement energy for the John H. Kerr project during the fiscal year. Flood damages reduced during FY 2009 were \$1,660,550, increasing the cumulative total since 1952 to \$432,289,500.

**Falls Lake** is located in the Neuse River Basin, North Carolina. Flood damages reduced during FY 2009 were \$3,243,680 for a cumulative total of \$590,871,119 since inception of the project in 1983.

**Philpott Lake** is located on the Smith River in the Dan River Basin, Virginia. Gross power generation for the fiscal year was 17,384,000 kwh, compared to a period of record (1953-2009) average of 33,283,682 kwh, and net marketed power revenue was \$2,056,515, making the cumulative total \$41,693,605 since inception of the project in 1952. The Southeastern Power Administration did not purchase replacement energy for Philpott Lake project during the fiscal year. Flood damages reduced during FY 2009 were \$840,925 raising the cumulative total to \$545,790,675.

**W. Kerr Scott Dam and Reservoir** is located in the Yadkin-Pee Dee River Basin, North Carolina. Flood damages reduced during FY 2009 were \$399,000 for a cumulative total of \$183,922,600 since inception of the project in 1962.

**Miscellaneous**

**27. ROANOKE ISLAND FESTIVAL PARK, DARE COUNTY, N.C. (CAP Section 206)**

**Location.** The Roanoke Island Festival Park is a state owned historic facility located on Iceplant Island, in Shallowbag Bay, off of Roanoke Sound adjacent to Manteo, in Dare County, North Carolina, about 75 miles south of Norfolk, Virginia. (See USGS quadrangle sheet, Manteo)

**Existing project.** This project was substantially physically completed in 2002 and provides 4 acres of valuable estuarine and wetland habitat that has been restored and protected, including protection of 2 acres of existing coastal marsh and adjacent wooded wetlands from erosion and restoration of about 2 acres of shallow water area by marsh restoration and development of sea grass, marine rock and oyster habitat. A 1,330-foot long rock sill and breakwater was constructed to protect the aquatic habitat from further wave erosion. The project provides incidental benefits by shoreline protection for public facilities located at Festival Park. Subject to final project closeout, the estimated construction cost is \$1,080,000 (2002), consisting of \$702,000 Federal and \$378,000 non-Federal. The project was approved by the Division Commander on November 21, 2001 under the continuing authority of Section 206, Water Resources Development Act of 1996, as amended.

**Local Cooperation.** The sponsor shall contribute 35 percent of project costs, which include implementation of the authorized improvements as well as planning, engineering, design, supervision and administration, monitoring, and other activities associated with implementation, but does not include betterments. The sponsor shall also contribute sufficient additional funds to keep the Federal cost from exceeding the per project limit of \$5,000,000. The non-Federal contribution will consist of credit for required lands, easements, relocations, and rights-of way; estimated at \$1,000; work-in-kind credit for oyster bed placement, management of the 1.3 acres of wooded wetland, and project signage, estimated at \$42,000, and participation on the project coordination team, estimated at \$6,000; and cash.

**Operations and results during fiscal year. New Work:** The construction phase was completed, including

monitoring and coordination with the sponsor on work-in-kind credits, at a Federal cost of \$1,294.

**Condition at end of fiscal year.** The Division Commander approved the PDA Documentation and the project on November 21, 2001. Construction was substantially completed and the project was operational in FY 2002. Additional construction to complete the rock sill was completed in FY 2003. Marsh and sea grass plantings, as needed, and project monitoring was continued through FY 2008. Project closeout is scheduled for the fourth quarter of FY 2010.

**28. WILSON BAY RESTORATION,  
JACKSONVILLE, N.C.  
(CAP Section 206)**

**Location.** Wilson Bay is a 126-acre shallow estuarine embayment of the New River within the city of Jacksonville, Onslow County, North Carolina (See USGS quadrangle sheet Jacksonville North).

**Existing Project.** The project will restore the Wilson Bay ecosystem, which has been degraded for many years by wastewater plant discharges, urban runoff, and alteration of hydrology. The project consists of mechanical water column aeration by the purchase, installation, and operation of three aerators and the use of three existing aerators; restoration of approximately 11.3 acres of wetlands along creeks and drainages within the Wilson Bay urban watershed; restoration of a viable benthic community by bivalve plantings at Wilson Bay Island and Wilson Bay Park; planting of approximately 4.5 acres of submerged aquatic vegetation in five areas on the perimeter of the bay; planting of approximately 1.6 acres of bioswale in an area characterized with relatively heavy surface runoff within the Wilson Bay urban watershed; and planting of approximately .08 acre of rain gardens in areas characterized with sheet flow. The approved estimated cost for design and implementation is \$6,580,000 (2009), consisting of \$4,277,000 Federal and \$2,303,000 non-Federal.

**Local Cooperation.** The sponsor shall contribute 35 percent of project costs, which include implementation of the authorized improvements as well as planning, engineering, design, supervision and administration, monitoring, and other activities associated with implementation, but does not include betterments. The sponsor shall also contribute sufficient additional funds to keep the Federal cost from exceeding the per project limit of \$5,000,000. The non-Federal contribution will consist of credit for required lands, easements, relocations, and rights-of way; estimated at \$696,000; work-in-kind credit currently estimated at \$1,168,000,

and participation on the project coordination team, estimated at \$5,000 and cash contribution currently estimated at \$434,000. The sponsor will assume full responsibility for the costs of operation, maintenance, repair, rehabilitation, and replacement of project features, currently estimated at \$20,000 per year.

**Operations and results during fiscal year. New Work:** Continued preparation of plans and specifications and real estate coordination at a cost of \$141,326.

**Condition at end of fiscal year.** The feasibility report and project were approved in June 2003 and construction funds were committed in August 2003. Preparation of plans and specifications started in June 2003 and is continuing. The PCA was executed in April 2004. Construction by the sponsor was started in August 2004, as specified in the PCA. Subject to acquisition of real estate, Federal construction is scheduled to begin in the fourth quarter of FY 2010.

**29. WANCHESE MARSH CREATION AND  
PROTECTION, DARE COUNTY, N.C.  
(CAP Section 204)**

**Location.** This project is in Dare County, North Carolina on the southeastern corner of Roanoke Island at Wanchese Harbor adjacent to the channel from Oregon Inlet and north of the entrance to Wanchese Harbor. (See USGS quadrangle sheet, Oregon Inlet)

**Existing project.** The marshes of Roanoke Sound are important habitat for fish and wildlife resources, support recreational and commercial activities that rely on these resources, and provide an important function as nursery habitat for estuarine fish and shellfish and support a rich and diverse benthic fauna. The project created an estuarine creek and marsh area within a protective dike. The project encompasses an area of about 12.1 acres including; (1) 8.6 acres of construction in an area that is primarily open sound waters, (2) 2 acres of high marsh that will be protected by the proposed construction and (3) 1.5 acres of *Phragmites* to be removed by chemical control and replaced by native grasses. A dike has been constructed to protect the marsh from wave action until it becomes established and can withstand the strong wave action in this area. The dike is parallel to the existing harbor entrance channel for approximately 500 feet and then turns in a northerly direction and parallel to the shoreline for approximately 700 feet. Armor stone has been placed on the outside of the permanent dike to protect against wave action. The new marsh protect 2 acres of existing marsh from continued erosion and provides an incidental benefit by helping to stabilize the Wanchese Harbor entrance. The marsh has been graded, planted

with marsh grasses and monitored for 5 years to determine appropriate functioning of the habitat. Dredged material came from maintenance dredging of the Manteo (Shallowbag) Bay – Channel to Wanchese navigation channel. The new marsh was established by sprigging with at least three varieties of native marsh grasses including smooth cordgrass (*Spartina alterniflora*), black needlerush (*Juncus roemerianus*) and saltmeadow hay (*Spartina patens*). The approved estimated cost for construction is \$1,972,000 (2004) consisting of \$1,479,000 Federal and \$493,000 non-Federal. The Division Commander approved the project on August 9, 2001 under the continuing authority of Section 204, Water Resources Development Act of 1992, as amended.

**Local Cooperation.** The sponsor shall contribute 25 percent of project costs which include implementation of the authorized improvements as well as planning, engineering, design, supervision and administration, monitoring, and other activities associated with implementation, but does not include betterments. The non-Federal contribution will consist of credit for required lands, easements, relocations, and rights-of way; credit for participation on the Project Coordination Team; and cash.

**Operations and results during fiscal year. New Work:** Continue to monitor activities of the project at a Federal cost of \$115,121 and contributed funds at a cost of \$16,632.

**Condition at end of fiscal year.** The PCA was executed in November 2002. The construction contract for the sill was awarded in February 2003 and completed in FY 2004. Dredged material, in connection with a maintenance dredging contract, was placed in the site in FY 2004 but the material was found to be unsuitable. Additional material was placed in FY 2006. The dike was opened for flushing in the 3<sup>rd</sup> quarter of FY 2008. Monitoring will continue through FY 2012.

### 30. MOREHEAD CITY HARBOR, N.C. SEC 933 (CAP Section 933)

**Location.** This Section 933 project is located on the mid Atlantic coast, on Bogue Banks in Carteret County, North Carolina. (See Coast and Geodetic Survey Chart 420)

**Existing Project.** The project makes beneficial use of dredged material available from periodic maintenance dredging of the adjacent Morehead City Harbor, NC navigation project. The constructed project to date consists of two portions and used maintenance dredged material to construct a sand berm along a portion of the oceanfront of Bogue Banks at an elevation of 7 feet above National Geodetic Vertical Datum (NGVD). This elevation mimics the natural

berm elevation of the area. Subject to final project closeout, the approved estimated construction implementation cost is \$11,852,000 (2009), consisting of \$8,216,000 Federal and \$4,424,000 non-Federal.

**Local Cooperation.** The sponsor shall contribute 35 percent of project costs, which include implementation of the authorized improvements as well as planning, engineering, design, supervision and administration, monitoring, and other activities associated with implementation, but does not include betterments. The non-Federal contribution will consist entirely of cash. The sponsor shall provide all required lands, easements, relocations, and rights-of way; at no cost to the Government. No per project cost limit nor any provision for credit for work-in-kind has been established for Section 933 projects. The sponsor will maintain beach access throughout the 10-year life of the project. In accordance with the PCA, there is no requirement for operation, maintenance, repair, rehabilitation, and replacement of project features.

**Operations and results during fiscal year. New Work:** Conducted initial project closeout activities at a cost of \$3,322.

**Condition at end of fiscal year.** The feasibility report and plans and specifications were completed in FY 2003 with O&M funds. The PCA was approved by the ASA(CW) and was executed in January 2004. The first construction portion makes beneficial use of dredged material from maintenance of the entrance channel by placing it along Indian Beach, Salter Path, and a part of Pine Knoll Shores, and was substantially completed in March 2004. The second construction portion made beneficial use of dredged material from maintenance of the entrance channel by placing it along other parts of Pine Knoll Shores in FY 2007. Project will be scheduled for closeout once the project sponsor has provided multiple public beach access routes per requirements specified in PCA.

### 31. STANLY COUNTY WASTEWATER INFRASTRUCTURE, N.C. (Section 219)

**Location.** The project is located in Stanly County, in mid-southern North Carolina about 26 miles northeast of Charlotte. (See USGS quadrangle sheets, Norwood, Stanfield, Mt. Pleasant, and Albemarle).

**Existing project.** The plan of improvement includes upgrading substandard wastewater and water supply systems throughout Stanley County. Features completed to date include wastewater improvements to the Norwood portion of this project. Wastewater improvements to the Millingport Elementary portion of this project are underway. The county is predominately rural and unemployment is relatively high. In much of the county, basic infrastructures such as wastewater

lines, water supply lines and highways necessary to attract industry are lacking. Without major infrastructure improvements, quality of life in many of the communities in the county will continue to fall well short of the rest of the Nation. The estimated project cost is \$11,867,000 (2009), including \$8,900,000 Federal and \$2,967,000 non-Federal. This project is authorized by Sec 219(f) of the WRDA of 1992, as amended and Section 108(d) of the FY 2001 Omnibus Appropriations Act, and Section 5114 of the Water Resource Development Act of 2007 which provides "\$8,900,000 for Water and Wastewater Infrastructure, Stanly County, North Carolina".

**Local cooperation.** The sponsor shall contribute 25 percent of the total cost of the project, estimated at \$2,967,000. Project costs include implementation of the authorized improvements as well as planning, engineering, design, supervision and administration, monitoring, and other activities associated with implementation, but does not include betterments. The non-Federal contribution will consist of credit for required lands, easements, relocations, rights-of way, and borrow or disposal areas and participation on the project coordination team.

**Operations and results during fiscal year. New Work:** Initiated the letter report for a water transmission main linking the city of Albemarle, N.C. to Highway 205 and NC 73 at a Federal cost of \$18,816. Continued construction at the Millingport Elementary School at a Federal cost of \$157,495, including contributed funds of \$11,973.

**Condition at end of fiscal year.** Replacement of a wastewater pumping station and associated force main in the town of Norwood to benefit Aquadale School is complete. The decision document was approved in August 2003. The project cooperation agreement was executed in August 2004. The Collins and Ailaman force main and pump station in Norwood N.C. was physically complete in September 2005. Financial completion of the Norwood contract occurred in June 2008. Design of wastewater facilities for Millingport School in the city of Albemarle is ongoing. The decision document was approved in August 2004. The design agreement was executed in July 2005. The Project Cooperation Agreement was executed in September 2006. Construction of Millingport school facilities was completed in FY 2009.

**32. REGULATORY PROGRAM**

Cost for the period was \$6,576,889 in regular appropriations and \$277,357 in American Recovery and Reinvestment Act appropriations, including \$5,661,436 for Permit Evaluation, \$609,521 for Enforcement,

\$58,701 for Environmental Impact Statement preparation and \$524,588 for Compliance.

**General Investigations**

**33. SURVEYS**

Cost for the period was \$20,447 for Navigation studies, \$355,678 for Flood Damage Reduction studies, \$231,131 for Coastal Storm Damage Reduction studies, \$128,398 in FY 2006 Emergency Supplemental funds for Coastal Storm Damage Reduction studies, \$15,243 in American Recovery and Reinvestment Act funds for Coastal Storm Damage Reduction studies, \$726,340 for Watershed/Ecosystem Restoration studies, \$12,336 for Special Investigations, \$8,438 for Interagency Water Resources Development, \$750 for Review of FERC Licenses, \$1,982 for National Estuary Studies, and \$132,266 for Planning Assistance to States. Contributed funds cost was \$323,507 for Flood Damage Reduction studies, \$428,437 for Coastal Storm Damage Reduction studies, \$620,428 for Watershed/Ecosystem Restoration studies, and \$100,912 for Planning Assistance to States.

**34. COLLECTION AND STUDY OF BASIC DATA**

Flood plain management information studies, as authorized by Section 206, 1960 Flood Control Act, as amended, provide information, technical assistance, and guidance in identifying the magnitude of the flood hazard and for planning wise use of the flood plain. Direct response and assistance are provided to states, Indian tribes, and local governments without charge and to Federal agencies and private persons on a cost reimbursable basis. Total costs for the period were \$90,535 including a contributed funds cost of \$7. Total costs to September 30, 2009, were \$9,797,574.

Hydrologic studies collect and analyze basic data on hydrologic, climatologic, and river morphology for general use in connection with Corps planning, design, construction, and operation of water resource projects. No work for hydrologic studies was accomplished for FY 2009.

**35. PRECONSTRUCTION ENGINEERING AND DESIGN**

No work for preconstruction engineering and design (PED) was accomplished for FY 2009.

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

**TABLE 6-A COST AND FINANCIAL STATEMENT**

See Section							Total cost to
In Text	Project	Funding	FY06	FY07	FY08	FY09	Sept. 30, 2009
1.	Atlantic Intracoastal Waterway between Norfolk, Va. & St. John River, Fla. (Regular Funds)	New Work: Approp. Cost	- - -	- -	- -	- -	88,835,273 <sup>1</sup> 88,830,685 <sup>1</sup>
		Maint: Approp. Cost	10,564,000 7,887,849	4,262,029 4,919,434	5,492,880 5,408,129	7,349,960 2,491,779	267,737,152 <sup>2</sup> 260,726,304 <sup>2</sup>
	(Contributed Funds)	Maint: (American Recovery and Reinvestment Act) Approp. Cost	- -	- -	- -	3,920,000 113,714	3,920,000 113,714
		New Work: Contrib. Cost	- -	- -	- -	- -	86,851 86,851 <sup>3</sup>
		Maint: Contrib. Cost	- -	- -	- -	3,070,650 1,757,840	3,737,950 2,425,140
2.	Beaufort Harbor, N.C. (Regular Funds)	New Work: Approp. Cost	- -	- -	- -	- -	818,040 <sup>4</sup> 818,040
	(Contributed Funds)	Maint: Approp. Cost	750,000 266,594	(333,947) 149,459	146,274 132,800	100,796 114,270	5,533,187 5,533,187
		New Work: Contrib. Cost	- -	- -	- -	- -	34,000 34,000
		Maint: Contrib. Cost	- -	- -	- -	- -	326,225 326,225
3.	Cape Fear River, N.C. Above Wilmington	New Work: Approp. Cost	- -	- -	- -	- -	3,759,573 <sup>5</sup> 3,759,573 <sup>5</sup>
		Maint: Approp. Cost	636,000 536,699	606,000 640,416	694,000 743,003	667,680 653,123	30,192,004 <sup>6</sup> 30,164,124 <sup>6</sup>
		Maint: (American Recovery and Reinvestment Act) Approp. Cost	- -	- -	- -	5,197,950 47,180	5,197,950 47,180
4.	Lockwoods Folly River, N.C. (Regular Funds)	New Work: Approp. Cost	- -	- -	- -	- -	241,272 <sup>7</sup> 241,272 <sup>8</sup>
	(Contributed Funds)	Maint: Approp. Cost	843,000 553,858	199,513 488,655	608,000 597,768	907,565 1,006,468	18,277,627 18,366,298
		Maint: (American Recovery and Reinvestment Act) Approp. Cost	- -	- -	- -	1,161,000 -	1,161,000 -
		New Work: Contrib. Cost	- -	- -	- -	- -	92,650 92,650 <sup>9</sup>
5.	Manteo (Shallowbag) Bay, N.C. (Regular Funds)	New Work: Approp. Cost	- -	- -	- -	- -	10,099,515 <sup>10</sup> 10,099,515 <sup>10</sup>
	(Contributed Funds)	Maint: Approp. Cost	7,746,000 6,892,761	7,823,000 3,855,324	8,713,000 4,052,440	8,509,558 14,575,738	168,408,802 164,966,886
		Maint: (American Recovery and Reinvestment Act) Approp. Cost	- -	- -	- -	13,077,300 9,550,176	13,077,300 9,550,176
		Maint: Contrib. Cost	- 2,361	30,000 59,076	1,868,656 1,364,548	(5,224) 614,709	6,936,425 6,936,427

WILMINGTON, N.C. DISTRICT

**TABLE 6-A (Continued) COST AND FINANCIAL STATEMENT**

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total cost to Sept. 30, 2009
6.	Morehead City Harbor, N.C. (Regular Funds)	New Work:					
		Approp.	-	-	-	-	13,204,707 <sup>11</sup>
		Cost	-	-	-	-	13,204,707 <sup>11</sup>
		Maint:					
		Approp.	5,674,000	5,178,488	5,088,000	11,010,622	132,508,463 <sup>12</sup>
		Cost	4,616,566	6,018,639	3,853,741	7,431,791	127,293,476
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	2,731,996
		Cost	-	-	-	-	2,731,996
		Maint:					
		Contrib.	590,000	-	(11,038)	-	3,896,073
		Cost	580,396	8,050	-	-	3,896,074
7.	Rollinson Channel, N.C. (Regular Funds)	New Work:					
		Approp.	-	-	-	-	589,105
		Cost	-	-	-	-	589,105
		Maint:					
		Approp.	980,000	(160,949)	668,000	247,139	5,501,911 <sup>13</sup>
		Cost	133,437	685,614	189,241	334,493	5,110,506
	(Contributed Funds)	Maint:					
		Contrib.	-	-	-	-	41,142
		Cost	-	-	-	-	41,142
8.	Far Creek, N.C. <sup>1</sup> (Regular Funds)	New Work:					
		Approp.	-	-	-	-	164,642
		Cost	-	-	-	-	164,642
		Maint:					
		Approp.	925,000	-	150,000	(102,598)	3,271,747
		Cost	-	10,372	7,283	954,648	3,271,648
	(Contributed Funds)	Maint:					
		Approp.	-	-	-	-	11,181
		Cost	-	-	-	-	11,181
9.	Silver Lake Harbor, N.C. (Regular Funds)	New Work:					
		Approp.	-	-	-	-	184,284
		Cost	-	-	-	-	184,284
		Maint:					
		Approp.	2,117,000	-	983,120	662,071	15,875,060 <sup>14</sup>
		Cost	1,423,820	667,700	370,379	1,151,061	15,725,829
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	495,500	495,500
		Cost	-	-	-	12,921	12,921
	(Contributed Funds)	Maint:					
		Approp.	-	-	-	-	75,000
		Cost	-	-	-	-	75,000
10.	Waterway Connecting, Pamlico Sound and Beaufort Harbor, NC (Regular Funds)	New Work:					
		Approp.	-	-	-	-	502,567
		Cost	-	-	-	-	502,567
		Maint:					
		Approp.	1,570,000	632,141	(161,600)	-	6,243,869 <sup>15</sup>
		Cost	75,333	1,947,868	(70,830)	28,103	6,112,972
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	250,000	250,000
		Cost	-	-	-	-	-
	(Contributed Funds)	Maint:					
		Contrib.	-	-	-	-	17,252
		Cost	-	-	-	-	17,252

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

**TABLE 6-A (Continued) COST AND FINANCIAL STATEMENT**

See Section							
In Text	Project	Funding	FY06	FY07	FY08	FY09	Total cost to Sept. 30, 2009
11.	Wilmington Harbor, N.C.	New Work:					
	(Regular Funds)	Approp.	17,569,000	8,200,000	3,745,000	2,375,000	281,237,626 <sup>16</sup>
		Cost	15,117,176	5,587,241	3,817,539	3,344,895	276,695,551 <sup>16</sup>
		Maint					
		Approp.	15,393,000	9,903,000	15,531,500	15,325,660	209,918,072 <sup>17</sup>
		Cost	12,694,382	11,647,512	7,740,729	22,913,623	208,631,134 <sup>17</sup>
	(Contributed Funds)	New Work:					
		Contrib.	6,000,000	227,595	982,719	900,000	90,615,667
		Cost	3,792,713	1,129,340	2,885,312	774,109	89,958,782
		Maint:					
		Contrib.	-	-	(17,281)	-	12,923,181 <sup>18</sup>
		Cost	-	-	-	-	12,907,181 <sup>18</sup>
14A.B.	Everett Jordan Dam and Lake, N.C.	New Work:					
	(Regular Funds)	Approp.	-	-	-	-	149,920,287
		Cost	-	-	-	-	149,915,644
		Maint:					
		Approp.	1,464,000	1,721,000	1,526,000	1,390,680	33,297,842 <sup>19</sup>
		Cost	1,168,064	1,401,449	1,793,520	1,754,613	33,271,456 <sup>20</sup>
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	1,128,000	1,128,000
		Cost	-	-	-	111,824	111,824
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	1,764,735
		Cost	-	-	-	-	1,764,735
15A	Falls Lake, N.C.	New Work:					
	(Regular Funds)	Approp.	-	-	-	-	184,513,996
		Cost	7,299	-	-	-	184,448,719
		Maint:					
		Approp.	1,740,000	1,617,000	1,748,000	1,530,760	32,419,440 <sup>23</sup>
		Cost	1,334,597	1,386,539	1,907,815	1,957,509	32,305,833 <sup>24</sup>
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	792,000	792,000
		Cost	-	-	-	87,159	87,159
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	21,540	281,264
		Cost	-	-	-	1,189	260,913
16.	Roanoke River Upper Basin VA. - Headwaters Area	New Work:					
	(Regular Funds)	Approp.	5,250,000	8,300,000	9,502,000	1,029,000	37,111,000
		Cost	4,287,502	6,833,744	5,787,404	5,423,742	34,626,468
		New Work: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	3,902,400	3,902,400
		Cost	-	-	-	4,966	4,966
	(Contributed Funds)	New Work:					
		Contrib.	638,000	1,595,824	944,606	1,285,000	5,610,430 <sup>25</sup>
		Cost	522,545	946,906	701,639	462,304	3,493,079 <sup>25</sup>
		New Work: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	50,000	50,000
		Cost	-	-	-	-	-
17A.W.	Kerr Scott Dam and Reservoir, N.C.	New Work:					
	(Regular Funds)	Approp.	-	-	-	-	8,841,326
		Cost	-	-	-	-	8,841,326
		Maint:					
		Approp.	2,766,000	3,188,308	2,952,000	3,038,723	66,149,745 <sup>26</sup>
		Cost	2,831,316	2,790,521	2,944,718	3,190,296	65,863,583 <sup>27</sup>
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	2,797,200	2,797,200
		Cost	-	-	-	483,612	483,612
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	25,000	25,000
		Cost	-	-	-	-	-

WILMINGTON, N.C. DISTRICT

**TABLE 6-A (Continued) COST AND FINANCIAL STATEMENT**

See Section In Text	Project	Funding	FY06	FY07	FY08	FY09	Total cost to Sept. 30, 2009
20.	Brunswick County Beaches N.C. (Cape Fear to N.C. - S.C. Line) (Regular Funds)	New Work: Approp.	3,020,000	50,000	212,050	3,679,959	14,139,124 <sup>28</sup>
	(Contributed Funds)	Cost	308,021	2,522,752	242,386	1,019,911	11,084,507 <sup>29</sup>
		New Work: Contrib.	300,000	-	-	1,411,570	5,931,570 <sup>30</sup>
		Cost	173,080	982,324	163,450	-	4,328,080 <sup>31</sup>
21.	Carolina Beach and Vicinity, N.C. (Regular Funds)	New Work: Approp.	6,000,000	-	(151,289)	3,809,990	38,370,944 <sup>32</sup>
	(Contributed Funds)	Cost	264,484	4,570,995	52,249	233,766	33,833,226
		New Work: Contrib.	3,202,500	(55,339)	-	2,022,109	23,110,830 <sup>33</sup>
		Cost	(48,911)	2,554,742	35,253	-	20,476,217 <sup>33</sup>
22.	Dare County Beaches, N.C. (Bodie Island) (Regular Funds)	New Work: Approp.	1,921,000	100,000	-	(28)	3,790,972 <sup>34</sup>
	(Contributed Funds)	Cost	1,283,650	690,248	184,185	4,131	3,787,677 <sup>34</sup>
		New Work: Contrib.	-	-	-	-	-
		Cost	-	-	-	-	-
23.	West Onslow Beach and New River Inlet, N.C. (Regular Funds)	New Work: Approp.	660,000	-	49,000	100,000	2,773,000
	(Contributed Funds)	Cost	212,849	269,617	232,776	29,321	2,676,022
		New Work: Contrib.	100,000	101,000	16,333	-	1,026,000 <sup>35</sup>
		Cost	77,900	104,720	51,701	-	1,023,448
24.	Wrightsville Beach, N.C. (Regular Funds)	New Work: Approp.	2,746,000	-	218,948	3,136,000	11,653,048 <sup>36</sup>
	(Contributed Funds)	Cost	2,478,000	54,737	122,875	358,796	8,490,699
		New Work: Approp.	1,500,000	-	-	966,532	6,187,142 <sup>37</sup>
		Cost	1,256,594	(1)	-	-	4,977,203
25A.	John H. Kerr Dam and Reservoir, VA&NC (Regular Funds)	New Work: Approp.	-	-	-	-	94,402,927
	(Contributed Funds)	Cost	-	-	-	-	94,402,927
		Major Rehab: Approp.	13,560,000	10,500,000	13,767,000	14,581,563	74,243,563
		Cost	6,218,209	15,181,269	15,298,225	14,844,375	72,411,872
		Maint: Approp.	10,171,000	11,213,000	10,507,000	10,999,823	255,385,708 <sup>38</sup>
		Cost	8,604,405	10,978,946	11,276,967	11,974,477	254,809,168 <sup>39</sup>
		Maint: (American Recovery and Reinvestment Act) Approp.	-	-	-	5,858,000	5,858,000
		Cost	-	-	-	179,766	179,766
	(Contributed Funds)	Maint: Contrib.	-	-	-	4,333,260	4,723,917
		Cost	271,000	-	-	37,901	427,997
25B.	Philpott Lake, Va.	New Work: Approp.	-	-	-	-	14,796,384
		Cost	-	-	-	-	14,796,384
		Maint: Approp.	4,642,000	4,652,000	4,325,000	6,181,780	87,577,546 <sup>40</sup>
		Cost	3,692,062	5,164,312	3,915,092	5,009,363	82,272,614 <sup>41</sup>
		Maint: (American Recovery and Reinvestment Act) Approp.	-	-	-	2,688,000	2,688,000
		Cost	-	-	-	175,812	175,812

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

**TABLE 6-A (Continued) COST AND FINANCIAL STATEMENT**

See Section								
In Text	Project	Funding	FY06	FY07	FY08	FY09	Total cost to Sept. 30, 2009	
27.	Roanoke Island Festival New Work: Park, Dare County, N.C. (Regular Funds) (Contributed Funds)	Approp. Cost New Work: Contrib. Cost	58,000 2,866 - -	(32,400) 220 - -	(5,000) 549 - -	- 1,294 - -	664,600 <sup>44</sup> 639,259 <sup>45</sup> 308,000 303,000	
28.	Wilson Bay Restoration, New Work: Dare County, N.C. (Regular Funds) (Contributed Funds)	Approp. Cost New Work: Contrib. Cost	445,000 287,784 - -	303,976 96,327 - -	(60,000) 167,132 - -	46,000 141,326 - -	1,250,976 <sup>46</sup> 1,186,684 <sup>47</sup> - -	
29.	Wanchese Marsh Creation and Protection Dare County, N.C. (Regular Funds) (Contributed Funds)	New Work: Approp. Cost New Work: Contrib. Cost	54,000 58,183 - 13,802	78,000 241,476 - 49,481	120,000 74,567 73,000 4,334	- 115,121 - 16,632	1,642,000 <sup>48</sup> 1,660,960 <sup>49</sup> 548,000 477,222	
30.	Morehead City Harbor, NC Section 933 (Regular Funds) (Contributed Funds)	New Work: Approp. Cost New Work: Contrib. Cost	2,970,000 548,036 - 208,648	2,200,000 3,147,401 1,200,000 1,554,045	- 8,437 - -	- 3,322 - -	8,704,000 <sup>50</sup> 6,895,840 <sup>50</sup> 4,665,000 3,925,133	
31.	Stanly County Wastewater Infrastructure, N.C. (Regular Funds) (Contributed Funds)	New Work: Approp. Cost Maint: (American Recovery and Reinvestment Act) Approp. Cost New Work: Contrib. Cost	2,338,000 327,255 - - - 83,187	- 319,430 - - 805,875 125,206	- 1,864,262 - - (7,054) 677,113	216,000 164,338 200,000 - - 11,973	3,610,000 3,156,214 200,000 - 278,721 809,308	

- |  |   |
|--|---|
| 1. Includes \$198,707 for previous projects.   | 9. Includes \$69,145 refund to local interests.   |
| 2. Includes \$107,634 for previous projects. Includes<br>Emergency Supplemental funds: FY06, \$3,890,000.  | 10. Adjusted by \$6,361 to reflect actual costs.  |
| 3. Includes \$13,934 refund to local interests.  | 11. Includes \$44,484 for previous projects.  |
| 4. Include \$12,854 for previous projects. Includes<br>Emergency Supplemental funds: FY06, \$750,000.  | 12. Includes \$284,557 for previous projects. Includes<br>Emergency Supplemental funds: FY06, \$2,000,000.                                  |
| 5. Includes \$149,119 for previous projects.   | 13. Includes Emergency Supplemental funds: FY06, \$980,000.   |
| 6. Includes \$8,178 for previous projects.   | 14. Includes Emergency Supplemental funds: FY06, \$750,000.   |
| 7. Includes preauthorization study funds: FY64, \$3,000; FY65,<br>-\$2,755; FY71, \$8,000; FY72, \$2,000; FY74, \$9,000; FY75,<br>\$25,000; FY76 & 76T, \$20,000; FY77, \$2,500; FY78,<br>\$8,800; FY79, \$3,000; FY81, \$1,680; and preconstruction<br>planning funds: FY80, \$15,000 and FY81, \$19,320.         | 15. Includes Emergency Supplemental funds: FY06, \$1,570,000.   |
| 8. Includes preauthorization study costs: FY64, \$219; FY65,<br>\$26; FY71, \$8,000; FY72, \$1,448; FY73, \$552; FY74,<br>\$9,000; FY75, \$11,925; FY76 & 76T, \$27,977; FY77,<br>\$7,598; FY78, \$7,449; FY79, \$4,351; FY81, \$1,680; and<br>preconstruction planning costs: FY80, \$5,686 and FY81,<br>\$1,471. | 16. Includes \$4,625,614 for new work on previous projects.   |
|  | 17. Includes \$602,614 for previous projects. Includes<br>Emergency Supplemental funds: FY06, \$3,500,000.                                  |
|  | 18. Includes refunds to local interests: FY78, \$92,374; FY79,<br>\$8,000; FY80, \$14,007; FY81, \$1,847; FY82, \$2,823; FY85,<br>\$60,000. |

WILMINGTON, N.C. DISTRICT

19. Includes maintenance and operation of Dams funds: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900.
20. Includes maintenance and operation of Dams costs: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900.
23. Includes maintenance and operation of Dams funds: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900.
24. Includes maintenance and operation of Dams costs: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900.
25. Adjusted in FY 2000 report to remove funds and costs for reimbursable, support for others work on the low water bridges; should not have been included in the FY90 - FY99 report.
26. Includes Special Recreation Use Fees funds: FY74, \$4,000; FY75, \$5,500; FY76 & 76T, \$3,600; FY 77, \$5,800; FY78, \$7,200; FY79, \$8,000; FY80, \$10,000; FY81, \$10,000; FY82, \$11,040; FY83, \$7,000; FY84, \$9,000; and maintenance and operation of Dams funds: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,200; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900.
27. Includes Special Recreation Use Fees costs: FY74, \$4,000; FY75, \$4,400; FY76 & 76T, \$4,666; FY 77, \$5,193; FY78, \$6,824; FY79, \$7,506; FY80, \$11,312; FY81, \$9,688; FY82, \$9,727; FY83, \$7,000; FY84, \$8,444; FY85, \$2,379; and maintenance and operation of Dams costs: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,200; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900.
28. Includes \$116,508 refund to local interests and prior to FY77 costs of \$31,161 for Ocean Isle, \$49,731 for Long Beach, \$41,443 for Yaupon Beach and \$31,157 for Sunset Beach. Includes Emergency Supplemental funds: FY06, \$2,800,000.
29. Includes refunds to local interests: FY83, \$400,000; FY84, \$128,345; FY85, \$82,600.
30. Includes Emergency Supplemental funds: FY06, \$1,211,921.
31. Does not include preauthorization PED funds and costs of \$4,837,200 GI Federal through FY 2004.
32. Includes Emergency Supplemental funds: FY06, \$6,000,000.
33. Does not include preauthorization PED funds and costs of \$970,000 GI Federal and \$323,333,33 non-Federal contributed funds through FY 2004. Includes Emergency Supplemental funds: FY06, \$3,202,500.
34. Does not include preauthorization PED funds and costs of \$461,600 GI Federal through FY 1994. Includes Emergency Supplemental funds: FY06, \$100,000.
35. Includes Emergency Supplemental funds: FY06, \$6,500.
36. Includes \$61,585 refund to local interests. Includes Emergency Supplemental funds: FY06, \$1,900,000.
37. Includes Emergency Supplemental funds: FY06, \$1,023,000.
38. Includes Special Recreation Use Fees funds: FY74, \$35,000; FY76 & 76T, \$48,000; FY77, \$51,400; FY78, \$115,100; FY79, \$63,000; FY80, \$60,000; FY81, \$80,000; FY82, \$67,160; FY83, \$77,759; FY84, \$73,000; and maintenance and operation of Dams funds: FY79, \$167,646; FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900; FY00, \$475,769.
39. Includes Special Recreation Use Fees costs: FY75, \$35,000; FY76 & 76T, \$13,606; FY77, \$85,692; FY78, \$114,604; FY79, \$1,120; FY80, \$118,718; FY81, \$83,760; FY82, \$67,160; FY83, \$77,759; FY84, \$67,850; FY85, \$5,149; and maintenance and operation of Dams costs: FY79, \$167,350; FY80, \$296; FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900; FY00, \$472,993.
40. Includes Special Recreation Use Fees funds: FY75, \$47,000; FY78, \$40,400; FY79, \$22,000; FY80, \$25,000; FY81, \$20,000; FY82, \$20,240; FY83, \$21,000; FY84, \$19,000; and maintenance and operation of Dams funds: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900; FY00, \$18,748.
41. Includes Special Recreation Use Fees costs: FY75, \$13,741; FY76 & 76T, \$31,666; FY77, \$1,593; FY78, \$39,771; FY79, \$22,629; FY80, \$24,619; FY 81, \$20,381; FY82, \$20,240; FY83, \$21,000; FY84, \$19,000; and maintenance and operation of Dams costs: FY87, \$66,678; FY88, \$75,000; FY89, \$73,000; FY90, \$54,000; FY91, \$97,200; FY92, \$79,000; FY93, \$80,300; FY94, \$67,800; FY95, \$153,900.
42. Includes preauthorization study funds: FY97, \$150,000; FY98, \$30,000, FY99, \$40,000; and preconstruction planning funds: FY99, \$ 1,000; FY00, \$184,000; and FY01, \$31,000.
43. Includes preauthorization study costs: FY97, \$4,792; FY98, \$167,663; FY99, \$43,471; FY00, \$4,074; and preconstruction planning costs: FY00 \$179,408; and FY01, \$36,592.
44. Includes planning design and analysis funds: FY02, \$15,000; and construction implementation funds: FY02, \$529,000; FY03, \$54,000; and FY04, \$15,000.
45. Includes planning design and analysis costs: FY02, \$15,000; and construction implementation costs: FY02, \$527,671; FY03, \$53,638; and FY04, \$16,691.
46. Includes preauthorization study funds: FY00, \$45,000; FY01, (\$12,000); FY02, \$217,000; FY03, \$40,000; and preconstruction planning funds: FY03, \$40,000; FY04, \$151,000.
47. Includes preauthorization study costs: FY00, \$24,347; FY01, \$4,793; FY02, \$219,140; FY03, \$40,513; FY04, \$1,207; and preconstruction planning costs: FY03, \$39,959; FY04, \$151,041.
48. Includes preauthorization study funds: FY97, \$25,000; FY98, \$115,000; FY99, \$28,000; FY00, \$16,000; FY01, \$14,000; and preconstruction planning funds: FY01, \$51,000; FY02, \$48,000; and FY03, \$5,000.

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

49. Includes preauthorization study costs: FY98, \$103,281; FY99, \$61,594; FY00, \$15,236; FY01, \$17,869; FY02, \$20; and preconstruction planning costs: FY01, \$26,074; FY02, \$67,179; and FY03, \$10,747.
50. Includes \$768,000 of O&M funds and costs through FY03, prior to CAP C.G. funding. O&M funds were used for the Section 933 report and plans and specifications and will be included in the final accounting and cost sharing calculations.

WILMINGTON, N.C. DISTRICT

**TABLE 6-B**

**AUTHORIZING LEGISLATION**

Acts	Project and Work Authorized	Documents
	<b>ATLANTIC INTRACOASTAL WATERWAY BETWEEN NORFOLK, VA. AND ST. JOHNS RIVER, FLA.</b>	
July 25, 1912	Original route of the Norfolk-Beaufort Inlet section.	H.D. 391, 62d Cong., 2d sess.
July 25, 1912	Purchase of canal.	H.D. 589, 62d Cong., 2d sess.
August 8, 1917	Change in route; following changes approved by Secretary of War, April 14, 1919.	H.D. 1478, 63d Cong., 3d sess. and H. D. 1136, 64th Cong., 1 <sup>st</sup> sess. <sup>1</sup>
	Albemarle Sound-Pamlico Sound section: Changed from "Alligator River-Rose Bay route" to "Alligator River- Pungo River route." Pamlico Sound-Neuse River section: Changed from "Pamlico Sound-Brant Shoal Neuse River route" to "Goose Creek-Bay River route."	
July 18, 1918	Alligator River-Pungo route (proposed land cut connecting the rivers): Changed from a straight line to a bent line approaching nearer town of Fairfield, N. C.	Approved by Secretary of War, May 15, 1919.
January 21, 1927	A 12-foot channel 90 feet wide from Beaufort to Cape Fear River, N.C., including highway bridge and tidal lock. <sup>4</sup>	H.D. 450, 69th Cong., 1st sess.
July 3, 1930	An 8-foot channel 75 feet wide from Cape Fear River to Winyah Bay, S.C.	H.D. 41, 71st Cong., 1st sess.
March 4, 1933 <sup>2</sup>	Construct a suitable bridge near Fairfield, N. C.	Rivers and Harbors Committee Doc. 5, 72d Cong., 1st sess.
June 26, 1934 <sup>3</sup>	Operating and care of works of improvements provided for with funds from War Department appropriations for rivers and harbors.	
August 26, 1937	Increasing dimensions of waterway to 12 feet deep and 90 feet wide.	Rivers and Harbors Committee, Doc. 6, 75th Cong., 1st sess. <sup>1</sup>
August 26, 1937	A 12-foot side channel 90 feet wide to Swansboro.	Rivers and Harbors Committee, Doc. 16, 75th Cong., 1st sess. <sup>1</sup>
June 20, 1938	A yacht basin near Southport, 12 feet deep, 230 feet wide, and 450 feet long, with connecting channel.	H.D. 549, 75th Cong., 3d sess. <sup>1</sup>
June 20, 1938	A 6-foot channel 90 feet wide from New River Inlet to Inland Waterway.	H.D. 691, 75th Cong., 3d sess. <sup>1</sup>
March 2, 1945	Six mooring basins. <sup>5</sup>	H.D. 660, 76th Cong., 3d sess. <sup>1</sup>
June 30, 1948	A 12-foot channel in New River. <sup>6, 11</sup>	H.D. 421, 80th Cong., 1st sess. <sup>1</sup>
May 17, 1950	Vicinity of Fairfield - drainage.	H.D. 723, 80th Cong., 2d sess. <sup>1</sup>
May 17, 1950	Masonboro Inlet and connecting channels, including jetties at the inlet. <sup>7, 12</sup>	H.D. 341, 81st Cong., 1st sess. <sup>1</sup>
September 3, 1954 November 29, 1963, Sec. 107 July 14, 1960	A 6-foot channel 90 feet wide from Intracoastal Waterway to Bogue Inlet gorge.	Detailed Project Report April 1963.
April 7, 1966 Sec. 107, July 14, 1960	An 8-foot channel 150 feet wide through New Topsail Inlet, thence a 7-foot channel 80 feet wide to Intracoastal Waterway by way of Old Topsail Creek; and a 7-foot channel 80 feet wide in Banks Channel from New Topsail Inlet, paralleling barrier beach, to Intracoastal Waterway.	Detailed Project Report July 1965.
November 7, 1966	Maintenance of a channel 6 feet deep, 80 feet wide, and 8,000 feet long, from the through channel of the waterway to and including a basin of the same depth, 130 feet wide and 180 feet long at Carolina Beach.	H.D. 515, 89th Cong., 2d sess. <sup>1</sup>
November 7, 1966	Maintenance of general navigation features of N.C. State Ports Authority Small Boat Harbor at Southport.	H.D. 514, 89th Cong., 2d sess.
December 31, 1970	Replacement of federally-owned and operated highway bridges at Coinjock, Fairfield, Wilkerson Creek, Hobucken, and Core Creek.	H.D. 142, 92nd Cong., 1st sess.

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

<b>TABLE 6-B (Continued)</b>	<b>AUTHORIZING LEGISLATION</b>	
<b>Acts</b>	<b>Project and Work Authorized</b>	<b>Documents</b>
October 22, 1976	Modification of terms of local cooperation to allow for full Federal funding of Wilkerson Creek and Coinjock Bridges.	H.D. 597, 94th Cong., 2d sess.
August 13, 1968	Mitigation of damages caused by north jetty at Masonboro Inlet.	Approved by OCE Oct. 2, 1980
February 18, 1982, Sec. 107 July 14, 1960	An 8-foot channel 150 feet wide through Carolina Beach Inlet to the Intracoastal Waterway.	Detailed Project Report June 1980
September 7, 1983, Sec. 107 July 14, 1960	An 8-foot channel 150 feet wide from the gorge in Bogue Inlet through the ocean bar.	Detailed Project Report May 1983
November 17, 1986	Modification of terms of local cooperation to allow for full Federal funding of Core Creek, Hobucken and Fairfield Bridges.	
	<b>BEAUFORT HARBOR, N.C.</b>	
March 3, 1881	A 9-foot channel 200 feet wide through Bulkhead Channel to Beaufort; a 6-foot channel 100 feet wide to North River and Core Sound; and construct jetties on Shackleford Point.	Annual Report, 1881, p.1013
March 2, 1907	Repairs to Fort Macon jetties and additional jetties and shore protection.	Specified in act.
March 3, 1925	Bulkhead across Bird Shoal.	Rivers and Harbors Committee Doc. 8, 68th Cong., 2d sess. <sup>1</sup>
July 3, 1930	Increase in depth to 12 feet in Bulkhead Channel, Gallants Channel, and in front of Beaufort.	H.D. 776, 69th Cong., 2nd sess. <sup>1</sup>
March 2, 1945	Increase in width and length of basin in front of Beaufort, all to 12 feet deep.	H.D. 334, 76th Cong., 2nd sess. <sup>1</sup>
May 17, 1950	Increase in depth to 12 feet and in width to 100 feet in Taylors Creek; transfer to Beaufort Harbor project.	H.D. 111, 81st Cong., 2nd sess. <sup>1</sup>
May 21, 1965, Sec. 107 July 14, 1960	Channels 15 feet deep, 100 feet wide in Bulkhead, Gallants and Taylors Creek channels, and through turning basin in front of Beaufort; and harbor of refuge in Town Creek, 12 feet deep, 400 feet wide and 900 feet long connected to Gallants Channel by channel 12 feet deep, 150 feet wide and 1,400 feet long.	Detailed Project Report April 1965
August 12, 1983 Sec. 107 July 14, 1960	A channel 14 feet deep, 70 feet wide, and 1,900 feet long, from Bulkhead Channel to a turning basin 14 feet deep, 150 feet wide, and 300 feet long near the upper end of Morgan Creek.	Detailed Project Report June 1983

WILMINGTON, N.C. DISTRICT

**TABLE 6-B AUTHORIZING LEGISLATION**

Acts	Project and Work Authorized	Documents
<b>SILVER LAKE HARBOR, N. C.</b>		
July 3, 1930	Entrance channel, 5 feet deep and 50 feet wide, from Pamlico Sound to the 3-foot contour in the lake, and training wall at entrance.	Rivers and Harbors Committee Doc. 3, 70th Cong., 1st sess.
October 17, 1940	Channel, 10 feet deep, and anchorage basin of same depth, 100 feet wide across Big Foot Slough and 60 feet wide in entrance.	H.D. 325, 76th Cong., 1st sess. <sup>1</sup>
February 7, 1967, Sec. 107 July 14, 1960	Basin depth of 12 feet in Silver Lake Harbor; channels 12 feet deep, 150 feet wide, in Teaches Hole and Big Foot Slough Channels and across Bluff Shoal; entrance channel, same depth, 60 feet wide; and training wall on south side of entrance channel.	Detailed Project Report July 9, 1965
<b>WATERWAY CONNECTING PAMLICO SOUND AND BEAUFORT HARBOR, N. C.</b>		
August 30, 1935 <sup>9</sup>	A 7-foot channel 75 feet wide from Pamlico Sound to Beaufort Harbor via Wainright Channel.	H.D. 485, 72d Cong., 2d sess. <sup>1</sup>
August 26, 1937	A 7-foot channel 75 feet wide to Atlantic.	Rivers and Harbors Committee Doc. 92, 74th Cong., 2d sess. <sup>1</sup>
March 2, 1945	Channels, 7 feet deep, 75 feet wide, at east and west ends of Harkers Island and side channel 5 feet deep, 75 feet wide, with basin 150 by 130 feet, same depth, at Davis.	H.D. 99, 77th Cong., 1st sess. <sup>1</sup>
March 2, 1945	A 7-foot side channel 75 feet wide, with basin 200 feet by 500 feet, same depth, at sea level.	S.D. 247, 77th Cong., 2d sess. <sup>1</sup>
May 17, 1950	A 6-foot side channel 60 feet wide, with basin 100 feet by about 600 feet, same depth, at Marshallberg.	H.D. 68, 81st Cong., 1st sess. <sup>1</sup>
July 11, 1963, Sec. 107 July 14, 1960	A side channel 7 feet deep, 70 feet wide to local harbor at Cedar Island and an access channel 6 feet deep, 60 feet wide and about 400 feet long to a basin same depth, 60 by 100 feet.	Detailed Project Report Dec. 12, 1962
September 22, 1967, Sec. 107 July 14, 1960	An entrance channel 6 feet deep, 60 feet wide, from Back Sound to harbor of refuge 120 by 250 feet, same depth, at west end of Harkers Island in Brook Creek.	Detailed Project Report March 13, 1967
February 17, 1969, Sec. 107 July 14, 1960	A channel 7 feet deep, 70 feet wide, from existing side channel at Atlantic to a basin 600 by 180 feet, same depth, with a breakwater, between mouth of Little Port Brook and White Point.	Detailed Project Report December 21, 1967
April 3, 1975, Sec. 107 July 14, 1960 <sup>10</sup>	Deepening the existing 5-foot channel and basin at Davis to 7 feet.	Detailed Project Report Feb. 8, 1974

1. Contains latest published maps.
2. Public Law No. 443, 72d Cong.
3. Permanent Appropriations Repeal Act.
4. Tidal lock in land cut between Myrtle Sound and Cape Fear River, deauthorized September 23, 1986, under authority of Sec. 12, PL 93-251.
5. Deauthorized August 5, 1977, under authority of Sec. 12, PL 93-251.
6. A 12-foot by 90-foot channel in New River from Intracoastal Waterway to and including a basin at Jacksonville, N.C.
7. Jetties on each side of Masonboro Inlet.
8. A 6-foot by 50-foot channel provided under Section 3, River and Harbor Act of March 2, 1945; 12-foot by 90-foot project deauthorized November 17, 1986, under authority of 1002, PL 99-662.
9. Included in the Public Works Administration Program January 3, 1934.
10. Deauthorized by the Chief of Engineers March 31, 1982.
11. Deauthorized January 1, 1990, under authority of Sec. 1001(b)(1), PL 99-662.
12. Training wall at Masonboro Inlet deauthorized April 5, 1999 under authority of Sec. 1001 (b)(1), PL 99-662.

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

**TABLE 6-C OTHER AUTHORIZED NAVIGATION PROJECTS**

<u>September 30, 2009</u> Project	Annual Report		Cost to
	For Last Full Report	Construction	Operation and Maintenance
			4. 8-foot modification deauthorized August 5, 1977, under authority of Sec. 12, PL 93-251
Aquatic Plant Control <sup>1</sup> (R & H Act of 1958 and 1962)	1969	70,664	--
Aquatic Plant Control (R & H Act of 1965) <sup>1,6</sup>	2002	972,035	31,809
Atlantic Beach Channels, N.C.	2002	517,995 <sup>7</sup>	528,595
Avon Harbor, N.C. <sup>1</sup>	1999	74,096	1,821,129
Bay River, N.C. <sup>1</sup>	1950	44,382	49,627
Belhaven Harbor, N.C. <sup>1</sup>	1998	176,709	946,799
Black River, N.C. <sup>1</sup>	1969	12,358	124,846
Cashie River, N.C. <sup>1</sup>	1950	40,403	15,905
Channel Connecting Thoroughfare Bay with Cedar Bay, N.C. <sup>1</sup>	1975	69,610	25,615
Channel From Back Sound to Lookout Bight, N.C. <sup>1</sup>	2001	88,328	3,384,794
Channel from Pamlico Sound to Rodanthe, N.C. <sup>1</sup>	1998	42,029	1,199,452
Chowan River, N.C.	1950	--	--
Contentnea Creek, N.C. <sup>1</sup>	1941	64,395	32,247
Drum Inlet, N.C. <sup>1</sup>	1999	166,119	3,725,663
Edenton Harbor, N.C. <sup>1</sup>	1960	73,750	47,642
Fishing Creek, N.C. <sup>1</sup>	1922	22,715	8,633
Knobb's Creek, N.C. <sup>1,2</sup>	1961 <sup>3</sup>	80,500	48,969
Mackay Creek, N.C. <sup>1</sup>	1938 <sup>3</sup>	13,375	6,273
Neuse River, N.C. <sup>1</sup>	1999	477,223 <sup>5</sup>	360,922
Newbegun Creek, N.C. <sup>1</sup>	1928 <sup>3</sup>	4,802	247
Northeast Cape Fear River, N.C. <sup>1</sup>	1950	10,688	61,139
Ocracoke Inlet, N.C. <sup>1</sup>	2001	346,240	1,032,786
Pamlico and Tar River, N.C.	2005	674,651	1,381,173
Pembroke Creek, N.C. <sup>1</sup>	1976	60,000	--
Perquimans River, N.C. <sup>1</sup>	1910 <sup>3</sup>	13,750	414
Roanoke, River, N.C.	2005	404,584	786,773
Scuppernong River, N.C. <sup>1</sup>	1950	81,164	92,825
Shallotte River, N.C. <sup>1</sup>	2002	18,181	718,163
Smith's Creek (Pamlico County), N.C. <sup>1</sup>	1989	113,273	55,771
Smiths Creek (Wilmington), N.C. <sup>1</sup>	1950	8,507	18
South River, N.C. <sup>1</sup>	1936	12,452	23,686
Stumpy Point Bay, N.C. <sup>1</sup>	1999	268,381	1,187,963
Swift Creek, N.C. <sup>1</sup>	1940	1,600	5,422
Trent River, N.C. <sup>1,4</sup>	1968	115,199	143,579
Wallace Channel, Pamlico Sound, N.C. <sup>1</sup>	1965	132,834	85,299
Waterway Connecting Swanquarter Bay with Deep Bay, N.C. <sup>1</sup>	1997	751,099	193,880
Waterway - Norfolk, Va. to Sounds of N.C.	1976	751,196	2,893,812
Wrights Creek, N.C. <sup>1</sup>	1984	68,325	166,602

1. Completed.

2. Transferred from Norfolk District (FY1970 Meherrin River, N.C., transferred to Norfolk District.)

3. Report of Norfolk District.

5. Includes \$1,959 refund to local interests Dawson Creek, N.C.

6. Includes \$2,369 returned to local interests in FY82.

7. Includes \$2,055 refund to local interests.

WILMINGTON, N.C. DISTRICT

**TABLE 6-D-OTHER AUTHORIZED COASTAL STORM DAMAGE REDUCTION PROJECTS**

<b>Project</b>	<b>For Last Full Report See Annual Report For</b>	<b><u>Cost to September 30, 2009</u></b>	
		<b>Construction</b>	<b>Operation and Maintenance</b>
Fort Fisher and Vicinity, N.C.	1997	5,966,730	--
Fort Macon State Park, N.C. <sup>1</sup>	1973	620,000	--

---

1. Uncompleted portion of project was deauthorized November 17, 1986, under authority of Sec. 1002, PL 99-662.

**TABLE 6-E OTHER AUTHORIZED ENVIRONMENTAL RESTORATION PROJECTS**

<b>Project</b>	<b>For Last Full Report See Annual Report</b>	<b><u>Cost to September 30, 2009</u></b>	
		<b>Construction</b>	<b>Operation and Maintenance</b>
Battery Island Bird Habitat Preservation, N.C. (CAP Section 204)	2002	1,220,850	--
Cape Fear L&D No.1 Fish Ladder, N.C. (CAP Section 1135)	2002	63,000	--

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

**TABLE 6-E OTHER AUTHORIZED FLOOD DAMAGE REDUCTION PROJECTS**

<b>Project</b>	<b>Last Full</b>	<b>Cost to September 30, 2009</b>	
	<b>Annual Report</b>	<b>Construction</b>	<b>Operation and Maintenance</b>
Ararat River, Mount Airy, N. C. <sup>1</sup>	1987	4,901,854	--
Black River, Harnett County, N. C. <sup>1</sup>	1984	475,574	--
Blackberry Creek, Henry County, Va. <sup>1</sup>	1994	22,870	--
Broad Creek, Beaufort County, N. C. <sup>1</sup>	1972	283,846	--
Clinton Wastewater Treatment Plant, Clinton, N.C. <sup>18,19</sup>	2006	1,151,930	--
Conetoe Creek, N. C. <sup>1</sup>	1960	29,867	--
Contentnea Creek, N. C. <sup>1</sup>	1939-1943 & 1958	50,889	--
Core Creek, N. C. <sup>1</sup>	1965	236,223 <sup>7</sup>	--
Dan River, Madison Wastewater Treatment Plant, N. C. <sup>1</sup>	1989	175,315	--
Danville (Southside Wastewater Treatment Plant) Va. <sup>1</sup>	1999	279,562	--
Deep Creek, Edgecombe County, N. C. <sup>1</sup>	1984	394,055	--
Ellerbe Creek, Durham County, N. C. <sup>1</sup>	1963	223,413	--
Ellis Swamp, Gates County, N. C. <sup>1</sup>	1971	138,117 <sup>4</sup>	--
Filberts Creek, N. C. <sup>1</sup>	1970	37,777 <sup>3</sup>	--
Gapway Swamp, N. C. & S. C. <sup>1,8</sup>	1969	374,005	--
Gardners Creek, N. C. <sup>1</sup>	1972	54,597 <sup>6</sup>	--
Genoa Sewer Facility, Wayne County, N. C. <sup>1</sup>	1985	167,800	--
Goldsboro, Neuse River, N. C.	1984	50,430	623,687
Hamlet City Lake, N. C.	2002	3,019,828	--
Joyce Creek, Camden County, N. C. <sup>1</sup>	1984	606,189 <sup>12</sup>	--
King (Water Plant), N. C. <sup>1</sup>	1998	270,227	--
Leesville, Va. <sup>1</sup>	1989	367,755	--
Leith's Creek, Scotland County, N. C. <sup>1,10</sup>	1982	430,951	--
Lick Run, Roanoke, Va. <sup>1</sup>	1974	1,280,317	--
Little Rockfish Creek, Hope Mills, N. C. <sup>1</sup>	1978	113,657	--
Little Sugar Creek, Charlotte, N. C. <sup>1,8</sup>	2004	485,000	--
Little Sugar Creek, Charlotte, N. C. <sup>1,8</sup>	2004	567,000	--
Lower Creek, Lenoir, N. C. <sup>1</sup>	1997	638,500	--
Neuse River, Oriental, N. C. <sup>1</sup>	1992	370,446	--
Moravian Creek, Wilkesboro, N. C.	2004	742,543	--
New River, N. C. <sup>1</sup>	1950 & 1956	51,896	--
New River, Onslow County, N. C. <sup>1</sup>	1972	580,977	--
N.C. Aquarium, Dare County, N. C. <sup>1</sup>	1998	708,000	--
Northeast Cape Fear River, N. C. <sup>1</sup>	1961	95,873	--
Old Field Swamp, N. C. <sup>1,8</sup>	1969	86,600	--
Oriental, South Avenue, N. C. <sup>1</sup>	1997	542,800	--
Pantego Creek and Cucklers Creek, N. C.	1963	517,948	--
Pasquotank River, N. C.	1960	80,931	--
Perquimans River, N. C. <sup>1</sup>	1961	6,366	--
Pungo Creek, N. C. <sup>1</sup>	1972	582,270	--
Pungo River, N. C. <sup>1</sup>	1971	296,602 <sup>2,3</sup>	--
Sanitary Sewer Fairway Lane, Mount Airy, N.C.	2006	539,367	--
Simmons Bay, N. C. <sup>8</sup>	1963	186,435	--
South Creek, N. C. <sup>1</sup>	1971	194,367 <sup>5</sup>	--
Stuart, Va. <sup>1</sup>	1989	2,220,440	--
Swift Creek, Pitt and Craven Counties, N. C. <sup>1</sup>	1966	611,096	--
Tar River, N. C.	1964	81,266	61,473
Tar River, N. C. <sup>1</sup>	1947	18,624	--
Tar River and Tributaries, N. C. <sup>1</sup>	1943	22,660	--
Tar River, Princeville, N. C. <sup>1</sup>	1967	390,249	--
Thomasville (Walnut Street), N. C. <sup>1</sup>	1996	59,919	--
Trent River, N. C. <sup>1</sup>	1953	64,769	--
Waccamaw River & Seven Creeks, N. C. & S. C. <sup>1,8</sup>	1961	67,821	--
White Oak Dike, Bladen and Pender Counties, N. C. <sup>1</sup>	1963	214,286	--

WILMINGTON, N.C. DISTRICT

**TABLE 6-E OTHER AUTHORIZED FLOOD DAMAGE REDUCTION PROJECTS**

1. Project authorized by Chief of Engineers under continuing authority.
2. Includes \$17,356 refund to local interests.
3. Adjusted to reflect actual cost.
4. Includes \$1,519 refund to local interests.
5. Includes \$387 refund to local interests
6. Includes \$338 refund to local interests
7. Adjusted \$3,000 to include preauthorization cost prior to FY 1960.
8. Transferred from Charleston District, FY 1980.
9. Reclassified to inactive category February 3, 1976.
10. Transferred from Charleston District, FY 1984.
11. Includes \$1,057 refund to local interests.
12. Includes preauthorization study funds; FY98, \$40,000; FY99, \$110,000; FY00, \$10,000; and preconstruction planning funds: FY00, \$65,000; FY01, \$145,000; FY02, \$97,000; FY03, \$13,000; and FY04, \$5,000.
13. Includes preauthorization study costs; FY98, \$16,807; FY99, \$128,745; FY00, \$14,448; and preconstruction planning costs: FY00, \$38,176; FY01, \$156,678; FY02, \$89,036; FY03, \$35,839; and FY04, \$5,271.
14. Includes preauthorization study funds: FY99, \$59,000; FY00, \$111,000 and preconstruction planning funds: FY00, \$40,000; FY01, \$190,000; FY02, \$136,000; FY03, \$27,000; and FY04, \$4,000.
15. Includes preauthorization study costs: FY99, \$44,071; FY00, \$112,681; FY01, \$11,766; FY02, \$1,482; and preconstruction planning costs: FY00, \$39,968; FY01, \$155,536; FY02, \$144,441; FY03, \$52,672; and FY04, \$4,383.
16. Includes preauthorization study funds: FY91, \$70,000; FY92, \$15,000; FY93, \$3,000; FY94, \$35,000; FY95, \$4,543; and preconstruction planning funds: FY95, \$457; FY96, \$20,000; FY97, \$55,000; FY98, \$15,000; FY99, \$10,000; FY00, \$32,000; and FY01, \$14,000.
17. Includes preauthorization study costs: FY91, \$12,573; FY92, \$69,544; FY93, \$57; FY94, \$32,103; FY95, \$13,311; FY96, -\$45; and preconstruction planning costs: FY96, \$11,317; FY97, \$26,257; FY98, \$45,357; FY99, \$15,425; FY00, \$23,500; and FY01, \$24,601.
18. Includes preauthorization study funds: FY82, \$10,000; FY83, \$85,000; FY84, \$70,000; FY85, \$35,000; FY86, \$45,000; FY87, \$30,000; FY88, \$1,000; FY89, \$55,000; FY90, \$85,000; FY92, \$39,484; and preconstruction planning funds: FY92, \$516; FY94, \$40,000; FY95, \$75,000; FY96, \$61,000; FY97, \$10,000; FY98, \$14,000 and FY99, \$11,910.
19. Includes preauthorization study costs: FY82, \$4,828; FY83, \$76,218; FY84, \$61,709; FY85, \$41,994; FY86, \$36,550; FY87, \$49,888; FY88, \$3,562; FY89, \$30,816; FY90, \$32,657; FY91, \$63,108; FY92, \$50,468; FY93, \$3,024; FY94, \$662; and preconstruction planning costs: FY94, \$25,758; FY95 \$70,987; FY96, \$27,117; FY97, \$41,023; FY98, \$21,990; and FY99 \$25,551.

**TABLE 6-G DEAUTHORIZED PROJECTS**

Project	For Last Full Report See Annual Report For	Date Deauthorized	Federal Funds Expended	Contributed Funds Expended
Adkin Branch, N. C.	1982	8 Sept. 81 <sup>2</sup>	219,477	--
AIWW- Masonboro Inlet - Training Wall	1998	5 April 99 <sup>8</sup>	--	--
AIWW- Mooring Basins	None	5 Aug. 77 <sup>1</sup>	--	--
AIWW- New River Onslow County, N. C.	1990	1 Jan. 90 <sup>6</sup>	--	--
AIWW- Peltier Creek, N. C. 12-foot project	None	17 Nov. 86 <sup>5</sup>	--	--
AIWW- Tidal Lock in Snows Cut	None	23 Sept. 86 <sup>1</sup>	--	--
Bodie Island, N. C.	None	5 Aug. 77 <sup>1</sup>	--	--
Cape Lookout, N. C.	None	5 Aug. 77 <sup>1</sup>	--	--
Conoho Creek, N. C.	1974	31 Mar. 78 <sup>2</sup>	79,782	--
Contentnea Creek, N. C.	1972	31 Mar. 78 <sup>3</sup>	4,250	--
Davis, N. C.	1982	31 Mar. 82 <sup>4</sup>	25,419	--
Fort Macon State Park, N. C., Remaining Work	1973	17 Nov. 86 <sup>5</sup>	--	--
Harbor of Refuge, Cape Lookout, N. C.	1934	1 Nov. 81 <sup>1</sup>	1,396,653	--
Hominy Swamp, N. C.	1973	31 Mar. 78 <sup>2</sup>	107,472	--
Howards Mill Lake, N.C.	1980	9 Jul. 95 <sup>8</sup>	698,400	--
Hyde County Dike, N. C.	None	5 Aug. 77 <sup>1</sup>	--	--
MacKay Creek, N.C.	1976	31 Mar. 78 <sup>2</sup>	130,900	--
Mann's Harbor, N. C.	1973	31 Mar. 78 <sup>4</sup>	7,265	--
Mill Creek, N. C.	1973	31 Mar. 78 <sup>2</sup>	116,395	--
Mocassin Swamp, N. C.	1973	31 Mar. 78 <sup>2</sup>	36,680	--
Morehead City Harbor, N. C.	1986	17 Nov. 86 <sup>5</sup>	--	--
Jetties at Beaufort Inlet				
Moyock Creek, N. C.	1973	31 Mar. 78 <sup>2</sup>	64,416	--
Nahunta Swamp, N. C.	1973	31 Mar. 78 <sup>2</sup>	65,673	--
Neuse River, N. C.	None	31 Mar. 78 <sup>4</sup>	30,911	--
Neuse River Barrier, N. C.	None	5 Aug. 77 <sup>1</sup>	--	--
Neuse River, 300 ft.-wide channel in front of New Bern, N.C.	None	5 Aug. 77 <sup>1</sup>	--	--
North River Dike, N. C.	None	5 Aug. 77 <sup>1</sup>	--	--
Ocracoke Inlet Jetty, N. C.	1986	17 Nov. 86 <sup>5</sup>	--	--
Ocracoke Island, N. C.	1975	17 Nov. 86 <sup>5</sup>	129,592	--
Randleman Lake, N.C.	1994	16 Apr. 02 <sup>8</sup>	4,786,088	--
Reddies River Lake, N.C. <sup>9</sup>	1980	16 Apr. 02 <sup>8</sup>	985,800	--
Roanoke River, 50 mile long Channel from Palmya Landing to Weldon, N.C.	1983	17 Nov. 86 <sup>5</sup>	--	--
Roaring River Lake, N.C. <sup>9</sup>	1978	16 Apr. 02 <sup>8</sup>	370,000	--
Rockfish Creek, N. C.	1976	31 Mar. 78 <sup>2</sup>	157,721	--
Scuppernong River, N. C.	1987	20 Apr. 88 <sup>2</sup>	234,032	--
Six Runs Creek, N. C.	1971	31 Mar. 78 <sup>2</sup>	64,977	--
Sweetwater Creek, N. C.	1973	31 Mar. 78 <sup>2</sup>	64,584	--
Thoroughfare Swamp, N. C.	1976	31 Mar. 78 <sup>2</sup>	132,767	--
Topsail Beach and Surf City, N.C.	None	5 Aug. 77 <sup>1</sup>	--	--
Tranters Creek, N. C.	1974	11 Jan. 85 <sup>2</sup>	139,339	--
Trent River, Basins and Access Channels at New Bern, N.C.	None	5 Aug. 77 <sup>1</sup>	--	--
Wilmington Harbor Widening and Deepening, N.C.	1990	1 Jan. 90 <sup>6</sup>	--	--

- |  |  |
|--|--|
| 1. Deauthorized under authority of Sec. 12, PL 93-251.   | 5. Deauthorized under authority of Sec. 1002, PL 99-662.   |
| 2. Deauthorized pursuant to the continuing authority provided the Chief of Engineers under Sec. 205 of the 1948 Flood Control Act, as amended. | 6. Deauthorized under authority of Sec. 1001 (b)(1), PL 99-662.                                    |
| 3. Deauthorized pursuant to the continuing authority provided the Chief of Engineers under Sec. 208 of the 1954 Flood Control Act.             | 7. Cost-to-date included in remaining authorized portion of project (Engineering and Design only). |
| 4. Deauthorized pursuant to the continuing authority provided the Chief of Engineers under Sec. 107 of the R&H Act of 1960, as amended.        | 8. Deauthorized under authority of Sec. 1001(b)(2), PL 99-662.                                     |

WILMINGTON, N.C. DISTRICT

**TABLE 6-H DAMS AND RESERVOIRS**

See Section in Text	Project	Name	Nearest City	River	Miles Above Mouth	Height of Dam (Ft)	Type	Reservoir Capacity (acre-feet)	Power Development (kilowatts)	Construction	Estimated Cost Lands and Damages <sup>1</sup>	Total
14.	Cape Fear River Basin, N.C.	B.Everett Jordan <sup>2</sup>	Moncure, N.C.	Haw	4.3	112	E	753,500	-	89,186,000	58,414,000	147,600,000 <sup>3</sup>
		Randleman <sup>2, 14</sup>	Randleman, N.C.	Deep	85.0	110	E	108,000	-	62,300,000	61,700,000	124,000,000 <sup>13</sup>
15.	Neuse River Basin, N.C.	Small reservoirs	-	Various	-	20 to 70+	E	923,000	-	-	-	38,454,000
		Falls <sup>2</sup>	Falls, N.C.	Neuse	-	92	E	335,620	-	91,334,000	91,666,000	183,000,000 <sup>4</sup>
		Wilson Mills	Wilson Mills, N.C.	Neuse	-	81	CG,E	201,000	-	-	-	13,000,000
		Beulah town	Kenly, N.C.	Little	-	50	E	81,000	-	-	-	9,300,000
		Bakers Mills	Princeton, N.C.	Little	-	53	E	36,000	-	-	-	6,600,000
		Little Buffalo	Kenly, N.C.	Little Buffalo Creek	-	51	E	13,000	-	-	-	1,100,000
		Buckhorn	Wilson, N.C.	Contentnea Creek	-	63	E	119,000	-	-	-	17,300,000
		Wiggins Mill	Wilson, N.C.	Contentnea Creek	-	42	E	35,000	-	-	-	6,700,000
		Stantonsburg	Stantonsburg, N.C.	Tisnot Swamp	-	36	E	48,000	-	-	-	5,100,000
		Great Swamp	Fremont, N.C.	Great Swamp	-	39	E	18,000	-	-	-	1,800,000
		Black Creek	Wilson, N.C.	Black Creek	-	33	E	17,000	-	-	-	1,500,000
		Aycock Swamp	Fremont, N.C.	Aycock Swamp	-	37	E	7,000	-	-	-	550,000
		Hillsboro	Durham, N.C.	Eno	-	136	E	123,000	-	-	-	8,100,000
17.	Yadkin River Basin, N.C. & S.C.	Orange	Durham, N.C.	Little	-	107	E	57,000	-	-	-	3,500,000
		W. Kerr Scott, N.C.	Wilkesboro, N.C.	Yadkin-Pee Dee	404.0	148	E	153,000	-	5,749,343	3,360,657	9,110,000
25.	Roanoke River Basin, VA. and N.C.	John H. Kerr, VA., and N.C. <sup>2</sup>	Boydton, VA.	Roanoke	178.7	144	CG,E	2,808,000	204,000	67,529,000	24,521,000	92,050,000 <sup>5</sup>
		Philpott, VA. <sup>2</sup>	Bassett, VA.	Roanoke	336.2	220	CG <sup>11</sup>	249,800	14,000	13,933,000	1,157,000	15,090,000
		Gaston, VA. and N.C. <sup>6</sup>	Roanoke Rapids, N.C.	Roanoke	144.9	108	CG,E	432,000	54,000	27,000,000	3,500,000	30,500,000
		Roanoke Rapids, N.C. <sup>7</sup>	Roanoke Rapids, N.C.	Roanoke	137.0	75	CG	59,300	83,000	31,300,000	800,000	32,100,000
		Smith Mountain, VA. <sup>8</sup>	Altavista, VA.	Roanoke	314.2	244	CG	825,000	41,000	28,000,000	3,800,000	31,800,000
		Leesville, VA. <sup>9</sup>	Altavista, VA.	Roanoke	293.7	95	CG,E	76,900	20,000	9,100,000	1,000,000	10,100,000
		Taber, VA.	Altavista, VA.	Roanoke	275.0	54	CG	34,000	12,000	8,000,000	1,700,000	9,700,000
		Melrose, VA.	Bookneal, VA.	Roanoke	262.9	110	CG,E	120,000	43,000	17,700,000	6,000,000	23,700,000 <sup>10</sup>
		Randolph, VA.	Chase City, VA.	Roanoke	227.8	147	CG,E	350,000	48,000	22,100,000	4,700,000	26,800,000
		Stuart, VA. and N.C.	Spray, N.C.	Roanoke	297.2	138	E	163,000	15,000	9,000,000	1,100,000	10,100,000
Schoolfield, VA. and N.C.	Danville, VA.	Roanoke	265.9	126	CG,E	248,000	80,000	27,800,000	6,400,000	36,000,000		

1. Includes highway, railroad, and utility relocations.  
 2. For details, see individual report.  
 3. Includes \$3,700,000 presently allocated to water supply to be reimbursed in the future by local interests and \$44,000 cash contribution for construction of ranger security buildings.  
 4. Includes \$13,637,000 presently allocated to water supply and \$21,595,000 recreation and fish and wildlife to be reimbursed in the future by local interests.  
 5. Exclusive of transmission lines.  
 6. Construction completed in 1963 by Virginia Electric and Power Co.  
 7. Based on modified plan developed in fiscal year 1949. Construction completed June 1955 by Virginia Electric and Power Co.

8. Construction completed in February 1966 by Appalachian Power Co.  
 9. Construction completed in June 1963 by Appalachian Power Co.  
 10. Includes cost of earth dam on Whipping Creek.  
 11. Authorizing legislation provided for earth dam; concrete gravity dam constructed.  
 12. Includes \$1,600,000 presently allocated to recreation and fish and wildlife.  
 13. Includes \$74,058,000 presently allocated to water supply, \$8,646,000 allocated to recreation and \$8,296,000 to flood damage reduction to be paid by local interests during construction.  
 14. Deauthorized April 2002

Key  
 E.....Earth  
 CG.....Concrete-Gravity

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

**TABLE 6-I RECONNAISSANCE AND**

**CONDITION SURVEYS**

**Project**

**Date Survey Conducted**

Atlantic Intracoastal Waterway, N.C.

October, November, December 2008;  
January, February, March, April, May,  
June, July, August 2009

Atlantic Beach, N.C.

August 2009

Beaufort Harbor, N.C.

October, November 2008; March, August  
2009

Bogue Inlet, N.C.

January, February, July, August 2009

Cape Fear River Above Wilmington Harbor, N.C.

November, December 2008; March, May,  
July, August 2009

Carolina Beach Inlet, N.C.

November 2008; January, April, July 2009

Lockwoods Folly River, N.C.

October, November, December 2008;  
January, April, June, July, August 2009

Manteo (Shallowbag) Bay, N.C.

October, November, December 2008;  
January, February, March, April, May,  
June, July, August 2009

Masonboro Inlet, N.C.

November, December 2008

Morehead City Harbor, N.C.

October, November, December 2008;  
January, February, March, April, May,  
June, July, August 2009

New River Inlet, N.C.

October 2008; February, March, April, July,  
August 2009

New Topsail Inlet, N.C.

October, December 2008; March, April,  
May, July, August 2009

Pamlico Sound, N.C.

March, April, July 2009

Rodanthe, N.C.

April, August 2009

Rollinson Channel, N.C.

October, November, December 2008; April,  
August 2009

Silver Lake Harbor, N.C.

October, November 2008; January, April,  
May 2008

Stumpy Point Bay, N.C.

April, July 2009

Wilmington Harbor, N.C.

October, November, December 2008;  
January, February, March, April, May,  
June, July, August 2009

**NAVIGATION WORK UNDER SPECIAL AUTHORIZATION**  
**Navigation Activities CAP Section 107, Public law 86-645 (Preauthorization)**

**TABLE 6-J**

---

<b>Study Identification</b>	<b>Fiscal Period Cost</b>
New River Inlet, Onslow County, N.C.	0
Newport River, Carteret County, N.C.	0
Shalotte River, Brunswick County, N.C.	0
Walter Slough, Dare County, N.C.	251
Section 107 Coordination Account	5,779

---

**ENVIRONMENTAL RESTORATION WORK - SPECIAL AUTHORIZATION**  
**CAP Sections 1135, 206, 204, 933**  
**(Preauthorization)**

**TABLE 6-K**

<b>Study Identification</b>	<b>Fiscal Period Cost</b>
Belhaven Harbor, N. C.	173,624 <sup>1</sup>
Concord Streambank Restoration	22,418 <sup>2</sup>
Western Cary Streams Restoration, Cary, N.C.	48,035 <sup>2</sup>
Section 1135 Coordination Account	10,790
Section 206 Coordination Account	16,959
Section 204 Coordination Account	10,458

1. Sec. 204 Project.

**FLOOD DAMAGE REDUCTION WORK UNDER SPECIAL AUTHORIZATION**  
**Flood Damage Reduction Activities CAP Section 205,**  
**Public Law 858, 80th Congress, as amended**  
**(Preauthorization)**

**TABLE 6-L**

<b>Study Identification</b>	<b>Fiscal Period Cost</b>
Section 103 Coordination Account	1,842

1. Sec. 103 Project.

# CHARLESTON, S.C., DISTRICT\*

This district comprises all of South Carolina (except local watersheds draining into the Savannah River). It embraces the drainage basins tributary to the Atlantic Ocean between

Little River and Port Royal Sound, except watersheds of Mackey and Skull Creeks, and excluding Hilton Head Island.

## IMPROVEMENTS

### Navigation

1. Ashley River, SC ..... 7-2
2. Atlantic Intracoastal Waterway Between Norfolk, VA and St. Johns River, FL ..... 7-2
3. Brookgreen Gardens, SC ..... 7-2
4. Charleston Harbor, SC ..... 7-2
5. Cooper River, Charleston Harbor, SC ..... 7-3
6. Folly River, SC ..... 7-4
7. Georgetown Harbor, SC ..... 7-4
8. Little River Inlet, NC and SC ..... 7-4
9. Murrells Inlet, SC ..... 7-5
10. Town Creek, SC ..... 7-5
11. Reconnaissance and Condition Surveys ..... 7-5
12. Other Authorized Navigation Projects ..... 7-5
13. Navigation Work Under Special Authorization ..... 7-5

### Shore Protection

14. Folly Beach, SC ..... 7-5
15. Morris Island Lighthouse, SC ..... 7-6
16. Myrtle Beach, SC ..... 7-6
17. Other Authorized Shore Protection Projects ..... 7-6
18. Shore Protection Work Under Special Authorization ..... 7-6

### Flood Control

19. Inspection of Completed Works ..... 7-6
20. Other Authorized Flood Control Projects ..... 7-6
21. Flood Control Work Under Special Authorization... 7-7

### Emergency Bank Protection

22. Streambank Erosion Under Special Authorization... 7-7

### Environmental Infrastructure

23. Lakes Marion & Moultrie, SC ..... 7-7

### Multiple Purpose Projects Including Power

24. Multiple Purpose Projects Including Power ..... 7-7

### Miscellaneous

25. Pocotaligo River and Swamp, SC ..... 7-7
26. Ecosystem Restoration and Protection ..... 7-8
27. Emergency Response Activities ..... 7-8
28. Regulatory Activities ..... 7-8

### Investigations

29. Active Investigations ..... 7-8

### Tables

- |           |   |      |
|-----------|---|------|
| Table 7-A | Cost and Financial Statement                              | 7-9  |
| Table 7-B | Authorizing Legislation                                   | 7-13 |
| Table 7-C | Other Authorized Navigation Projects                      | 7-18 |
| Table 7-D | Other Authorized Shore Protection Projects                | 7-18 |
| Table 7-E | Other Authorized Flood Control Projects                   | 7-19 |
| Table 7-F | Multiple Purpose Projects Including Power                 | 7-19 |
| Table 7-G | Deauthorized Projects                                     | 7-20 |
| Table 7-H | Other Authorized Streambank Erosion Control Projects      | 7-21 |
| Table 7-I | Active Investigations                                     | 7-22 |
| Table 7-J | Flood Control Work Under Special Authorization            | 7-23 |
| Table 7-K | Inspection of Completed Works                             | 7-24 |
| Table 7-L | Other Authorized Environmental Projects                   | 7-24 |
| Table 7-M | Aquatic Ecosystem Restoration Under Special Authorization | 7-25 |

\*All costs and financial statements for projects are listed at the end of this chapter. All other tables are referenced in text and also appear at the end of this chapter.

## Navigation

### 1. ASHLEY RIVER, SC

**Location.** The Ashley River rises near Ridgeville, SC and flows southeasterly about 40 miles, uniting with the Cooper River to form the harbor of Charleston, SC.

**Existing Project.** The project provides for a channel 30 ft deep and 300 feet wide for a distance of 7.4 miles and was last dredged in 1954.

**Local Cooperation.** Requirements are fully satisfied.

**Operations and results during fiscal year.** Initial appraisal report for deauthorization purposes is underway and scheduled for completion in July 2010. Federal costs for the project were \$8,419.

### 2. ATLANTIC INTRACOASTAL WATERWAY BETWEEN NORFOLK, VA AND ST. JOHNS RIVER, FL (CHARLESTON DISTRICT)

**Location.** The project starts near Little River at the North Carolina-South Carolina state line and extends generally south along the coast of South Carolina 62 miles to Winyah Bay; thence 63.5 miles to Charleston; thence 84.5 miles to and including Port Royal Sound; a total of 210 miles. (See National Ocean Survey Charts Nos. 11513, 11521, 11531, 11534, and 11535.)

**Previous projects.** For further details see page 613 of Annual Report for 1932.

**Existing project.** The project provides for a waterway twelve feet deep and not less than 90 feet wide with a branch channel of the same dimensions to McClellanville and construction of three bridges crossing the waterway in Horry County, South Carolina. Existing project was completed in 1940; three bridges were completed in 1936. (See Table 7-B for authorizing legislation.)

**Local cooperation.** None required.

**Terminal facilities.** There are rail-water terminals at Georgetown, Charleston and Port Royal and numerous open-pile wharves mostly for shipping agricultural products, fish, oysters, pulpwood, wood products, and petroleum products. Marinas are located at convenient intervals along the waterway where limited supplies and repair facilities are available for both commercial vessels and pleasure craft. Facilities are considered adequate for existing commerce and recreation requirements.

**Operations and results during fiscal year.** New Work: None. Maintenance: Costs of \$26,728 were incurred for

mosquito abatement and trenching. Costs of \$132,158 were incurred for environmental testing. Dredging was performed by Southwind Construction Corporation using a pipeline dredge on selected shoals from Jeremy Creek to St. Helena Sound during October 2008 – January 2009, removing 349,069 cubic yards of material, at a cost of \$1,680,493. Condition and operation studies, natural resource management, project operations management, planning, engineering and design and supervision and administration costs were \$520,972. Federal costs for the project were \$2,360,351.

Maintenance American Recovery and Reinvestment Act: A contract was awarded to Southern Dredging Company, Inc. on September 8, 2009 to perform dredging from Little River to Port Royal and minimal dike maintenance at selected disposal areas. Spillway and disposal area repairs will begin in November 2009 and dredging work will begin in January 2010. Federal costs for the project were \$10,913.

### 3. BROOKGREEN GARDENS, SC

**Location.** The project is located on the western boundary of Brookgreen Gardens near Murrells Inlet in Georgetown County, SC.

**Existing project.** The project provides for a 3,600 foot canal with a 30 foot bottom width maintained to a depth of four feet mlw. (See Table 7-B for authorizing legislation.)

**Local Cooperation.** Requirements are fully satisfied.

**Operations and results during fiscal year.** New Work: None. Maintenance: None.

### 4. CHARLESTON HARBOR, SC

**Location.** The harbor is located on the coast of South Carolina about 15 miles south of the midpoint of the coastline, 50 miles southwest of Winyah Bay, SC, and 80 miles northeast of the mouth of Savannah River. (See National Ocean Survey Charts Nos. 11521 and 11524.)

**Previous projects.** For further details see page 1808 of the Annual Report for 1915; page 579 of the Annual Report for 1926; page 562 of the Annual Report for 1938; page 425 of the Annual Report for 1962; and page 7-2 of the Report for 1997.

**Existing project.** The project as authorized by the 1996 Water Resources Development Act provides for deepening of the entrance channel from 42 ft deep to 47 ft deep and the inner channels from 40 ft deep to 45 ft deep. Other improvements include realignment/widening of various channels/reaches, construction of a new turning basin opposite the future Daniel

## CHARLESTON, S.C. DISTRICT

Island terminal, construction of a new contraction dike, reconstruction of two existing dikes and removal of a third existing dike. Removal of the east contraction dike on Daniel Island was completed in June 1999. Dredging of the Daniel Island Reach was completed in July 2000. The Entrance Channel dredging was completed in September 2001. Dredging in the Lower Harbor was completed in April 2002. Dredging in the Upper Harbor was completed in May 2004. All features have been completed except for the turning basin. (See Table 7-B for authorizing legislation.)

**Local cooperation.** Requirements are described in full on pg 7-2 of the FY 99 Annual Report. The non-Federal partner is the South Carolina State Ports Authority. The Project Cooperation Agreement was executed on June 5, 1998.

**Terminal facilities.** The South Carolina State Ports Authority owns and operates five public terminals and a grain elevator in Charleston Harbor. These terminals offer more than two miles of berthing space, room enough for seventeen vessels at one time. The Ports Authority operates twenty-one container cranes, thirty rubber tire gantry cranes, fifty-nine toplifters, five chassis stackers, nine emptyhandlers, and two traveling breakbulk gantry cranes. There are 1.4 million square feet of warehouse space with covered rail access and truck loading docks. In addition to both CSX and Norfolk Southern rail lines, over 150 truck carriers provide inland transportation for Charleston Harbor. Facilities for marine repairs and servicing are available at Detyens Shipyard, which operates two yards. The main shipyard is located on the Cooper River and the original, smaller shipyard is located on the Wando River. For further details see Port Series No. 13, 1987, Corps of Engineers.

**Operations and results during fiscal year.** New Work: A General Re-Evaluation Report to analyze channel alignment/modification of the authorized but not constructed turning basin for a revised terminal configuration is underway. Total project costs were \$52,657; \$39,169 Federal and \$13,488 non-Federal. Maintenance: Dredging was performed (a) by Norfolk Dredging Company using a pipeline dredge in the Lower Reaches and Wando River during October 2009, removing 360,565 cubic yards of material, at a cost of \$2,166,458, and (b) by Southern Dredging Company, Inc. using a pipeline dredge in the Upper Harbor during December 2008 – July 2009, removing 1,632,768 cubic yards of material, at a cost of \$5,003,975, and (c) by Great Lakes Dredge and Dock Company using a pipeline dredge in the Lower Harbor during September 2009, at a cost of \$567,000. Costs of \$13,429 were incurred to Specpro Environmental Services, LLC for work performed in FY08 at the Clouter Creek Disposal Area. Clearing, ditching, and drainage activities were performed by J/Mac Construction, Inc. at the Clouter Creek Disposal Area during March 2009 – September 2009, at a cost of \$613,688. Costs of \$23,828 were incurred for mosquito abatement. Condition and operation studies, ODMDS monitoring, planning, engineering and design, and supervision and administration costs were \$1,151,497. Federal costs for maintenance were \$9,539,875.

Maintenance American Recovery and Reinvestment Act: A contract was awarded to Great Lakes Dredge and Dock Company, LLC on June 30, 2009 to perform dredging of the Lower Harbor. Work began in late September 2009 and is scheduled to be completed in December 2009. Federal costs for the project were \$226,769.

## 5. COOPER RIVER, CHARLESTON HARBOR, SC

**Location.** Cooper River is located in Charleston and Berkeley Counties, SC, and empties into the Atlantic Ocean at Charleston (See National Ocean Survey Charts Nos. 11521 and 11524.)

**Existing project.** The major cause of the shoaling problem in Charleston Harbor was the diversion of fresh water from the Santee River through Pinopolis Dam into the salt water of Charleston Harbor, which caused density currents that trapped sediments resulting in a phenomenal rate of deposition. The most practical solution of the shoaling problem was to divert most of the Santee River waters above Pinopolis Dam back into the lower Santee River through a canal beginning at Lake Moultrie and extending to the Santee River in the vicinity of St. Stephen, South Carolina. The project for Cooper River, as authorized by the 1968 River and Harbor Act, provided that the discharge through the existing Pinopolis Hydroplant be reduced to a flow which would not establish a density current in the harbor. This flow was estimated at 3,000 cubic feet per second (cfs) during the design phase of the project, but after operational tests, this flow is estimated at 4,500 cfs. The excess water impounded in Lake Moultrie is being directed through a new canal above St. Stephen, South Carolina, to enter the Santee River at a point well below the Lake Marion Spillway (Wilson Dam). A new hydroelectric facility was constructed on the new canal at the edge of the swamp adjacent to the Santee River. This plant replaces those features made less effective at Pinopolis through curtailment of flows. The average flow of 11,000 cfs at the new powerplant, plus the 4,500 cfs average release planned for Pinopolis, approximates the historical average flow at Pinopolis. The three generators at the new plant are rated at 28,000 kilowatts each, for a total of 84,000 kilowatts. In the interest of fish and wildlife resources of the area, the project includes a herring lift at the new powerhouse site and a fish hatchery. Construction as initiated March 1977. The power-on-line date was March 1985. The power plant, channels and canals, and attendant work were completed in FY 85. (See Table 7-B for authorizing legislation.)

**Local cooperation.** None required.

**Operations and results during fiscal year.** New Work: None. Maintenance: Funds of \$4,158,001 were spent for maintenance of completed work.

Maintenance American Recovery and Reinvestment Act: Contracts were awarded to (a) Eaton Corporation on June 30, 2009 to replace the excitation system in the Powerhouse, and (b)

The Clement Group, LLC on July 29, 2009 to replace the roof on the Powerhouse, and (c) Pavkov Contracting Company, Inc on August 5, 2009 for bank stabilization of bridge abutments at the project site, and (d) Hall Contracting Corporation on August 10, 2009 to repair the intake gate. Federal costs for the project were \$509,573.

## 6. FOLLY RIVER, SC

**Location.** The project begins in Folly River and Folly Creek north of the Town of Folly Beach and follows a southwesterly course into the Atlantic Ocean. (See National Ocean Survey Chart No. 11521.)

**Existing project.** The project provides for an entrance channel, eleven feet deep by 100 feet wide extending from the Stono River three miles through the ocean bar; a channel within Folly River nine feet deep and 80 feet wide, extending three miles downstream from U. S. Highway 171 to the confluence of Folly and Stono Rivers; and a channel within Folly Creek nine feet deep by 80 feet wide extending three miles downstream from Highway 171 to the confluence with the Folly River. The existing project was completed in FY 79. (See Table 7-B for authorizing legislation.)

**Local cooperation.** None required.

**Operations and results during fiscal year.** New Work: None. Maintenance: Condition and operations studies and environmental monitoring costs were \$1,748.

## 7. GEORGETOWN HARBOR, SC

**Location.** The harbor is located on the coast of South Carolina 50 miles northeast of Charleston Harbor and 90 miles southwest of the entrance to Cape Fear River, North Carolina. (See National Ocean Survey Chart No. 11532)

**Previous projects.** For further details see page 1806 of Annual Report for 1915; page 549 of Annual Report for 1938; and page 442 of Annual Report for 1944.

**Existing project.** The authorizations provide for a channel 27 feet deep with varying widths of 600 feet to 400 feet from the Atlantic Ocean to and including a turning basin at the U. S. Highway 17 bridge over Sampit River, with a side channel 2,400 feet long and not less than 200 feet wide leading to a turning basin at the upper end of the built-up portion of the city waterfront, a total of 17.9 miles. The project also provides for the continued maintenance to a depth of 18 feet and a width of 400 feet for the bypassed portion of Sampit River opposite the City of Georgetown. The existing project was completed in 1951. The jetties were completed in 1903 - 1904. (See Table 7-B for authorizing legislation.)

**Local cooperation.** None required.

**Terminal facilities.** Terminal facilities at the Port of Georgetown consist of one 600-foot concrete wharf, one 700-foot bulkhead adjacent to a paved outside storage area, and one 600-foot steel berth. There are 103,000 square feet of transit warehouse space, 36,400 square feet of covered transit storage sheds, and 25 acres of paved backup space. Mobile cranes with up to a 225-ton lifting capacity are available. The port is equipped with special handling facilities for metals, cement, salt, and forest products. On-terminal rail service is provided by CSX and the port is accessible via U.S. Highways 17, 521, 701 and Interstates 95, 26, and 20. For further details, see Port Series No. 13, 1987, Corps of Engineers.

**Operations and results during fiscal year.** New Work: None. Maintenance: Costs of \$37,615 were incurred to Southern Dredging Company, Inc for dredging work performed in FY08 in the Sampit River and Upper Winyah Bay. Costs of \$8,800 were incurred to Smalls Loading Limited, Inc for diking work performed in FY08 at the Waccamaw Point Disposal Area. A contract was awarded on September 30, 2009 to Porter Partners for diking activities at the Waccamaw Neck and Sampit River Disposal Areas. The work will begin in November 2009 and scheduled to be completed in September 2010. Efforts are underway to recertify and expand the existing Ocean Dredged Material Disposal Site for the entrance channel material. An analysis is underway to determine if the project has enough disposal area capacity for 20 years. Condition and operation studies, planning, engineering and design and supervision and administration costs were \$380,769. Federal costs for the project were \$427,184.

## 8. LITTLE RIVER INLET, NC AND SC

**Location.** The project is located near the North Carolina-South Carolina state line. Little River enters the Atlantic Ocean at Little River Inlet at the state line and affords the only connection between the Atlantic Intracoastal Waterway and the ocean along 68 miles of coastline from Shallotte, N. C. to Georgetown, S. C. (See National Ocean Survey Chart No. 11535.)

**Existing project.** The project provides for an entrance channel twelve feet by 300 feet across the ocean bar; thence a ten by 90-foot inner channel to the Atlantic Intracoastal Waterway. The entrance channel is stabilized by jetties extending seaward 3,284 feet and 3,830 feet long on the east and west sides of the inlet, respectively. The project was completed in FY 84. (See Table 7-B for authorizing legislation.)

**Local cooperation.** Fully in compliance.

**Terminal facilities.** There are seven marinas, numerous private docks, and several public boat ramps located in or near Little River.

**Operations and results during fiscal year.** New Work: None. Maintenance: None.

## 9. MURRELLS INLET, SC

**Location.** The project is located on the coast of South Carolina, in Georgetown County, about 13 miles southwest of the City of Myrtle Beach. The inlet is the ocean entrance through a barrier beach to several tidal streams in the Murrells Inlet-Garden City estuarine area. (See National Ocean Survey Chart No. 11535.)

**Existing project.** The project provides for an entrance channel twelve feet by 300 feet across the seaward bar; thence a ten by 90-foot inner channel to a turning basin at the old Army crashboat dock. The entrance channel is stabilized by ocean jetties extending seaward 3,445 feet and 3,319 feet on the north and south sides of the inlet, respectively. The recreational project includes a walkway on the south jetty with access road and parking area. The existing project was completed in 1981. (See Table 7-B for authorizing legislation.)

**Local cooperation.** Fully in compliance.

**Terminal facilities.** There are five marinas, numerous private docks, and several public boat ramps located about the Murrells Inlet Harbor.

**Operations and results during fiscal year.** New Work: None. Maintenance: None.

## 10. TOWN CREEK, SC

**Location.** Town Creek Channel begins at the AIWW directly south of the Town of McClellanville in Charleston County, SC. The channel follows Five Fathom Creek in a southerly direction to the Atlantic Ocean. (See National Ocean Survey Chart No. 11531.)

**Existing project.** The project provides a channel ten feet deep by 80 feet wide from the AIWW to the mouth of Five Fathom Creek, a distance of 6.2 miles. The project includes an entrance channel twelve feet deep by 100 feet wide across the ocean bar, a distance of 4.0 miles. The existing project was completed in 1975. In 1989, Hurricane Hugo breached Sandy Point and created a new inlet to the ocean. This inlet continued to increase in size and was being used by local traffic to get to the Atlantic Ocean. In 1997, the district requested authority to maintain this new inlet in lieu of the existing authorized channel. Our request to abandon the existing Town Creek channel alignment and establish the Clark's Creek channel alignment was approved by headquarters. The proposed channel relocation, due to natural occurrences, is within the scope of the project authorization. The authorized project dimensions of 12 feet deep by 100 feet wide shall be maintained as appropriate. (See Table 7-B for authorizing legislation.)

**Local cooperation.** Requirements fully satisfied.

**Operations and results during fiscal year.** New Work: None. Maintenance: Maintenance dredging was

performed by the government-owned sidescaster dredge *Merritt* during June - July 2009, removing 113,045 cubic yards of material, at a cost of \$486,084. Condition and operations studies, natural resource management, planning, engineering and design and supervision and administration costs were \$9,545. Federal costs for the project were \$495,629.

## 11. RECONNAISSANCE AND CONDITION SURVEYS

Costs of \$567,256 were incurred.

## 12. OTHER AUTHORIZED NAVIGATION PROJECTS

(See Table 7-C.)

## 13. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION

Navigation Activities Pursuant to Section 107, Public Law 86-645, as amended (Preauthorization).

No cost incurred in FY09.

Snagging and Clearing for Navigation (Section 3, Public Law 79-14.)

No cost incurred in FY09.

Mitigation of Shore Damages Activities Pursuant to Section 111, Public Law 90-483 (Preauthorization).

Fiscal year costs were Coordination Account, \$14,952.

## Shore Protection

## 14. FOLLY BEACH, SC

**Location.** The municipality of Folly Beach, SC is located along the Atlantic shoreline of Folly Island, approximately 12 miles south of the City of Charleston, SC. Folly Island is 6.1 miles in length, of which 5.34 miles are included in the Federal project. (See National Ocean Survey Chart No. 11521).

**Existing project.** The project includes a protective beach for 28,200 linear feet (5.34 miles) of shoreline to provide storm damage protection. Initial project construction was completed in 1993 placing 2.7 million cubic yards of material on the beach. Rehabilitation of nine groins was completed in May 1993. Periodic nourishment will be required approximately every eight years, however, the project held up beyond expectations. The first periodic nourishment was completed in December 2005 placing 2.3 million cubic yards of material on the beach. (See Table 7-B for authorizing legislation.)

**Local cooperation.** Requirements are described in full on page 7-8 of the FY 1994 Annual Report.

**Operations and results during fiscal year. P.L 84-99 rehabilitation assistance authorized in FY2006 related to Hurricane Ophelia:** Costs of \$61,340 were incurred for environmental monitoring performed by South Carolina Department of Natural Resources. Supervision and administration costs were \$2,515.

Total project costs were \$63,855; all Federal.

## 15. MORRIS ISLAND LIGHTHOUSE, SC

**Location.** The Morris Island Lighthouse is located approximately one-quarter mile off Morris Island in Charleston County, South Carolina. The lighthouse sits in 10 feet of water southwest of the Charleston Harbor jetties in the Atlantic Ocean. Morris Island Lighthouse was built in 1876 and placed on the National Register of Historic Places in 1982.

**Existing project.** For over a century the lighthouse has weathered ocean currents, earthquakes, and hurricanes but is now in danger of being destroyed by natural forces. The conceptual plan for erosion protection includes a sheetpile cell around the base of lighthouse with rip-rap and filter cloth around the outside perimeter of the cell. (See Table 7-B for authorizing legislation).

**Local cooperation.** The Section 103 Project Cooperation Agreement was executed on October 13, 2006. The sponsor is the South Carolina State Budget and Control Board. The cost sharing on this project is 87.5% Federal/12.5% Non-Federal to offset the damages attributed to the Charleston Harbor jetties.

**Operations and results during fiscal year.** Project was completed in March 2008. Final costs as a result of balancing the project for cost sharing were \$4,775 Federal and \$-2,371 non-Federal.

## 16. MYRTLE BEACH, SC

**Location.** Myrtle Beach is located along the northern coast of SC. The area is commonly referred to as the Grand Strand. The Grand Strand extends from Little River Inlet at the NC border, in a southerly direction, to Murrells Inlet, SC for a total distance of approximately 37 miles. This project includes the developed area along the coast of Horry County, SC and a portion of the coastal area of Georgetown County, SC. Major municipalities in the project area include the cities of Myrtle Beach and North Myrtle Beach, Garden City, and the Town of Surfside Beach.

**Existing project.** The plan of improvement placed about 6.3 million cubic yards of sand over a total project reach of 25.4 miles of beach encompassing three separable reaches. The material came from offshore borrow sites. Periodic nourishment will be required once every 8 to 10 years throughout the project

life of 50 years. Sand placement on the North Myrtle Beach reach was completed in May 1997 placing 2.5 million cubic yards of sand. Sand placement on the Myrtle Beach reach was completed in January 1998 placing 2.3 million cubic yards of sand. Sand placement on the Garden City/Surfside reach was completed in November 1998 placing 1.5 million cubic yards of sand. (See Table 7-B for authorizing legislation.)

**Local cooperation.** Requirements are described in full on page 7-8 of the FY 1995 Annual Report.

**Operations and results during fiscal year. P.L 84-99 rehabilitation assistance authorized in FY2006 related to Hurricane Ophelia:** Sand placement on the Myrtle Beach reach began in October 2008 and was completed in January 2009 placing 1,497,975 cubic yards of material on the beach over 8.2 miles. Total contract costs in FY 2009 were \$17,307,064. Costs for grassing and fencing were \$1,361,592. Planning, engineering and design, environmental monitoring and supervision and administration costs were \$618,480. Total costs for the project were \$19,287,136; \$14,447,129 Federal and \$4,840,007 non-Federal.

## 17. OTHER AUTHORIZED SHORE PROTECTION PROJECTS

(See Table 7-D.)

## 18. SHORE PROTECTION WORK UNDER SPECIAL AUTHORIZATION

Shore Protection Activities Pursuant to Section 103, Public Law 87-874 (Preauthorization).

No costs incurred in FY09.

## Flood Control

## 19. INSPECTION OF COMPLETED WORKS

Flood Control Act of June 22, 1936, and subsequent acts require local interests to maintain and operate local protection projects after completion in accordance with regulations prescribed by Secretary of the Army. Inspections were made to determine extent of compliance and responsible local officials were advised of inadequacies in maintenance and operation on local flood protection works when appropriate. Cost for the period was \$70,131. For project inspection data see Table 7-K. Costs of \$61,200 were incurred to prepare a Section 408 Report for Sawmill Branch. Total Federal costs were \$131,331.

## 20. OTHER AUTHORIZED FLOOD CONTROL PROJECTS

(See Table 7-E.)

## 21. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION

Flood Control Activities Pursuant to Section 205, Public Law 80-858, as amended (Preauthorization).

(See Table 7-J.)

### Emergency Bank Protection

## 22. STREAMBANK EROSION UNDER SPECIAL AUTHORIZATION

Emergency Streambank and Shoreline Protection Activities Pursuant to Section 14, Public Law 79-526 as amended (Preauthorization).

Fiscal year costs were Coordination Account, \$2,164 and Rocky Branch, SC, \$11,816. (See Table 7-H for Other Authorized Streambank Erosion Control Projects.)

Snagging and Clearing of Navigable Streams and Tributaries in Interest of Flood Control, Section 208, Public Law 83-780.

No costs incurred in FY09.

### Environmental Infrastructure

## 23. LAKES MARION & MOULTRIE, SC

**Location.** The Lakes Marion and Moultrie, SC project is located in the east central part of the state and the two lakes make up the Santee Cooper Lake system. Calhoun, Clarendon, Colleton, Dorchester, Orangeburg, and Sumter Counties are located around Lakes Marion and Moultrie.

**Existing project.** Six counties and fourteen municipalities joined together to form the Lake Marion Regional Water Agency. Using Lake Marion as a source, the system will provide potable water to satisfy the immediate and future water supply needs for a large portion of six counties and seven municipalities located in central South Carolina in the proximity of Lake Marion. The project includes construction of an 8 MGD (million gallon per day) water treatment plant, installation of approximately 70 miles of water transmission lines and installation of a sewer component.

The U.S. Army Corps of Engineers currently has authorization to expend \$60 million for planning, engineering, design, and construction assistance for the project. (See Table 7-B for authorizing legislation).

**Local cooperation.** The Design Agreement was executed on May 11, 2001 with the Lake Marion Regional Water Agency. An amendment was executed on January 14, 2002 that allowed

the Corps to accept a design provided by the sponsor. A second amendment was executed on June 4, 2004 to include design of the sewer component. The Project Cooperation Agreement was executed on June 4, 2004.

### Operations and results during fiscal year.

Installation of 1.8 miles of water transmission lines was performed by Master Builders Constructors, Inc. for the Santee Reach during November 2008 – July 2009 at a cost of \$3,224,344. Environmental activities, planning, engineering and design and supervision and administration costs were \$442,217. Total costs for the project were \$3,666,561; \$3,224,344 Federal and \$442,217 non-Federal.

Construction American Recovery and Reinvestment Act: A contract was awarded to Heeter Construction, Inc on August 26, 2009 to install 6.9 miles of water transmission lines for Holly Hill Phase I. Contract activities and supervision and administration costs were \$53,893. Total costs for the project were \$53,893; all non-Federal.

## 24. MULTIPLE PURPOSE PROJECTS INCLUDING POWER

(See Table 7-F.)

### Miscellaneous

## 25. POCOTALIGO RIVER AND SWAMP, SC

**Location.** The project is located in the Pocotaligo River and Swamp in Clarendon and Sumter Counties. It starts at the confluence of Turkey Creek and the Pocotaligo River near the City of Sumter and it extends pass U.S. Highway 301, near the City of Manning, SC.

**Existing project.** Purpose of the project is Aquatic Ecosystem Restoration. Pocotaligo Swamp has elevated water levels in the portion of the swamp between Sumter and Manning. Over the past years, these elevated water levels have caused the over story canopy to die and expose the swamp waters to sunlight. The presence of sunlight provides the means whereby nuisance aquatic weeds propagate, thus additionally elevating the water levels. Construction will lower the artificially high water levels and allowed approximately 6,000 acres of swamp to revert to a forested swamp that normally dries up for part of each year. Two waterways will be cleared (20 feet wide X 2-4 feet deep) to allow flow to resume and water levels to decrease. Approximately 25 miles of waterway will be cleared. (See Table 7-B for authorizing legislation).

**Local cooperation.** The Section 206 Project Cooperation Agreement was executed on January 29, 2004. The sponsor is

the Sumter County Soil and Water Conservation District. The cost sharing on this project is 65% Federal and 35% non-Federal.

**Operations and results during fiscal year.** Project was completed in February 2009. Contract costs in FY 2009 were \$94,818. Environmental activities, planning, engineering and design and supervision and administrative costs were \$47,911. \$54,581 was credited to the sponsor for lands, easements, and right-of way for the project. Total costs were \$197,310; \$83,465 Federal and \$113,845 non-Federal.

## **26. ECOSYSTEM RESTORATION AND PROTECTION**

Project modifications accomplished under the authority of Section 206, Aquatic Ecosystem Restoration, Water Resources Development Act of 1996 (Preauthorization).

(See Table 7-M.)

Project modifications accomplished under the authority of Section 204, Beneficial Use of Dredged Material, Water Resources Development Act of 1986, as amended.

Fiscal year costs were Coordination Account, \$10,113 and \$45,074 for SC Coast Regional Sediment Management.

Project modifications accomplished under the authority of Section 1135, Project Modifications For Improvement of the Environment, Water Resources Development Act of 1986, as amended.

Fiscal year costs were Coordination Account, \$22,014.

See Table 7-L for Other Authorized Environmental Projects.

## **27. EMERGENCY RESPONSE ACTIVITIES - FLOOD CONTROL AND COASTAL EMERGENCIES**

Federal costs incurred under the Flood Control and Coastal Emergencies Program for planning, training, and facilities was \$413,051.

Federal costs incurred under Emergency Response Operations and Operational Support was \$28,106.

Emergency Work in Support of Other Federal Agencies. Costs of \$21,554,226 were incurred largely for FEMA ice support in response to Hurricane Ike and Gustav.

Costs of \$8,394 were incurred for the Catastrophic Disaster Preparedness Program.

Emergency flood control activities – repair, flood fighting, and rescue work (Public Law 99, 84<sup>th</sup> Congress, and antecedent legislation).

Fiscal year costs were Folly Beach, SC, \$63,855 and Myrtle Beach, SC, \$3,999,798. See individual project write-ups for details.

## **28. REGULATORY ACTIVITIES**

During FY 09, \$4,766,544 was expended on Permit Evaluation, \$174,023 on Enforcement, \$91,124 on Compliance and \$7,083 on EIS. Total costs were \$5,038,774.

American Recovery and Reinvestment Act: Costs of \$127,788 were incurred to implement measures to increase the number of compliance inspections performed on permit decisions.

## **Investigations**

## **29. ACTIVE INVESTIGATIONS**

See Table 7-I which covers: Surveys, Collections, and Study of Basic Data, and Research and Development Activities.

CHARLESTON, S.C. DISTRICT

**TABLE 7-A COST AND FINANCIAL STATEMENT**

See Sect. in Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
1	Ashley River, SC	New Work:					
		Approp.	0	0	20,000	0	20,000
		Cost	0	0	990	8,419	9,409
2	Atlantic Intra-coastal Waterway Between Norfolk, Va. and the St. Johns River, FL	New Work:					
		Approp.	0	0	0	0	7,455,378 1
		Cost	0	0	0	0	7,455,378 1
		Maint:					
		Approp.	2,222,000	537,000	2,180,000	1,015,280	101,851,288 2
		Cost	616,088	1,986,502	569,430	2,360,351	101,125,859 2
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	0	0	0	6,088,000	6,088,000
		Cost	0	0	0	10,913	10,913
3	Brookgreen Gardens, SC	Maint:					
		Approp.	-12,000	0	0	0	231,000
		Cost	9,641	4,512	0	0	230,936
4	Charleston Harbor, SC	New Work:					
		Approp.	0	-65,000	0	0	145,298,128 3
		Cost	-208,001	115,719	111,407	39,169	145,074,637 3
		Maint:					
		Approp.	9,187,000	7,679,000	9,577,000	8,923,340	220,300,521 4
		Cost	4,324,419	11,094,448	8,552,204	9,539,875	218,408,300 4
	(Contributed Funds)	New Work:					
		Approp.	0	0	7,034,821	0	52,100,676 5
		Cost	278,591	25,011	47,346	13,488	44,961,491 5
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	0	0	0	5,049,450	5,049,450
		Cost	0	0	0	226,769	226,769
5	Cooper River, Charleston Harbor, SC	New Work:					
		Approp.	0	0	0	0	204,188,712
		Cost	0	0	0	0	204,188,712
		Maint:					
		Approp.	2,944,000	3,331,000	2,999,000	4,387,020	92,644,565 6
		Cost	2,964,028	3,232,760	2,875,836	4,158,001	92,178,218 6
		Maint: (American Recovery and Reinvestment Act)					
		Approp.	0	0	0	4,010,490	4,010,490
		Cost	0	0	0	509,573	509,573

**TABLE 7-A COST AND FINANCIAL STATEMENT**

See Sect. in Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009	
6	Folly River, SC	New Work:						
		Approp.	0	0	0	0	337,736	
		Cost	0	0	0	0	337,736	
		Maint:						
		Approp.	888,000	6,000	3,000	0	9,639,320	
		Cost	878,145	20,690	1,677	1,748	9,639,309	
7	Georgetown Harbor, SC	New Work:						
		Approp.	0	0	0	0	7,061,755 7	
		Cost	0	0	0	0	7,061,755 7	
		Maint:						
		Approp.	3,785,000	5,037,000	4,677,000	1,576,820	115,114,080 8	
		Cost	4,561,944	2,140,161	7,364,671	427,184	113,690,344 8	
8	Little River Inlet, NC and SC	New Work:						
		Approp.	0	0	0	0	17,037,428	
		Cost	0	0	0	0	17,037,428	
		Maint:						
		Approp.	0	0	0	0	3,017,422	
		Cost	0	-500	0	0	3,016,922	
		(Contributed Funds)	New Work:					
		Approp.	0	0	0	0	1,521,920	
		Cost	0	0	0	0	1,521,920	
		9	Murrells Inlet, SC	New Work:				
Approp.	0			0	0	0	15,502,240	
Cost	0			0	0	0	15,502,240	
Maint:								
Approp.	0			0	0	0	7,858,685	
Cost	0			0	0	0	7,858,439	
(Contributed Funds)	New Work:							
Approp.	0			0	0	0	1,536,893 9	
Cost	0			0	0	0	1,536,893 9	
10	Town Creek, SC			New Work:				
		Approp.	0	0	0	0	219,521	
		Cost	0	0	0	0	219,521	
		Maint.						
		Approp.	407,000	472,000	435,000	500,000	11,842,699	
		Cost	402,423	461,986	445,194	495,629	11,833,881	
		(Contributed Funds)	New Work:					
		Approp.	0	0	0	0	8,600	
		Cost	0	0	0	0	8,600	

CHARLESTON, S.C. DISTRICT

**TABLE 7-A COST AND FINANCIAL STATEMENT**

See Sect. in Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009	
14	Folly Beach, SC (First Nourishment)	New Work:						
		Approp.	59,000	0	34,000	-44,931	9,115,969	
		Cost	3,326,928	100,193	-28	0	8,987,969	
	(Contributed Funds)	New Work:						
		Approp.	0	0	-225,126	0	1,624,956	
		Cost	631,860	11,177	28	0	1,624,956	
		Rehab:						
		Approp.	6,690,369	1,551,000	-56,000	-345	11,799,924	
		Cost	1,554,740	7,981,384	50,298	63,855	11,799,924	
15	Morris Island Lighthouse, SC	New Work:						
		Approp.	2,701,000	0	0	0	2,900,019	
		Cost	80,749	1,524,562	1,165,925	4,775	2,900,019	
	(Contributed Funds)	New Work:						
		Approp:	0	535,596	521,000	-261,798	794,798	
		Cost	0	275,151	522,018	-2,371	794,798	
16	Myrtle Beach, SC (First Nourishment)	New Work:						
		Approp.	74,000	17,873,000	0	0	17,947,000	
		Cost	0	179,935	6,383,763	10,447,331	17,011,029	
	(Contributed Funds)	New Work:						
		Approp:	39,846	9,624,000	0	0	9,663,846	
		Cost	0	0	2,254,413	4,840,007	7,094,420	
		Rehab:						
		Approp.	900,000	14,363,450	0	-1,700,000	13,563,450	
		Cost	392,686	674,409	7,924,371	3,999,798	12,991,264	
23	Lakes Marion & Moultrie, SC	New Work:						
		Approp.	7,940,000	6,300,000	6,607,000	10,000,000	41,930,000	
		Cost	8,150,371	5,099,405	1,446,723	3,224,344	28,793,472	
	(Contributed Funds)	New Work:						
		Approp.	2,000,000	4,000,000	0	3,000,000	11,864,333	
		Cost	4,231,376	745,283	3,175,115	442,217	11,412,519	
		New Work: (American Recovery and Reinvestment Act)						
		Approp.	0	0	0	13,900,000	13,900,000	
		Cost	0	0	0	0	0	
		(Contributed Funds)	New Work:					
			Approp.	0	0	0	3,000,000	3,000,000
			Cost	0	0	0	53,893	53,893

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

**TABLE 7-A COST AND FINANCIAL STATEMENT**

See Sect. in Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
25	Pocotaligo River & Swamp, SC	New Work:	5,000	445,000	0	0	705,309
		Approp. Cost	5,569	36,785	325,151	83,465	705,306
	(Contributed Funds)	New Work: Approp. Cost	0	216,9200	108,280	0	325,200
			0	0	265,922	59,264	325,186

1 Includes \$109,490 for new work for previous projects.  
 2 Includes \$69,422 for maintenance of previous projects.  
 3 Includes \$47,395,108 for previous projects and \$318,000 for Preconstruction, Engineering and Design on the current project.  
 4 Includes \$401,989 for maintenance of previous projects and \$600 for maintenance expended from contributed funds for the existing project.

5 Includes \$12,409,848 for the 40 ft project, excludes \$2,996,994 credit for LERRD's and \$1,966,945 final project reimbursement for the 40 ft project. Includes \$179,000 for Preconstruction, Engineering and Design on the current project.  
 6 Includes \$765,000 appropriated and expended in FY 96 under appropriation 96X5125 Maintenance and Operation of Dams and Other Improvements of Navigable Waters.  
 7 Includes \$2,445,852 for new work for previous projects.  
 8 Includes \$114,556 for maintenance of previous projects.  
 9 Includes \$67,000 accomplished under authority of Section 3, P.L. 79-11 incurred through FY 73.  
 10 Excludes \$54,581 credit for LERRD's.

CHARLESTON, S.C. DISTRICT

**TABLE 7-B AUTHORIZING LEGISLATION**

See Sect. in Text	Date of Authorizing Act	Project and Work Authorized	Documents
1.		<b>ASHLEY RIVER, SC</b>	
	Jun 14, 1880	Channel (depth unknown)	River and Harbor Act
	Jul 25, 1912	Channel 20 feet deep and 240 feet wide up to Standard Wharf.	River and Harbor Committee Doc. 4, 62nd Cong., 2nd sess. P.L. 241
	Aug 26, 1937	Enlarging channel to 30 feet deep and 300 feet wide from the mouth to the Standard Wharf, 7.4 miles, suitably widened at bends and at the head of the improvement.	River and Harbor Committee Doc. 449, 74 <sup>th</sup> Cong., 2nd sess.
2.		<b>ATLANTIC INTRACOASTAL WATERWAY BETWEEN NORFOLK, VA, AND ST. JOHNS RIVER, FL</b>	
	Sep. 19, 1890	Channel from Minim Creek to Winyah Bay.	Annual Report, 1889, p. 1184.
	Jun. 13, 1902	Channel from Charleston to a point opposite McClellanville.	H.D. 84, 56th Cong., 1st sess. and Annual Report 1900, p.1908
	Mar. 2, 1907	Branch channel to McClellanville.	Annual Report 1903, p. 1133
	Mar. 2, 1907	Extending the channel to Minim Creek, thence through the Esterville-Minim Canal to Winyah Bay.	H.D. 178, 63rd Cong., 1st. sess.
	Mar. 3, 1925	Cut across the Santee Delta at Four Mile Creek.	H.D. 237, 68th Cong., 1st sess.
	Mar. 3, 1925	Widening and deepening the waterway from Charleston to Beaufort.	S.D. 178, 68th Cong., 2nd sess.
	Jul. 3, 1930	A waterway eight feet deep and 75 feet wide from Cape Fear River to Winyah Bay.	H.D. 41, 71st Cong., 1st sess.
	Aug. 30, 1935 <sup>1</sup>	Construction of bridges across the waterway in Horry County, SC.	River and Harbor Committee Doc. 14, 72nd Cong., 1st sess.
	Aug. 30, 1935 <sup>2</sup>	Cutoff between Ashepoo and Coosaw Rivers.	H.D. 129, 72nd Cong., 1st sess.
	Aug. 30, 1935 <sup>2</sup>	Enlarging the channel from Winyah Bay to Charleston including the branch channel to McClellanville, to depth of ten feet and bottom width of 90 feet.	River and Harbor Committee Doc. 11, 72nd Cong., 1st sess.
	Aug. 26, 1937	Increasing dimensions of waterway to twelve feet deep and 90 feet wide.	River and Harbor Committee, Doc 6, 75th Cong., 1st sess. <sup>3</sup>
	Mar. 2, 1945	Anchorage Basin 125 feet wide, 335 feet long, twelve feet deep, near Myrtle Beach, SC. (Deauthorized by 1986 WRDA) <sup>4</sup>	H.D. 327, 76th Cong., 1st sess.

**TABLE 7-B AUTHORIZING LEGISLATION**

See Sect. in Text	Date of Authorizing Act	Project and Work Authorized	Documents
3.	Jul. 14, 1960 as amended	<b>BROOKGREEN GARDENS, SC</b> Provides for a 3,600 foot canal with a 30-foot bottom width, maintained to a depth of four feet mlw.	Sec. 107, P.L. 86-645
4.		<b>CHARLESTON HARBOR, SC</b>	
	Jun. 18, 1878 Aug. 8, 1917	2 jetties. <sup>5</sup> Increase in depth to 30 feet with width of 500 feet between the jetties and 1,000 feet seaward thereof.	Annual Report 1878, pp. 553-572. H.D. 288, 62nd Cong., 2nd sess.
	Jul. 18, 1918	The 40-foot channel to the Naval Base. Act provided that the 40-foot channel should not be undertaken "until the proposed new drydocks at this navy yard, carrying a depth of 40 feet of water over the blocks, has been authorized." This dock was authorized in the Naval Appropriations Act approved July 1, 1918 (40 Stat. L. 725).	H.D. 1946, 64th Cong., 2nd sess, pt.1, pp. 21-29, 57, 58, and 64-68.
	Jan. 21, 1927	A 30-foot channel from the sea to Goose Creek via Cooper River, together with a 30-foot channel through Town Creek for commercial purposes. The act also provided that the 40-foot channel be prosecuted only as found necessary for national defense.	H.D. 249, 69th Cong. 1st sess.
	Oct. 17, 1940	The 35-foot channel depth from the sea to the head of the project via Cooper River and Town Creek, also a channel in Shem Creek to Mount Pleasant, 110 feet wide and ten feet deep, including a turning basin at the upper end.	H.D. 259, 76th Cong., 1st sess.
	Mar. 2, 1945	An anchorage area 30 feet deep in the water area between Castle Pinckney and Fort Moultrie. <sup>6</sup> (Deauthorized by 1986 WRDA)	H.D. 156, 77th Cong., 1st sess.
	Sep. 3, 1954	Deepen the 30-foot channel north and east of Drum Island to 35 feet.	S.D. 136, 83rd Cong., 2nd sess. <sup>3</sup>
	Jul. 14, 1960 as amended	Shem Creek Channel modified by extending 1,150 feet upstream and downstream from mouth to Atlantic Intracoastal Waterway.	H.D. 35, 86th Cong., 1st sess.
	Oct. 22, 1976	Project authorized for the Phase I design memorandum stage of Advanced Engineering and Design.	H.D. 94-436, 94th Cong., 2nd sess.
	Nov. 17, 1986	Deepening 35 foot channel to 40 feet (42 feet in the ocean bar and entrance channel) from the 42 foot ocean contour to Goose Creek, a distance of 27.1 miles, construction of one turning basin, modification of existing turning basins, deepening and modification of the anchorage basin, deepening Shipyard River to 38 feet, maintain the Wando River Channel to 35 feet at Federal expense and the deepening of this channel to 40 feet if economically justified.	99th Cong. 2nd sess., P.L. 96-662

CHARLESTON, S.C. DISTRICT

**TABLE 7-B AUTHORIZING LEGISLATION**

See Sect. in Text	Date of Authorizing Act	Project and Work Authorized	Documents
	Oct 12, 1996	Deepening of the entrance channel from 42 ft. deep to 47 ft. deep and the inner channels from 40 ft. deep to 45 ft. deep. Other improvements include realignment/widening of various channels/reaches, construction of a new turning basin opposite the future Daniel Island terminal, construction of a new contraction dike, reconstruction of two existing dikes and removal of a third existing dike.	104 th Cong. P.L. 104-303
5.	Aug. 13, 1968	<b>COOPER RIVER, CHARLESTON HARBOR, SC (ST. STEPHEN PROJECT)</b> Redivert most of the Santee River waters Pinopolis Dam into the lower Santee River through a canal beginning at Lake Moultrie and extending to the Santee River in the vicinity of St. Stephen, South Carolina	S.D. 88, 90th Cong.,P.L. 90-483
6.	Jul. 14, 1960 as amended	<b>FOLLY RIVER, SC</b> Consists of stable all-tide channel nine feet deep and 80 feet wide in Folly River and Folly Creek and an entrance channel at Stono Inlet 100 feet wide and eleven feet deep.	Sec. 107, P.L. 86-645. Authorized by Chief of Engineers, Dec. 23, 1977.
7.	Aug. 5, 1886	<b>GEORGETOWN HARBOR, SC</b> Jetties and earthen dike to protect south jetty.	H. Ex. Doc. 258 48th Cong., 2nd sess., and Annual Report 1885, pp. 1154-1170, and H. Ex. Doc. 117, 50th Cong., 2nd sess., and Annual Report 1889, pp. 1110-1111.
	Jun. 25, 1910	Previous project channel dimensions and training wall.	H.D. 398, 58th Cong., 2nd sess. and Annual Report 1904, pp. 1591-1605.
	Mar. 2, 1945	27-foot channel from ocean, including a turning basin in Sampit River.	H.D. 211, 76th Cong., 1st sess.
	Jun. 30, 1948	Cutoff and side channel in Sampit River.	H.D. 21, 81st Cong., 1st sess.

**TABLE 7-B AUTHORIZING LEGISLATION**

See Sect. in Text	Date of Authorizing Act	Project and Work Authorized	Documents
8.		<b>LITTLE RIVER INLET, NC AND SC</b>	
	Oct. 27, 1965	Provides for an entrance channel twelve feet by 300 feet across the ocean bar; thence ten feet by 90-foot inner channel to the Atlantic Intracoastal Waterway.	H.D. 362, 92nd Cong. Section 201, P.L. 89-298 River and Harbor and Flood Control Act of 1965
	Mar. 7, 1974	Authorized emergency dredging operations as the Chief of Engineers determines necessary to maintain channel depths sufficient to permit free and safe movement of vessels until such time as the authorized project is constructed.	H.D. 10203, 93rd Cong. Section 67, P.L. 93-251 Water Resources Development Act of 1974
9.		<b>MURRELLS INLET, SC</b>	
	Oct. 27, 1965	Provides for an entrance channel twelve feet by 300 feet across the seaward bar, thence ten by 90-foot inner channel to a turning basin at the old Army crash boat dock.	H.D. 137, 92 <sup>nd</sup> Cong. Section 201, P.L. 89-298 River and Harbor and Flood Control Act of 1965
	Mar. 7, 1974	Authorized emergency dredging operations as the Chief of Engineers determines necessary to maintain channel depths sufficient to permit free and safe movement of vessels until such time as the authorized project is constructed.	H.D. 10203, 93 <sup>rd</sup> Congr. Section 67, P.L. 93-251 Water Resources Development Act of 1974
10.		<b>TOWN CREEK, SC</b>	
	Jul 14, 1960 as amended	An entrance channel twelve feet deep by 100 feet wide across the ocean bar a distance of 4.0 miles and a channel ten feet deep by 80 feet wide from the mouth of Five Fathom Creek to the Atlantic Intracoastal Waterway, a distance of 6.2 miles.	Sec. 107, P.L. 86-645. Authorized by Chief of Engineers, Feb. 12, 1974.
14.		<b>FOLLY BEACH, SC</b>	
	Nov. 17, 1986	Shoreline protection.	P.L. 99-662 99 <sup>th</sup> Cong., 2 <sup>nd</sup> sess.
	Aug. 17, 1991	Construct hurricane and storm protection measures.	P.L. 102-104, 102 <sup>nd</sup> Cong.
15.		<b>MORRIS ISLAND LIGHTHOUSE, SC</b>	
	Oct. 23, 1962	Erosion protection consisting of a sheetpile cell around the base of lighthouse with rip-rap and filter cloth around the outside perimeter of the cell.	Sec. 103, P.L. 87-874 Authorized by Chief of Engineers, Sep. 28, 2006

CHARLESTON, S.C. DISTRICT

**TABLE 7-B AUTHORIZING LEGISLATION**

<b>See Sect. in Text</b>	<b>Date of Authorizing Act</b>	<b>Project and Work Authorized</b>	<b>Documents</b>
16.		<b>MYRTLE BEACH, SC</b>	
.	Nov. 28, 1990	Storm damage reduction for periodic nourishment over the 50-year life of the project.	P.L. 101-640
23.		<b>LAKES MARION &amp; MOULTRIE, SC</b>	
	Aug. 17, 1999	Provide technical, planning and design, and construction assistance for \$5M for water supply treatment and distribution projects in the counties of Calhoun, Clarendon, Colleton, Dorchester, Orangeburg, and Sumter, SC.	Sec 502(f)(25), P.L. 106-53 Water Resources Development Act of 1999
	Dec. 21, 2000	Increased authority from \$5M to \$15M	Sec. 108(c)(4), P.L. 106-554
	Dec. 1, 2003	Increased authority from \$15M to \$35M and added wastewater treatment component.	Sec. 126, P.L. 108-137
	Nov. 8, 2007	Increased authority from \$35M to \$60M.	Sec. 5128, P.L. 110-114
25.		<b>POCOTALIGO RIVER AND SWAMP, SC</b>	
	Oct. 12, 1996	Snagging and clearing of two waterways (20 feet wide X 2-4 feet deep) to allow flow to resume and water levels to decrease to allow approximately 6,000 acres of swamp to revert to a forested swamp that normally dries up for part of each year. Approximately 23.7 miles of waterway will be cleared.	Sec. 206, P.L. 104-303 Authorized by Chief of Engineers, Nov. 2, 2002

1/ Included in Public Works Administration Program September 6, 1933.  
 2/ Included in Emergency Relief Administration Program May 28, 1935.  
 3/ Contains latest published maps.

4/ Inactive.  
 5/ Completed under previous projects.  
 6/ For national defense.

**TABLE 7-C OTHER AUTHORIZED NAVIGATION PROJECTS**

(See Section 12 of Text)

<b>Project</b>	<b>Status</b>	<b>For Last Full Report See Annual Report For</b>	<b>Construction</b>	<b>Cost to Sep. 30, 2009 Operation &amp; Maintenance</b>
Adams Creek, SC (107)	Completed	1978	\$125,697	\$29,143
Aquatic Plant Control, NC and SC 1/	Completed	1968	379,680	--
Aquatic Plant Control, SC	Completed	2007	11,947,733	--
Archers Creek, SC	Completed	1914	20,646	--
Ashley River, SC	Completed	1955	260,996	589,436
Brookgreen Gardens, SC (107)	Completed	1992	102,500 2/	4,011
Calabash Creek, SC (107)	Completed	2003	728,756	--
Charleston Hbr Rediversion (Fishlift), SC	Completed	2001	0	6,705,010
Edisto River, SC	Completed	1938	33,103	2,887
Great Pee Dee River, SC	Completed	1950	183,712	271,098
Jeremy Creek, SC (107)	Completed	1996	49,987	116,175
Lynches River and Clark Creek, SC	Completed	1982	9,500	85,595
Mingo Creek, SC	Completed	1950	29,050	8,575
Port Royal, SC	Completed	2004	1,786,100	16,774,429
Salkahatchie River, SC	Completed	1896	15,841	1,936
Santee River, NC & SC	Completed	1950	99,750	182,469
Village Creek, SC (107)	Completed	1985	26,500	111,314
Waccamaw River, NC and SC	Completed	1978	262,814	284,347
Wateree River, SC	Completed	1940	60,000	154,559

Construction costs include both federal and non-federal.

1 Pilot Program

2 Includes \$32,413 credit for LERRD's.

**OTHER AUTHORIZED SHORE**

**TABLE 7-D PROTECTION PROJECTS**

(See Section 17 of the Text)

<b>Project</b>	<b>Status</b>	<b>For Last Full Report See Annual Report For</b>	<b>Construction</b>	<b>Cost to Sep. 30, 2009 Operation &amp; Maintenance</b>
Folly Beach, SC	Completed	1996	\$12,538,693 1/	--
Hunting Island Beach, SC	Completed	1984	\$ 4,122,053	--
Hunting Island Waterline , SC (103)	Completed	2003	\$ 2,480,258 2/	--
Myrtle Beach, SC	Completed	2004	\$ 51,319,020 3/	--

Construction costs include both federal and non-federal.

1/ Includes \$819,693 credit for LERRD's and includes \$1,586,000 for Preconstruction, Engineering and Design.

2/ Includes \$800 credit for LERRD's.

3/ Includes \$1,634,993 credit for LERRD's and includes \$2,666,000 for Preconstruction, Engineering and Design.

**TABLE 7-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

(See Section 20 of Text)

<b>Project</b>	<b>Status</b>	<b>For Last Full Report See Annual Report for</b>	<b>Construction</b>	<b>Cost to Sep. 30, 2009 Operation &amp; Maintenance</b>
Buck Creek, NC & SC (205)	Completed	1970	\$334,167	--
Cow Castle Creek, SC (208)	Completed	1985	276,000	--
Cowpen Swamp, SC (208)	Completed	1960	37,200	--
Crabtree Swamp, SC (208)	Completed	1969	139,900	--
Eagle Creek, SC (205)	Completed	1986	1,245,063	--
Edisto River, SC	Discontinued	1947	6,379	--
Edisto River, North Fork, SC (205)	Completed	1969	170,960	--
Edisto R. Vicinity Canadays Landing (208)	Completed	1958	3,160	--
Gapway Swamp, SC 1	Completed	1969	339,197	--
Kingtree Branch, Williamsburg Cty, SC (205)	Completed	1978	247,242	--
Leith Creek, NC 1	Completed	1982	430,951	--
Little Sugar Creek, NC 1	Completed	1969	86,600	--
Old Field Swamp, NC 1	Completed	1979	763,022	--
Reddies River Lake, NC 1	Completed	1980	985,800	--
Reedy River, SC	Discontinued	1974	4,500	--
Roaring River, Wilkes County, NC 1	Phase I Only	1978	370,000	--
Saluda River, SC (208)	Completed	1963	99,500	--
Sawmill Branch, SC (205)	Completed	1971	334,105	--
Scotts Creek, SC (205)	Completed	1988	545,000	--
Shot Pouch Creek, Sumter Co., SC (208)	Completed	1971	130,400	--
Simmons Bay Creek, NC 1	Completed	1963	186,435	--
Simpson Creek, SC (208)	Completed	1957	129,000	--
Socastee Creek, SC (205)	Completed	1996	1,365,257	--
Todd Swamp, SC (208)	Completed	1964	57,000	--
Turkey Creek, Sumter County, SC (205)	Completed	1974	393,169	--
Turkey Creek, Sumter County, SC (205) 2	Completed	2001	576,765	--
Waccamaw R. & Seven Creeks, NC & SC 1	Completed	1961	67,821	--
Wilson Branch, Chesterfield County, SC (205)	Completed	1985	284,017	--

Construction costs include both federal and non-federal.

1 Transferred to Wilmington District

2 Includes \$5,596 credit for LERRD's.

**TABLE 7-F MULTIPLE PURPOSE PROJECTS INCLUDING POWER**

(See Section 24 of the Text)

<b>Project</b>	<b>Status</b>	<b>For Last Full Report See Annual Report for</b>	<b>Construction</b>	<b>Cost to Sep. 30, 2009 Operation &amp; Maintenance</b>
Cooper River Seismic Modification, SC	Completed	1992	\$29,400,000 1/	--

1 Excludes \$770,000 for credits to Santee Cooper.



CHARLESTON, S.C. DISTRICT

**OTHER AUTHORIZED**

**TABLE 7-H STREAMBANK EROSION CONTROL PROJECTS**

(See Section 22 of the Text)

<b>Project</b>	<b>Status</b>	<b>For Last Full Report See Annual Report for</b>	<b>Construction</b>	<b>Cost to Sep. 30, 2009 Operation &amp; Maintenance</b>
Battery Pringle, SC	Completed	1996	\$152,579	--
Castle Pinckney, SC	Completed	2000	\$381,681	--
Cooper River, Pompion Hill Chapel, SC	Completed	1987	\$185,000	--
Drayton Hall, SC	Completed	1994	\$250,374	--
Hunting Island Waste Treatment Plant, SC	Completed	2000	\$ 69,160	--
Indian Bluff, SC	Completed	1998	\$164,155	--
Pinopolis Dam, SC	Completed	1996	\$574,787	--
Santee Dam, SC	Completed	1996	\$558,117	--
SC DOT Bridges, SC	Completed	1998	\$217,890	--
Shore Drive, Singleton Swash, SC	Completed	2001	\$261,077 <sup>1/</sup>	--

Construction costs include both federal and non-federal.

<sup>1/</sup> Includes \$6,785 for work-in-kind credit and \$36,028 for betterments.

**TABLE 7-1 ACTIVE INVESTIGATIONS**

(See Section 28 of Text)

ITEM	FISCAL YEAR COSTS
<b>SHORELINE PROTECTION (CATEGORY 130)</b>	
Edisto Island	\$117,584
<b>MISCELLANEOUS ACTIVITIES (CATEGORY 170)</b>	
Special Investigations	\$13,370
Interagency Water Resources Development	\$11,293
North American Waterfowl	\$185
<b>COORDINATION STUDIES WITH OTHER AGENCIES (CATEGORY 180)</b>	
Cooperation With Other Water Resource Agencies	\$589
Planning Assistance to States (Coordination)	\$29,651
Planning Assistance to States (Cost-shared Studies)	\$160,101
<b>TOTAL (CATEGORY 100)</b>	<b>\$ 332,773</b>
<b>FLOOD PLAIN MGMT SERVICES (CATEGORY 250)</b>	
Flood Plain Management Services	\$47,763
SS-Singleton Swash	\$15
SS-Storm Surge Monitoring	\$27,000
SAC Hurricane Evacuation Studies	\$34,214
Technical Services	\$59,840
<b>TOTAL (CATEGORY 200)</b>	<b>\$ 168,832</b>
<b>PRECONSTRUCTION ENGINEERING &amp; DESIGN (CATEGORY 400)</b>	
Pawleys Island	\$ 1,970
<b>TOTAL (CATEGORY 400)</b>	<b>\$ 1,970</b>
<b>TOTAL FEDERAL</b>	<b>\$503,576</b>
<b>CONTRIBUTED FUNDS</b>	<b>TOTAL NON-FEDERAL \$153,103</b>
<b>TOTAL GENERAL INVESTIGATIONS</b>	
<b>\$ 656,679</b>	

**TABLE 7-J**

**FLOOD CONTROL WORK UNDER  
SPECIAL AUTHORIZATION**

**Preauthorization Studies  
(See Section 21 of Text)**

<b>Study Identification</b>	<b>Section</b>	<b>Fiscal Year Costs</b>
Coordination Account	205	\$14,818

**TABLE 7-K INSPECTION OF COMPLETED WORKS**  
(See Section 19 of Text)

<b>Project</b>	<b>Date of Inspection</b>
Battery Pringle, SC	April 6, 2009
Cape Marsh, SC	July 16, 2009
Castle Pinckney, SC	May 27, 2009
Cow Castle Creek, SC	August 18, 2009
Drayton Hall, SC	June 30, 2009
Eagle Creek, SC	July 20, 2009
Hunting Island, SC	November 18, 2008
Indian Bluff, SC	August 27, 2009
Kingstree Branch, SC	July 27, 2009
Morris Island Lighthouse, SC	July 18, 2009
Murphy Island, SC	July 16, 2009
Pompion Hill, SC	November 21, 2008
Sawmill Branch, SC	February 2, 2009
Shore Drive, Singleton Swash, SC	April 22, 2009
Scotts Creek, SC	December 16, 2008
SC DOT Bridges, SC	September 2 - 3, 2009
Socastee Creek, SC	January 22, 2009
Turkey Creek, SC	August 10, 2009
Wilson Branch, SC	July 23, 2009

**TABLE 7-L OTHER AUTHORIZED ENVIRONMENTAL PROJECTS**  
(See Section 25 of the Text)

<b>Project</b>	<b>Status</b>	<b>For Last Full Report See Annual Report for</b>	<b>Construction</b>	<b>Cost to Sep. 30, 2009 Operation &amp; Maintenance</b>
Cape Marsh Management Area, Santee Coastal Reserve, Charleston County, SC	Completed	2001	\$333,914 <sup>1/</sup>	--
Miller Corner Phragmites Control, SC	Completed	2001	\$236,923 <sup>2/</sup>	--
Murphy Island, SC	Completed	1998	\$375,631 <sup>3/</sup>	--

Construction costs include both federal and non-federal.

<sup>1</sup> Includes \$43,000 credit for work-in-kind installation of the water control structures.

<sup>2</sup> Includes \$47,600 credit for work-in-kind structural modifications.

<sup>3</sup> Includes \$100,277 for work-in-kind credit.

**TABLE 7-M                      AQUATIC ECOSYSTEM RESTORATION**

**Preauthorization Studies  
(See Section 25 of Text)**

---

<b>Study Identification</b>	<b>Section</b>	<b>Fiscal Year Costs</b>
Coordination Account	206	\$11,281

---



# SAVANNAH, GA, DISTRICT

The District comprises drainage basins that flow into the Atlantic Ocean between Port Royal Sound, SC, and Cumberland Sound, GA and FL, and includes the Atlantic Intracoastal Waterway between these points. This area covers the headwaters of the Savannah River in southwestern North Carolina, eastern Georgia, and a small portion of northeastern Florida.

## IMPROVEMENTS

### NAVIGATION..... 8-2

- 1. Atlantic Intracoastal Waterway (AIWW) between Norfolk, VA, and St. Johns River, FL.... 8-2
- 2. Brunswick Harbor, GA..... 8-2
- 3. Lower Savannah River Basin, GA and SC ..... 8-3
- 4. Savannah Harbor, GA ..... 8-3
- 5. Savannah River below Augusta, GA ..... 8-5
- 6. Reconnaissance and Condition Surveys ..... 8-6
- 7. Other Authorized Navigation Projects ..... 8-6
- 8. Dredged Material Disposal Facilities Program..... 8-6
- 9. Navigation Work under Special Authorization .... 8-6

### BEACH EROSION CONTROL..... 8-6

- 10. Tybee Island, GA ..... 8-6

### FLOOD CONTROL..... 8-7

- 11. Inspection of Completed Flood Control Projects . 8-7
- 12. Other Authorized Flood Control Projects..... 8-7
- 13. Flood Control Work under Special Authorization..... 8-8
- 14. Emergency Stream Bank and Shoreline Protection under Special Authorization..... 8-8
- 15. Snagging and Clearing ..... 8-8

### ENVIRONMENTAL RESTORATION..... 8-8

- 16. Inspection of Completed Environmental Projects..... 8-8
- 17. Project Modification to Improve Environment under Special Authorization ..... 8-8
- 18. Aquatic Ecosystem Restoration under Special Authorization..... 8-8
- 19. Wetland/Other Aquatic Habitat ..... 8-8

### MULTIPLE-PURPOSE POWER PROJECTS INCLUDING MAJOR REHABILITATION..... 8-8

- 20. J. Strom Thurmond Dam and Lake, GA and SC (Formerly Clark Hill Lake)..... 8-8
- 21. Hartwell Dam and Lake, GA and SC ..... 8-9
- 22. Richard B. Russell Dam and Lake, GA and SC (Formerly Trotters Shoals Lake, GA and SC) .... 8-10
- 23. Richard B. Russell Dam and Lake Wildlife Mitigation, GA and SC..... 8-11
- 24. Hartwell Lake/Clemson Upper and Lower Diversion Dams, GA and SC..... 8-11
- 25. Surveys ..... 8-12
- 26. Coordination with Other Agencies ..... 8-12

- 27. Collection and Study of Basic Data ..... 8-12

- 28. Pre-Construction Engineering and Design (PED) ..... 8-12

### MISCELLANEOUS..... 8-12

- 29. Catastrophic Disaster Preparedness Program..... 8-12
- 30. Flood Control and Coastal Emergencies ..... 8-12
- 31. Miscellaneous Reimbursable Work-All Other ... 8-12
- 32. Rivers and Harbors Contributed Funds ..... 8-12

### Tables

- Table 8-A Cost and Financial Statement..... 8-14
- Table 8-B Authorizing Legislation ..... 8-17
- Table 8-C Other Authorized Navigation Projects ..... 8-23
- Table 8-D Other Authorized Flood Control Projects ..... 8-24
- Table 8-E Savannah River Basin, Dams and Lakes, GA and SC ..... 8-25

## NAVIGATION

### 1. Atlantic Intracoastal Waterway (AIWW) between Norfolk, VA, and St. Johns River, FL

**Location.** This 161-mile section of waterway connects Port Royal Sound, SC, with Cumberland Sound, GA, and FL. (See NOAA charts 11489-11507, formerly Coast and Geodetic Survey Charts 838-841, inclusive.)

**Previous Project.** (Between Savannah, GA, and Fernandina, FL): For details see pages 1814, 1821-1823 of Annual Report for 1915 and page 585 of Annual Report for 1938.

**Existing Project.** The project provides for a waterway, 12 feet (ft) deep at mean low low water (MLLW), and not less than 90 ft wide, between Port Royal Sound, SC, and Savannah, GA; 12 ft deep at MLLW, with widths of 90 ft in land cuts and narrow streams and 150 ft in open waters between Savannah, GA, and Cumberland Sound, GA and FL; and a suitable anchorage basin at Isle of Hope, GA. Mean tidal range between Port Royal, SC, and Cumberland Sound, GA and FL, is from 6 to 8 ft with fluctuations from 1.5 to 2.5 ft due to winds and lunar phases. The final Environmental Impact Statement (EIS) appeared in the Federal Register October 29, 1976. (See Table 8-B for Authorizing Legislation).

**Local Cooperation.** Fully complied with (Georgia Department of Transportation).

**Terminal Facilities.** There are approximately one dozen privately owned marinas adjacent to the AIWW that provide fuel and services to mariners.

#### Operations during Fiscal Year

**Maintenance.** The District used Cottrell Contracting Company, Inc. during the third quarter of FY 09 to dredge Hell Gate using the dredge "Richmond". The dredge removed 229,173 cubic yards (cu yd) of maintenance material at a cost of \$998,837 providing full width and depth for the FY.

Operation and Maintenance costs for the FY were \$1,266,138. (See Table 8-A, Cost and Financial Statement.)

**Condition at End of Fiscal Year.** Except for Hell Gate, the main channel of the existing project, completed in 1941, has not been maintained at 12 ft since 2001. The controlling depth in the District's portion of the project was 4 ft MLLW throughout the year.

### 2. Brunswick Harbor, GA

**Location.** The harbor entrance is 70 statute miles south of the entrance to Savannah Harbor, GA, and 25 statute miles north of the entrance to Fernandina Harbor, FL. (See NOAA Chart 11215, formerly Coast and Geodetic Survey Chart 447.)

**Previous Project.** For details see page 1818 of Annual Report for 1915 and page 591 of Annual Report for 1938.

**Existing Project.** The project provides for the following:

- Channels:
  - 38 ft deep and 500 ft wide across the bar;
  - 36 ft deep and 400 ft wide through St. Simons Sound;
  - 36 ft deep and 400 ft wide through Brunswick River and East River to the foot of Second Avenue;
  - 30 ft deep and 300 ft wide in Turtle River to the Allied Chemical Company wharf, formerly the Atlantic Refining Company;
  - 36 ft deep and 400 ft wide in South Brunswick River;
  - 36 ft deep and 400 ft wide in East River from Second Avenue to its confluence with Academy Creek;
  - a channel in Back River 20 ft deep and 150 ft wide from St. Simons Sound to the mouth of Mill Creek;
  - a channel in Terry Creek 10 ft deep and 80 ft wide from its mouth to a point immediately above the wharf of the former Glynn Canning Company.
- A stone jetty, 2537 ft long, at the entrance to East River
- A 1,100 by 1,100-foot turning basin is located at the lower mouth of the East River.

All depths refer to MLLW. Mean tidal range on the bar is 6.5 ft, at the City of Brunswick 7.3 and 7.6 ft at the upper end of the harbor. For further details, see Annual Report for 1962 and 2003.

The Savannah District and the Environmental Protection Agency have a Memorandum of Agreement and a Section 103 Permit for the use of an offshore disposal area for placement of sediments dredged from the offshore portion of the channel.

**Local Cooperation.** Complied with to date (Georgia Department of Transportation).

**Terminal Facilities.** Twenty-six wharves and piers, almost all privately or state (Georgia Ports Authority) owned, have a berthing space of 7,530 linear feet. The Port of Brunswick and the State of Georgia have a transit shed and intermodal docks with 1,640 ft of berthing space (three general cargo berths) on East River. For further details, see Port Series No. 14, Corps of Engineers (revised 2000).

**Operations during Fiscal Year**

**Maintenance.** The District used Great Lakes Dredge and Dock Company during the second and fourth quarter in FY 09 to dredge the Entrance Channel using the dredges “Dodge Island” and “Padre Island”. The dredges removed 1,480,559 cu yd of maintenance material at a cost of \$6,024,024 in the second quarter. The dredges removed 193,001 cu yd of maintenance material at a cost of \$1,296,860 in the fourth quarter using ARRA<sup>1</sup> funds. Only \$669,600 of \$1,296,860 was paid to the contractor in FY 09 with the remainder to be paid in FY10. The maintenance work performed during the 4<sup>th</sup> quarter was part of a demonstration project on the effectiveness of the current sea turtle avoidance methods during warm-water conditions.

Operation and Maintenance costs for FY 09 was \$4,668,757 (\$3,950,872 O&M<sup>2</sup>, \$717,975 ARRA), which included such items as water quality monitoring, project condition surveying, real estate monitoring, environmental and cultural resources monitoring. (See Table 8-A, Cost and Financial Statement.)

**Condition at End of Fiscal Year.** The condition of the Inner Harbor was excellent. The port pilots are satisfied with the operational characteristics of the expanded turning basin in East River. The Entrance Channel continues to be deficient due to a lack of O&M funding.

Total cost through September 30, 2009, for existing completed project, was \$215,969,981.

**New Work.** The Savannah District completed the Andrews Island Dike, Weir, and Shoreline Improvements in FY 09 to restore capacity to the dredged material disposal facility that was lost because of new work dredging for the recent deepening of the Brunswick Harbor. New work cost for the FY was \$4,501,734. (See Table 8-A, Cost and Financial Statement.)

**3. Lower Savannah River Basin, GA and SC**

**Location.** The project is located on the Savannah River between river mile 40.9 and river mile 42.0, approx-

imately 20 river miles above the city of Savannah, GA. The project area itself is located within Effingham County, GA and Jasper County, SC. A portion of the project is within the Federal Savannah National Wildlife Refuge.

**Existing Project.** This environmental restoration project was authorized by a resolution passed on August 1, 1990, by the U.S. House of Representatives Committee on Public Works and Transportation. The approved project cost is \$4,222,000. The project plan included a large partial diversion structure at cut #3; a plug in bend #3 below the mouth of Bear Creek; a realignment and restoration of the mouths of Bear and Mill Creeks, which provides improved flows into both creeks.

The PCA was executed and the construction phase officially began in FY 00. Construction was completed in FY 02. In addition, there is a requirement for five years of monitoring and the preparation of a final monitoring report which to date has been unfunded.

Annual periodic inspections are performed with the local sponsor under the Inspection of Completed Works (Environmental) Program.

**Local Cooperation.**

**New Work:** The cost share is 75 percent federal and 25 percent non-federal (City of Savannah), with the value of lands being a portion of the local sponsor’s 25 percent.

**Operation and Maintenance:** O&M is 100% non-federal responsibility.

**4. Savannah Harbor, GA**

**Location.** The harbor entrance is 75 statute miles south of Charleston, SC and 70 miles north of Brunswick Harbor, GA. (See NOAA Chart 11512, formerly Coast and Geodetic Survey Chart 440.)

**Previous Project.** For details see page 1810 of Annual Report 1915 and page 578 of Annual Report 1938.

**Existing Project.** The harbor consists of 11.4 miles of ocean channel and 21.3 miles of Inner Harbor channel. The ocean channel is 44 ft deep MLLW and 600 ft wide. The inner channel is 42 ft deep MLLW and 500 ft wide to the upper end of Kings Island Turning Basin; 36 ft deep MLLW and 400 ft wide to the upper end of Argyle Island Turning Basin; and 30 ft deep MLLW and 200 ft wide to the upper limit of the project.

<sup>1</sup> American Recovery & Reinvestment Act

<sup>2</sup> Operation and Maintenance

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

Project features also include:

- the Fig Island and Marsh Island Turning Basins 34 ft deep by 900 ft wide by 1,000 ft long;
- the Kings Island Turning Basin 42 ft deep with advance maintenance to 50 ft MLLW by 1,500 ft wide by 1,600 ft;
- Argyle Island and Port Wentworth Turning Basins 30 ft deep by 600 ft long and at the extreme upper limit of the project;
- a 1,200-foot long by 1,050-foot wide by 40-foot deep Oyster Bed Island Turning;
- sediment control works consisting of an inactivated tide gate structure across Back River;
- a sediment basin 40 ft deep, 600 ft wide; about 2 miles long, with an Entrance Channel 38 to 40 ft deep and 300 ft wide;
- a closed drainage canal across Argyle Island 15 ft deep and 300 ft wide;
- control works and canals for supplying fresh water to the Savannah National Wildlife Refuge;
- facilities to mitigate damages to presently improved areas other than refuge lands.

Mean range of tide is 7.9 ft at the upper end of the harbor and 6.9 ft at the lower end. Extreme ranges are about 11.1 and 10.7 ft, respectively.

Bend wideners and advance maintenance in critical shoaling areas assist passage of ships through the harbor. The Inner Harbor has six turning basins and an inactivated Tide Gate structure adjacent to a Sediment Basin. Kings Island Turning Basin (42 ft deep MLLW, 1500 ft wide and 1600 ft long) is the primary turning basin and lies adjacent to the bulk of Georgia Ports Authority's containerized cargo docks. Georgia Department of Transportation became the local sponsor on December 8, 1999, and provides lands, easements, and rights-of-way for the construction of upland dredged material disposal facilities. The Savannah District and the Environmental Protection Agency have a Memorandum of Agreement and a Section 103 Permit for the use of an offshore disposal area for placement of sediments dredged from the offshore portion of the channel. The offshore area is monitored by hydrographic surveys before and after each dredging event to determine the amount of sediment retention within the boundaries of the area.

The tide gate structure across Back River was taken out of operation in March 1991 to decrease salinity levels in the National Wildlife Refuge. The drainage canal across Argyle Island, which was part of the original tide gate project, was closed in April 1992 by the New Cut

closure contract under the Section 1135 program. The cost of this project was \$1,531,847.

**Local Cooperation.** Local interests must provide the real estate for suitable disposal areas and retaining dikes for construction and future maintenance of the project. The Georgia Department of Transportation became the local sponsor in December 1999 and has met all requirements to date. In January 2005 the Project Cooperation Agreement was executed that changed the local sponsor's responsibility from providing capacity to providing the real estate and to cost-share the capacity increases. Maintenance of the diked disposal areas, after they have been raised under the 2005-revised PCA, is now a Federal responsibility under WRDA 1996.

**Terminal Facilities.** Sixty-one piers and wharves adequately serve existing waterborne commerce at the port. These facilities, with use of dolphins, have a combined berthing space of 46,930 linear feet at MLLW. Included in the berthing space are ten container berths with 271 acres of handling area. All have railway and highway connections. The "Lash" Facilities are located at the entrance to the harbor and have depth ranging up to 42 ft MLLW. The berthing space of "Lash" facilities is included in the above combined berthing space; however, the Lash facility is no longer active. For further details, see Port Series No. 14, Corps of Engineers (revised 1982) and Annual Report for 1990.

### **Operations during Fiscal Year**

**Maintenance.** The District used Marinex Corporation in FY 09 to dredge the Inner Harbor using the dredge "Brunswick". The dredge removed 1,805,242 cu yd of maintenance material at a cost of \$6,380,835. The dredge removed 884,559 cu yd of maintenance material at a cost of \$4,312,996 using ARRA funds. The Sediment Basin was not dredged this fiscal year. The District used Great Lakes Dredge and Dock Company during the second and fourth quarters in FY 09 to dredge the Entrance Channel using the dredge "Dodge Island". The dredge removed 241,820 cu yd of maintenance material at a cost of \$918,916 in the second quarter. \$343,039 of ARRA funds were used to dredge 85,063 cu yd of maintenance material in the fourth quarter from the Entrance Channel and also to conduct a pilot project to determine if the Entrance Channel could be dredged during the month of September and avoid impacts to endangered sea turtle species.

ARRA funds were also used to award two contracts in FY 09 for rock revetment at Disposal Areas 14B (\$9M) and 13A/B (\$15M). The rock revetments will provide protection to critical sections of the Savannah River bank, thereby reducing erosion of the shoreline and

confined disposal area dike structures. This also reduces shoaling and dredging costs.

Operation and Maintenance costs for FY 09 was \$15,659,207 (\$11,363,324 O&M, \$4,295,883 ARRA), which included such items as water quality monitoring; project condition surveying; and cultural resources monitoring. (See Table 8-A, Cost and Financial Statement.) The authorized depths were maintained along the inner quarters of the channel to assure minimal safe navigation features. Side channel shoaling in critical areas (bends and widenings) were dredged but lack of funding prevented full channel maintenance.

### **Savannah Harbor Expansion**

The Georgia Ports Authority (GPA) completed the Feasibility Study and Tier I Environmental Impact Study (EIS) for the Savannah Harbor Expansion project in August 1998, under the authority of Section 203 of WRDA 86. Based on this study, WRDA 1999 gave a conditional authorization. The conditions were the completion of a Chief's Report by the end of CY 1999. The final Chief's Report called for the preparation of a General Reevaluation Report (GRR) and a TIER II EIS. In addition, this Tier II EIS and GRR must obtain the approvals from the Secretary of the Army, the Director of the Environmental Protection Agency, and the Secretary of Commerce and Interior before construction can begin.

The Department of the Army signed a Memorandum of Understanding in July 2001 with GPA regarding the preparation of the GRR and Tier II EIS. The authorization calls for the Savannah Harbor to be deepened as much as 6 ft, from the present -42 ft MLLW to a depth of -48 ft MLLW at a first cost (October 1997 price levels) of \$230,174,000. The Savannah District has been refining environmental impact prediction modeling and the corresponding proposed mitigation of those impacts for each depth alternative as required by the authorization. These studies are scheduled for completion in March 2010. In FY 09, \$1.73M in federal funds were expended for report preparation. The draft GRR and Tier II EIS are scheduled for public review in FY10, with the final Record of Decision planned for FY11.

GPA contributed \$1,007,038 in FY 09, which brings their total contribution to \$10,166,308.

\$597,717 in ARRA<sup>1</sup> funds were used for various contracts to assist with the writing of the GRR and EIS including collecting data and refining impact predictions

<sup>1</sup> American Recovery & Reinvestment Act

on chlorides, the Floridan aquifer, the shortnose sturgeon, and economic analysis assistance from industry experts.

**Condition at End of Fiscal Year.** Environmental modeling studies were essentially completed. A complete revision of the economics report to reflect the expansion of the Panama Canal and to incorporate updated containerized shipping information was nearing completion in FY 09. Alternative mitigation strategies were also coordinated with the three Cabinet level agencies that must approve the project plan throughout the study.

**New work.** There was no new work performed in FY 09.

### **5. Savannah River below Augusta, GA**

**Location.** The Savannah River is formed by the confluence of the Tugaloo and Seneca Rivers on the boundary line between Georgia and South Carolina. It flows southeast 314 miles, forming the boundary line between two states, and empties into the Atlantic Ocean 16.6 miles below Savannah, GA. (See NOAA Charts 11514 and 11515, formerly Geological Survey maps of Georgia and South Carolina.)

**Previous Projects.** For details see page 1813 of Annual Report for 1915 and page 581 of Annual Report for 1938.

**Existing Project.** The authorized project provides for a channel 9 ft deep and 90 ft wide (at ordinary summer flow of 5,800 second-feet at Augusta, GA) from the upper end of the Savannah Harbor to the head of navigation at Augusta, above the 13th Street Bridge (R.M. 202.6), a total distance of about 181 miles. A lock and dam is located approximately 15 miles below the upper limit of the project at New Savannah Bluff. Improvement is to be obtained by construction of contraction works, closure of cutoffs, bank protection, dredging, removal of snags, over hanging trees and wrecks, and open-river regulation. Mean tidal variation at the mouth of the river is 7 ft. Freshet variation above the normal pool level (elevation 114.5 mean sea level) of New Savannah Bluff Lock and Dam at mile 187 is ordinarily about 13 ft with an extreme of 34 ft. Due to lack of commercial use, the river has not been dredged or otherwise maintained since FY 79. The notice on the final EIS appeared in the Federal Register February 18, 1977.

**Local Cooperation.** Project maintenance was discontinued in 1979.

**BEACH EROSION CONTROL**

**Terminal Facilities.** The only water terminals served by this improvement are at Augusta, Sylvania, and at or near Savannah. Augusta provided a municipal dock valued at \$50,000 and Georgia Ports Authority constructed a state port at Augusta, GA, costing approximately \$418,000. These facilities were expanded in 1965 at an additional cost of about \$250,000. These are supplemented by natural landings along the river and extensive facilities at Savannah.

**Operations during Fiscal Year.** Open-channel works are in good condition. There were no dredging projects during this fiscal year.

Operation and Maintenance costs for the FY were \$1,650. (See Table 8-A, Cost and Financial Statement.)

Excess contributed funds from the dewatering of the New Savannah Bluff Lock and Dam, an inactive navigation project on the Savannah River, were used to perform hydro surveys of the Savannah River below Augusta. (See Table 8-A, Cost and Financial Statement.)

**6. Reconnaissance and Condition Surveys**

Project condition surveys in the amount of \$27,092 were performed in FY 09.

**7. Other Authorized Navigation Projects**

(See Table 8-C.)

**8. Dredged Material Disposal Facilities Program**

Construction expenditures in FY 09 were incurred for the Savannah Harbor Disposal Area, GA and SC, in the amount of \$2,415,611. ARRA funds of \$91,430 were expended to design and initiate a contract for the construction of the Savannah Harbor Disposal Area 14A.

**9. Navigation Work under Special Authorization**

Navigation activities pursuant to Section 107, Public Law 86-645 (preauthorization). During FY 09, no cost was incurred.

During FY 09, \$30,631 was expended for Mitigation of Shore Damages activities pursuant to Section 111, Public Law 90-483 (preauthorization) as follows:

CAP Section 111 ----- \$20,587  
 Brunswick Harbor/Jekyll Island ----- \$10,044

**10. Tybee Island, GA**

**Location.** Tybee Island is located directly south of the Savannah River entrance, about 17 miles east of the City of Savannah, GA. (See NOAA 11512, 11513, and 11509, formerly U.S. Coast and Geodetic Survey Charts Numbers 440, 1240, and 1241, and on maps included in HD 92-105, 92nd Cong.) The island is bound on the north by the south channel of the Savannah River, on the east by the Atlantic Ocean, and on the south and west by Tybee Creek and other small tidal streams. The Island is occupied by the City of Tybee Island, GA, hereinafter referred to as "Tybee Island." The ocean face of this area has a wide sandy beach. Tybee Island is about 3.5 miles long from its northerly tip to the mouth of Tybee Creek with an average width of about 0.5 miles. Behind the beach lies a line of sand dunes, a number of which have been removed during the past years to make room for improvements and for various other reasons. Those that remain are from 10 to 20 ft high. The ground elevation west of the dunes is from 10 to 18 ft and slopes westward to the salt marsh.

**Existing Project.**

Section 201 of the Flood Control Act of 1965, U.S. Senate Committee Resolution of June 22, 1971 approved the project as contained in House Document No. 92-105. The main features included a north terminal groin that was completed in June 1975

Renourishments were completed as follows:

Initial ----- March 1976  
 First ----- April 1987  
 Second ----- July 2000  
 Third ----- FY 08

The Water Resources Development Act of 1976 authorized a Project Plan of Improvement for an 800-foot rock groin at the north end of the island, with a 225-foot tie-in to high ground. An additional 1,200-foot extension of this groin is deferred, as are two additional intermediate groins (480 ft long); these would be added at a later date, if needed. The 1976 plan also provided for the initial restoration of approximately 13,300 ft of beach, from the vicinity of 18th Street to the terminal groin located at the northern end of the island. Periodic nourishment is authorized to maintain suitable beach dimensions.

Construction of the south terminal groin was completed in February 1987. The Federal Project at that time included 2.6 miles of oceanfront beach between the north and south terminal rock groins.

## SAVANNAH, GA, DISTRICT

In 1993, the Savannah Harbor Deepening Project placed approximately 1,000,000 cu yd of material on the north end of the Island as a beneficial use of dredge material. In 1994, the Georgia Ports Authority placed an additional 1,000,000 cu yd on the south end. These two actions allowed the deferment for the second renourishment until July 2000.

The Asst. Secretary of the Army (Civil Works) approved the Special Report on South Tip Beach/Back River on August 24, 1998. This resulted in the passage of Section 301 of 1996 WRDA that modified the authorized project to include the portion of Tybee Island located south of the existing south terminal groin

### **Operations during Fiscal Year.**

**New Work:** The FY 08 beach renourishment for the Hurricane and Storm Damage Reduction project was completed in Dec 2008 (FY 09) under budget and ahead of schedule. The contract was closed-out and excess sponsor funds were returned to the City of Tybee Island, GA.

**Condition at End of Fiscal Year.** New work costs for the FY were \$5,509,159. (See Table 8-A, Cost and Financial Statement.)

**Local Cooperation.** Local interests (City of Tybee Island) must:

Contribute in cash the required percentage of the first cost (including costs for construction, engineering and design, and administration; and excluding the cost of lands, easements, rights-of-way and relocation) of all items of work to be provided by the Corps of Engineers. According to the 2006 Limited Reevaluation Report, the local contribution is presently estimated at 39.3 percent, to be paid in a lump sum prior to start of construction or in installments prior to the start of pertinent work items in accordance with construction schedules as required by the Chief of Engineers, the final apportionment of cost to be made after the actual costs have been determined.

Provide maintenance and repair of the groins, and provide (after the first 10 years of project life) periodic nourishment of the restored beach as may be required to serve the intended purpose during the life of the project.

Provide without cost to the United States all lands, easements, rights-of-way, and relocations required for construction and subsequent nourishment of the project.

Control water pollution to the extent necessary to safeguard the health of bathers.

Provide, without cost to the United States, access and facilities necessary for realization of the public benefits upon which federal participation is based, and maintain continued public use of the beach and administer it for public use during the life of the project, and provide further the construction on the project shall not be started until local interests furnish lands for beach access and parking, satisfactory to the Chief of Engineers, for the entire project limits.

The studies for FY 04/05 were an analysis of the possibility of including the North Beach into the federal project, a Limited Reevaluation Report of the existing project and a study to determine the impacts to the beach caused by the Savannah Harbor federal navigation channel. Of the \$225,000 requested in FY 04, Congress under the Construction Program allocated only \$150,000 of federal funds. Only \$84,000 of that was available due to Savings and Slippage.

In 2006 the City of Tybee assumed maintenance responsibilities for the project.

The 905(b) Reconnaissance Report for the channel impact study was completed and approved in 2006 with the recommendation to proceed into the feasibility phase to further investigate potential impacts of the Savannah Harbor Federal navigation project to Tybee Island. In FY 08, a technical report was completed documenting the impact of Savannah Harbor Deep Draft Navigation Project on Tybee Island Shelf & Shoreline. This report showed approximately 75 percent of the Tybee Island's shoreline and shelf erosion was attributable to the Savannah Harbor Federal navigation project.

## **FLOOD CONTROL**

### **11. Inspection of Completed Flood Control Projects**

Expenditure for the FY was \$73,559. (See Table 8-A and 8-D.)

### **12. Other Authorized Flood Control Projects**

During FY 09 no costs were incurred for other authorized flood control projects.

**13. Flood Control Work under Special Authorization**

These Flood Damage Reduction activities are accomplished under the authority of Section 205, Flood Control Act of 1948 (Public Law 858, 80th Congress) as amended.

During FY 09, a total of \$58,079 was spent on preauthorization flood damage reduction studies as follows:

Unnamed Tributaries Ben Hill	
County (Turkey Creek)-----	\$12,674
Coordination Account Section 205 -----	\$8,785
Byrum Creek, Anderson County, SC -----	\$36,620

**14. Emergency Stream Bank and Shoreline Protection under Special Authorization**

During FY 09, costs were incurred as follows:  
 Coordination Account Section 14 ----- \$4,552

**15. Snagging and Clearing**

No cost was incurred during FY 09.

**ENVIRONMENTAL RESTORATION**

**16. Inspection of Completed Environmental Projects**

Expenditure for the FY was \$2,466.19.

**17. Project Modification to Improve Environment under Special Authorization**

Under the authority of Section 1135, Water Resources Development Act of 1986 (Public Law 99-662) as amended, a total of \$9,399 was expended in FY 09.

**18. Aquatic Ecosystem Restoration under Special Authorization**

Under the authority of Section 206, Aquatic Ecosystem Restoration, and Water Resources Development Act of 1996 a total cost of \$50,917 was incurred in FY 09 for the coordination of the following projects:

Coordination Account Section 206 -----	\$5,133
Beaver Ruin, Cabin Creek, Reeves Creek, and Allen Creek -----	\$2,719
Jackson Creek, Gwinnett County -----	\$43,065

**19. Wetland/Other Aquatic Habitat**

Under the authority of Section 204, Public Law 102-560, a total of \$11,217 was expended in FY 09. The funds were expended for the coordination with local authorities and government agencies for potential projects in the vicinity of Brunswick and Savannah, GA.

**MULTIPLE-PURPOSE POWER PROJECTS INCLUDING MAJOR REHABILITATION**

**20. J. Strom Thurmond Dam and Lake, GA and SC (Formerly Clark Hill Lake)**

**Location.** J. Strom Thurmond Dam and Lake is located at mile 237.7 on the Savannah River about 22 miles upstream from Augusta, GA. (See Geological Survey maps of GA and SC.)

**Existing Project.** The authorized project provided for construction of J. Strom Thurmond Dam and Reservoir, with a final cost of \$79,156,300. The dam has a concrete section 2,282 ft long with a maximum height of 200 ft and a controlled spillway 1,096 ft long. The concrete section is flanked on the west side by a rolled-earth embankment of 2,069 ft and on the east side by a similar embankment of 1,329 ft.

The total length of the dam is 5,680 ft. The lake covers 71,100 acres at maximum power pool elevation of 330 mean sea levels (MSW). It provides a total storage capacity of 2,900,000 acre-feet allocated as follows:

flood control -----	390,000 acre-feet
hydropower-----	1,045,000 acre-feet
dead storage -----	1,465,000 acre-feet

At the end of FY 09, there were seven units producing 52,000 kilowatts each, with a total of 364,000 kilowatts, and an average annual output of 700 million kilowatt-hours of electrical energy.

**Local Cooperation.** None required.

**Operations during Fiscal Year.** Net generation of electrical energy for the period were 302,366 megawatt-hours, all of which was marketed by the Southeastern Power Administration. Cumulative flood damage prevented through FY 09 was \$104,967,368 for the period 1955 thru 2009.

**Maintenance.** Total Operation and Maintenance costs for FY 09 was \$14,110,664 (this includes ARRA funds). (See Table 8-A, Cost and Financial Statement.) ARRA funds of \$2,275,139 were used for delineation and testing of DDT contaminated soil at Lake Springs Airstrip, the hiring of 7 summer park rangers, 2 forestry technicians, and an administrative assistant to support the project's visitor assistance and forestry programs, as well as supporting additional contracting workloads. Contracts were also awarded to install county water in 3 parks and to perform corrosion protection and weld

## SAVANNAH, GA, DISTRICT

repair on spillway gates with work scheduled to begin in FY 10. An estimated 5,251,446 people visited the lake.

**Condition at End of Fiscal Year.** Construction is complete except for providing additional recreational development. The project was operated in drought conditions, which began in March 2007.

**Major Rehabilitation.** An Evaluation Report was approved in July 1994. The J. Strom Thurmond Powerplant was included as a project in the Major Rehabilitation Program in 1996. Construction appropriation was provided in the FY 96 Energy and Water Bill in November 1995. Current project cost estimates remain at \$69,700,000. All contracts have been awarded. Project completion date is Sep 2011, which includes remaining miscellaneous work items. The eight major rehabilitation contracts were completed in FY 06. Major Rehabilitation costs for FY 09 was \$40,425. (See Table 8-A, Cost and Financial Statement.) These funds were used to upgrade the plants HVAC system required to support operation of the new auto-venting turbines and complete rehab contract closeout actions.

**New work.** ARRA funds in the amount of \$123,303 were used to award the CO2 Fire Suppression System and the Asbestos Abatement and Cable Tray Replacement Design and Construction contracts.

### 21. Hartwell Dam and Lake, GA and SC

**Location.** Hartwell Dam and Lake is on the Savannah River 305 miles above its mouth and 89 miles upstream from Augusta, GA (See Geological Survey maps of GA and SC.)

**Existing Project.** The dam is a concrete gravity-type structure 1,900 ft long with a maximum height of 204 ft and a controlled spillway 480 ft in length. The concrete section is flanked on the east and west abutments by earth embankments totaling 13,362 ft in length and by a saddle dike 2,590 ft long also on the west side. Total length of the dam is 17,852 ft. At maximum conservation pool elevation of 660 ft the lake covers 55,950 acres. Total capacity of the lake is 2,843,000 acre-feet of storage allocated as follows:

flood control----- 93,000 acre-feet  
hydropower-----416,000 acre-feet  
dead storage -----1,134,000 acre-feet

Four 66,000 kilowatt generators having a generating capacity of 264,000 kilowatts were installed initially with provisions for a fifth unit. Unit 5 went into operation in 1983 with a nameplate rating of 80,000 kilowatts. Rehabilitation is complete for Units 1-4 and has

increased their nameplate rating to 85,500 kilowatts for a total plant nameplate capacity of 422,000 kilowatts.

The notice on the final EIS on the operation and maintenance of Hartwell Dam and Lake appeared in the Federal Register on August 21, 1978.

**Local Cooperation.** None required.

**Operations during Fiscal Year.** Net generations of electrical energy for FY totaled 189,385 megawatt-hours, all of which was marketed by the Southeastern Power Administration Generating \$19,347,468 power revenue returns to the treasury. Cumulative flood damage prevented for the period 1962 thru 2009 was \$62,726,517.

Funds for the repair of the generator 5 rotor rim were contributed by the Southeastern Power Administration.

**Maintenance.** Operation and Maintenance costs for the FY was \$11,677,100 (this includes ARRA funds). (See Table 8-A, Cost and Financial Statement.) ARRA funds of \$433,664 were used to award contracts to repair/replace sanitary facilities, paving; water quality monitoring, summer rangers, design and install motor control centers and station service switchgear.

In FY 09, approximately 10 million people visited the lake generating \$1,077,404 recreation revenue, which was returned to the treasury.

**Condition at End of Fiscal Year.** The project has operated under drought conditions since March 2007.

**Major Rehabilitation.** The Hartwell Powerplant Major Rehabilitation project was approved by Headquarters, US Army Corps of Engineers (USACE), and was included in the FY 96 budget for construction. The project scope included the rewinding of the first four generators, the replacement of the transformers, the refurbishment of the turbine water passageways, the replacement of key electrical/mechanical peripheral equipment and the replacement/refurbishment of the four headgates. The fully funded cost for the recommended plan was \$26,000,000. All contracts have been awarded and Rehabilitation Phase I was completed in September 2000. Phase II included replacing the exciters and voltage regulators, governor upgrades, replacing the 230-kilovolt switchyard breakers, and upgrading the switchyard equipment and current capacity. Funding for \$10 million was authorized for Phase II Rehabilitation Program. Rehab Phase II was completed in FY 06.

Major Rehabilitation costs for FY 09 totaled \$30,475 (see Table 8-A, Cost and Financial Statement). These costs were in support of the rehab contract closeout actions.

**22. Richard B. Russell Dam and Lake, GA and SC (Formerly Trotters Shoals Lake, GA and SC)**

**Location.** Richard B. Russell Dam is located on the Savannah River 275.1 miles above its mouth, 29.9 miles below Hartwell Dam, and about 37.4 miles above J. Strom Thurmond Dam (formerly Clark Hill Dam). (See NOAA Survey maps of GA and SC.)

**Existing Project.** The authorized project provides for construction of Richard B. Russell Dam and Lake substantially in accordance with the recommendations. The latest approved cost estimate for the project is \$638,858,000 of which \$480,947,000 is for construction; \$28,857,000 for lands and damages; \$4,880,000 for cultural resources; and \$124,174,000 for engineering/design, supervision/administration, and all project studies, including environmental. Approval was received in January 1977 to include minimum provisions for pumped storage.

A Feasibility Report and final EIS to address the installation and operation of four 75-megawatt reversible pump-turbines were prepared in 1979 with the Record of Decision signed in August 1980. The Richard B. Russell Fish and Wildlife Mitigation Plan was completed in 1981, approved by the Assistant Secretary of the Army (Civil Works) in September 1982, and the provisions have been implemented.

Since 1986, the District has conducted comprehensive fishery studies in the Russell tailrace and J. Strom Thurmond Lake (formerly Clark Hill Lake) downstream of Richard B. Russell. In addition, the District conducted water quality studies, hydraulic modeling, and an evaluation of various fish protection measures associated with hydro- electric projects. The results of these study efforts are used to evaluate the need to develop fish protection at the Richard B. Russell Project associated with pumped storage operations. This evaluation is presented in a supplement to the final EIS on pumped storage. The Record-of-Decision was signed September 1991. Installation of pumped storage is complete; final Phase III environmental testing was completed in October 1996.

The Phase III Environmental Report and its Interagency Review was completed in August 1997. The District completed the National Environmental Policy Act of

1969 (NEPA) Documentation Phase and completed discussions with the resource agencies in attempting to resolve issues. The Savannah District reached an agreement with South Carolina Department of Natural Resources (SCDNR) on operational measures and general mitigation package. The remaining issue was that SC insisted on a consent order for commercial operations. USACE could not accept this condition and attempted to resolve this with a Memorandum of Agreement (MOA) in addition to the NEPA Documentation. SCDNR did not accept the MOA. DOJ/USACE request for summary judgment and oral arguments were presented in the Charleston, SC, U.S. District Court on October 17, 2000, requesting release from the injunction to commercially operate this 320-megawatt addition. The court ruled in USACE's favor on May 3, 2002, and the units were placed into commercial production on September 1, 2002. Final environmental mitigation requirements required additional environmental monitoring and installation of an oxygen injection system in the downstream J. Strom Thurmond reservoir. For increased plant reliability installation of the Static Start and Main Circuit Breakers commenced in FY 08 and is currently ongoing with a tentative completion date of Dec 2011.

**Local Cooperation.** Federal Water Project Recreation Act. Public Law 89-72; 79 stat. 213C (for Legislative History of Act see page 1864).

**Operations during Fiscal Year.** Net generation of electrical energy for the period were 409,954 megawatt-hours. Cumulative flood damage prevented was \$21,125,632 for the period 1983 thru 2009.

Southeastern Power Administration funded the installation of units 1-4 main circuit breakers.

**Maintenance.** Operation and Maintenance costs for FY 09 totaled \$6,608,211 (this amount includes ARRA funds). These funds were for management of lake and power activities. ARRA funds in the amount of \$159,202 were used to award contracts for water/air piping, penstock painting, penstock grouting, security improvements, paving, repairing and painting headgates.

In FY 09, approximately 959,504 people visited the lake.

**New Work.** The J. Strom Thurmond Cryogenic Oxygenizing System is sub-divided into three components:

1. O2 access road (Gilchrist Ferry) improvements.
2. Above ground Cryogenic System installation.
3. Underwater O2 diffuser system.

## SAVANNAH, GA, DISTRICT

The contracts for Phases 1 and 2 have been awarded. A contract for the design and installation of the Phase 3 work will be awarded in FY 10. The O2 injection system is now expected to be fully operational in late summer 2011, which will allow operation of all four pump back units and for the initiation of 5 years of environmental monitoring.

New work cost for the FY was \$3,711,920 (this amount includes ARRA funds). (See Table 8-A, Cost and Financial Statement.). ARRA funds of \$19,598 were expended towards the award of the above ground cryogenic system construction contract.

**Condition at End of Fiscal Year.** The project is 98.5 percent complete. Total cost of project to Sep 30, 2009, was \$787,790,202. The project has operated under drought conditions since March 2007.

### 23. Richard B. Russell Dam and Lake Wildlife Mitigation, GA and SC

**Location.** The 10,165 acres of land involved with this conveyance are located on four tracts of land located in Jasper, Colleton, and Hampton counties, SC.

**Existing Project.** The District completed NEPA and Real Estate closure and conveyed the land to SC in FY 05.

**Local Cooperation.** None required.

**Condition at End of Fiscal Year.** There were no costs for the FY. (See Table 8-A, Cost and Financial Statement.)

### 24. Hartwell Lake/Clemson Upper and Lower Diversion Dams, GA and SC

**Location.** Both Diversion Dams are located on Government property located between Clemson University and the Savannah River Basin on the South Carolina side of Hartwell Lake, approximately 20 miles upstream of Hartwell Dam.

**Existing Project.** The Remedial Measures to Increase Post Earthquake Stability for both Upper and Lower Clemson Diversion Dams in accordance with the Dam Safety Assurance Program was authorized in Senate and House Committee resolutions pursuant to the Water Resources Development Act of 2000, as presented to 106<sup>th</sup> Congress dated January 24, 2000.

Both upper and lower earthen dams were constructed in 1960 and 1961 prior to the impoundment of Hartwell Reservoir to protect Clemson University lands and exist-

ing facilities. The upper dam is 2,100 ft and the lower dam is 3,000 ft long, both have a maximum height of 75 ft. Seismic evaluation indicates that the downstream slopes of both dams (the Clemson University side) will fail from seismic events that could occur with a probability of once in every 475 years. Earthquake triggering events of as low as .07 to .10 g forces could cause liquefaction and subsequent failure. In this scenario, 390 acres of Clemson University will flood in about 5 hours. Economic damage is estimated at \$1.1 billion and there is a high probability that human life will be lost in such event.

The total project for both upper and lower diversion dams includes the following construction components:

#### a. Excavation at Upper and Lower Dams.

Temporarily excavated existing material from the downstream side over the entire 2,100 and 3,000-foot lengths of both upper and lower dams, respectively. The excavation took place between approximate elevations of 645 ft to 640 ft MSW. This section traverses 50 ft perpendicular to the dams and involves removing material to an average depth of about 4 ft.

#### b. Deep Soil Mixing at Upper and Lower Dams.

Deep soil mixing elements were installed to a depth of two ft below the existing loose alluvium layer. The deep soil mixing elements were installed into 3-foot diameter auger holes driven to varying depths of 40 to 45 ft. All holes were overlapped into each other to create a 51-foot continuous underground shear wall, oriented perpendicular to the axis of each dam and spaced approximately 11.5 ft apart. A longitudinal wall paralleling the dam axis connects the upstream ends of the transverse walls and runs the entire length of both dams.

#### c. Restore downstream side of the dams to original template

Original excavation material was reused. Excess excavated material was placed in the lower berm.

The project was funded with construction funds. The total project cost estimate was \$8,741,000. This included all engineering and design as well as supervision and administration during construction and a 25-percent contingency on the construction cost estimate. The project design was completed in June 2004 and it was awarded for construction in September 2004. The construction period was 18 months and was completed on schedule in May 2005.

**Local Cooperation.** None required.

**Condition at End of Fiscal Year.** There were no new work cost for FY 09. (See Table 8-A, Cost and Financial Statement)

**INVESTIGATION**

**25. Surveys**

During FY 09, survey costs of \$259,442 were incurred as follows:

Flood Damage Prevention Studies -----	\$192,688
Shoreline Protection Studies -----	\$9,457
Miscellaneous Activities -----	\$57,297

**26. Coordination with Other Agencies**

Planning Assistance to States activities are accomplished under the authority of Section 22, Water Resources Development Act of 1974, as amended. During FY 09, a total of \$124,989 was expended to support the following:

- a. Negotiations for an agreement with Tybee Island to conduct a retention pond feasibility study.
- b. Continuation of Hartwell Lake Economic Impact Analysis.
- c. Completion of Chatham Emergency Management Agency's Flood Hazard Information Report.
- d. Continuation of a Dam Safety Analysis with the Georgia Soil and Water Conservation Commission in coordination with the Georgia Department of Natural Resources.
- e. Completion of Tybee Island water infrastructure GIS mapping.

**27. Collection and Study of Basic Data**

During FY 09, under the Flood Plain Management Services (FPMS) Program, 6 requests for information and assistance were processed from state and local governments on a non-reimbursable basis, and from other Federal agencies and private persons on a cost recovery basis. Information and data was provided on the following:

- Past flood insurance study reports.
- Hurricane evacuation study reports and surge maps.
- Data from past Hydrologic Engineering Center models.
- Determination of Base Flood Elevations.

In addition, Hurrevac training was presented in Florida, South Carolina, and Georgia.  
 Combined FPMS Cost ----- \$61,699

**28. Pre-Construction Engineering and Design (PED)**

Total PED expenditures in FY 09:

Projects Not Fully Authorized	
Savannah Harbor Expansion, GA-----	\$1,131,453

Congress added funds for development of the Tier II EIS, GRR and the federal oversight of the project that was initially formulated by the Georgia Ports Authority, a non-Federal interest, under Section 203 of WRDA 86.

The project was conditionally authorized for construction by Congress in the Water Resources Development Act of 1999.

**MISCELLANEOUS**

**29. Catastrophic Disaster Preparedness Program**

No cost was incurred during FY 09.

**30. Flood Control and Coastal Emergencies**

**Disaster Preparedness Program**

Disaster Preparedness Program -----	\$364,654
Emergency Operations -----	\$27,108
<b>TOTAL: -----</b>	<b>\$391,762</b>

**General Regulatory Functions**

Permit Evaluation -----	\$3,497,935
Enforcement -----	\$431,255
Compliance-Authorized Activities and Mitigation -----	\$575,832
<b>TOTAL: -----</b>	<b>\$4,505,022</b>

**31. Miscellaneous Reimbursable Work-All Other**

WRDA Section 214 -----	\$207,592
------------------------	-----------

**32. Rivers and Harbors Contributed Funds**

Contributed funds expended in FY 09 for authorized Federal studies included:

**Investigations**

Savannah River Below Augusta -----	\$126,775
Augusta-Richmond, GA -----	\$194,242
Tybee Island North Beach -----	\$14,170
PAS SWCC Dam Safety, GA -----	\$2,076
Flood Warning & Public Awareness -----	\$7,815
PAS Tybee Island, GA -----	\$24,315
PAS Hartwell Lake, GA -----	\$32,232
<b>Subtotal: -----</b>	<b>\$401,625</b>

SAVANNAH, GA, DISTRICT

**Construction**

Brunswick Harbor, GA----- \$2,410,560  
Savannah Harbor Disposal Area----- \$1,341,219  
**Subtotal: ----- \$3,751,779**

**Maintenance**

Richard B. Russell Recreation, SC----- \$166,056  
Hartwell Lake----- \$108,024  
**Subtotal: ----- \$274,080**

**Flood Control Mississippi River and Tributaries**

Tybee Island, GA ----- \$3,850,892  
Savannah Harbor Expansion ----- \$988,064  
**Subtotal: ----- \$4,838,956**

**Flood Control Projects**

Unnamed Tributaries Ben Hill  
County, GA (Turkey Creek) ----- \$7,547

**GRAND TOTAL (Rivers and Harbors**

**Contributed Funds):----- \$9,273,987**

---

---

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

**TABLE 8-A COST AND FINANCIAL STATEMENT**

See Section	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total to 30 Sep 09
1	Atlantic Intracoastal Waterway between Norfolk, VA, and the St. Johns River, FL	New Work:					
		Approp.	--	--	--	--	958,096 <sup>1</sup>
		Cost	--	--	--	--	958,096 <sup>1</sup>
		Maintenance:					
		Approp.	253,000	253,000	1,870,000	946,680	44,214,155 <sup>2</sup>
		Cost	112,192	229,281	198,818	1,266,138	43,156,316 <sup>2</sup>
		Maintenance: (American Recovery & Reinvestment Act)					
		Approp.	--	--	--	4,112,055	4,112,055
Cost	--	--	--	--	--		
2	Brunswick Harbor, GA	New Work:					
		Approp.	18,850,500	19,700,000	5,992,000	-1,261,000	75,667,708 <sup>3</sup>
		Cost	8,716,370	28,813,674	-118,982	4,501,734	75,050,650 <sup>3</sup>
		Maintenance:					
		Approp.	2,361,000	4,234,000	4,319,000	5,044,060	138,275,387 <sup>4</sup>
		Cost	1,069,391	4,339,522	5,337,776	3,950,782	140,201,356 <sup>4</sup>
		Maintenance: (American Recovery & Reinvestment Act)					
		Approp.	--	--	--	6,031,400	6,031,400
		Cost	--	--	--	717,975	717,975
		(Contributed Funds)					
		New Work:					
		Contrib.	10,280,250	10,608,000	5,807,228	--	
Cost	5,581,018	15,446,234	3,597,149	2,410,560			
3	Lower Savannah River Basin, GA and SC	New Work:					
		Approp.	--	--	--	--	2,704,000
		Cost	400	--	--	--	2,702,202
		(Contributed Funds)					
		New Work:					
		Contrib.	--	--	--	--	
		Cost	1,019	--	--	--	
4	Savannah Harbor, GA	New Work:					
		Approp.	--	--	--	--	70,271,731 <sup>5</sup>
		Cost	31,370	641	534	--	69,995,456 <sup>5</sup>
		Maintenance:					
		Approp.	12,000,000	13,276,000	12,293,000	12,640,040	370,167,167 <sup>6</sup>
		Cost	8,466,128	16,384,365	12,061,177	11,363,325	352,098,351 <sup>6</sup>
		Maintenance: (American Recovery & Reinvestment Act)					
		Approp.	--	--	--	32,368,300	32,368,300
		Cost	--	--	--	4,295,883	4,295,883
		(Contributed Funds)					
		New Work:					
		Contrib.	5,030,000	--	625,573	1,007,038	
Cost	5,039,233	568,867	1,002,779	988,064			
5	Savannah River Below Augusta, GA	New Work:					
		Approp.	--	--	--	--	6,790,031 <sup>7</sup>
		Cost	--	--	--	--	6,790,031 <sup>7</sup>
		Maintenance:					
		Approp.	--	27,000	224,000	166,600	26,160,941
		Cost	1,515	25,824	143,377	1,650	25,833,528
		(Contributed Funds)					
		New Work:					
Contrib.	--	--	--	--			
Cost	--	--	--	126,775			

SAVANNAH, GA, DISTRICT

TABLE 8-A (continued) COST AND FINANCIAL STATEMENT

See Section	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total to 30 Sep 09
10	Tybee Island, GA	New Work:					
		Approp.	-13,000	--	7,287,003	-1,100,000	16,679,252 <sup>8</sup>
		Cost	25,961	27,001	402,723	5,509,159	16,259,370 <sup>8</sup>
		(Contributed Funds)					
11	Inspection of Completed Flood Control Projects	New Work:					
		Contrib.	--	-57,855	4,885,186	-353,250	
		Cost	32,854	-56,307	60,066	3,850,892	
19	J. Strom Thurmond Dam and Lake, GA and SC (Formerly Clark Hill Lake)	Maintenance:					
		Approp.	39,000	106,000	44,000	99,360	1,324,111
		Cost	40,107	41,421	64,749	73,559	1,244,581
		New Work:					
		Approp.	--	--	--	--	84,880,940 <sup>9</sup>
		Cost	--	--	--	--	84,876,004 <sup>9</sup>
		New Work: (American Recovery & Reinvestment Act)					
		Approp.	--	--	--	6,610,000	6,610,000
		Cost	--	--	--	123,303	123,303
		Maintenance:					
		Approp.	9,823,000	10,573,000	8,978,000	11,502,145	280,885,306 <sup>10</sup>
		Cost	9,744,718	10,409,847	8,230,796	11,835,525	280,085,999 <sup>10</sup>
		Maintenance: (American Recovery & Reinvestment Act)					
		Approp.	--	--	--	9,496,900	9,496,900
Cost	--	--	--	2,275,139	2,275,139		
Major Rehab:							
Approp.	2,037,000	--	250,000	--	59,869,000		
Cost	1,058,304	347,341	618,490	40,425	59,625,642		
20	Hartwell Dam and Lake, GA and SC	New Work:					
		Approp.	--	--	--	--	115,874,985 <sup>11,12</sup>
		Cost	--	--	--	--	115,876,925 <sup>11,12</sup>
		Maintenance:					
		Approp.	14,637,000	13,630,000	10,438,000	11,401,597	286,389,315 <sup>13</sup>
		Cost	13,155,235	14,041,831	10,971,272	11,243,436	298,422,277 <sup>13</sup>
		Maintenance: (American Recovery & Reinvestment Act)					
		Approp.	--	--	--	8,902,000	8,902,000
		Cost	--	--	--	433,664	433,664
		Major Rehab:					
Approp.	828,000	--	--	--	39,398,822		
Cost	679,640	30,998	3,792	30,475	36,848,860		
21	Richard B. Russell Dam and Lake, GA and SC (Formerly Trotters Shoals)	New Work:					
		Approp.	1,177,000	4,600,000	4,770,000	3,544,000	651,482,455
		Cost	925,196	1,226,918	2,454,096	3,692,322	644,668,592
		New Work: (American Recovery & Reinvestment Act)					
		Approp.	--	--	--	9,393,500	9,393,500
		Cost	--	--	--	19,598	19,598
		Maintenance:					
		Approp.	10,794,000	7,786,000	6,901,000	7,647,681	145,803,046
		Cost	9,706,237	7,346,559	7,987,668	6,449,009	153,262,941
		Maintenance: (American Recovery & Reinvestment Act)					
Approp.	--	--	--	15,464,941	15,464,941		
Cost	--	--	--	159,202	159,202		
(Contributed Funds)							
New Work:							
Contrib.	607,100	--	--	--			
Cost	602,145	4,955	--	--			

REPORT OF THE SECRETARY OF THE ARMY ON CIVIL WORKS ACTIVITIES FOR FY 2007

**TABLE 8-A (continued) COST AND FINANCIAL STATEMENT**

See Section	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total to 30 Sep 09
22	Richard B. Russell Dam and Lake Wildlife Mitigation, GA and SC	New Work:					
		Approp.	--	--	--	--	4,850,000
		Cost	--	--	--	--	4,850,000
23	Hartwell Lake/ Clemson Upper and Lower Diversion Dams, GA and SC	Major Rehab:					
		Approp.	3,500	--	--	--	9,153,500
		Cost	9,360	63	--	--	9,502,930

1 Includes \$194,497 for previous projects.

2 Includes \$134,789 for previous projects. Does not include \$35,000 appropriated but unexpended of contributed funds in FY's 86 and 87.

3 Includes \$643,456 for previous projects and \$97,521 expended from Public Works Funds for existing project. Does not include \$10,000 contributed funds.

4 Includes \$54,414 for previous projects, \$4,995 expended from Public Works Funds for existing project, and \$2,150,000 under 1983 Job Bill Act. Does not include contributed funds by Brunswick and Georgia Port Authority.

5 Includes \$7,260,384 for previous projects. Does not include \$46,847 for removal of sunken vessels or contributed funds.

6 Includes \$298,894 for previous projects and \$62,727 contributed funds.

7 Includes \$93,480 for previous projects and \$1,634,562 from Public Works Fund.

8 Does not include \$61,856 contributed funds.

9 Does not include \$395,634 accelerated Public Works Funds. Includes \$4,448,613 appropriated under Code 710. Also includes \$1,000,000 expended under the 1983 Job Bill Act.

10 Includes \$576,665 under special recreation use fees and \$736,000 under the 1983 Job Bill Act.

11 Includes \$17,515,000 appropriated for construction of 5th Unit of which \$17,469,002 has been expended.

12 Does not include \$276,200 accelerated Public Works Funds. Includes \$4,861,000 appropriated under Code 710 of which \$4,851,306 has been expended and \$545,000 expended under the 1983 Job Bill Act.

13 Includes \$797,558 expended for special recreation use fees.

SAVANNAH, GA, DISTRICT

**TABLE 8-B AUTHORIZING LEGISLATION**

See Section	Date of Authorizing Act	Project and Work Authorized	Documents
<b>1.</b>	<b>ATLANTIC INTRACOASTAL WATERWAY BETWEEN NORFOLK, VA, AND ST. JOHNS RIVER, FL (SAVANNAH DISTRICT)</b>		
	Jun 3, 1896	Section from Beaufort, SC, to Savannah, GA Route No. 2 adopted.	HD295, 53d Cong., 3d sess.
	Mar 3, 1899	Route No. 1 adopted.	HD295, 53d, Cong., 3d sess.
	Jul 13, 1892	Section from Savannah, GA, to Fernandina, FL. Original 7-foot channel.	HD41, 52d Cong., 1st sess.
	Mar 3, 1905	Provided for Skidaway Narrows.	HD450, 58th Cong., 2d sess.
	Jul 25, 1912	Incorporated alternative routes previously improved as separate projects and the auxiliary channels.	HD1236, 60th Cong., 2d sess.
	Aug 8, 1917	Section from Cumberland Sound, GA and FL to St. Johns River, FL. Consolidation of the 3 sections shown above, into "Waterway between Beaufort SC, and St. Johns River, FL."	
	Mar 2, 1919	Section from Beaufort, SC to Cumberland Sound, GA and FL. Removing logs and snags from Generals Cut.	HD581, 63d Cong., 2d sess.
	Mar 2, 1919	Improving Back River to provide a channel 7 ft deep and 150 wide.	HD1391, 62d Cong., 3d sess.
	Mar 3, 1925	Channel 75 ft wide between Beaufort, SC, and Sa- vannah, GA.	SD178, 68th Cong., 2d sess.
	Jul 3, 1930	Channel from Baileys Cut to Dover Creek.	SD43, 71st Cong., 2d sess.
	Aug 26, 1937	A 7-foot protected channel around St. Andrews Sound.	Senate Committee Print, 74 <sup>th</sup> Cong., 1st sess.
	Aug 26, 1937	A 12-foot channel between Beaufort, SC, and Savan- nah, GA, via Beaufort River and Port Royal Sound.	Rivers and Harbors Committee, Doc 6, 75th Cong., 3d sess.
	Jun 20, 1938	A 12-foot channel between Savannah, GA, and Fer- nardina, FL, various cutoffs; and anchorage basin at Thunderbolt, GA.	HD618, 75th Cong., 3d sess.
	Mar 2, 1945	An alternate route 9 ft deep and 150 ft wide in that part of Frederica River, GA, not now traversed by the main route, at no additional cost to the United States.	HD114, 77th Cong., 1st sess.
	Oct 15, 1981	Main channel relocated from Frederica River to Mac- kay River in the vicinity of Torras Causeway. Navi- gation Project.	Project authorized by Chief of Engi- neers under the Small Navigation Project Authority, Sec. 107, PL 86- 645, as amended.

**TABLE 8-B (continued) AUTHORIZING LEGISLATION**

See Section	Date of Authorizing Act	Project and Work Authorized	Documents
<b>2.</b>	<b>BRUNSWICK HARBOR, GA</b>		
	Mar 3, 1879	Construction of East River jetty.	Annual Report, 1980, p.959.
	Mar 2, 1907	Channels in the inner and outer harbors of 30-foot depth at mean high water, with widths varying from 150 ft in Academy Creek to 400 ft across the outer bar, extension of training wall in East River and construction of two spur dikes.	HD407, 59th Cong., 1st sess.
	Mar 2, 1919	Channels 27 ft deep at MLLW over the bar and at Brunswick point and 24 ft deep at MLLW in the Inner Harbor and provides for a cut from Academy Creek to Turtle River, if deemed advisable.	HD393, 64th Cong., 1st sess.
	Jul 3, 1930	A channel in Back River 230 ft deep and 150 ft wide.	SD57, 71st Cong., 2d sess.
	Jul 3, 1930	Increased Channel dimensions of the bar, Brunswick Point, East River, and Turtle River, as given in the then existing project.	SD132, 71st Cong., 2d sess.
	Jun 20, 1938	A 10-foot channel in Terry Creek.	HD690, 75th Cong., 3d sess.
	May 17, 1950	Increased channel dimensions of the bar, St. Simons Sound, Brunswick River, East River, and Turtle River, as given in the existing project.	HD110, 81st Cong., 1st sess.
	Oct 22, 1976	Provides for Phase I AE&D studies for deepening portions of existing harbor (East River and Entrance Channel) and for provision of a navigation channel to Colonels Island.	Report of Chief of Engineers dated Aug. 18, 1976.
	Jul 14, 1981	Enlargement of the maneuvering area of the entrance to East River and dredging Brunswick and Turtle Rivers to obtain depths authorized by the Rivers and Harbors Act of May 17, 1950.	HD177, 97th Cong., 1st sess.
	Jul 13, 1983	Enlargement of the East River Turning Basin to a length of 1,000 ft and a width of 750 ft.	PL 98-360
	Oct 17, 1986	Incorporated Georgia Port Authority's 30-foot deep by 300-foot wide by 8000-foot channel in South Brunswick River serving Colonel's Island into Brunswick Harbor Navigation Project.	HR6, 99th Cong., 2d sess., Section 846
	Aug 17, 1999	A six-foot deepening in the Inner Harbor from 30 to 36 ft and the bar channel from 32 to 38 ft, enlarge the existing turning basin in the lower East River to 1,100 by 1,100 feet, and widen the Inner Harbor Channel to 400 ft. Construct a 10-acre migratory bird-nesting island as a beneficial use of dredged material and a 1,300-foot bend widener for safe ship handling.	PL 108-07 WRDA 99

SAVANNAH, GA, DISTRICT

**TABLE 8-B (continued) AUTHORIZING LEGISLATION**

See Section	Date of Authorizing Act	Project and Work Authorized	Documents
<b>3. LOWER SAVANNAH RIVER BASIN, GA AND SC.</b>			
	PL-104-303 Water Resources Development Act of 1996, Oct 12, 1996	Project for the environmental restoration of the Lower Savannah River Basin; modification to cut off Bend No. 3 and improve the mouths of Bear Creek and Mill Creek.	HD105-173, 105th Congress, 2nd Session, Jan 27, 1998
<b>4. SAVANNAH HARBOR, GA</b>			
	Mar 2, 1907	Tentative provisions for a 26-foot channel from the Quarantine Station to the Seaboard Air Line Railway Bridge.	HD181, 59th Cong., 1st sess.
	Jun 25, 1910	Definite provision for the 26-foot channel.	
	Jul 25, 1912	A 21-foot channel from the Seaboard Air Line Railway Bridge to the foot of Kings Island.	HD563, 62d, Cong., 2d sess.
	Aug 8, 1917	A 30-foot depth from the sea to the Quarantine Station.	HD1471, 64th Cong., 2d sess.
	Jan 21, 1927	A 21-foot channel above Kings Island.	HD261, 69th Cong., 1st sess.
	Jan 21, 1927	Channel 30 ft deep, with general width 50 ft, from the ocean to the Quarantine Station, thence 26 ft deep, general width 400 ft, to the Seaboard Air Line Rho. Bridge, thence 21 ft deep and 300 ft wide to Kings Island. Widening at West Broad and Barnard Streets; anchorage basin; mooring dolphins; regulating dam across South Channel; relocation of the Inland Waterway; dredging Drakes Cut to 13 ft; widening to 525 ft at Kings Island; extension of training walls, revetments, and jetties. Consolidation of projects relating to Savannah Harbor.	HD262, 69th Cong., 1st sess.
	Jul 3, 1930	Channel 26 ft deep and 300 ft wide from the Seaboard Air Line Rho. Bridge to the foot of Kings Island.	SD39, 71st Cong., 1st sess.
	Aug 30, 1935	Authorized the 30-foot project and eliminated from the project (a) the relating dam across South Channel; (b) the relocation of the Inland waterway; and (c) the further extension of training walls, revetments, and jetties.	HD276, 73d Cong., 2d sess.
	Mar 2, 1945	Deepening the channel and turning basin above the Seaboard Air Line Rho. Bridge from 26 to 30 ft and widening the channel opposite the Atlantic Coast Line Terminals to a maximum of 550 ft for a length of 5,000 ft.	HD283, 76th Cong., 1st sess.
	Nov 7, 1945	Deepening the channels to 36 ft deep and 500 ft wide across the ocean bar; 34 ft deep and generally 400 ft wide increased to 550 ft opposite the Atlantic Coast Line Terminals, with a turning basin 34 ft deep at the Mexican Petroleum Corp. Refinery; and with such modifications thereof as the Secretary of War and the Chief of Engineers may consider desirable.	HD227, 79th Cong., 1st sess.

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

**TABLE 8-B (continued) AUTHORIZING LEGISLATION**

See Section	Date of Authorizing Act	Project and Work Authorized	Documents
	Jul 24, 1946	Extending channel 30 ft deep, 200 ft wide upstream from Atlantic Creosoting Terminal to a point 1,500 ft below the Atlantic Coastal Highway Bridge, with turning basin 30 ft deep at upper end.	HD678, 79th Cong., 2d sess.
	Sep 3, 1954	Deepening the channel to 34 ft and widening to 400 ft from the upper end of the presently authorized 34-foot channel in the vicinity of the American Oil Company Refinery wharf, to the Savannah Sugar Refinery Corp. with a turning basin at the upper end of the proposed improvement made by widening the channel to 600 ft for a length of 700 ft and providing approaches.	HD110, 83d Cong., 1st sess.
	Oct 23, 1962	Enlargement of turning basin near Kings Island to a width of 900 ft and a length of 1,000 ft, with suitable approaches, at a depth of 34 ft.	SD115, 87th Cong., 1st sess.
	Oct 27, 1965	Deepening the bar channel from 36 ft to 40 ft, the channel between the bar channel and Garden City Terminal from 34 ft to 38 ft, and the channel from the Garden City Terminal to the vicinity of the Savannah Sugar Refining Corp., from 30 ft to 36 ft; widening the bar channel from 500 ft to 600 ft, the channel between Fort Pulaski and the Atlantic Coast Line Terminal from 400 ft to 500 ft, and the channel between Garden City Terminal and the Savannah Sugar Refinery Corp., from 200 ft to 400 ft; providing necessary wideners of the bends; constructing a new turning basin 900 ft wide by 1,000 ft long by 34 ft deep opposite the Atlantic Coast Line Terminals; and enlargement of existing turning basin at the American Oil Company Terminal from 600 ft wide by 600 ft long to 900 ft wide by 1,000 ft long.	HD226, 89th Cong., 1st sess.
	Oct 27, 1965	Providing sediment control works consisting of tide gate structure across Back River; sediment basin 40 ft deep, 600 ft wide about 2 miles long, with Entrance Channel 38 to 40 ft deep and 300 ft wide; control works and canals for supplying fresh water to Savannah National Wildlife Refuge; and facilities to mitigate damages to presently improved areas other than refuge lands.	HD263, 89th Cong., 1st sess.
	SPWC Resolution Jun 15, 1976 and HPWC, Jun 9, 1976 under authority of Sec. 201, Flood Control Act of 1965	Provided for modification of the existing project to include (1) incorporation of the LASH Turning Basin as an element of the existing Federal navigation project for maintenance purposes, (2) enlargement of Kings Island Turning Basin to 1,500 ft by 38 ft.	HD94-520, 94th Cong. dated June 8, 1976.
	Jul 16, 1984	Construction of three new work curve wideners in the Inner Harbor channel. Curve Widener #1 is between mile 11.1 and 11.9. Curve widener #2 is between mile 13.2 and 13.8 and curve widener #3 is between mile 14.0 and 14.8. The Wideners are located on the north side of the channel.	PL 98-360

SAVANNAH, GA, DISTRICT

**TABLE 8-B (continued) AUTHORIZING LEGISLATION**

See Section	Date of Authorizing Act	Project and Work Authorized	Documents
	Oct 17, 1986	Savannah Harbor Widening as described in Report of Chief of Engineers date Dec. 19, 1978. Widen channel from 400 ft to 500 ft between Kings Island turning Basin and Fig Island Turning Basin. Allows planning, engineering and design to remove drift and debris as part of operations and maintenance.	HD6, 99th Cong., 2d sess. Dated Oct. 17, 1986, Section 201 Section 867
	Oct 31, 1992	Savannah Harbor Deepening deepened harbor from -38 ft to -42 ft MLLW in Inner Harbor and from -40 ft to -44 ft MLLW in the Bar Channel for a total of 31 miles of harbor improvements.	WRDA 1992
	Aug 17, 1999	Savannah Harbor Deepening conditionally authorized for -42 ft to -48 ft MLLW in the Inner Harbor.	WRDA 1999
<b>5. SAVANNAH RIVER BELOW AUGUSTA, GA</b>			
	Sep 13, 1891	Authorization provides for a 5-foot channel.	HD255, 51st Cong., 2d sess.
	Jun 25, 1910	Special improvement by bank protection work of 20 to 25 miles of the river immediately below Augusta.	HD962, 60th Cong., 1st sess.
	Jul 3, 1930	The present 6-foot channel project and Lock and Dam, GA.	HD101, 70th Cong., 1st sess.
	Aug 30, 1935	Provision made for locating the lock and dam at New Savannah Bluff.	Senate Committee Print, 73d
	Aug 26, 1937	Conditions of local cooperation modified.	Cong., 2d sess.
	May 17, 1950	Authorization provides for a 9-foot channel at 5,800 cubic foot per second.	Rivers and Harbors Com., Doc. 39, 75th Cong., 1st sess. SD6, 81st Cong., 1st sess.
<b>10. TYBEE ISLAND, GA</b>			
	SPWC Resolution Apr 29, 1963 and HPWC Jun 19, 1963.	Project will provide for beach erosion control, consisting of beach restoration, groin nourishment.	HD105, 92d Cong.
	SPWC Resolution Jun 22, 1971 and HPWC Jun 23, 1972 under authority of Sec. 201, Flood Control Act of 1965 Oct 17, 1986	Extends authority for renourishment with Federal participation from 15 to 50 years.	HR6, 99th Cong., 2d sess. Dated Oct. 17, 1986, Section 867
	PL-104-303 Water Resources Development Act of 1996, Oct 12, 1996	Sect 301(b)(4) provided for inclusion of that portion of Tybee Island located south of the existing terminal groin, including the East Bank of Tybee Creek up to Horse Pen Creek.	WRDA 1996
		Sect 506(a)(4) extended periodic nourishment for a period of 50 years beginning on the date of initiation of construction.	WRDA 1996

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

**TABLE 8-B (continued) AUTHORIZING LEGISLATION**

See Section	Date of Authorizing Act	Project and Work Authorized	Documents
<b>19. J. STROM THURMOND DAM AND LAKE, GA AND SC</b>			
	Flood Control Act of Dec 22, 1944	Approved the general plan for the comprehensive development of the Savannah River Basin and provided for construction of the Project.	HD657, 78th Cong., 2d sess.
	Oct 17, 1986 Jan 1988	Recreation, fish, and wildlife added as name changed. (Formerly Clarks Hill Lake.)	HR6, 99th Cong., 2d sess. Section 864, HJR 376
<b>20. HARTWELL DAM AND LAKE, GA AND SC</b>			
	Flood Control Act of May 17, 1950	Provided for construction of Hartwell Project.	HD657, 78th Cong., 2d sess. PL516, 82nd Cong., 2d sess.
	Flood Control Act of Jul 3, 1958	Provided for the completion of the Hartwell Project.	PL85-500, 87 <sup>th</sup> Cong., 2d sess.
	Water Resources Development Act of 1976	Provides for installation of 5th unit.	PL94-587, Sec. 182b., 85th Cong.
<b>21. RICHARD B. RUSSELL DAM AND LAKE, GA AND SC</b>			
	Flood Control Act of Nov 7, 1966	Provided for construction of the Trotters Shoals Project.	SD52, 89th Cong., 1st sess.
	Water Resources Development Act of 1986	Authorized mitigation plan.	HR6, 99th Cong., 2d sess. dated Oct. 17, 1986, Section 601
<b>23. HARTWELL LAKE/CLEMSON UPPER AND LOWER DIVERSION DAMS, GA AND SC</b>			
	Flood Control Acts of 1944, 1950, 1958, and Water Resources Development Act of 1986	Seismic remediation.	HD657, 78 <sup>th</sup> Cong., 2d sess. PL516, 81 <sup>st</sup> Cong., 2d sess. Sect 1203; WRDA 1986

SAVANNAH, GA, DISTRICT

**TABLE 8-C OTHER AUTHORIZED NAVIGATION PROJECTS**

(See Section 7, page 8-6)

Project	Status	For Last Full Report See Annual Report	Cost to Sep 30, 2009	
			Construction	Operation and Maintenance
Bellville Point, GA	Completed		--	--
Cedar Point, GA	Completed	1982	656,233	--
Darien Harbor, GA	Completed	1975	199,723	185,433
Fancy Bluff Creek, GA <sup>1</sup>	Completed	1935	8,000	7,200
St. Mary's River, GA and FL, and North River, GA	Completed	1951	15,688	69,936
Sapelo Harbor, GA <sup>2, 3</sup>	Completed	1929	17,906	19,594
Satilla River, GA <sup>1, 4, 5, 6</sup>	Completed	1951	9,452	57,172
Savannah River above Augusta, GA <sup>2, 3, 6</sup>	See Notes	1929	69,600	85,944
Savannah River at Augusta, GA <sup>2, 3, 4</sup>	See Notes	1929	200,556	17,444

<sup>1</sup> Channel adequate for commerce.

<sup>2</sup> Project recommended for abandonment in HD 467, 69th Cong., 1st session.

<sup>3</sup> No commerce reported.

<sup>4</sup> Excludes \$185,000 contributed funds (\$172,151 for construction and \$12,849 for operation and maintenance).

<sup>5</sup> Water Resources Development Act of 1986 authorized demonstration project on the Umbrella Creek - Dover Creek for the purpose of reducing shoaling. Monitor for 10 years, develop a hydrodynamic model.

<sup>6</sup> About 84 percent completed. Owing to construction of two power dams which submerged much of the work under the present and former projects, this improvement cannot be completed as originally planned.

**TABLE 8-D OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

(See Section Error! Reference source not found., page Error!

Bookmark not defined.)

Project	Status	For Last Full Report See Annual Report	Cost to Sep 30, 2008	
			Construction	Operation and Maintenance
Augusta, Savannah River, GA	Completed	1941	643,016	38,242
Curry Creek Dam and Lake, GA <sup>1</sup>	See Note	1974	--	--
Dunn Branch, Woodbine, Camden County, GA	Completed	1977	132,640	5,219
Macon, GA	Completed	1955	380,043	38,243
Oates Creek, GA <sup>2</sup>	Completed	1993	12,571,350 <sup>3</sup>	--
Peacock Creek, Liberty County, GA	Completed	1976	582,163	5,219

<sup>1</sup> Feasibility report completed. Project not authorized for construction.

<sup>2</sup> Authorized by HR 6, Water Resource Development Act of 1986 dated October 17, 1986. First Federal cost of \$9,600,000 and non-federal cost of \$4,100,000.

<sup>3</sup> Cost of construction includes \$6,350 for deficiency correction. The original project is complete and further deficiency correction is on hold due to lack of funds.

SAVANNAH, GA, DISTRICT

**TABLE 8-E SAVANNAH RIVER BASIN, DAMS AND LAKES, GA AND SC**  
(See Section 20, 21, 22, and 24)

Name	River	Estimated Cost		Total
		Federal	Non-federal	
J. Strom Thurmond Dam and Lake, GA and SC	Savannah	69,700,000		69,700,000 <sup>1, 2</sup>
Hartwell Dam and Lake, GA and SC	Savannah	32,700,000		32,700,000 <sup>3</sup>
Richard B. Russell Dam and Lake, GA and SC <sup>4, 5</sup>	Savannah	624,100,000	1,900,000	626,000,000 <sup>5</sup>
Hartwell Lake/Clemson Upper and Lower Diversion Dams, GA and SC	Savannah	8,741,000		8,741,000

<sup>1</sup> Approved July 1954.

<sup>2</sup> Final Cost (excludes \$127,000 for preauthorization study).

<sup>3</sup> Approved August 1963 (excludes \$73,000 for preauthorization study).

<sup>4</sup> Excludes Code 710 funds.

<sup>5</sup> Richard B. Russell Dam and Lake (formerly Trotters Shoals Lake) replaced Goat Island, GA and SC, and Middleton Shoals, GA and SC.



# JACKSONVILLE, FL DISTRICT\*

With the exception of a small area in the north-eastern section of Florida, this district comprises a portion of south-central Georgia and all of peninsular Florida, embracing the watersheds tributary to the

Atlantic Ocean and the Gulf of Mexico from, and including the harbor at Fernandina, Florida, to and including the Aucilla River. It also includes Puerto Rico and the U.S. Virgin Islands.

## IMPROVEMENTS

### *Navigation*

1. Aquatic Plant Control (R&H Act of 1965) .....	3
2. Arecibo Harbor, PR .....	3
3. Atlantic Intracoastal Waterway between Norfolk, VA and St. Johns River, FL .....	3
4. Bakers Haulover Inlet, FL .....	4
5. Canaveral Harbor, FL .....	4
6. Channel from Naples to Big Marco Pass .....	5
7. Charlotte Harbor, FL .....	5
8. Eau Gallie Harbor, FL .....	5
9. Fernandina Harbor, FL .....	6
10. Fort Myers Beach, FL .....	6
11. Fort Pierce Harbor, FL .....	6
12. Intracoastal Waterway, Caloosahatchee River to Anclote River, FL .....	7
13. Intracoastal Waterway, Jacksonville to Miami, FL .....	7
14. Jacksonville Harbor, FL .....	8
15. Jacksonville Harbor (Mill Cove), FL .....	9
16. John's Pass, FL .....	9
17. Longboat Pass, FL .....	10
18. Manatee Harbor, FL .....	10
19. Mayaguez Harbor, PR .....	11
20. Melbourne Harbor, FL .....	11
21. Miami Harbor .....	11
22. New Pass, Sarasota, FL .....	14
23. Okeechobee Waterway, FL .....	14
24. Oklawaha River, FL .....	15
25. Palm Beach Harbor, FL .....	15
26. Palm Valley Bridge, FL .....	16
27. Ponce de Leon Inlet, FL .....	16
28. Ponce Harbor, PR .....	16
29. Port Everglades Harbor, FL .....	17
30. Removal of Aquatic Growth from Navigable Waters in the State of Florida .....	18
31. St. Augustine Harbor, FL .....	18
32. St. Johns River, Jacksonville to Lake Harney, FL .....	18
33. St. Lucie Inlet, FL .....	19
34. San Juan Harbor, PR .....	19
35. Tampa Harbor, FL .....	20
36. Navigation Projects on which Reconnaissance and Condition Surveys only were Conducted during Period .....	21

### *Navigation (cont.)*

37. Other Authorized Navigation Projects .....	21
38. Navigation Work under Special Authorization .....	21

### *Beach Erosion Control*

39. Brevard County, FL .....	22
40. Broward County, FL Beach Erosion Control and Hillsboro Inlet, FL Navigation Project .....	22
41. Duval County, FL .....	23
42. Ft. Pierce Beach, FL .....	23
43. Indian River County, FL .....	24
44. Lee County, FL .....	24
45. Manatee County, FL .....	25
46. Martin County, FL .....	26
47. Nassau County, FL .....	26
48. Palm Beach County; Lake Worth Inlet FL .....	27
49. Palm Beach Island, FL .....	27
50. Pinellas County, FL .....	28
51. St. Johns County, FL .....	29
52. Sarasota County, FL .....	29
53. Other Authorized Beach Erosion Control Projects .....	30
54. Beach Erosion Control Activities under Special Authorization .....	30

### *Flood Control*

55. Cedar Hammock (Wares Creek), FL .....	30
56. Dade County, FL .....	30
57. Dade County, North of Haulover Beach, FL .....	31
58. Four River Basins, FL .....	32
59. Herbert Hoover Dike .....	32
60. Portugues and Bucana Rivers, PR .....	33
61. Rio De La Plata, PR .....	34
62. Rio Grande De Arecibo, PR .....	34
63. Rio Grande De Loiza, PR .....	35
64. Rio Manati, Barceloneta, PR .....	35
65. Rio Puerto Nuevo, PR .....	36
66. Inspection of Completed Flood Control Projects .....	37
67. Other Authorized Flood Control Projects .....	37
68. Flood Control Work under Special Authorization .....	37

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

*General Investigations*

69. Surveys ..... 37  
 70. Collection and Study of Basic Data ..... 37  
 71. Continuation of Planning and Engineering ..... 37  
 72. Advance Engineering and Design ..... 37

*General Regulatory*

73. Permit Evaluation ..... 37  
 74. Enforcement..... 38  
 75. Studies..... 38

*Environmental Improvement Projects*

76. Alligator Creek, FL..... 38  
 77. Central and Southern Florida, Including  
 Comprehensive Everglades Restoration Plan ..... 39  
 78. Everglades South Florida Ecosystem  
 Restoration..... 41  
 79. Florida Keys Water Quality Improvements..... 42  
 80. Kissimmee River Restoration .....43  
 81. Modified Water Deliveries to Everglades  
 National Park .....44  
 82. Restoration Work under Special Authorization . 45  
 83. Wetland and Other Aquatic Habitat  
 Creation under Special Authorization ..... 45  
 84. Other Programs and Activities ..... 45

*Tables (Continued)*

Table 9-K Central and Southern Florida Project  
 Status of Work Under Contract at  
 End of Fiscal Year 2009 ..... 97  
 Table 9-L Central and Southern Florida Project  
 Principal Features of Hurricane  
 Gates ..... 98  
 Table 9-M Central and Southern Florida Project  
 Local Cooperation ..... 99  
 Table 9-N Central and Southern Florida Project  
 Operations and Results During  
 Fiscal Year .....100  
 Table 9-O Four River Basins, Florida Project  
 Condition at End of Fiscal Year  
 2009 .....102  
 Table 9-P Four River Basins, Florida Project  
 Moss Bluff Lock .....103  
 Table 9-Q Flood Control Work Under Special  
 Authorization Pursuant to Section  
 205, Public Law 685,  
 (Preauthorization) ..... 104

*Tables*

Table 9-A Cost & Financial Statements ..... 46  
 Table 9-B Authorizing Legislation .....61  
 Table 9-C Other Authorized Navigation Projects .....90  
 Table 9-D Other Authorized Beach Projects .....91  
 Table 9-E Other Authorized Flood Control  
 Projects .....91  
 Table 9-F De-Authorized Projects .....92  
 Table 9-G Navigation Projects On Which  
 Reconnaissance and Condition Surveys  
 Only Were Conducted During Fiscal  
 Year .....94  
 Table 9-H Okeechobee Waterway Operations  
 And Results During Fiscal Year .....95  
 Table 9-I Removal Of Aquatic Growth From  
 Navigable Waters In The State of  
 Florida Control Operations ..... 96  
 Table 9-J Central and Southern Florida Project  
 Construction Completed During  
 Fiscal Year 2009 .....97

## Navigation

### 1. AQUATIC PLANT CONTROL (R&H ACT OF 1965)

**Location.** Navigable waters, tributary streams, connecting channels, and other allied waters in Florida.

**Existing project.** The authorized project provides for control and progressive eradication of water hyacinth, alligator weed, Eurasian water-milfoil, and other noxious aquatic plant growths from navigable waters, tributary streams, connecting channels, and other allied waters of the United States, in combined interest of navigation, flood control, drainage, agriculture, fish and wildlife conservation, public health, and related purposes, including continued research for development of most effective and economical control measures in cooperation with other Federal and State agencies in accordance with report of Chief of Engineers, H 251/89/1. The Water Resource Development Act of 1986 amended the River and Harbor Act of 1965 requiring the local sponsor to share 50 percent of planning costs and 50 percent of research costs that are local in nature. The cost of research that is regional or national in scope shall be borne fully by the United States.

**Local cooperation.** Florida Department of Natural Resources holds the United States free from damages that may occur from operations performed in connection with this project and contributes 50 percent of cost of operations. Compliance with requirements of local cooperation is on schedule.

**Operations and results during fiscal year.** New work: none

**Condition at end of fiscal year.** Cost share operation by the Corps and the State of Florida are on hold due to lack of funding. Water hyacinths within Florida are under maintenance control.

### 2. ARECIBO HARBOR, PR

**Location.** The harbor is located on the north shore of Puerto Rico about 40 miles west of San Juan Harbor. (See NOAA Nautical Chart No. 25668.)

**Previous project.** For details see page 504 of 1956 Annual Report.

**Existing project.** The project provides for a channel 25 feet deep by 400 feet wide, with flare at entrance and widening at inner end to form a maneuvering area and a stone breakwater 1,200 feet long. Plane of reference is mean low water. Mean tidal range is 1.1 feet. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** A bulkhead wharf 688 by 220 feet providing deep water berthing space of approximately 500 feet and a 300 by 100-foot transit shed. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** Maintenance cost was \$181,060.

**Condition at end of fiscal year.** Project was completed in 1944. Breakwater was repaired in 1952. Wave action has since caused damage.

### 3. ATLANTIC INTRACOASTAL WATERWAY BETWEEN NORFOLK, VA AND ST. JOHNS RIVER, FL (JACKSONVILLE DISTRICT)

**Location.** That part of Intracoastal Waterway between southerly limit of Fernandina Harbor, FL, at junction of Lanceford Creek and Amelia River, and St. Johns River, FL. (See NOAA Nautical Chart No. 11489.)

**Previous project.** For details see page 605 of 1938 Annual Report.

**Existing project.** Channel 12, 90 to 150 feet wide from Fernandina Harbor to St. Johns River, about 22 miles long. Plane of reference is mean low water. Mean tidal range is 6 feet at Fernandina and 3.8 feet at St. Johns River. (See Table 9-B for Authorizing Legislation.)

Existing project was authorized by River and Harbor Acts of 1913 (H 898/62/2) and 1938 (H 618/75/3).

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** There is a commercial marina located at Sisters Creek. No other facilities exist along this section of the waterway and none are currently required.

**Operations and results during fiscal year.** Maintenance cost was \$393.

**Condition at end of fiscal year.** Next maintenance dredging scheduled for 2010. Minor shoals exist throughout the project.

#### 4. BAKERS HAULOVER INLET, FL

**Location.** The inlet connects the Intracoastal Waterway and the Atlantic Ocean and is located 2 miles north of Miami Beach in Dade County, Florida.

**Existing project.** The authorized project provides for an entrance channel 11 by 200 feet, thence 8 by 100 feet to the Intracoastal Waterway and a marina basin 8 by 200 feet. The length of the project is 1.02 miles. Plane of reference is mean low water.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** The initial construction of project was completed in December 1964. Maintenance dredging of the Intracoastal Waterway intersection was completed in Spring 2006.

#### 5. CANAVERAL HARBOR, FL

**Location.** The harbor is located on the east coast of Florida in Canaveral Bight, about 146 miles south of the entrance to Jacksonville Harbor and 69 miles north of the entrance to Fort Pierce Harbor. (See NOAA Nautical Chart Nos. 11478 and 11484.)

**Existing project.** The authorized project provides for a 37 foot deep entrance channel and maintenance of the 44 foot deep Navy channel in the 37 foot channel reach; and 35 foot depth turning basin; construction and operation of a sand transfer plant; relocation of the perimeter dike about 4,000 feet westward and extension of the harbor westward; south entrance jetty 1,100 feet long and the north entrance jetty 1,150 feet long; a lock; a channel and turning basin 31 feet deep near the relocated dike; and a barge canal 12 by 125 feet from the turning basin to the Atlantic Intracoastal Waterway. Plane of reference is mean low water (Banana River) for barge canal. The project is about 11.5 miles long. Mean tidal range is 3.5 feet at the entrance and practically non-tidal in Banana and Indian Rivers. (See Table 9-B for Authorizing Legislation.)

Estimated project cost for Canaveral Harbor Sand Transfer System is \$201,700,000 Federal and \$5,000,000 non-Federal.

**Local cooperation.** Local interests must; provide all lands, rights-of-way, spoil-disposal areas, retaining dikes, and embankments; hold United States free from damages; provide and maintain four-lane bridge and roadway subject to Federal contribution of 65.3 percent of cost of constructing bridge and 51.2 percent of constructing roadway; provide public terminal and transfer facilities; and make alterations as required in berthing facilities. For further details see Senate Document 140, 87th Congress, 2nd session.

**Terminal facilities.** Canaveral Harbor has 27 commercial waterfront facilities. The General Cargo Facilities consist of 1,900 feet of usable berthing space capacity of 168,000 square feet. The Oil Handling Facilities operate with 3,760 feet of usable berthing space and 1,413,000 barrels of tank storage. Available warehouse storage includes 28,000 square feet of dry storage and 2,500,000 cubic feet of cold storage. Open storage is 189 acres.

Three-cruise ship berths totaling 1,400 feet long by 34-foot depth and three 8,800 square foot cruise terminals are also located on the south side. The western cruise ship berth is equipped with a roll on/off ramp and is adjacent to 20 acres of trailer storage area.

Hoisting facilities consist of one 45-ton floating crane and crawler and mobile cranes, with capacities from 70 to 200 tons, available from local crane rental services. There are 2 waterfront marine repair facilities with the nearest dry-dock facilities located at Port Everglades and Jacksonville. Two tugs with ratings of 1,600 and 2,250 horsepower are also available. There is no rail service available at the port. The nearest rail service is the Florida East Coast Railway located 9 miles away. Facilities are considered adequate for existing commerce. (See Port Series No. 16, Rev. 1982.)

**Operations and results during fiscal year.** New work: contract cost: \$201,143; Engineering and Design: \$346,581; Construction Management: \$-699. Maintenance cost was \$1,647,199.

**Condition at end of fiscal year.** Construction of the 3<sup>rd</sup> Sand Bypass was completed during December 2007. A construction contract is scheduled for award during FY 2010.

## 6. CHANNEL FROM NAPLES TO BIG MARCO PASS, FL

**Location.** Naples Bay is on the southwestern side of the Florida peninsula about 35 miles south of the mouth of the Caloosahatchee River and approximately 1-mile inland and parallel to the Gulf of Mexico coastline. (See NOAA Nautical Chart No. 11430.)

**Existing project.** The authorized project provides for an interior channel 6 by 70 feet from Naples to Big Marco Pass; a channel 12 by 150 feet from the Gulf of Mexico to Gordon Pass, thence 10 by 100-70 feet to a 10 foot depth turning basin in the upper Naples Bay; and an 8 foot depth turning basin at the municipal yacht basin. Plane of reference is mean low water. Mean tidal range is 2.1 feet. (See Table 9-B for Authorizing Legislation.) For further details see Annual Report of 1962.

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Four seafood-packing houses; 4 marine repair yards; a municipal pier and basin for use by recreational boats; and numerous private piers and slips for both commercial and recreational craft are available. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year:** Maintenance: \$790,109.

**Condition at end of fiscal year.** Minor shoals exist throughout the project. Maintenance dredging contract awarded September 29, 2009.

## 7. CHARLOTTE HARBOR, FL

**Location.** The Harbor is located on the west coast of Florida about 68 miles south of the entrance to Tampa Bay and 150 miles north of Key West. (See NOAA Nautical Chart No. 11429.)

**Previous projects.** For details, see page 457 of 1959 Annual Report.

**Existing project.** The authorized project provides for a channel 32 by 300 feet, increased to 700 feet at the bend, from the Gulf of Mexico to Port Boca Grande to and including a turning basin at 200 feet square at the municipal terminal at Punta Gorda. Plane of reference is mean low water. The project is about 29.5 miles long.

Mean tidal range is one foot at Port Boca Grande and 1.4 feet at Punta Gorda. Extreme range is about 3 feet at Port Boca Grande and 3.8 feet at Punta Gorda. Strong southwesterly winds raise water levels about 1.5 feet; strong northerly and easterly winds lower water levels about one foot. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Local cooperation is fully complied with to date.

**Terminal facilities.** Existing facilities consist of a phosphate wharf at Port Boca Grande and a municipal earth fill pier about 850 feet long at Punta Gorda, both open to the public. Railway connections are available at Port Boca Grande, and highway and railway connections are available at Punta Gorda.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** The project was completed in 1959, and was dredged for maintenance in June 1998. The Florida Power and Light Company no longer has a requirement for bunker fuel oil to be delivered into Charlotte Harbor. Therefore, there is no future maintenance scheduled for the project.

## 8. EAU GALLIE HARBOR, FL

**Location.** The Harbor is located on Indian River about midway of the State of Florida, 176 miles south of Jacksonville Harbor and 174 miles north of Miami Harbor.

**Existing project.** The authorized project provides for a channel 8 by 100 feet from Indian River to and including a 300 by 600-foot turning basin in Eau Gallie. The project is about 2,700 feet long. Plane of reference is mean low water. The harbor is almost non-tidal.

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** A privately owned boatyard in Eau Gallie Harbor provides more than 600 feet of docking space used chiefly by pleasure boats. There are also 2 marine railways and repair and storage facilities available. The facilities are considered adequate for the present needs of navigation.

**Operations and results during fiscal year.** None. No future maintenance is scheduled for this project.

**Condition at end of fiscal year.** The project was completed in 1939. In December 1982, the controlling depth of the channel was 5 feet.

## 9. FERNANDINA HARBOR, FL

**Location.** Entrance to the harbor is located on the northeast coast of Florida about 95 miles south of the entrance to Savannah Harbor, Georgia, and 22 miles north of the entrance to Jacksonville Harbor, Florida. (See NOAA Nautical Chart No. 11503.)

**Existing project.** The authorized project provides for a 32 foot depth channel (maximum channel in active status: 28 feet) generally 300-400 feet wide from deep water in the ocean to the junction of Lanceford Creek with Amelia River; an 800 foot wide turning basin at the first bend below Lanceford Creek; and 2 jetties, 19,150 and 11,200 feet long. The project is 7 miles long. Plane of reference is mean low water. Mean tidal range is 5.8 feet on the bar and 6 feet in the inner harbor. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date. Non-Federal contribution for new work was \$935,000.

**Terminal facilities.** There are 2 large wharves operated by industrial plants; 12 wharves serving fishing boats, recreational craft, and other vessels; 3 oil handling wharves with pipelines; and a Municipal Marina and Sportsman's Wharf with public facilities for small craft. Total berthing space is approximately 4,065 feet. Most terminals are served by rail, and all have highway access. Facilities are considered adequate for existing commerce. (See Port Series No. 16 (Part 2), 1964.)

**Operations and results during fiscal year.** Maintenance: Maintenance contract dredging including E&D and S&A, entrance channel \$1,190,915.

**Condition at end of fiscal year.** The active portion of the existing project is complete. Jetties are in poor condition and are badly in need of repair. Remaining work is to deepen the inner harbor channel and turning basin to 32 feet when and if the presently inactive 1950 authorization is reactivated. The entrance channel was deepened to 46 feet for the Kings Bay project.

## 10. FORT MYERS BEACH, FL

**Location.** Fort Myers Beach is on Estero Island near the mouth of the Caloosahatchee River, about 20

miles below Fort Myers and 110 miles south of Tampa, Florida. (See NOAA Nautical Chart No. 11427.)

**Existing project.** The authorized project provides for a channel 12 by 150 feet from that depth in San Carlos Bay into Matanzas Pass, thence 11 by 125 feet in Matanzas Pass to and including a turning basin 2,000 feet upstream from the upper shrimp terminals. Plane of reference is mean low water. Project is 2.5 miles long.

Mean tidal range is 1.7 feet. Spring range is about 2.3 feet. Strong northerly winds lower the water surface 1 to 2 feet; strong southerly winds have an opposite effect. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** There are 3 shrimp-packing houses and several fish-packing houses, 2 marine railways, a fuel terminal and an ice manufacturing plant in the area. There are several commercial facilities for servicing shrimp boats. Recreational craft facilities include 9 marinas, a boat motor testing laboratory which is closed, and numerous privately owned piers and wharves. All terminals have highway access. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** Maint: Maintenance contract dredging including E&D and S&A, entrance channel \$2,727,160.

**Condition at end of fiscal year.** Maintenance dredging contract awarded April 30, 2009.

## 11. FORT PIERCE HARBOR, FL

**Location.** On east coast of Florida, about 218 miles south of entrance to St. Johns River and about 124 miles north of entrance to Miami Harbor. (See NOAA Nautical Chart No. 11475.)

**Existing project.** Entrance channel to 400 feet wide and 30 feet deep, the interior channel to 250 feet wide and 28 feet deep, the existing turning basin to 1,100 feet square and 28 feet deep, and providing an access channel 1,250 feet long, 250 feet wide and 28 feet deep north of the main turning basin.

Mean tidal range is 2.6 feet at the entrance and 0.7 feet at terminals. (See Table 9-B for Authorizing Legislation.) For further details see 1961 Annual Report.

## JACKSONVILLE, FL DISTRICT

**Local cooperation.** Fully complied with to date. Non-Federal contribution for new work was \$2,503,387. A 25% contribution and an additional 10% reimbursement over 30 years from locals were required.

**Terminal facilities.** Two earth-filled piers forming a slip 200 by 300 feet, with bulkhead wharf at inner end, affording berthing space of about 1,653 feet. The south pier and bulkhead wharf are municipally owned. Railway and both piers serve the north pier by highway connections. North of the turning basin local interests have provided deep-draft berthing and pier facilities. Also available is a bulkhead wharf with a depth of 25 feet with ample room for open storage and with tank storage for petroleum in the rear. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** Maintenance: No work in FY 2009.

**Condition at end of fiscal year.** Existing project is complete.

### 12. INTRACOASTAL WATERWAY, CALOOSAHCHEE RIVER TO ANCLOTE RIVER, FL

**Location.** The Waterway extends from the mouth of the Caloosahatchee River at Punta Rassa, Florida, to the mouth of Anclote River, Florida, following in general an almost continuous series of protected inside waterways along the gulf coast of Florida. (See NOAA Nautical Chart Nos. 11411, 11425 and 11427.)

**Previous projects.** For details see page 767 of 1945 Annual Report.

**Existing project.** The authorized project provides for a channel 9 by 100 feet from Caloosahatchee River to Anclote River; deepening the existing channel at Casey's Pass to 9 feet; a channel 6 by 80 feet (Cats Point Channel) along the southeastern side of Boca Ciega Bay past Frenchman Creek and Gulfport; maintenance of bulkheads, revetments, and two jetties built at Casey's Pass under previous project; and improvement and maintenance of Sunshine Skyway Channel. Plane of reference is mean low water. The project includes about 160 miles of channels.

Mean ranges of tide are 1.7 feet at Punta Rassa, 1 foot at Port Boca Grande, 1.4 feet in Tampa Bay at Anna Maria, and 2 feet at entrance to Anclote River.

Extreme ranges are about 4.5 feet at Punta Rassa, about 3 to 4 feet between Port Boca Grande and Corey Causeway over Boca Ciega Bay, and about 5.5 feet at entrance to Anclote River. Southerly winds over the area generally raise water levels by 1 to 1.5 feet; northerly winds lower water levels by 1 to 2 feet. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Existing facilities include one municipal concrete pier, one railway pier, one freight wharf, one marginal wharf 500 feet long on Terminal Island, and 11 privately owned landings, all at Sarasota. Municipal pier and freight wharf are open to the public. All piers have highway connections. There are 6 wharves along Boca Ciega Bay and a number of small privately owned piers and wharves at various points along waterway for use by commercial fishing boats and recreational craft. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** Maintenance: \$693,716.

**Condition at end of fiscal year.** Shoaling exists in northern Pinellas County, around Longboat Pass and Venice Inlet and just south of the Sunshine Skyway Bridge. Spot shoals exist in Lee County. Engineering and design is underway for maintenance dredging in 2010 pending funds.

### 13. INTRACOASTAL WATERWAY, JACKSONVILLE TO MIAMI, FL

**Location.** The Waterway extends from Jacksonville to Miami, Florida, following the St. Johns River to the mouth of Pablo Creek and thence following in general an almost continuous series of protected inside waterways along the Atlantic coast of Florida to Miami. (See NOAA Nautical Chart Nos. 11489, 11485, 11472 and 11467.)

**Previous projects.** For details, see pages 618-619 of 1938 Annual Report.

**Existing project.** The authorized project provides for a channel 12 by 125 feet from Jacksonville to Miami, modified by Chief of Engineer's report of July 22, 1960; side channels at Sebastian and Daytona Beach and turning basins at Sebastian and Vero Beach, all to an 8 foot depth, and operation and maintenance of Palm Valley highway bridge. Project is 370 miles long, including 21 miles in Jacksonville Harbor. Mean

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

range of tide is 3.8 feet at St. Johns River, 0.7 foot in Indian River at Fort Pierce, 1.8 feet in Lake Worth at Port of Palm Beach terminals, 2.3 feet at the Port Everglades terminals, and 2 feet in Biscayne Bay. The extreme range is about 7 feet at St. Johns River, 1.5 feet at Fort Pierce, and 3 feet in Biscayne Bay. Plane of reference is mean low water. Tidal effect is imperceptible at points along waterway distant from inlets. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** There are a number of privately owned piers, wharves, and landings at various points along waterway. Terminals with railway connections are available at Jacksonville, Fort Pierce, West Palm Beach, Port Everglades, and Miami. Municipal piers or wharves have been constructed at Titusville, Cocoa, Melbourne, and Vero Beach for handling general freight and at St. Augustine, Daytona Beach, New Smyrna Beach, Eau Gallie, West Palm Beach, Delray Beach, Fort Lauderdale, and Miami for use of recreational craft. Yacht basins, open to the public, have been provided at Jacksonville Beach, Daytona Beach, Titusville, Eau Gallie, Vero Beach, Fort Pierce, West Palm Beach, Fort Lauderdale, Hollywood, and Miami. Facilities are considered adequate for existing commerce. (For further details on facilities at Jacksonville, see Port Series No. 15, 1969, and at Palm Beach, Port Everglades, and Miami, see Port Series No. 16, Revised 1972.)

**Operations and results during fiscal year.** Maintenance: \$4,831,576.

**Condition at end of fiscal year.** Work is underway through coordination with the Florida Inland Navigation District to maintain the Federally authorized channel depth and width of the Intracoastal Waterway. Construction was underway in 2009 for dredge material management area MSA 641. In 2009 dredging was completed for the northern section of Palm Valley and underway for the Crossroads reach. In 2010 dredging is anticipated for the Matanzas and Bakers Haulover reaches.

### 14. JACKSONVILLE HARBOR, FL

**Location.** The authorized project comprises the lower 24.9 miles of St. Johns River, which empties into the Atlantic Ocean near the northeasterly corner of the Florida peninsula. (See NOAA Nautical Chart No. 11491.)

**Previous projects.** For details, see page 607 of Annual Report, 1938.

**Existing project.** The authorized project provides for a channel 40 feet deep by 400-1,200 feet wide from ocean to mile 20.0 via Dame Point-Fulton Cutoff, thence 34 feet to Commodore Point, and thence 30 feet deep to the FEC railway bridge at Jacksonville, including a 30 foot channel in Arlington cut in the old Dames Point-Fulton channel; maintenance of the existing 42 and 40 foot depth entrance channel; widening of channel by 100 feet near mile 5 and by 200 feet near mile 7; maintenance of jetties at channel entrance; maintenance of training walls and revetments; a navigation and floodway channel 26 by 200 feet along south side of Commodore Point; on approach and mooring basin 20 feet deep, 1,300 feet long at 20 foot depth contour and 600 feet long at pier head line near Naval Reserve Armory in south Jacksonville; a depth of 24 feet between that depth contour and the pier head line from Hogan Creek to the foot of Laura Street; and a depth of 28 feet to within 60 feet of pier head line between foot of Laura Street and St. Elmo W. Acosta (formerly Upper State) bridge. Length of project is about 26.8 miles. In addition the Navy has provided funds for a deeper Jacksonville Harbor entrance channel 42 feet deep and 800 feet long, intersecting with the Navy's Mayport entrance channel to the Mayport turning basin; also an extension of the existing project to provide 38 foot depth for the Navy fuel depot, at Drummond Creek.

Mean tidal range is 5.3 feet on the bar, 4.9 feet at Mayport, 2.6 feet at Dame Point, and 1.1 feet at Jacksonville. The extreme range varies from about 9 feet on the bar to about 1.5 feet at Jacksonville. Strong northeasterly winds raise the water level about 2 feet at Mayport and Jacksonville. Strong southwesterly winds lower the water about 1.5 feet at Mayport and one foot at Jacksonville. (See Table 9-B for Authorizing Legislation.)

Estimated cost of new work \$77,100,000 Federal and \$42,900,000 non-Federal.

**Local cooperation.** Fully complied to date. A 25 percent contribution and an additional 10 percent reimbursement over 30 years from local sponsor is required for general navigation features, a 100 percent contribution is required for local service facilities, and non-Federal contribution for new work is \$9,665,000.

**Terminal facilities.** Jacksonville Harbor has 84 waterfront facilities. Available at the General Cargo

## JACKSONVILLE, FL DISTRICT

Facilities are 11,140 feet of usable berthing space and 12 transit sheds with a total storage space of 1,009,800 square feet. The Oil Handling Facilities consist of 7,843 feet of usable berthing space and 179 storage tanks providing a total of 8,478,900 barrels of tank storage. Warehouse storage at the port includes 3,266,900 square feet of dry storage and 4,071,100 cubic feet of cold storage. Available open storage is 233 acres. Four fixed cranes with capacities from 40 to 100 tons are located at the port. Available locally are crawler and truck cranes with capacities up to 100 tons. Various phases of marine repair work are accomplished by 7 waterfront repair facilities and numerous other companies located off water. Dry-dock facilities consist of 6 floating dry-docks with capacities from 800 to 33,000 tons. Floating equipment includes 25 tugs with up to 3,300 horsepower and 16 tank barges with capacities up to 20,700 barrels. Three major railroads furnish rail service from port docks to all points outside of Jacksonville. Facilities are considered adequate for existing commerce (See Port Series No. 15, Rev. 1978.)

**Operations and results during fiscal year.** New Work: Navigation construction \$3,635,136; Engineering and Design \$1,969,772 and Contract Management \$161,948. Maintenance: Contract dredging cost including Engineering and Design and Contract Management \$2,011,808.

**Condition at end of fiscal year:** Construction to extend the authorized 40-foot project depth from river mile 14.7 to river mile 20.0 is underway.

### 15. JACKSONVILLE HARBOR (MILL COVE), FL

**Location.** The authorized Mill Cove project comprises a 6 square mile body of shallow water on the St. Johns River approximately 10 miles from the Atlantic Ocean near the northeasterly corner of the Florida peninsula. (See NOAA Nautical Chart No. 11491.)

**Previous project.** None.

**Existing project.** The authorized project provides improved flow and circulation through Mill Cove to eliminate further shoaling. This large shallow area averages about 2 to 4 feet deep, is about 5.5 miles long, and varies from 0.5 to 2.0 miles wide. It is situated along the St. Johns River near the Dame Point-Fulton Cutoff portion of the Jacksonville Harbor navigation project. The Mill Cove project includes dredging a 650

foot by 3,600 foot flow channel at the west end to -12 feet MSL; enlarging the weir opening at the eastern end to 1,300 feet wide and -12 feet MSL; and installing flow diversion features at the west and east ends of the cove. Mean tidal range is 4.9 feet at entrance, 4.5 feet at Mayport, 3.0 feet at Dame Point, and 1.2 feet at Jacksonville. Strong northeasterly winds raise the water level about 2 feet at Mayport and Jacksonville. Strong southwesterly winds lower the water about 1.5 feet at Mayport and 1 foot at Jacksonville (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** In conformance with Section 221, Public Law 91-611, and prior to commencement of construction, the Jacksonville Port Authority, as local sponsor, must provide written agreement to the following local cooperation requirements: provide without cost to the United States all lands, easements, and rights-of-way required for construction and subsequent maintenance of the project; hold and save the United States free from damages that result due to construction and maintenance other than damages due to the fault or negligence of the United States or its contractors; accomplish without cost to the United States such utility and other relocations or alterations as necessary for construction.

**Terminal facilities.** None.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** Project completed November 2002.

### 16. JOHNS PASS, FL

**Location.** A natural inlet on the west coast of Florida connecting Boca Ciega Bay with Gulf of Mexico. The pass is located about 8 miles northwest of lower Tampa Bay directly across Boca Ciega Bay from St. Petersburg, Florida. (See NOAA Nautical Chart No. 11411.)

**Existing project.** Channel 10 by 150 feet in the Gulf, thence 8 by 100 feet inside pass, and 6 by 100 feet to the Intracoastal Waterway, and suitable protective measures over a frontage of approximately 1,000 linear feet of shore along the north end of Treasure Island. Plane of reference is mean low water. Mean range of tide is 1.5 feet. Project is about 2.6 miles long. Project was authorized December 2, 1964

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

by the Chief of Engineers under Section 107 of the 1960 River and Harbor Act and by Section 110 of the 1966 River and Harbor Act.

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Only small marinas and repair yards for recreational craft are in the general vicinity. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** Project was completed in 1968. Authorized project depths were restored as of June 2002.

### 17. LONGBOAT PASS, FL

**Location.** Longboat Pass is located on the west coast of Florida about 11 miles northwest of Sarasota and 23 miles south of St. Petersburg. Located in Manatee County, it is one of several natural inlets connecting Sarasota Bay, a tidal estuary, with the Gulf of Mexico. (See NOAA Nautical Chart No. 11425.)

**Existing project.** The authorized project provides for an entrance channel 12 by 150 feet from the Gulf to Longboat Pass Bridge, thence a channel 10 by 100 feet from Longboat Pass Bridge along a north to northeasterly alignment to the Intracoastal Waterway to Cortez Bridge. The mean tidal range is 2.2 feet and the maximum tidal range is about 5 feet. Currents are predominantly tidal. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date. See 1978 Annual Report for detailed local cooperation requirements.

**Terminal facilities.** From Sarasota north to Tampa Bay there are about 28 small craft facilities including marinas, boat repair yards, and boat basins along the Intracoastal Waterway. Nine of them are located within 2 miles of Longboat Pass. Numerous private mooring piers and wharves also exist in the area. The marina and repair facilities appear adequate for the general boating needs of the area.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** Construction of the project is complete. Authorized project depths were

restored as of May 2003. The channel depths are adequate for navigation.

### 18. MANATEE HARBOR, FL

**Location.** The project is located in Manatee County on the east side of Tampa Bay 10 miles from the Gulf of Mexico. (See NOAA Nautical Chart No. 11414.)

**Existing project.** The authorized project provides for maintenance of the existing 40-foot deep draft navigation channel and turning basin, which extends from Tampa Bay Channel to berthing facilities at Port Manatee. Also provide initial construction for a widener at the northwest end of the Manatee Harbor Channel and a repositioned 900 by 1300 foot turning basin adjacent to the northern berthing area to provide a larger turning basin. All material from the project was placed on upland sites west and northeast of the port slip.

Estimated cost of new work \$62,700,000 Federal and \$26,800,000 non-Federal.

**Local cooperation.** Fully complied with to date. A 25 percent contribution and an additional 10 percent reimbursement over 30 years from locals are required.

**Terminal facilities.** Existing facilities at Port Manatee consist of 675 acres of port operational lands, a ship basin 1,500 feet long by 788 feet wide; and an approximately 3 mile access channel, with a design width of 400 feet, which connects with the Federally authorized Tampa Bay Channel. The Manatee project was constructed between August 1968 and February 1970. The required design depth was 40 feet, and the dredging contractor was allowed a pay over depth of 2 feet. Port Manatee also operates its own terminal railroad, which is licensed under the Interstate Commerce Commission, and publishes a switching tariff as a Class III railroad. It also maintains and operates 2 switch engines and about 30,000 feet of track, which connects with the CSX Railroad.

**Operations and results during fiscal year.** New Work: Engineering and Design costs: \$580,629. Maintenance: Contract dredging cost including Engineering and Design and Contract Management \$4,285,618.

**Condition at end of fiscal year.** A General Reevaluation Report is being completed under current policies and guidelines for the addition of a channel

## JACKSONVILLE, FL DISTRICT

extension 1,590 feet long by 400 feet wide to provide additional berthing areas.

### 19. MAYAGUEZ HARBOR, PR

**Location.** The Project is on the west coast of Puerto Rico, about 110 miles by water from San Juan Harbor. (See NOAA Nautical Chart No. 25673.)

**Existing project.** The authorized project provides for a 30 by 1,000-foot approach channel to the deep-water terminal, decreasing to a 500-foot width opposite the westerly end of terminal, thence the same width to the easterly end of terminal. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** A modern deep water terminal is located in the northeast section of the harbor consisting of a bulkhead wharf about 1,270 feet long with a storage transit shed 800 by 60 feet immediately shoreward. The Puerto Rico Industrial Development Company, an agency of the Commonwealth of Puerto Rico, owns a bulkhead wharf of about 200 feet in line with the existing deep-water terminal plant located within the industrial harbor area. In addition, Bumble Bee Packing Company, Inc., owns and operates a dock of about 200 feet for docking tuna fish boats. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** Project was completed in 1934.

### 20. MELBOURNE HARBOR, FL

**Location.** The project is on Indian River about midway of the east coast of Florida, 179 miles south of Jacksonville Harbor and 171 miles north of Miami Harbor.

**Existing project.** The authorized project provides for a channel 8 by 100 feet from Indian River to a 400 by 800 foot turning basin in Crane Creek. Project is about 3,150 feet long. Plane of reference is mean low water. The harbor is almost non-tidal.

**Terminal facilities.** The Municipal Marina on the north end of the turning basin has a 350 foot steel bulkhead with 11 finger piers, each about 40 feet long. There are also 2 privately owned storage and repair facilities and several privately owned boathouses and

docks. The facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** The project was completed in 1938. As of September 1984 channel depths as authorized were available throughout the project. Project determined to have inadequate economic benefits to justify further use of operation and maintenance funds. Therefore, no future maintenance is planned for this project.

### 21. MIAMI HARBOR, FL

**Location.** Miami is near the northern end of Biscayne Bay, about 71 miles south of the entrance to Palm Beach Harbor. Miami River has its source in the Everglades and flows southeasterly to enter Biscayne Bay at Miami. (See NOAA Nautical Chart No. 11468.)

**Existing project.** The project as authorized in WRDA 2007 Section 1001 (17) provides for the widening of the entrance channel from 500 to 800 feet and deepening from 44 to 51 feet and the addition of a turn widener at the southern intersection with Fisherman's Channel and deepening to 50 feet. It will also increase the Fisher Island Turning Basin from 1200 to 1500 feet and deepening from 42 to 50 feet and realign the existing channel 250 feet to the south. The project will also entail expanding local service facilities (berthing areas), widening the Lummus Island Cut by 40 feet, reduce Lummus Island middle turning basin from 1600 to 1500 feet and deepening from 42 to 50 feet. The harbor project will also include mitigation plans to restore seagrass beds and construction of artificial reefs.

Mean tidal variation is 2.5 feet at entrance and 2 feet in the bay. Extreme variation is about 4.5 feet at entrance and 3 feet in Biscayne Bay. Strong easterly winds raise the water level about 1.5 feet at entrance and 1 foot in the bay. Strong westerly winds lower water level about 1 foot at entrance and about 0.5 foot in the bay. Plane of reference is mean lower low water, except for 15-foot channel in Miami River where depths are based on flood conditions. Total length of the project is about 13 miles.

Estimated cost for Miami Harbor Channel is \$54,000,000 Federal and \$142,300,000 non-Federal. (See Table 9-B for Authorizing Legislation.)

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

**Local cooperation.** The recommendation of the Chief of Engineers is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies, including the following requirements:

a. Enter into an agreement, which provides, prior to execution of the project cooperation agreement, 25 percent of design costs;

b. Provide, during construction, any additional funds needed to cover the non-federal share of design costs;

c. Provide, during the period of construction, a cash contribution equal to the following percentages of the total cost of construction of the general navigation features (which include the construction of land-based and aquatic dredged material disposal facilities that are necessary for the disposal of dredged material required for project construction, operation, or maintenance and for which a contract for the federal facility's construction or improvement was not awarded on or before October 12, 1996, or, a dredged material disposal facility designed, constructed, managed, or operated by a public or private entity, if consistent with economic and environmental considerations and said facility is the least-cost alternative:

(1) 10 percent of the costs attributable to dredging to a depth not in excess of 20 feet; plus

(2) 25 percent of the costs attributable to dredging to a depth in excess of 20 feet but not in excess of 45 feet; plus

(3) 50 percent of the costs attributable to dredging the NED plan to a depth in excess of 45 feet; plus

(4) 100 percent of the costs attributable to dredging to a depth that is in excess of the initial construction cost of construction of the NED plan;

d. Pay, during subsequent maintenance, 100 percent of any additional costs attributable to operation and maintenance of a depth that is in excess of the NED plan;

e. Pay with interest, over a period not to exceed 30 years following completion of the period of construction of the project, up to an additional 10 percent of the total cost of construction of general navigation features. The value of lands, easements, rights-of-way, and relocations provided by the non-Federal sponsor for the general navigation features, allocated to the NED plan, described below, may be credited toward this required payment. If the amount of

credit exceeds 10 percent of the total cost of construction of the general navigation features, the non-Federal sponsor shall not be required to make any contribution under this paragraph, nor shall it be entitled to any refund for the value of lands, easements, rights-of-way, and relocations in excess of 10 percent of the total cost of construction of the general navigation features;

f. Provide all lands, easements, and rights-of-way, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features (including all lands, easements, and rights-of-way, and relocations necessary for dredged material disposal facilities).

g. Provide, operate, maintain, repair, replace, and rehabilitate, at its own expense, the local service facilities; in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government; provide and maintain without cost to the United States depths in berthing areas serving the terminals commensurate with the depths provided to the project identified as the NED plan; these berthing areas are identified as Gantry Crane Berths 99-140;

h. Accomplish all removals determined necessary by the Federal Government other than those removals specifically assigned to the Federal Government;

i. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to the general navigation features for the purpose of inspection, and, if necessary, for the purpose of operating, maintaining, repairing, replacing, and rehabilitating the general navigation features;

j. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project, any betterments, and the local service facilities, except for damages due to the fault or negligence of the United States or its contractors;

k. Keep, and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of 3 years after completion of the accounting for which such books, records, documents, and other evidence is

JACKSONVILLE, FL DISTRICT

required, to the extent and in such detail as will properly reflect total cost of construction of the general navigation features, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and local governments at 32 CFR, Section 33.20;

l. Perform, or cause to be performed, any investigations for hazardous substances as are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, or rehabilitation of the general navigation features. However, for lands that the Government determines to be subject to the navigation servitude, only the Government shall perform such investigation unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

m. Assume complete financial responsibility, as between the Federal Government and the non-Federal sponsor, for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features;

n. To the maximum extent practicable, perform its obligations in a manner that will not cause liability to arise under CERCLA;

o. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987, and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required for construction, operation, maintenance, repair, replacement, and rehabilitation of the general navigation features, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

p. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army;" and all applicable Federal labor standards and requirements, including but not limited to 40 U.S.C. 3141-3148 and U.S.C. 3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 et seq.) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c;

q. Provide the non-Federal share of that portion of the costs of mitigation and data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project, in accordance with the cost sharing provisions of the agreement;

r. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized;

s. Prepare and implement a harbor management plan to be coordinated with local interest. The harbor management plan shall incorporate best management practices to control water pollution at the project site.

**Terminal facilities.** Miami Harbor offers 18,840 linear feet of berthing on Dodge and Lummus Islands. The cruise zones total 8,860 linear feet. The cargo berthing areas total 9,980 linear feet; 6,120 feet (42'D) along the southeast section of Lummus Island and the South Ship Channel at the gantry facility, 1,000 feet (42'D) at the northeast section along the Main Ship Channel, and 2,760 feet (32'-28'D) of roll-on roll-off berth space is available along the south section of port. There is a total of 468,000 square feet of transit cargo shed space and 988 electrical Outlets at full capacity..

Hoisting Facilities located at the port include two 40 ton cranes and cranes with capacities up to 200 tons available through local rental. Twelve waterfront repair yards and 2 off water yards serve the port. Dry-dock facilities available include 7 marine railways and 4 boat lifts with haul out capacities ranging from 40 to 1,000 tons and lifting capacities ranging from 79 to 500 tons. Nine tugs, with ratings up to 3,000 horsepower, and 13

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

tank barges, with capacities up to 35,000 barrels, are also available. The CSX and the Florida East Coast Railway serve rail Facilities at the port.

Facilities are considered adequate for existing commerce. (See Port Series No. 16, Rev. 1982.)

**Operations and results during fiscal year.** New work: Engineering and Design costs, \$265,294 and Contract Management cost \$2,407. Maintenance: Miami River and Miami Harbor Maintenance cost: \$27,772,144.

**Condition at end of fiscal year.** Execution of a design agreement and commencement of plan and specifications were accomplished in FY 2009. Maintenance dredging of the Miami River was completed during FY 2009.

### 22. NEW PASS, SARASOTA, FL

**Location.** Sarasota Bay is a tidal lagoon along the west coast of Florida immediately south of Tampa Bay. New Pass is a gulf inlet across the bay from Sarasota, Florida. (See NOAA Nautical Chart No. 11425.)

**Existing project.** The authorized project provides for an entrance channel 10 feet deep and 150 feet wide in the Gulf of Mexico diminishing to 8 by 100 feet through New Pass and extending across Sarasota Bay to the Intracoastal Waterway with side channels to, and turning basins at, Payne Terminal and city pier. Plane of reference is mean low water. Mean range of tide is 1.3 feet in Sarasota Bay; mean spring range is 1.7 feet. Project is about 4 miles long. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Consist of Payne Terminal, a slip 200 by 650 feet, and city pier, 400 feet long with 2 finger piers equipped with adequate facilities at each location.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** Project was completed in 1964. Authorized project depths were restored as of May 2003. Limit of federal participation in maintenance dredging has been met.

### 23. OKEECHOBEE WATERWAY, FL

**Location.** The waterway traverses the southern part of the Florida peninsula via the Caloosahatchee River, Lake Okeechobee, and St. Lucie Canal, connecting coastal waterways along the Gulf and Atlantic Shores. (See NOAA Nautical Chart No. 11428.)

**Previous project.** For details, see page 785 of 1949 Annual Report.

**Existing project.** The authorized project provides for replacing the old locks on the St. Lucie Canal by a single new lock; a channel 10 by 100 feet from Ft. Myers for about 5 miles upstream, thence 8 by 80-100 feet to the Intracoastal Waterway, Jacksonville to Miami, near Stuart; a side channel at Ft. Myers; operation and care of St. Lucie Lock; and maintenance of features completed under previous projects as follows: a 12 by 200 foot channel from the Gulf of Mexico to Punta Rassa, thence 10 by 100 feet to Ft. Myers with a 10 foot depth basin at Fort Myers; a 6 by 80 foot channel along the south shore of Lake Okeechobee from Clewiston to St. Lucie Canal; a 6 by 60 foot channel in Taylor Creek from the town of Okeechobee to the Lake; and operation and care of Moore Haven and Ortona Locks. (See Table 9-B for Authorizing Legislation.)

For further details see 1962 Annual Report.

**Local cooperation.** Fully complied with for completed portion of project.

**Terminal facilities.** There are 3 freight piers, one municipal recreation pier, 4 privately owned piers, and a municipal yacht basin on the Caloosahatchee River near Fort Myers. The Corps has provided a boat basin, launching ramp, and a 120-foot wharf on the Caloosahatchee River about one-quarter mile below Ortona Lock. There are tie-up dolphins above and below all 5 locks. Commercial yacht basins are provided on the south side of the Caloosahatchee River about halfway between Ortona and Moore Haven Locks and about 3 miles east of LaBelle. A commercial/municipal yacht basin is provided on the north side of the St. Lucie Canal at Indiantown.

There are numerous small wooden-pile landings along the Caloosahatchee River, St. Lucie Canal, and on the St. Lucie River, including one railroad terminal pier, municipal pier, and a pier for handling petroleum products at Stuart. Also, 550 feet of wharves have been provided on the west side of Taylor Creek immediately landward of Hurricane Gate No. 6 and 150 feet on the east side of the creek. A yacht basin has been provided

## JACKSONVILLE, FL DISTRICT

on the west side of the creek immediately landward of the hurricane gate. The installations on Taylor Creek are privately owned, but are open to the public. A breakwater-protected harbor is available at Pahokee. There is a 440 foot marginal wharf on the Industrial Canal at Clewiston; a 125 foot wharf at LaBelle; a 150 foot wharf at Belle Glade; a 125 foot wharf at Moore Haven; a 50 foot wharf at Alva; and a 30 foot wharf on Taylor Creek at the town of Okeechobee. A docking facility for loading raw sugar was constructed in 1967 on Herbert Hoover Dike near Belle Glade. All have highway and/or railway connections. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** (See Table 9-H for work accomplished.)

**Condition at end of fiscal year.** The project is complete. (The 8 foot depth basin at Stuart was deauthorized by WRDA of 1988, P.L. 100-676.)

### 24. OKLAWAHA RIVER, FL

*Location.* The river has its source in a system of large lakes in the central part of the Florida peninsula and flows generally northerly, then easterly, and emptying into St. Johns River 22 miles upstream from Palatka. The extreme head of the system is considered to be Lake Apopka, 120 miles above the river's mouth.

**Previous projects.** For details, see page 613 of 1938 Annual Report.

**Existing project.** The authorized project provides for clearing a channel to Lake Griffin; maintaining dikes to obtain a navigable depth of about 4 feet to Leesburg and construction of a lock and dam at Moss Bluff. The project length is about 85.7 miles. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** Several private and public landings and boat-launching ramps are located along the river. Public recreation craft basins and boat launching ramps are near Silver Springs and State Roads 40 and 316 bridges. There is a municipal wharf on Lake Griffin at Leesburg. A dam has created Lake Ocklawaha (13,000 acres) with egress to the St. Johns River through Buckman Lock. Along the lake are 4 launching ramps; Payne's Landing, Orange Springs, Kenwood Landing, and Rodman Recreation Area. Access below the dam is at the Ocklawaha Boat launch

ramp and at State Road 19. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** Maintenance: \$169,469.

**Condition at end of fiscal year.** The project is complete. (A 6-foot depth channel from the mouth of the river to the head of Silver Springs Run was deauthorized.) The Moss Bluff lock and dam structure was replaced under the Four River Basins, Florida flood control project.

### 25. PALM BEACH HARBOR, FL

**Location.** The authorized project is located on the east coast of Florida about 71 miles north of the entrance to Miami Harbor and about 264 miles southeasterly from the entrance to Jacksonville Harbor. (See NOAA Nautical Chart No. 11472.)

**Existing project.** The authorized project provides for an entrance channel 35 by 400 feet merging with an inner channel 33 by 300 feet to and including a turning basin; tank revetment; and restoring jetties. Plane of reference is mean lower water. The project is about 1.6 miles long.

Mean range of tide in the ocean at the entrance is 2.8 feet and at the turning basin, 2.2 feet. Extreme range of tide is about 4.5 feet at the inlet and 3 feet at the terminals. Seven-foot tidal ranges have occurred during storms. For details, see 1962 Annual Report. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date. For requirements, see 1961 Annual Report.

**Terminal facilities.** The port has 13 commercial waterfront facilities. The General Cargo Facilities include 5,156 feet of usable berthing space and 6 transit sheds with a total of 118,030 square feet of storage capacity. The Oil Handling Facilities consist of 10 storage tanks with a total capacity of 2,029,600 barrels. Usable berthing space is not available at the Oil Handling Facilities. Dry storage is available at 150,500 square feet, cold storage at 19,200 cubic feet and open storage at 27.1 acres. Seven cranes with capacities from 15 to 230 tons are located at the port. There are no floating cranes, repair facilities or dry-dock facilities located at the port. A 100-ton vertical boatlift is located on the Intracoastal Waterway south of the port for heavy lifts. Two tugs with ratings of 900 and 1,000 horsepower are available. The Palm Beach Belt Line,

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

which connects, with the Florida East Coast Railway serves the port. Facilities are considered adequate for existing commerce. (See Port Series No.16, Rev. 1982.)

**Operations and results during fiscal year.** Maintenance: \$2,624,085.

**Condition at end of fiscal year.** The project was completed in 1967. Jetties and revetment are in need of repair. Future maintenance dredging will occur yearly as necessary depending on shoaling conditions.

### 26. PALM VALLEY BRIDGE, FL

**Location.** Palm Valley Bridge is located over the Intracoastal Waterway on State Road 210 in St. John's County, Florida.

**Existing project.** The project replaced the existing Palm Valley Bridge with a new high-level bridge that is fixed for navigation. Additional roadway construction was required because of the new bridge alignment. The old bridge was removed and the Intracoastal Waterway in the vicinity of the old bridge was dredged to its authorized dimensions in FY 2005. (See Table 9-B for Authorizing Legislation).

**Local cooperation.** Operations and Maintenance at an estimated \$75,000 per year.

**Terminal facilities.** None in the immediate area.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** Local sponsor has funded expansion from 2 to 4 lanes. PCA executed in December 1999. Construction contract awarded September 2000. The County Commissioners have approved a betterment to a 4-lane bridge. The new bridge was completed in July 2002.

### 27. PONCE DE LEON INLET, FL

**Location.** Ponce de Leon Inlet is on the Atlantic coast of Florida about 65 miles south of St. Augustine Harbor and 57 miles north of Canaveral Harbor. (See NOAA Nautical Chart No. 11485.)

**Existing project.** The authorized project provides for an entrance channel 15 by 200 feet across the ocean bar, thence 12 by 200 feet and 12 by 100 feet through the inlet; thence southward in Indian River North, 12 by 100 feet, and northward in Halifax River, 7 by 100 feet, each leg continuing to the Intracoastal Waterway;

ocean jetties on the north and south of the inlet 4,200 and 2,700 feet long respectively, and weir in the north jetty with an impoundment basin inside the jetty. Plane of reference is mean low water. Mean range of tide is 4.1 feet in the ocean and 2.3 feet inside the inlet. The project is about 5 miles long.

Estimated cost for new work is \$5,200,000 Federal and \$4,300,000 non-Federal.

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** None in the immediate area.

**Operations and results during fiscal year.** New Work: Real Estate \$1,527, Engineering and Design \$289,688: Maintenance: \$497,462.

**Condition at end of fiscal year.** The south jetty extension is awaiting sponsor approval to proceed.

### 28. PONCE HARBOR, PR

**Location.** Ponce Harbor is an open bay about midway on the south coast of Puerto Rico. From the center of the city of Ponce, the harbor is about 3 miles south. (See NOAA Nautical Chart No. 25677.)

**Previous project.** For details, see page 12 of Annual Report for 1975.

**Existing project.** The authorized project provides for a seawall 362 feet long extending northwesterly across the rock reef from near the landward end of the municipal pier, 30 feet deep and containing about 18 acres; a breakwater 2,400 feet long extending southwesterly from Punta Carenero; a channel 36 feet deep by 600 feet wide extending from the Caribbean Sea approximately 2.8 miles up to the port, thence a channel 400 feet wide by 36 feet deep into the harbor, and a 36 foot deep, irregularly shaped turning basin with a diameter of 959 feet. Plane of reference is mean low water. Mean tidal range is 0.6 foot, extreme varies between about 1 foot below and 2 feet above mean low water. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Should provide all lands, easements and rights-of-way; provide and maintain at local expense depths in berthing areas and local access channels; hold United States free from any damages resulting from construction and maintenance of the project; relocate without cost to the United States all cables, sewer mains, water supply, drainage and other utility installations as required; provide adequate public

## JACKSONVILLE, FL DISTRICT

terminal and transfer facilities open to all on equal terms. A letter has been received from mayor of Ponce, assuring compliance with local requirements and to cost share the project. Non-Federal contribution for new work was \$717,304. A 25 percent contribution is required and an additional 10 percent reimbursement over 30 years from locals.

**Terminal facilities.** The municipality of Ponce owns and operates the only deep-draft terminal facilities in Ponce Harbor, which consist of a municipal pier 515 feet long and 108 feet wide, and a bulkhead wharf 3,811 feet long. Both are equipped for transfer and storage of freight. A 40-ton container lift shore crane is available for the handling of loaded containers. The municipal pier has a steel transit shed 386 by 85 feet. The bulkhead wharf has 4 steel transit sheds totaling over 103,000 square feet. Three concrete and steel warehouses are available providing 800,000 square feet for general storage. Open storage areas for structural steel, lumber, and other bulk and package commodities are also provided. Bulk cement is handled and loaded into cement cargo ships by the use of a private pipeline loading facility. A tuna fish processing and canning factory is located on the premises, with direct access to the bulkhead wharf. Existing facilities are open to the public. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** Maintenance: None.

**Condition at end of fiscal year.** Construction of the project is complete. South and north jetties are in fair condition.

### 29. PORT EVERGLADES HARBOR, FL

**Location.** The harbor is on the east coast of Florida about 23 miles north of Miami and about 48 miles south of Palm Beach Harbor, Florida. (See NOAA Nautical Chart No. 11470.)

**Existing project.** The authorized project provides for an ocean entrance channel 45 by 500 feet through an ocean bar tapering to 42 by 450 feet between rubble stone entrance jetties, and continuing at that depth to an irregularly flared entrance and turning basin of same depth; enlarging Pier 7 channel to 36 by 400 feet for distance of about 1,600 feet; maintenance of the locally dredged channel opposite Berth 18 to 36 feet deep over a length of 700 feet with varying widths of 200 to 150 feet; construction of a south jetty fishing walkway; and, maintenance of the jetties. Plane of reference is mean

low water. The project is about 1.9 miles long. Mean range of tide is 2.5 feet at the entrance and 2.3 feet at the terminals; extreme range is about 4.5 feet with storm tides of about 6.5 feet.

Estimated cost of new work is \$15,003,000 Federal and \$7,888,000 non-Federal.

**Local cooperation.** Fully complied with for work completed to date. For work under H 144/93/1, local interests must: provide all lands, easements and rights-of-way; save United States free from damages; accomplish utility and other relocations or alterations; provide depths in berthing areas and local access channels serving the terminals commensurate with depths provided in the related project areas; establish regulations prohibiting discharge of pollutants into waters of the channel by users thereof; prohibit erection of any structure within 100 feet of project channel as authorized at time of construction; provide and maintain public terminal and transfer facilities; contribute 50 percent of total first costs of recreational jetty fishing facility; and operate and maintain jetty fishing facility. The local sponsor has furnished assurances of local cooperation for the 1974 authorization.

**Terminal facilities.** There are 22 commercial waterfront facilities serving the port. The General Cargo Facilities include 13,807 feet of usable berthing space, 7 transit sheds with a total capacity of 393,870 square feet, and 6 container yards with space for 3,965 containers. Oil Handling Facilities consist of 232 storage tanks with a total storage capacity of 9,564,800 barrels. There is no usable berthing space located at the Oil Handling Facilities. Dry storage is available at 225,000 cubic feet and open storage at 100.3 acres.

Hoisting facilities available from a local firm include 8 cranes with capacities from 20 to 155 tons. No floating cranes or derricks for heavy lifts are available at the port. There are 2 marine repair yards. Dry-dock facilities include 2 dry-docks with capacities of 2,200 and 3,200 tons and a 4,270 ton vertical boatlift. Three tugs with ratings up to 4,290 horsepower serve the port. The Port Everglades Belt Line connects with the CSX railroad to serve the port. (See Port Series No. 16, Rev. 1982.)

**Operations and results during fiscal year.** New work: Reimbursement: \$1,435,000; Maintenance: No work during FY 2009.

**Condition at end of fiscal year.** Feasibility study to expand and deepen the port is scheduled to be

completed in Nov 2012. PED is scheduled to start in Dec 2012.

### **30. REMOVAL OF AQUATIC GROWTH FROM NAVIGABLE WATERS IN THE STATE OF FLORIDA.**

**Location.** Water hyacinth, hydrilla and water lettuce are found in Federal navigation projects in the Jacksonville District.

**Existing project.** The authorized project provides for destruction or removal of aquatic growth in Federal navigation projects in Jacksonville District, which threaten or negatively impact navigation. This project is 100% federally funded. No estimate of the final cost of work has been made. (See Table 9-B for Authorizing Legislation.)

For further details, see 1962 Annual Report.

**Local cooperation.** None required.

**Operations and results during fiscal year.** Maintenance: Operations continued during the year: \$4,222,347; (See Table 9-B for Authorizing Legislation and Table 9-I for spraying operations.)

**Condition at end of fiscal year.** The project is for maintenance of federal navigation projects. During the year approximately 9,759 acres of floating vegetation (water hyacinth and/or water lettuce) and 500 acres of hydrilla were controlled.

### **31. ST. AUGUSTINE HARBOR, FL**

**Location.** The harbor is on the east coast of Florida, about 35 miles south of the entrance to St. Johns River and about 180 miles north of Fort Pierce Harbor. (See NOAA Nautical Chart No. 11485.)

**Previous project.** For details see page 412 of Annual Report for 1958.

**Existing project.** The authorized project provides for a channel 16 by 200 feet along the best natural new inlet bar, thence 12 feet deep to the Intracoastal Waterway; a sand trap groin on the north side of the inlet extending seaward from the shore of Vilano Beach, and a sand-tight jetty on the south side of the channel extending seaward from the shore of Conch Island parallel to and coextensive with the groin; future landward extension of the groin and jetty; and a channel 10 by 100 feet in San Sebastian River from the

Intracoastal Waterway to King Street Bridge, with a turning basin near the upper end. Length of the inlet channel is about 1.5 miles and length of the San Sebastian River channel is about 2.6 miles. Plane of reference is mean low water. The mean tidal range is 4.5 feet in the ocean at St. Augustine Inlet and 4.2 feet at the city waterfront. Strong northerly winds, mostly in the winter, lower the water surface about 1 foot. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Fully complied with to date.

**Terminal facilities.** There are several timber docks on the Matanzas waterfront of St. Augustine. In this area of the harbor is a concrete dock, which serves as a municipal yacht pier. It has fuel facilities, 19 slips and accommodates boats up to 60 feet in length. A large public boat ramp is also available. The principal terminals are the numerous shrimp docks in the San Sebastian River, which flows southward through the city into the Matanzas River south of the bridge. These consist of timber wharves, with frame and corrugated iron warehouses thereon, and 9 marine railways for small boats. There is also a marine supply facility and several boat yards. The present terminals have highway connections and several of the shrimp docks have rail connections. They are considered adequate for existing commerce and recreational craft.

**Operations and results during fiscal year.** Maintenance: None.

**Condition at end of fiscal year.** Project is complete except for the North Jetty, which is in a deferred status. The groin is in good condition except for the 300 feet, which has subsided to about elevation 3.0 feet, mean low water. The jetty is in good condition, but is submerged at high tide. Maintenance dredging at the entrance channel was completed December 2002.

### **32. ST. JOHNS RIVER, FL, JACKSONVILLE TO LAKE HARNEY**

**Location.** Rises in marshes of Brevard County, Florida, near east coast, and flows northwesterly to Jacksonville, thence easterly into the Atlantic Ocean, 122 miles south of Savannah River. River is about 285 miles long, of which 161.5 miles are included in project. (See NOAA Nautical Chart No. 11492.)

**Previous projects.** Adopted by River and Harbor Acts of June 14, 1880 and July 5, 1884. For further details see Annual Reports for 1915 and 1938.

## JACKSONVILLE, FL DISTRICT

**Existing project.** Channel is 13 by 200 feet from Florida East Coast Railway Bridge at Jacksonville to Palatka, thence 12 by 100 feet to Sanford, and thence 5 by 100 feet to Lake Harney, with side channel to Enterprise and maintenance of two jetties.

Existing project was authorized by River and Harbor Acts of March 2, 1945 (H 445/78/2) and July 24, 1946 (SD 208/79/2). For further details see Annual Report for 1962.

**Terminal facilities.** There are 36 piers and wharves along project, including municipal piers and wharves at Green Cove Springs and Palatka, 12 Navy piers at Green Cove Springs, a municipal recreational pier at Sanford, and 19 privately owned piers, 5 of which have nearby tank storage facilities for petroleum projects. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** None.

**Condition at end of fiscal year.** Active portion is complete. Condition of project, as a whole is adequate for present needs of navigation. (For more detailed information refer to 1963 Annual Report.)

### 33. ST. LUCIE INLET, FL

**Location.** The inlet is on the east coast of Florida about 19 miles south of the entrance to Fort Pierce Harbor, Florida, and 100 miles north of the entrance to Miami Harbor, Florida. (See NOAA Nautical Chart No. 11472.)

**Previous project.** For details see page 764 of Annual Report for 1949.

**Existing project.** The authorized project provides for a north jetty with a sand bypass weir section about 500 feet long; a sand impoundment basin adjacent to the bypass weir in the north jetty; a south jetty consisting of a rubble mound structure about 2,200 feet long with a walkway for recreational fishing; channel between existing bar cut and the Intracoastal Waterway 10 by 500 feet through the bar cut, tapering to 150 feet through the inlet, and 7 by 100 feet to the Intracoastal Waterway. Total project length is about 1.9 miles. Plane of reference is mean low water. Mean tidal range is 2.6 feet on the ocean side and about one foot on the landside of the inlet. (See Table 9-B for Authorizing Legislation.)

Estimated cost of new work \$23,200,000 Federal and \$4,600,000 non-Federal.

**Local cooperation.** Local interests must: contribute 19.9 percent of construction cost allocated to navigation in the combined project, 23.1 percent allocated to beach erosion, and 50 percent of construction cost of jetty fishing walkway; provide 39.8 percent of the annual maintenance cost allocated to navigation and 23.2 percent of the annual costs for maintenance dredging allocated to beach erosion control for periodic beach nourishment and 100 percent of the annual jetty maintenance costs allocated to beach erosion control; maintain jetty fishing walkway; agree that each 5 years the amount of local cost sharing for maintenance is to be adjusted; provide all lands, easements, and rights-of-way; hold United States free from damages; provide marina with mooring facilities and utilities; provide and maintain depths in berthing area and local access and feeder channels commensurate with the depths provided in the project; accomplish such alterations as required to sewer, water supply, drainage, and other utility facilities, and take action to place in effect statutes and/or regulations which will protect water quality for the authorized uses of the project. The local sponsor signed assurances of local cooperation for the 1974 modification on August 24, 1978.

**Terminal facilities.** A municipal pier provides facilities for docking and servicing charter fishing and small recreational craft. At Stuart there is a dock for handling bulk petroleum products and several marinas, which provide facilities for mooring, servicing and minor repair of small craft. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** New Work: Construction of Navigation Features: \$3,878,670; Engineering and Design: \$246,919; Contract Management: \$333,187. Maintenance: No work in FY 2009.

**Condition at end of fiscal year.** Construction was underway on the jetty modification during FY 2009. Maintenance dredging of the inlet is currently scheduled for 2011.

### 34. SAN JUAN HARBOR, PR

**Location.** San Juan Harbor is on the north coast of Puerto Rico and about 35 miles from the east end of the island and 1,100 miles southeast of Miami, Florida. (See NOAA Nautical Chart No. 25670.)

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

*Previous projects.* For details see Annual Reports for 1915, 1916, and 1938.

**Existing project.** The authorized project to provide the deepening of the Bar Channel to 48 feet and shifting its alignment 350 feet west; deepening Anegado and Army Terminal to 40 feet; deepening Graving Dock Channel, the Cruise Ship Basin, Puerto Nuevo Channel, and San Antonio Channel to 36 feet; and deepening Anchorage Area E to 38 feet while reducing its size and constructing 6 mooring dolphins within its limits. The Sabana approach channel deepened to 32 feet.

Estimated cost of new work \$49,400,000 Federal and \$17,900,000 non-Federal.

**Local cooperation.** Should provide all lands, easements and rights-of-way; hold the United States free from any damages; provide and maintain depths in berthing areas and local access and feeder channels; provide alterations as required to sewer, water supply, and other utility facilities. It is further recommended that local interests be reimbursed for work performed by them on the project subsequent to project authorization. A 25 percent contribution and an additional 10 percent reimbursement over 30 years from locals are required. Non-Federal contribution was \$16,128,708.

**Terminal facilities.** There are 28 piers and bulkhead wharves in the harbor capable of docking deep-draft vessels, which have an aggregate berthing length of about 23,700 feet. Eleven piers and bulkhead wharves are on the north shore, 2 piers and a three-level ramp facility for roll-on/roll-off operations at Front Graving Dock turning basin and channel, 9 at the eastern side and 3 at the western side of the Army Terminal basin and channel, and 3 on the south shore of San Antonio Channel. One pier and bulkhead wharf are privately owned, 7 are U.S. Government property, and the Commonwealth of Puerto Rico owns 24. Twenty piers and wharves are equipped with mechanical crane transfer facilities. Five wharves are equipped with a special crane for handling loaded containers. Twenty-four are open to the general public. Pier No. 6 was repaired and improved in 1985.

There is an aggregate length of about 1,339 feet of berthing space at Catano Point used principally by small vessels within the 18-foot draft range. This space is also open to the public. In addition, there are 10 piers

and bulkhead wharves with approximately 6,910 feet of berthing space owned and operated by different agencies of the Federal Government. This space is not open to the public.

Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.** Maintenance: \$101,469.

**Condition at end of fiscal year.** The PED phase was completed in September 1995. Revisions to the plans and specifications were accomplished in FY 97. Execution of PCA was completed June 1998. Authorized in WRDA 1996. Contract II (navigation improvements for the Bar, Anegado, and Army Terminal Channel) has been completed. Plans and specifications for Mitigation contract are ongoing and contract is scheduled for award in FY 2011.

Existing project includes the entrance channel and turning basin to Army Terminal, which cost \$1,543,712 (this expenditure was made from military appropriations and is not included in Table 9-A costs).

### 35. TAMPA HARBOR, FL

**Location.** Tampa Harbor is in a large natural indentation of the Gulf of Mexico about midway of the west coast of Florida. The entrance is about 220 miles north of Key West and about 330 miles southeast of Pensacola. (See NOAA Nautical Chart Nos. 11413 and 11414.)

**Previous projects.** For details see page 665 of 1938 Annual Report.

**Existing project.** The authorized project provides for a channel from the Gulf of Mexico to Port Sutton and Tampa; 46 by 700 feet from the Gulf of Mexico to Mullet Key; 44 by 600 feet in Mullet Key Cut Channel; 44 by 500 feet in Tampa Bay from Mullet Key Cut to Hillsborough Bay and Port Tampa Channels; 44 by 500 feet in Hillsborough Bay from junction with Tampa Bay and Port Tampa Channels to the junction with Port Sutton entrance channel, thence 42 by 400 feet to the junction with Seddon and Garrison Channels; 44 by 400 feet in Port Sutton entrance channel; 42 by 400 feet in Sparkman Channel; 40 by 300 feet in Ybor Channel; 42 by 400 feet in Port Tampa Channel; 44 by 400-500 feet in East Bay entrance channel; 44 by 300 feet in East Bay approach channel; 12 by 200 feet in Seddon and Garrison

## JACKSONVILLE, FL DISTRICT

Channels; 32 by 200 feet in Alafia River; 9 by 100 feet in Hillsborough River to a point 2,000 feet above Columbus River bridge; a breakwater; a 42 by 290 foot Port Sutton Terminal Channel 3,700 feet long; turning basins at Ybor Channel, Port Tampa, East Bay, mouth of Hillsborough River, and in Alafia River; and maintenance of a channel 12 by 200 feet in Hillsborough River, and 34 by 300 feet in East Bay Channel. (The 46-foot and 44 foot depth portions of the project include a 5-foot under keel clearance. Special studies on the project concluded that 4 feet under keel is sufficient. Therefore, a one-foot over depth has been placed in an inactive status, resulting in active project depths of 45 and 43 feet respectively.) Plane of reference is mean low water. The project is about 67 miles long, including 10 miles in Hillsborough River and 3.6 miles in Alafia River. Mean range of tide is 1.3 feet at the lower end of the bay, 1.6 feet at Port Tampa, and 1.8 feet at Tampa. Extreme range is about 3.8 feet at the lower end of the bay and 4.8 feet at Tampa. Strong southwesterly winds raise the water level about 1.5 feet. Strong northerly winds, which usually occur in the winter, lower the water level about 2 feet. (See Table 9-B for Authorizing Legislation.) For further details, see 1962 Annual Report.

Estimated cost for Big Bend Channel \$20,700,000 Federal and \$7,400,000 non-Federal. Estimated cost for Alafia River is \$51,100,000 Federal and \$23,100,000 non-Federal. Estimated cost for Port Sutton is \$7,800,000 Federal and \$5,300,000 for non-Federal.

**Local cooperation.** Local cooperation has been fully complied with for work completed to date. See 1978 Annual Report for requirements for work authorized by the River and Harbor Act of 1970, H 401/91/2 and H 150/91/1. The Secretary of the Army approved assurances of local cooperation for the 1970 authorization on January 10, 1973. The LCA for branch channels was signed June 20, 1986. An amendment to the LCA reflecting cost sharing requirements of WRDA of 1986 for section 6 was signed August 31, 1987. Non-Federal contribution for new work was \$4,971,144. A 25 percent contribution and an additional 10 percent reimbursement over 30 years are required from locals.

**Terminal facilities.** There are 102 commercial waterfront facilities serving Tampa Harbor. The General Cargo Facilities consist of 7,226 feet of usable berthing space and 15 transit sheds with a total of 585,200 square feet of storage space. The Oil Handling Facilities include 16,440 feet of usable berthing space

and 316 storage tanks for a total capacity of 11,610,350 barrels. Dry storage is available at 1,904,750 square feet, cold storage at 14,309,000 cubic feet, and open storage at 59.4 acres. There are 2 wharves available for coal storage at 750,000 tons total storage and grain elevators with a 3,400,000-bushel total capacity. One elevator on Ybor Channel has a 1,000,000-bushel capacity.

Hoisting Facilities include 13 cranes, fixed and mobile, with capacities from 45 to 150 tons and other crawler and mobile cranes available locally. Marine repair yards include 9 waterfront repair facilities and numerous other off water companies engaged in various phases of marine repair. There are 4 floating and 4 graving docks available at the port with capacities ranging from 548 to 5,400 long tons. Floating equipment includes 24 tugs with up to 3,350 horsepower and 4 companies with tank barges of capacities up to 14,000 barrels. The CSX Railroad serves the port. Facilities are considered adequate for existing commerce. (See Port Series No. 17, Rev. 1979.)

**Operations and results during fiscal year.** New work: Tampa Harbor GRR: Engineering and Design \$694,022. Maintenance: Main Channel: \$1,639,143.

**Condition at end of fiscal year.** The GRR for widening Cut-A and Cut-B is ongoing and has experienced delays due to additional environmental requirements. The GRR for widening Cut-A and Cut-B is scheduled for completion in FY 2011.

### **36. NAVIGATION PROJECTS ON WHICH RECONNAISSANCE AND CONDITION SURVEYS ONLY WERE CONDUCTED DURING PERIOD**

Total cost was \$1,096,088. (See Table 9-G.)

### **37. OTHER AUTHORIZED NAVIGATION PROJECTS**

(See Table 9-C.)

### **38. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION**

*Navigation Activities Pursuant to Section 107, Public Law 86-645 (Preauthorization)*

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

No costs incurred.

*Snagging and clearing for navigation (Section 3 of 1945 River and Harbor Act, Public Law 14, 79th Congress.)*

No costs incurred.

*Mitigation of shore damages attributed to navigation projects (Sec 111).*

Section 111 Coordination: \$15,242. Aguadilla Coastline, PR: \$60,979.

### Beach Erosion Control

#### 39. BREVARD COUNTY, FL

**Location.** The project is on the east coast of Florida at approximately the midpoint of the peninsula. (See NOAA Nautical Chart Nos. 11484 and 11476.)

**Existing project.** The authorization provides for a protective and recreational beach with a berm 50 feet wide at elevation 10 feet above mean low water and a natural seaward slope as would be shaped by wave action, along 9.4 miles from the Canaveral harbor south jetty to Patrick Air Force base, (North Reach) and 3.4 miles of beach at Indialantic and Melbourne beach, and for periodic nourishment of the restored beach at Indialantic and Melbourne beach limited initially to a period of 6 years. Nourishment of the restored beach at the city of Cape Canaveral would be provided by the authorized sand-transfer plant for construction at Canaveral Harbor. The project also provides for improvement of the Federally owned shores for beach erosion control or hurricane protection to be accomplished by the Federal agencies involved, subject to their own determination of economic justification. Mean tidal range in the area is 3.5 feet. (See Table 9-B for Authorizing Legislation.)

Estimated cost for new work \$152,700,000 Federal and \$120,600,000 non-Federal.

**Local cooperation.** Local interests must contribute 50 percent of all first costs of the work and 50 percent of the nourishment cost at Indialantic and Melbourne beach for the first 10 years of the project life; provide lands and rights-of-way; provide, after the first 10 years of project life, periodic nourishment of the restored beach at Indialantic and Melbourne beach during project life; maintain continued public ownership of the shore upon which the amount of Federal participation

is based; control water pollution; and hold the United States free from damages. The Secretary of the Army approved assurances of local cooperation on July 9, 1973. Non-Federal contribution for new work was \$343,366.

**Operations and results during fiscal year.** New work: Engineering and design cost was \$534,951.

**Condition at end of fiscal year.** A GRR was initiated in FY04 for the mid reach, which consists of 7.6 miles south of Patrick Air Force base. The GRR is scheduled to be completed by September 2010.

#### 40. BROWARD COUNTY, FL BEACH EROSION CONTROL AND HILLSBORO INLET, FL NAVIGATION PROJECT

**Location.** Broward County is on the lower east coast of Florida, 300 miles south of Jacksonville and about 30 miles north of Miami. Hillsboro Inlet is in the northern part of Broward County. (See NOAA Nautical Chart No. 11466.)

**Existing project.** Broward County, - North County Line to Hillsboro Inlet (Segment I), Hillsboro Inlet to Port Everglades (Segment II) and, Port Everglades to the south county line (Segment III), Florida. The authorization provides for Federal participation in cost sharing of a shore restoration and protection project and a project to maintain a channel adequate for small craft navigation. The authorized plan provides for restoration of a shoreline protection and recreational beach at 4 locations generally 100 feet wide with berm elevation of 10 feet above mean low water; a navigation channel 8 by 100 feet from the Intracoastal Waterway to a point 1,500 feet ocean ward in Hillsboro Inlet, thence 10 by 150 feet in the ocean; jetties on north and south sides of ocean entrance; a permanently based floating dredge; and on a deferred basis, a trestle-mounted sand-transfer plant, if needed. Navigation portion of the project is in an inactive status. Mean range of tide in areas is 2.5 feet. Plane of reference is mean low water. Initial authorization provided for construction by the local sponsor with reimbursement

of the Federal share of eligible costs. The city of Deerfield Beach, which occupies the northern portion of the 4.4 miles of Segment I, recently indicated a desire to implement the project along Segment I. Broward County, the project sponsor initially constructed and re-nourished Segments II and III, a re-

## JACKSONVILLE, FL DISTRICT

nourishment contract for Segment III was completed in February 2006. A re-nourishment contract for Segment II is scheduled to be awarded in Fall 2009 by Broward County.

Cost estimate for Broward County is \$110,200,000 Federal and \$86,400,000 non-Federal contribution. For Hillsboro Inlet, \$3,630,000 and \$1,158,000 non-Federal. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Local interests must contribute 90.5 percent of the first cost beach restoration in the reach between north county line and Hillsboro Inlet, Seg. I, 55.35 percent of cost allocated to periodic renourishment, and 50 percent of first cost allocated to navigation for reach between Hillsboro Inlet and Port Everglades, Seg. II, and 56.16 percent of beach restoration costs in the reach between Port Everglades and south county line, Seg. III; provide all lands and rights-of-way; obtain approval of Chief of Engineers of plans and specifications if local interests construct beach erosion features; and furnish assurances that they will hold the United States free from damages; provide and maintain adequate public landing or wharf at Hillsboro Inlet; establish a public body to cooperate financially and to provide and operate local facilities for navigation, control water pollution, maintain ownership of publicly owned shores, and maintain all project works except the jetties (maintenance of the channel to revert to the United States if sand-transfer plant is constructed). Assurances of local cooperation were accepted November 22, 1968.

**Operations and results during fiscal year.** New work: Broward County BEC: Real estate \$32,938; Beach re-nourishment contract (Segment II): \$400,000; Engineering and Design: \$579,185. Hillsboro Inlet: None.

**Condition at end of fiscal year.** Another re-nourishment contract is scheduled to be awarded by the sponsor in 2011 for Segment II (pending state Water Quality Certification). The Federal contract, to replace 2004 hurricane erosion losses along Segment II at 100% Federal cost, is also anticipated to be awarded at that time.

### 41. DUVAL COUNTY, FL

**Location.** On upper east coast of Florida, within 20 miles of Florida-Georgia line. Ocean shoreline is about 16 miles long. (See NOAA Nautical Chart No. 11488.)

**Existing project.** Authorization provides for a beach 60 feet wide at elevation 11 feet above mean low water with a natural slope seaward. Project also provides for periodic re-nourishment. Mean tidal range at south jetty in St. Johns River is 4.9 feet. Project was authorized by River and Harbor Act of 1965 (H 273/89/1).

Estimated cost of new work \$79,700,000 Federal and \$53,200,000 non-Federal.

**Local cooperation.** Local interests must contribute 50 percent of first cost of constructing non-Federal publicly owned shores; contribute 44.5 percent of periodic nourishment costs for first 10 years of project life; provide all lands, rights-of-way, and relocations; hold the United States free from damages; control water pollution; and furnish assurances that they will maintain continued public ownership of the shore upon which the amount of federal participation is based during economic life of project. Assurances of local cooperation were accepted on November 29, 1973.

**Operations and results during fiscal year.** New work: Engineering and Design cost was \$282,277.

**Condition at end of fiscal year.** Annual surveys were conducted. The next renourishment is scheduled for 2011.

### 42. FORT PIERCE BEACH, FL

**Location.** Fort Pierce Beach Erosion Control Project extends 1.3 miles south of Fort Pierce Inlet, on the east coast of Florida about 120 miles north of Miami.

**Existing project.** The project fill was initially completed by local interests in 1971, using offshore borrow material. Prior to the nourishment, severe shorefront recession had destroyed a private residence and threatened other residences and a state road. Local interests were reimbursed the federal share of the initial project construction cost. Federal participation in re-nourishment was authorized for an initial 10-year period and subsequently extended five years under the discretionary authority of the Chief of Engineers until 1985. The project was re-nourished in 1980, 1999, 2003 and 2004. The next re-nourishment is scheduled for 2009.

A Section 111 project authorized in 1982 provides that 60 percent of the cost of material required to nourish 1.3 miles south of Fort Pierce Inlet should be

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

reallocated to the navigation project. A section 934 reevaluation report authorized the extension of federal participation in cost sharing to 50 years from date of initial construction to 2020.

Estimated cost of new work \$38,100,000 Federal and \$19,100,000 non-Federal.

**Local cooperation.** Non-Federal contribution is 53%. Sponsor is fully complying with local requirements.

**Operations and results during fiscal year.** New work: Real Estate: \$1,156; Renourishment Contract: \$2,291,073; Engineering and Design: \$256,432; and Contract Management cost \$176,867.

**Condition at end of fiscal year.** Re-nourishment of the project was accomplished during FY 2009.

### 43. INDIAN RIVER COUNTY, FL

**Location.** Indian River County is on the east coast of Florida, midway between Jacksonville and Miami. The authorized project comprises 2.65 miles of beach along the ocean shore of Vero Beach and 1.7 miles along the Sebastian Inlet State Park. (See NOAA Nautical Chart Nos. 11474 and 11476.)

**Existing project.** The authorized project provides nourishment for 8,870 feet (1.68) miles) of the State Park, south of Sebastian inlet. The initial beach fill would consist of 202,000 cubic yards of nourishment material. An estimated 202,000 cubic yards of periodic nourishment at 5-year intervals would be required. The Federal share of the first cost was estimated to be 65 percent of this segment.

The plan also provided for nourishment of 9,180 feet (1.74 miles) of Vero Beach. The initial beach fill consisted of 572,000 cubic yards of material, including advance nourishment. The restored beach would have a 20-foot wide level berm at an elevation of 15 feet above mean low water. The beach fill as designed would provide protection against a 10-year return interval storm. An estimated 120,000 cubic yards of periodic nourishment would be required at 5-year intervals. In addition to the beach fill a "Sabecon" reef breakwater was recommended. The structure would be placed 500 feet offshore of the new beach and would be 400 feet in length, with a zero mean low water crest elevation. The Federal share of the first cost was estimated to be 43.7 percent for this segment. The project was authorized on November 17, 1986 (Public

Law 99-662) by the 1986 Water Resource Development Act.

**Local cooperation.** The authorization of a beach erosion control project for Indian River County, Florida was made with the provision that the State and local interests will, in addition to the general requirements, agree to comply with the following requirements: provide all necessary lands, easements and rights-of way; including borrow areas and disposal areas for excavated material, and relocations; hold and save the United States free from claims for damages; assure continued conditions of public ownership and public use of the shore; assure maintenance and repair during the economic life of the project; provide and maintain as necessary access roads, parking areas and other public use facilities; provide a cash contribution for periodic nourishment's for the life of the project; provide an additional cash contribution for the Sebastian Inlet State Park Beach. The project, as authorized, provides that the work may be accomplished in separate units or features and that the written agreement with non-Federal interests be obtained. The Indian River County Board of Commissioners, by letters dated December 21, 1984 and January 15, 1987, affirmed their support for the project and their willingness and ability to share in project costs.

**Operations and results during fiscal year.** New work: None.

**Condition at end of fiscal year.** No work is currently scheduled.

### 44. LEE COUNTY, FL

**Location.** Lee County is on the lower Gulf coast of Florida, about 90 miles south of the entrance to Tampa Bay and 130 miles north of Key West.

**Existing project.** The project provides for the Federal participation in restoration and protection of Lee County, Florida, as follows: On Gasparilla Island, restore beach along 2.7 miles of shore and provide revetment along 2,400 feet of shore and a 500-foot terminal groin; on Captiva Island, restore beach along 4.7 miles of shore; and on Estero Island, restore beach along 4.6 and provide a 5-year advance supply of beach nourishment material and periodic nourishment of the restored beaches, as needed, with Federal aid for nourishment limited to the first 10 years of project life after completion of the initial fill placement on each island. (See Table 9-B for Authorizing Legislation.)

## JACKSONVILLE, FL DISTRICT

Estimated cost is \$56,300,000 Federal cost and \$118,900,000 non-Federal cost.

**Local Cooperation.** Local interest must: contribute in cash) including contract price, engineering and design, and supervision and administration) 65.8 percent of first cost at Gasparilla Island, 91.3 percent of first cost at Captiva Island, and 87.5 percent of first cost at Estero Island; contribute toward beach nourishment for the first 10 years of project life, 95.5 percent for Gasparilla Island; 91.3 percent for Captiva Island, and 96.9 percent for Estero Island; and contribute 50.9 percent of the annual maintenance costs of the terminal groin on Estero Island; provide after 10 years of project life periodic nourishment of the restored beaches; provide lands, easements, rights-of-way, and relocations; assure continued public ownership for public use of the shore upon which the amount of Federal participation is based; control water pollution; save the United States free from damages; and provide an adequate width of beach with acceptable access and other facilities necessary for public use.

**Operations and results during fiscal year.** New work: Beach re-nourishment contract: \$183,400; Engineering and Design cost: \$4,115.

**Condition at end of fiscal year.** Construction was completed in FY 2008 for rehabilitation of Captiva Island to its pre-hurricane condition under FY 2006 Emergency Supplemental funding. In 2007 the initial construction contract for Gasparilla Island was completed under the authority of Section 206 of WRDA 1992. Partial reimbursement was made in 2008 and the remaining balance was reimbursed in 2009.

### 45. MANATEE COUNTY, FL

**Location.** Manatee County is on the west coast of Florida, just south of the entrance to Tampa Bay. The county's 14-mile gulf shoreline consists of 2 barrier islands, Anna Maria Key and the northern half of Longboat Key, separated from the mainland by Tampa and Sarasota Bays and from each other by Longboat Pass. Project consists of about 7.5 miles of gulf shoreline.

**Existing project.** Provides for Federal participation in the shore protection project for Manatee County,

which includes the entire 7.5-mile, gulf shoreline of Anna Maria Key. The project consists of restoration of 3.2 miles of gulf shore beach to an elevation 6 feet above mean low water with a level berm 50 feet wide and a natural slope seaward as would be shaped by wave action. The project also provides for periodic nourishment of the restored beach and such adjacent shoreline as may be and justified for the project life. Mean tidal range is 2.3 feet. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$42,100,000 Federal and \$35,200,000 non-Federal.

**Local cooperation.** The authorization of a shore protection project for Manatee County, Florida was made with the provision that Federal cost sharing would be in accordance with policy established by existing law, and the percentages based on conditions of shore ownership and use existing at the time of construction: Provided that, prior to construction, local interests furnish assurances satisfactory to the Secretary of the Army that they will: (a) Provide without cost to the United States all lands, easements, and rights-of-way, including borrow areas, and relocations necessary for construction of the improvements; (b) Provide a cash contribution equal to 47 percent of the first cost of construction, subject to any credit for eligible construction costs incurred by local interests, and exclusive of costs for lands, easements, rights-of-way, relocations, and alterations, and exclusive of the cost of fill placed behind the Corps construction line, the final percentage to be based on shore ownership and use existing at the time of construction; (c) Provide all costs of construction for nourishment landward of the Corps construction line; (d) Provide a cash contribution for periodic nourishment equal to 41 percent of the cost of each nourishment, such contribution to be made prior to each nourishment operation, and the final percentage to be based on shore ownership and use existing at the time of construction; (e) Hold and save the United States free from damage due to the construction works, except for damages due to the fault or negligence of the United States or its contractors; (f) Assure continued public ownership and administration of the shore upon which the amount of Federal participation is based; (g) Provide without cost to the United States appropriate access and facilities, including parking and sanitation, necessary for realization of the public benefits upon which Federal participation is based; (h) Adopt appropriate ordinances, or provide other means, to insure the intended use of the beach fill areas; (i) Control water pollution to the extent necessary to safeguard the health of bathers; and (j) Agree to pay 100 percent of the

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

operation, maintenance, and replacement and rehabilitation's costs of the project, or functional element thereof.

**Operations and results during fiscal year.** New work: None.

**Condition at end of fiscal year.** No work is currently scheduled.

### 46. MARTIN COUNTY, FL

**Location.** Martin County is located on the east coast of Florida about 300 miles south of Jacksonville and 70 miles north of Miami. (See Table 9-B for Authorizing Legislation.)

**Existing project.** The recommended plan of improvement for Martin County provides for restoration of a protective beach along 4.0 miles of shoreline. The plan includes restoration of the primary dune as needed and a 35-foot wide protective berm. The recommended plan was designed to reduce environmental impacts. Of primary importance is the impact of project construction on sea turtle nesting. In order to avoid these impacts, project construction has to occur between November 1st and April 15th. Only one island segment is authorized for this project, which is located on Hutchinson Island in Martin County. The project begins at the St. Lucie/Martin County line and proceeds south 4 miles. The actual project to be constructed is 3.75 miles. The project was shortened 0.25 miles to avoid impacting sensitive hard-grounds. The borrow area is approximately 3,000 feet offshore of the southern end of the project area. (See Table 9-B for Authorizing Legislation.) Initial nourishment was completed April 1996. The last re-nourishment was in March 2005.

Estimated cost of new work is \$26,200,000 Federal and \$27,900,000 non-Federal.

**Local cooperation.** Martin County Board of Commissioners is the local sponsor.

**Operations and results during fiscal year.** New work: Real Estate \$2,546; Engineering and Design cost: \$244,107.

**Condition at end of fiscal year.** The project is functioning as designed. The next scheduled renourishment is in 2012.

### 47. NASSAU COUNTY, FL

**Location.** Nassau County is on the east coast of Florida, north of Jacksonville and adjoins the state of Georgia. The authorized project comprises 4.3 miles of beach along the ocean shore of northern Amelia Island, and tightening 1,500 feet of the shoreward end of the existing south jetty at the entrance to Fernandina Harbor.

**Existing project.** The authorized project would provide initial restoration of 3.6 miles of eroded beach, starting at a point about .7 mile south of the Fernandina Harbor south jetty and extending south to Sadler Road; sand tightening about 1,500 feet of the shoreward end of the south jetty; and periodic nourishment of 4.3 miles of shore between the south jetty and Sadler Road. The restored beach would have a 50-foot wide level berm at an elevation of 13 feet above mean low water. The initial beach fill would consist of an estimated 1,500,000 cubic yards of nourishment material. An estimated 240,000 cubic yards of nourishment at 2-year intervals would be required. Sand tightening would require about 16,700 tons of stone. The Federal share of the first cost was estimated to be 77%. (Sand tightening, accomplished as part of the Navy's effort to deepen and widen the navigation channel was deleted from the plan.)

Estimated cost of new work \$150,400,000 Federal and \$40,400,000 non-Federal contributed funds.

**Local cooperation.** The authorization of a shore protection project for Nassau County, Florida was made with the provision that the State and local interests will, in addition to the general requirements, agree to comply with the following requirements: provide without cost to the United States all necessary lands, easements, and rights-of-way, including borrow areas and disposal areas for excavated material and relocations required for construction of the project, including that required for periodic nourishment; hold and save the United States free from claims for damages which may result from construction and subsequent maintenance, operation and public use of the project, except damages due to the fault or negligence of the United States or its contractors; assure continued conditions of public ownership and public use of the shore upon which the amount of Federal participation is based during the useful life of the project; assure maintenance and repair during the useful life of the project as required to serve the project's intended purpose; provide and maintain clearly marked beach access, nearby parking areas, and other public use facilities, open to all on equal terms,

## JACKSONVILLE, FL DISTRICT

and as required to realize the benefits upon which Federal participation is based; provide a cash contribution for beach erosion control equal to the appropriate percentage of the final construction cost allocated to this function, exclusive of lands, easements, rights-of-way, alterations, and relocations, the percentage to be in accordance with existing law and based on shore ownership at the time of implementation; provide a cash contribution for periodic nourishment during the useful life of the project, such contribution to be made prior to each nourishment, with the actual amount to be based on existing law and conditions of ownership at the time of each nourishment; and at least annually inform affected interests of the limitations of the protection afforded by the project.

**Operations and results during fiscal year.** New work: Beach Replenishment: \$3,235,187; Engineering and Design cost: \$154,204; and Construction Management: \$176,705.

**Condition at end of fiscal year.** Initial construction completed during FY 2009. The first periodic renourishment of the project is scheduled for FY 2014.

### 48. PALM BEACH COUNTY, FL

**Location.** Palm Beach County is on the east coast of Florida about 300 miles south of Jacksonville and 70 miles north of Miami. (See NOAA Nautical Chart No. 11466.)

**Existing project.** Project authorization, the River and Harbor Act of 1962, provides for Federal participation toward the cost of local shore project for restoration of beaches to a general width of 100 feet with a berm elevation of 10 feet above mean low water, and periodic nourishment for 10 years from the year of initial nourishment, as follows: 62.1 percent of the cost for Martin County line-Jupiter Inlet segment; 55.8 percent of cost for Jupiter Inlet-Lake Worth Inlet segment; and 50 percent for south Lake Worth Inlet-Delray Beach; and 53 percent of cost for Delray Beach-Boca Raton inlet segment. Mean range of tide is 2.8 feet in the Atlantic Ocean at Palm Beach and 2.3 feet at Boca Raton Inlet. (See Table 9-B for Authorizing Legislation.)

Estimated cost for Palm Beach County is \$68,200,000 Federal and \$146,100,000 non-Federal cash contributions.

**Local cooperation.** Federal participation is subject to the conditions that responsible local authorities will: (a) obtain approval by the Chief of Engineers, prior to commencement of work on the project, of detailed plans and specifications and arrangements for prosecution of the work on the project; (b) provide at their own expense all necessary lands, easements, and rights-of-way; (c) furnish assurances satisfactory to the Secretary of the Army that they will: (1) assure maintenance of the protective measures during their economic life as may be required to serve their intended purpose, and periodic nourishment of the protective beach at suitable intervals; (2) control water pollution to the extent necessary to safeguard the health of bathers; and (3) maintain continued public ownership of the publicly owned shores upon which a part of the recommended Federal participation is based and their administration for public use during the economic life of the project.

**Operations and results during fiscal year.** New work: Engineering and Design cost: \$123,886.

**Condition at end of fiscal year.** The renourishment contract awarded by the City of Boca Raton during FY 2009 is scheduled to be completed Spring 2010.

### 49. PALM BEACH ISLAND, FL

**Location.** Palm Beach Island is on the east coast of Florida about 300 miles south of Jacksonville and 70 miles north of Miami. (See NOAA Nautical Chart No. 11466.)

**Existing project.** The River and Harbor Act of 1958 authorization provides for Federal participation in the costs of a plan for protection of the shore of the Palm Beach Island, comprising restoration of a protective beach with berm elevation of 10 feet above mean high water from Lake Worth Inlet to a point about 1,000 feet south of Southern Boulevard extended, thence with a general width of 100 feet to South Lake Worth Inlet, construction and operation of a sand-transfer plant at Lake Worth Inlet, and additional periodic nourishment from Lake Worth or other suitable source, substantially in accordance with the plan developed by the district engineer, with such modifications thereof as may be considered advisable by the Chief of Engineers. Federal assistance would entail contribution of funds in the amount of 4.7 percent of the initial construction cost of the beach restoration and appurtenant drainage work, and of the expenditures for periodic nourishment from Lake

Worth for a period of 10 years from the year of the initial placement, plus 19.3 percent of the expenditures for construction, and for operation, maintenance, and current replacements of parts of the sand-transfer plant for the same period. Mean tidal range is 2.8 feet in the Atlantic Ocean at Palm Beach and 2.3 feet at Boca Raton Inlet. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Federal participation is subject to the conditions that responsible local authorities will: (a) obtain approval of the Chief of Engineers, prior to commencement of work on the project (except the sand-transfer plant already under contract), of detailed plans and specifications and arrangements for prosecution of the work on the project; (b) make appropriate modification of the location of the end of the discharge line of the sand-transfer plant to accomplish satisfactory dispersion of bypassed material; (c) provide at their own expense all necessary lands, easements, and rights-of-way; (d) furnish assurances satisfactory to the Secretary of the Army that they will: (1) assure maintenance of the protective measures during their economic as may be required to serve their intended purpose, and periodic nourishment

of the protective beach at suitable intervals, including operation of the sand-transfer plant; (2) control water pollution to the extent necessary to safeguard the health of bathers; and (3) maintain continued public ownership of the publicly owned shores upon which a part of the recommended Federal participation is based and their administration for public use during the economic life of the project.

**Operations and results during fiscal year.** New Work: None.

**Condition at end of fiscal year.** The Town of Palm Beach completed initial construction of the Midtown project including construction of an offshore reef and groins in 1996 at non-Federal cost. The town is currently planning to re-nourish the Midtown project. PL 84-99 assistance would not apply to the Town of Palm Beach (Midtown) since a Federal project has not been constructed there prior to the 2004 hurricane impacts. Rehabilitation assistance under PL 84-99 can only be utilized to replace the erosion losses that have occurred along a constructed Federal project. Storm impacts along the private property at Singer Island have caused significant erosion during 2007. Non-Federal interests are pursuing erosion control measures.

## 50. PINELLAS COUNTY, FL

**Location.** Pinellas County is on the Gulf coast of Florida, about midway of the peninsula. It extends northerly about 39 miles from the main entrance to Tampa Bay to the vicinity of the mouth of Anclote River. (See NOAA Nautical Chart No. 11411.)

**Previous project.** For details see page 429 of Annual Report for 1965.

**Existing project.** The authorized project provides for Federal participation in preserving and protecting the shores of Pinellas County, Florida, by: restoration of 5,000 feet of beach at Clearwater Beach Island; restoration of 49,000 feet of beach at Sand Key; restoration of 9,200 feet of beach at Treasure Island; construction of 600 feet of revetment at Long Key; and advance nourishment of Long Key and periodic nourishment of each island. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$170,200,000 Federal and \$78,500,000 non-Federal.

**Local cooperation.** Local interests must (a) contribute in cash the required percentages of the first costs of work provided by the Corps of Engineers, the percentages varying with the type of beach ownership; 94.1 to 50 percent of the beach restoration at Clearwater Beach; 98.1 to 50 percent of the improvement at Sand Key; 94.3 to 50 percent of the improvement at Treasure Island; and 50 percent of the first cost of the revetment at Long Key; (b) contribute in cash an amount computed in accordance with the cost sharing provision contained in P.L. 826, 84th Congress as amended by P.L. 87-874, for beach nourishment cost for the first 10 years of the project life; (c) provide lands, easements, and rights-of-way; (d) assure maintenance and repair of the stone revetment of Long Key; (e) assure periodic nourishment of the restored beaches; (f) assure public ownership of beaches; (g) assure against water pollution; (h) hold the United States free from damages; and (i) provide beach for public use. Assurances of local cooperation were accepted March 22, 1967.

**Operations and results during fiscal year.** New work: Engineering and Design: \$1,249,685; and Construction Management cost \$-821.

**Condition at end of fiscal year.** Plans and Specifications and permitting for Long Key and

## JACKSONVILLE, FL DISTRICT

Treasure Island were underway in FY 2009. Construction of Long Key and Treasure Island is scheduled for FY 2010.

### 51. ST. JOHNS COUNTY, FL

**Location.** St. John's County is located about 100 miles south of the Florida/Georgia border.

**Existing project.** The project consists of restoration of 2.5 miles of shoreline, beginning approximately 2.7 miles south of St. Augustine Inlet, and including the City of St. Augustine Beach. The authorized project provides for initial restoration of the beach to a width of 60 feet +12 feet elevation relative to mean low water. The initial fill consisted of placement of 3,580,000 cubic yards of beach quality sand, includes six years of advanced nourishment. The project would replace sand lost due to frequent northeasters and provide storm protection to upland development. The borrow area is located at the ebb tidal shoal south of St. Augustine. The project was

authorized with a 50-year project life from the start of construction. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$137,900,000 Federal and \$33,400,000 Non-Federal.

**Local cooperation.** The sponsor of this project is the St. John's County Board of Commissioners. Cost sharing for this project is 80 percent Federal and 20 percent Non-Federal. The cost sharing reflects the higher Federal percentage required to mitigate for erosion caused by the Federal navigation project at St. Augustine Harbor.

**Operations and results during fiscal year.** New work: Engineering and Design cost was \$472,870.

**Condition at end of fiscal year.** Plans and Specifications and permitting activities were underway in FY 2009. Construction is scheduled for FY 2011.

### 52. SARASOTA COUNTY, FL

**Location.** Sarasota County is on the Gulf coast of Florida about 30 miles south of Tampa Bay. The northern most portion of the project adjoins the Manatee County Beach Erosion Control Project on Longboat Key. The total project consists of about 5.7 miles of gulf shoreline on Longboat Key and Venice Beach.

**Existing project.** The authorized project provides for Federal participation in the construction of a protective beach 12,600 feet long at Longboat Key and a protective beach 29,400 feet long at Manasota Key at the City of Venice, Florida. Two borrow areas will be required. The first is located within 2 shoal areas located between 1 to 2 miles offshore of Manasota Key south of the project area. This borrow area will be supplemented by material located within the ebb tidal shoal of Big Sarasota Pass which is about 13 nautical miles north of the project beach at Venice. The project also provides periodic nourishment of the restored beach and such adjacent shoreline as may be needed and justified for life of the project. The mean tidal range is 2.1 feet. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$51,600,000 Federal and \$29,600,000 non-Federal. The Federal share of each periodic nourishment is 72.55 percent for Venice, and 15.4 percent for Longboat, of applicable nourishment costs.

**Local cooperation.** Federal participation is subject to the conditions that responsible local authorities will: (a) provide without cost to the United States all lands, easements, and rights-of-way, including borrow areas, and relocations necessary for construction of the improvements; (b) provide a cash contribution equal to 29.3 percent of the first cost of construction, subject to any credit for eligible construction costs incurred by local interests, and exclusive of costs for lands, easements, and rights-of-way, relocations, and alterations, and exclusive of the cost of fill placed behind the Erosion Control Line (ECL), the final percentage to be based on shore ownership and use existing at the time of construction; (c) provide all costs of construction for nourishment of private lands and share in the costs of construction for public lands landward of the Erosion Control Line (ECL); (d) provide a cash contribution for periodic nourishment equal to 29.3 percent of the cost of each nourishment, such contribution to be made prior to each nourishment operation, and the final percentage to be based on shore ownership and use existing at the time of construction; (e) hold and save the United States free from damage due to the construction works, except for damages due to the fault or negligence of the United States or its contractors; (f) assure continued public ownership and administration of the shore upon which the amount of Federal participation is based; (g) provide without cost to the United States appropriate access and facilities, including parking and sanitation, necessary for realization of the public benefits upon which Federal

participation is based; (h) adopt appropriate ordinances, or provide other means, to insure the intended use of the beach fill areas; (i) control water pollution to the extent necessary to safeguard the health of bathers; and (j) agrees to pay 100 percent of the operation, maintenance, and replacement and rehabilitation costs of the project, or functional element thereof.

**Operations and results during fiscal year.** New work: Engineering and Design cost was \$362,217.

**Condition at end of fiscal year.** Borrow area studies were underway during FY 2009. The next renourishment contract is scheduled for award in 2012.

### **53. OTHER AUTHORIZED BEACH EROSION CONTROL PROJECTS**

Key West, FL; Lido Key, FL; Mullet Key, FL; Virginia Key and Key Biscayne, FL were deauthorized January 1, 1990 by the WRDA of 1988, P.L. 100-676. (See Table 9-D.)

### **54. BEACH EROSION CONTROL ACTIVITIES UNDER SPECIAL AUTHORIZATION**

*Beach erosion control activities pursuant to section 103, Public Law 87-874 (Preauthorization)* Reports incurring costs during the fiscal year were Fort San Geronimo, PR \$38,085; Tarpon Springs, FL \$53,791; Veteran's Drive Shoreline, St. Thomas, VI \$31,928; and Section 103 Coordination \$2,682 for a total cost of \$126,485.

*Beach erosion control activities pursuant to section III, Public Law 90-433, Mitigation of Shore Damages Attributable to Navigation Projects.*

No costs were incurred under the above authorization.

*Shoreline Erosion Control Development and Demo Program pursuant to Section 227, Public Law 104-303.*

No costs were incurred under the above authorization.

*Beach erosion control activities pursuant to Shoreline Erosion Control Act of 1074, Public Law 93-251.*

No costs were incurred under the above authorization.

## **Flood Control**

### **55. CEDAR HAMMOCK (WARES CREEK), FL**

**Location.** The project area is located in Bradenton and unincorporated Manatee County on the southwest side of Peninsular Florida.

**Existing project.** The project provides for clearing and snagging from approximately 500 feet upstream of Manatee Avenue bridge and extending 17<sup>th</sup> Avenue West; trapezoidal grass-lined channel, 1V:2H side slopes, 26-foot-bottom width from 17<sup>th</sup> Avenue West to 21<sup>st</sup> Avenue West; Vertical Sheet Pile Wall channel from just upstream of 21<sup>st</sup> Avenue West to 14<sup>th</sup> Street West (B.R. 41) with a 40-foot-bottom; and trapezoidal grass-lined channel, 1V:2H side slopes, 26-foot-bottom width from upstream of the 14<sup>th</sup> Street West (B.R. 41) and extending to just downstream of 44<sup>th</sup> Avenue West (Cortez Road) bridge. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$21,100,000 Federal and \$27,400,000 non-Federal.

**Local cooperation.** In accordance with the cost sharing and financing concepts reflected in WRDA 1986, the sponsor must provide lands, easements, rights of way, and borrow and excavated or dredged material disposal sites; modify or relocate utilities, roads, bridges, and other facilities where necessary for the construction of the project; and pay 10.06 percent of the costs allocated to flood damage reduction during construction.

**Operations and results during fiscal year.** New Work: Engineering and Design cost was \$615,237.

**Condition at end of fiscal year.** The sponsor has decided to proceed with the real estate surveys prior to signing PPA. Awaiting Water Quality Certificate from the Florida Department of Environmental Protection, to finalize Plans and Specifications, execute Project Cooperation Agreement and advertise contract.

### **56. DADE COUNTY, FL**

**Location.** Dade County is on the southeast coast of Florida. Project area consists of that part of the Atlantic shoreline of the county from Government Cut north to Bakers Haulover Inlet (9.3 miles), Haulover Beach

## JACKSONVILLE, FL DISTRICT

Park (1.2 miles) and along Sunny Isles (2.5 miles). (See NOAA Nautical Chart No. 11466.)

**Existing project.** Project provides for a protective and recreational beach having a dune at elevation 11.5 feet and a level berm 50 feet wide at elevation 9 feet, mean low water, for beach erosion control and hurricane protection between Government Cut and Bakers Haulover Inlet; a protective and recreational beach with a berm elevation of 9 feet at Haulover Beach Park and a level berm 20 feet wide at elevation 9 feet along Sunny Isles for beach erosion control. Federal participation is authorized for initial construction and periodic nourishment of the above reaches for the first 50 years of project life. Plane of reference is mean low water. Mean range of tide in the area is 2.5 feet. The project was authorized by Flood Control Act of 1968 (H 335/90/2), Supplemental Appropriations Act of 1985 and WRDA of 1986.

Estimated cost of the project is \$193,000,000 Federal cost and \$179,400,000 non-Federal cost.

**Local cooperation.** Local interests must (a) contribute for the first cost of the work: between Government Cut and Bakers Haulover Inlet amounts ranging from 60.2 percent of the cost of the fill within the project limit with existing shorefront ownership, and 100 percent of the cost of fill required landward of the project limit; and for the work at Haulover Beach Park, contribute 21.3 percent of the entire first cost excluding costs for lands, easements, rights-of-way, relocations, and pre-project work, but including credit for pre-project work; (b) contribute in cash for the first 10 years of project life, amounts ranging from 88.9 percent of the nourishment cost for the beach, with existing ownership, to 60.7 percent with public ownership, and the entire maintenance cost for dune, all between Government Cut and Bakers Haulover Inlet; (c) provide all lands and rights-of-way; (d) hold United States free from damages; (e) assure continued public ownership and use of the shore upon which the amount of Federal participation is based; (f) assure maintenance of the groin, and after 10 years of project life, periodic nourishment of the protective beach and maintenance of the dune during the economic life of the project; (g) assure that water pollution will not be permitted; (h) prevent removal or relocation by man of fill from the beach berm and dune; (i) prevent the erection of barriers to the littoral movement of material that would interfere with the nourishment of the beach; (j) maintain at the parks qualifying for 70 percent Federal participation a zone that excludes permanent human habitation; (k) at least annually inform interests affected that the project will not provide complete

protection from a hurricane tide level equal to or higher in elevation than that of the hurricane of September 1926; and (1) establish in public ownership for public use the beaches within project limits as a requirement for Federal participation in the allocated beach erosion control costs of improvement of shores presently in private ownership. Assurances of local cooperation were accepted January 16, 1973. A supplemental agreement for Bal Harbour portion was approved June 30, 1976.

**Operations and results during fiscal year.** New work: Engineering and Design: \$800,824.

**Condition at end of fiscal year.** Engineering and Design for preparation of plans and specifications for award of renourishment contracts for north Miami Beach, Bal Harbor, and Sunny Isles is ongoing to support 2 renourishment contracts that will exhaust remaining domestic sources of beach fill offshore of Dade County.

### 57. DADE COUNTY, NORTH OF HAULOVER BEACH, FL

**Location.** On the southeast coast of Florida. Project area consists of that part of the Atlantic shoreline extending 2.5 miles north of Haulover Beach Park. (See NOAA Nautical chart No. 11466.)

**Existing project.** The existing shore protection project for Dade County provides for Federal participation in the cost of construction of a beach fill for the purpose of erosion control and hurricane protection along 9.3 miles of shore between Government Cut and Bakers Haulover Inlet and for the construction of a beach fill for the purpose of erosion control along the 1.2 miles of shore fronting Haulover Beach Park and provides for protection and nourishment of 2.5 miles of beach shore north of Haulover Beach Park and for extension of the period of Federal participation from 10 years to the life of the project. (See Table 9-B for Authorizing Legislation.)

**Local cooperation.** Consistent with the cost-sharing and financing concepts agreed to by the administration and Senate Majority Leadership, local interests will be required to: provide lands, easements, and rights-of-way and relocations; pay 50 percent of the separable and joint costs allocated to recreation; pay 35 percent of the cost allocated to storm damage prevention; hold the United States free from damages; control water pollution; and furnish assurances that they will maintain continued public ownership of the shore upon which the amount of Federal participation

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

is based during economic life of project. Assurances of local cooperation have been requested from local sponsors.

**Operations and results during fiscal year.** New work: None.

**Condition at end of fiscal year.** No new work scheduled. Last re-nourishment was completed at Sunny Isles in 2003 along with construction of two offshore breakwaters.

### 58. FOUR RIVER BASINS, FL

**Location.** The Four River Basins area covers about 6,000 square miles within 14 counties in central and southwest peninsular Florida. Project includes all or part of the four mainstream basins -- the Hillsborough, Oklawaha, Withlacoochee, and Peace Rivers -- and all of three smaller coastal basins north of Tampa, Florida, drained by the Pithlachascotee and Anclote Rivers and Lake Tarpon.

**Existing project.** The authorized project provided for improvements for control of floods and drainage, and for conservation through construction of necessary canals, levees, reservoirs, and control structures. More specifically, the project provided for: *Green Swamp Area* -- a conservation area and 3 storage reservoirs with necessary canals and control structures; *Hillsborough River* -- 4 flood-storage reservoirs, with necessary channels, control structures and levees; *Oklawaha River* -- a levee on the north shore of Lake Apopka, improvement of parts of the river channel and a west bank levee below Moss Bluff lock and dam, and replacement of the lock and dam; *Withlacoochee River* -- one flood-storage reservoir with outlet canals and control structures; *Peace River* -- Peace Creek canal and control structures and improvements to the existing water control and drainage features; *Gulf Coastal Areas-Lake Tarpon*; outlet canal and control structure; Pithlachascotee River: reservoir with outlet canals and control structures. (See Table 9-O on Moss Bluff Lock.) (See Table 9-B for Authorizing Legislation.)

Estimated cost for new work is \$192,500,000 Federal and \$169,800,000 non-Federal.

**Local cooperation.** Local interests must furnish all lands, and rights-of-way; provide all alterations or replacements of public and private utilities, roads, bridges (except railroad bridges), etc.; hold the United States free from damages; operate and maintain all project works after completion; construct and maintain

such associated works as are necessary to realize benefits made available by the project works; and contribute in cash 17 percent of the first cost of construction and 50 percent of recreation costs.

**Operations and results during fiscal year.** New work: None.

**Condition at end of fiscal year.** Construction of the project commenced April 18, 1966 and the scheduled work is 98 percent complete. Flatwoods Phase II has not been funded.

### 59. HERBERT HOOVER DIKE

**Location.** The Herbert Hoover Dike (HHD) system encircles Lake Okeechobee entirely, except in the vicinity of Fisheating Creek on the western shore. The existing embankments total about 143 miles in length with typical crest elevations rising about 25 feet above adjacent land elevations. Reach 1 extends 22 miles from the Hillsboro Canal to the St. Lucie Canal in the southeast quadrant of the dike and Reaches 2 and 3 extend from Hillsboro Canal westward to C-43 (Caloosahatchee River).

**Previous projects.** Flood Control Act of 1948, 1954, 1960, 1965, and 1968; authorization in 1970 under Section 201 of the Flood Control Act of 1965; the Water Resources Development Acts (WRDA) of 1986, 1988, 1990, 1992, 1996 and 2007; and the Rivers and Harbors Act of 1930.

**Existing Project.** The Major Rehabilitation Report (MRR), approved in November 2000, divided the dike into 8 Reaches and included a detailed analysis of alternatives in the 1st Reach. The MRR proposed construction of a seepage/drainage berm along the landside toe of the dike for Reach 1. Following input from a variety of expert sources, the Corps convened an independent technical review panel to further evaluate the design of the proposed repairs, which were underway. After reviewing the findings of this panel, the Corps decided to fundamentally alter its plans for strengthening the HHD. The new design concept includes toe-ditch fill, cut-off wall at the center of the dike, and seepage berm. The Corps has classified the Herbert Hoover Dike as a Dam Safety Action Class I (DSAC I). Structures in this class are critically near failure or extremely high risk under normal operations without intervention. In this case, there is a concern even at a relatively low pool level due to the limitations of current outlet structures. As an interim measure, the Corps has changed the operating regime for Lake

## JACKSONVILLE, FL DISTRICT

Okeechobee to lower the probability of failure from seepage. However, it is also proceeding to repair the dike as quickly as is practical in order to further mitigate the risk. The work on Reach 1 involves the construction of a cutoff wall, landside construction

features such as partial seepage berms, relief wells, relief trenches and structural solutions for removing or replacing existing culverts and other penetrations through HHD. Currently, the probability of catastrophic dike failure due to piping is unacceptably high. Such an event would produce flooding, which could (depending on its location) lead to the loss of life and/or significant economic damage. The Corps is proceeding first with work on the reaches where the potential risk is the greatest. Any such failure would also adversely affect the ecosystem of Lake Okeechobee (directly) and the estuaries of the Indian River Lagoon and the Caloosahatchee River (indirectly). It would also reduce the ability to store water in the lake for release in dry years for consumptive uses and to benefit the ecosystem of the Everglades.

Estimated cost of the project is \$959,600,000 Federal and \$31,500,000 non-Federal.

**Local Cooperation.** A Partnership Agreement (PA) is not required for the Herbert Hoover Dike Project. There are resolutions through which the sponsor, South Florida Water Management District (SFWMD) commits to items of local cooperation. This consists of Resolutions 12 (1948) and 398(1949). The repairs to the Herbert Hoover Dike are being 100% federally funded. The Corps legal opinion is any additional real estate or easements required for the repairs are the responsibility of the local sponsor.

**Operations and results during fiscal year.** Engineering & Design: \$13,251,440; Levees & Floodwalls: \$30,883,287; and Construction Management: \$3,360,783.

**Condition at end of fiscal year.** Continued construction activities that were ongoing within HHD Reaches 1A and 1D including: cut-off wall, partial seepage berm modifications, Reach 1 D toe ditch fill and quarry fill. Detailed design activities ongoing within Reach 1 include: land side rehabilitation designs for reaches 1A, 1B, 1C and 1D; preparation of construction task order packages for Reach 1 cut-off wall and removal of culvert # 14. National Environmental Policy Act (NEPA) activities include: preparation of required Environmental Assessments

and Supplemental Environmental Impact Statements (EIS) for landside design and structural solutions for Reach 1 designs. Major Rehabilitation Report (MRR) for Reaches 2 and 3 activities include: completion of HHD system-wide alternatives analysis on the entire dike, loss of life risk assessment analysis and associated field work data collection.

### 60. PORTUGUES AND BUCANA RIVERS, PR

(This project is authorized as Lago de Cerrillos, Lago de Portugues, and Channel Improvement at Ponce.)

**Location.** Portugues and Bucana Rivers originate on the southern slopes of Cordillera Central divide of Puerto Rico and flow from this central ridge of the island to the Caribbean Sea. Their drainage areas are 22.6 and 31.4 square miles, respectively. Ponce, the second largest city in Puerto Rico, is located in the lower coastal area along Portugues River and is the only urban community in the two basins.

**Existing project.** The authorized project provides for 2 multiple-purpose reservoirs for flood control, water supply, general recreation, and fish and wildlife enhancement -- one on Portugues River and the other on Cerrillos River, a tributary to the Bucana River; enlargement of about 5.7 miles of the Bucana River, with an additional 0.2 mile long tieback levee at the upstream terminus of the improvement; enlargement of 2.1 miles of the Portugues River, with an additional 0.5 mile of tieback levee at the upstream terminus of the improvement; and a 1.3 mile diversion channel connecting Portugues River to lower Bucana River. (See Table 9-B for Authorizing Legislation.)

Estimated cost of the project is \$586,400,000 Federal and \$206,200,000 non-Federal.

**Local cooperation.** Local interests must provide all lands, easements, and rights-of-way; hold the United States free from damages; operate and maintain all project works after completion; repay construction cost allocated to water supply in accordance with Water Supply Act of 1958; pay one-half of the separable cost allocated to recreation and fish and wildlife enhancement; prohibit discharge of inadequately treated sewage and other pollutants into the reservoir; and prevent encroachment on downstream channels. Assurances of local cooperation have not been completed, except for Cerrillos Reservoir, which was signed March 15, 1982.

**Operations and results during fiscal year.** New work: Real estate: \$7,798; Dams: \$40,832,273; Recreation: \$166,621; Engineering and Design: \$2,538,950; and Construction Management: \$2,587,208.

**Condition at end of fiscal year.** Cerrillos Dam Lake Recreation contract was completed in June 2005. Remaining Lake Recreation was awarded in September 2005 and completed in January of 2009. Portugues Shoal Removal Phase II has been scheduled for award in FY 2013 pending completion of Portugues Dam. Portugues Dam contract was awarded in March 2008 in the amount of \$180,000,000 with a scheduled completion date of March 2013.

## 61. RIO DE LA PLATA, PR

**Location.** The Rio de La Plata basin is located about 11 miles west of the San Juan metropolitan area along the north coast of Puerto Rico. The Rio de la Plata basin drains an area of 240 square miles through several towns and villages into the Atlantic Ocean.

**Existing project.** The Water Resources Development Act of 1990 authorized the project. It would provide 100-year protection upstream of PR Highway 2 and SPF protection down stream and calls for construction of 7.6 miles of levees. The plan includes the replacement of 3 bridges, recreation facilities, and mitigation for the loss of environmental habitats. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$74,300,000 Federal and \$44,200,000 Non-Federal.

**Local cooperation.** The project cooperation agreement was executed on 7 June 1995. The Commonwealth of Puerto Rico, Department of Natural and Environmental Resources, is the body authorized to represent the local interest and is responsible for complying with the following requirements: (1) provide a cash contribution equal to five percent of total project costs; (2) provide all lands, easements, rights-of-way, relocations, and dredged material disposal areas; (3) provide an additional cash payment when the sum of both items (1) and (2) are less than 25 percent of total project costs; (4) operate and maintain the project after completion, including accomplishment of any needed repairs or rehabilitation's of any of its components; (5) hold and save the United States free from damages due to the construction or subsequent maintenance of the project, except due to damages due to the fault or

negligence of the United States or its contractors; (6) prevent future encroachments which might interfere with proper functioning of the project; (7) participate in and comply with applicable Federal flood plain management and flood insurance programs; and (8) (a) Provide guidance and leadership to prevent unwise future development in the flood plain; and (b) recreation local cooperation requirements: (1) provide one-half of the separable first cost of post authorization planning and construction of recreation facilities and provide all land required for recreation; and (2) all costs and full responsibility for the operation, maintenance, replacement, and management of recreation lands and facilities.

**Operations and results during fiscal year.** New work: Engineering and Design cost was \$378,252.

**Condition at end of fiscal year.** Construction contract award is scheduled for August 2010.

## 62. RIO GRANDE DE ARECIBO, PR

**Location.** The city of Arecibo is located on the northern coast of Puerto Rico, approximately 40 miles west of San Juan. The Rio Arecibo Basin covers a 272 square mile area and includes towns of Utuado, Jayuya, and Adjuntas.

**Existing Project.** The authorized project for flood control includes channel improvements, a floodwall, and a levee along the Arecibo River; a levee along the Tanama River; and a plug, channel improvements, and a diversion channel along the Santiago River. (See Table 9-B for Authorizing Legislation.)

Estimated cost of the project is \$39,800,000 Federal and \$23,200,000 non-Federal.

**Local cooperation.** Local interests must provide lands, easements, rights of way, and dredged material disposal areas; modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project; pay one-half of the separable costs allocated to recreation and bear all costs of operation and maintenance, and replacement of recreation facilities; pay 8.52 percent of the first costs allocated to flood control, and bear all cost of operation, maintenance, and replacement of flood control structures; and has also agreed to make all required payments concurrently with project construction.

## JACKSONVILLE, FL DISTRICT

**Operations and results during fiscal year.** New work: Lands and damages \$7,734; Channels and Canals \$985; Floodway Control and Diversion Structures: \$2,204,177; Engineering and Design cost was \$204,184; Construction management cost \$231,526.

**Condition at end of fiscal year.** The first construction contract, the Arecibo and Tanama Levees and the Rio Santiago Diversion Channel, was awarded in September 2004 for a total of \$12.9M. Notice to proceed was issued in May 2005. Construction of the original contract was completed in June 2008. Approved modifications to the original construction contract have extended completion to June 2009. Plans and Specifications for Contract 2A (construction estimated at \$13M) are complete for the design of 3 bridges and part of Rio Santiago Canal. Sponsor initiated land acquisition for Contract 2A in FY 2008 with contract award scheduled for FY 2012.

### 63. RIO GRANDE DE LOIZA, PR

**Location.** The Rio Grande De Loiza basin, located in the eastern central part of Puerto Rico, is the island's largest basin. It comprises the coastal plain of Carolina and the metropolitan area of Caguas in the interior valley. The project area consists of 530 square kilometers draining into Lake Loiza. It includes the city of Caguas and the town of Gurabo where over 4,100 families and numerous public buildings and commercial facilities are affected by flooding.

**Existing project.** The authorized project would provide channels, levees, and floodwalls for flood protection for the highly urbanized areas of the city of Caguas and the town of Gurabo. It consists of 1.8 kilometers of gabion-lined channel, 1.9 kilometers of concrete channels, and a debris basin for Rio Caguitas; 1.3 kilometers of concrete channels, 1.0 kilometers of earth channel, 0.6 kilometers of gabion-lined channel, 1.0 kilometers of levees, and a debris basin for Rio Bairoa; 2.8 kilometers of levees and floodwalls for Rio Grande De Loiza; and 0.7 kilometers of pilot channel and 1.8 kilometers of levees for Rio Gurabo. It also provides for recreation bikeway/pedestrian trails at Rio Grande De Loiza and Rio Gurabo levees. The average level of protection at Rio Caguitas and Rio Bairoa is estimated at 70 years and 220 years, respectively. The average level of protection for the remaining reaches is estimated at 100 years. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$173,000,000 Federal and \$60,900,000 non-Federal.

**Local cooperation.** In accordance with the cost sharing and finance concepts reflected in the Flood Control Act of 1970 and the WRDA 1986, the sponsor must provide lands, easements, and rights-of-way; modify or relocate buildings, utilities, roads, bridges, and other facilities, where necessary in the construction of the project; pay 6.32 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operations, maintenance, and replacement of flood control facilities; and pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, and replacement of recreation facilities.

**Operations and results during fiscal year.** New work: None.

**Condition at the end of fiscal year.** An updated LRR for entire project will be required in order to proceed with PCA execution. This action will be completed when Federal funding is made available.

### 64. RIO MANATI, BARCELONETA, PR

**Location.** The project area consists of the Rio Grande De Manati basin, which is located in the north-central coastal region of Puerto Rico at the town of Barceloneta.

**Existing project.** The recommended plan consists of providing a 5,300-meter long ring levee, two pilot channels totaling 1,620 meters in length, and minimum interior drainage facilities. Project implementation requires acquisition of seven residential structures, relocation of one boat ramp, three highway ramps, and one agricultural road ramp, and relocation of existing utilities impacted by the levee at four locations. The project is designed to protect against the 100-year flood and would reduce 92 percent of the total annual flood damages for the flood prone areas of the town of Barceloneta. The recommended plan maximizes the net national economic development benefits. (See Table 9-B for Authorizing Legislation.)

Estimated cost is \$16,700,000 Federal and \$8,200,000 non-Federal.

**Local cooperation.** In accordance with the cost sharing and financing concepts reflected in the Chief of Engineers Reported dated 22 January 1999 and WRDA

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

'99, the non-Federal sponsor must provide lands, easements, rights-of-way, and dredged material disposal areas; modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project; and pay 15.95 percent of the first costs allocated to flood control, and bear all cost of operation, maintenance, and replacement of flood control structures. The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

**Operations and results during fiscal year.** New work: Levees and floodwalls \$493,624; Engineering and Design: \$90,451; and Construction Management cost was \$173,211.

**Condition at the end of fiscal year.** Construction contract was completed and a separate small business contract was awarded September 2008 for the final clean up of vegetation in order to proceed with final transfer to local sponsor. Clean up is scheduled to be completed by March 2010.

### 65. RIO PUERTO NUEVO, PR

**Location.** The Rio Puerto Nuevo drainage basin is located within the San Juan Metropolitan Area along the northern coast of Puerto Rico. The basin joins the southeast side of San Juan Harbor and extends south and up into the foothills of the central mountains of Puerto Rico. The Rio Piedras, Rio Puerto Nuevo, Quebrada Margarita, Quebrada Josefina, Quebrada Dona Ana, Quebrada Vista, and Quebrada Guaracanal traverse the basin.

**Existing project.** The authorized project for flood control includes improvements to 11.2 miles of the existing channel of Rio Puerto Nuevo and Rio Piedras and five tributaries of the Rio Puerto Nuevo drainage basin. The 25 square mile drainage basin drains into San Juan Harbor. (See Table 9-B for Authorizing Legislation.)

Estimated cost of the project is \$372,400,000 Federal and \$147,900,000 non-Federal.

**Local cooperation.** Local interests must provide cash contribution equal to five percent of the total project costs; provide LERRD (except railroad bridge alterations); provide an additional cash payment when the sum of cash and LERRD are less than 25 percent of the total project costs; operate and maintain project works after completion; hold and save the United

States free from damages; prevent future encroachments; participate and comply with Federal flood plain management and flood insurance programs; provide guidance and leadership to prevent unwise future development in the flood plain; provide one-half of the separable first cost of post authorization planning and construction of recreation facilities; and all costs and full responsibility for operations, maintenance, replacement, and management of the recreation lands and facilities.

**Operations and results during fiscal year.** New work: Real Estate: \$4,718; Roads, Railroads, and Bridges: \$3,766,018; Channels and Canals: \$9,253,535; Engineering and Design: \$897,022; and Construction Management cost was \$1,880,646.

**Condition at end of fiscal year.** Contract 1 for \$46.0M covers construction of the first 1.3 miles of channel beginning in San Juan Harbor and ending about ½ mile downstream of the De Diego Expressway Bridge over Río Piedras. Contract has been completed.

Contract 1A for \$3.7M includes seismic retrofit for the Kennedy Avenue Bridge. Contract was awarded to PRE-CON Marine, Inc., in April 2002 and was completed in September 2004. Contract was modified to include installation of a 36-inch waterline as betterment at a cost of \$6.8 million (100% Non-Federal Cost). This added work was completed in December 2005.

Contract 2A for \$27 million was terminated for convenience to the government. Remainder work, to include confluence wall and excavation will be included in ARRA Contract 2AR. Recovery funds will be used by the Corps to complete the plans and specifications for the lower Margarita Channel and to award the construction contract by June 2010.

Contract 2AA for \$84M was awarded to Dick Corporation in November 2002 and it is scheduled for completion during the first quarter of fiscal year 2010. Contractor completed the secant pile wall box culvert, Option B, which is the last 300 feet of the culvert near

the port facilities bulkhead, and the open channel work north of Kennedy Avenue, which is the upper limit of this contract. The only item pending from this contract is the modification of the 90" sewer line segment. This work is going to be performed under a separate contract to be awarded later in FY 2010. Full flood

## JACKSONVILLE, FL DISTRICT

damage prevention benefits of the Bechara Sector will be realized once this segment of work is completed.

Contract 2D1 for \$22M was awarded to Río Construction in April 2003 and they proceeded to complete the east abutment wall. The contract was terminated by default after difficulties and lack of progress of work by Río Construction. The Corps of Engineers proceeded with negotiations with Surety Company and was able to award a new contract to Carro & Carro Construction in September 2007. Notice to Proceed was issued on November 26, 2007 and contract has mobilized to the site. Contractor completed the diversion dike and is proceeding with the drill shaft construction.

Contracts 2D & 2E: Plans and specifications are complete. This contract covers the area between De Diego Bridge and the Roosevelt Avenue Bridge. Contract is on hold pending availability of Federal funds (\$130M).

### **66. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS**

Features transferred to the Central and Southern Florida Flood Control District and Southwest Florida Water Management District were inspected quarterly during the fiscal year at a total cost of \$331,665.

### **67. OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

(See Table 9-E.)

### **68. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION**

*Flood control activities pursuant to section 205, Public Law 685, 84th Congress, as amended (Preauthorization).*

(See Table 9-Q.)

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

Federal costs for the fiscal year were \$19,655 for the Catastrophic Disaster Preparedness Program.

*Emergency stream bank and shoreline protection activities pursuant to Section 14, Public Law 526, 79th Congress as amended (Preauthorization).*

Total cost for the fiscal year was Section 14 Coordination for \$6,616.

## **General Investigations**

### **69. SURVEYS**

Costs during the fiscal year were: navigation studies \$214,459; flood damage prevention studies \$45,425; shoreline protection studies \$472,184; special studies \$48,827 miscellaneous activities \$42,385; coordination with other agencies and non-Federal interests \$139,495 for a total cost of \$962,774.

### **70. COLLECTION AND STUDY OF BASIC DATA**

The requirement for preparation of regular flood plain information studies has been rescinded. FPI studies that deal with land use changes will continue to be prepared. Costs incurred were Flood Plain Management Services \$47,471; Technical Services \$80,321; Quick Responses \$10,003; HES \$31,222; and HES Islands Support \$15,162 for a total cost of \$183,909.

### **71. CONTINUATION OF PLANNING AND ENGINEERING**

Lido Key, Sarasota Beach \$88,192.

### **72. ADVANCE ENGINEERING AND DESIGN**

No costs were incurred this period

## **General Regulatory**

### **73. PERMIT EVALUATION (R&H ACT of 1899; CWA of 1977; MPRSA of 1972)**

**Location.** Geographic coverage includes navigable waters of the United States (including tributary systems, headwaters and isolated waters) and ocean

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

waters to the limits of the territorial seas in Florida, Puerto Rico, and the U.S. Virgin Islands.

**Existing Program.** The program evaluates permit applications for work (dredging, filling, and other structures) and the transportation of dredged material to the oceans for ocean disposal. Decision making criteria consist of the public interest review, Section 404(b)(1) Guidelines, and ocean dumping criteria. We increased the number of Regional General Permits to 19, of Programmatic General Permits to 10, and are working on 6 more. We issued 4,323 permits and verifications. This number does not include 2,700 permit verifications issued by the state of Florida under the State Programmatic General Permit. This number also does not include jurisdictional determinations and other services to the public. We expanded our staff and provided in-house mentoring and workshops. Closer tracking of projects (supervisors are now present in each field office) supported by tailored reports from the revised permit database (ORM) has resulted in more timely reviews, for example, we increased the percentage of permits authorized within 60 days (General Permits) and 120 days (Individual Permits). We continue to streamline our review and processing timeframes, for example, this period established a web-based process where public can self-certify certain types of permit authorizations. We have 43 mitigation banks / in lieu fee programs and encourage their use as one component of implementing the program on a watershed basis.

**Local Cooperation.** The joint application arrangements with Florida, Puerto Rico, and the U.S. Virgin Islands continue in place. The Florida State Programmatic General Permit was maintained. We continue to implement the transportation decision streamlining process with FDOT and FHWA and the agreement with South Florida Water Management District to provide for accelerated permits under a coordinated process to support Florida's Accel8 program of critical projects that are supporting the Everglades restoration program.

**Operations and results during fiscal year.** Permit evaluation cost was \$14,219,872.

### **74. ENFORCEMENT (R&H ACT of 1899; CWA of 1977; MPRSA of 1972)**

**Existing program.** The program evaluates compliance with issued permits by conducting field inspections and evaluating compliance documents

submitted by the permittee. Appropriate action is taken on findings of noncompliance with issued permits. This program also evaluates and responds to reports of unauthorized work (performed without a permit).

*Focus shift:* Inspections of issued permits have increased to support the performance measures. We continue to take appropriate actions on unauthorized work and coordinate with EPA in accordance with our field level agreement. A majority of the resources have been focused on promoting compliance with issued permits rather than allocated to unauthorized activities.

*Operations.* Operation of the program is continuing to make increased use of alternative dispute resolution processes to remediate violations. Close coordination with and cooperation of Department of Justice continues, with development of consent orders and fines as appropriate. To improve efficiency and better served the public, we currently have five of the nine enforcement project manager positions located in the field offices in Miami, Tampa, Ft Myers, Pensacola, and Live Oak.

**Operations and results during fiscal year.** Cost incurred this fiscal year for enforcement was \$424,871.

### **75. STUDIES (R&H Act of 1899)**

**Location.** Navigable waters of the United States in Florida, Puerto Rico, and the U.S. Virgin Islands.

**Existing program.** This program conducts studies to determine geographic extent of navigable waters of the United States, and establishment of danger or restricted zones in these waters.

**Operations and results during fiscal year.** We promulgated rules for the establishment of ten new restricted areas and the major modification of another restricted area. Cost incurred this fiscal year was \$1,102,720.

### **Environmental Improvement Projects**

### **76. ALLIGATOR CREEK ADDITION RESTORATION PROJECT, FL**

**Location.** Alligator Creek Addition Restoration Project is on the South West Florida Coast in Charlotte County, Florida.

## JACKSONVILLE, FL DISTRICT

**Existing Project.** The primary goal of this project is to restore the historic saltern that once comprised the majority of the west central portions of the Alligator Creek Addition parcel. The area has been severely impacted by the construction of mosquito ditches, which functioned to divert water flow and subsequently alter the hydro period of the saltern. Restoration will involve backfilling approximately 35,000 linear feet of mosquito ditches. Backfilling will allow a more diffuse sheet flow of fresh water from upland areas and will allow extreme high tide events to flood the salterns and slowly sheet flow out through the mangrove forest fringe to the west. This project is anticipated to restore the natural hydro period, raise the interstitial salinities and restore the natural sill in the saltern resulting in approximately 350 acres of saltern restoration and enhancement.

Estimated cost for new work is \$1,368,702. The Estuary Habitat Restoration Council set an absolute limit on the Estuary Act funds that can go to this project at \$4,000,000. These are cost share projects and normally the Federal share is limited to 65% of the cost

**Local cooperation.** Fully complied with to date.

**Operations and results during fiscal year.** New Work: Engineering and Design and construction: \$2,442.

**Condition at the end of fiscal year.** State and federal permits have been obtained. The Alligator Creek Estuary Habitat Restoration Program Project Letter Report - Charlotte County, FL was approved on 13 September 2005. The Project Partnership Agreement was executed December 11, 2007. Construction started in January 2008 and was completed April 30, 2008.

### **77. CENTRAL AND SOUTHERN FLORIDA, INCLUDING COMPREHENSIVE EVERGLADES RESTORATION PLAN**

**Location.** The C&SF project is generally located within the southeastern 18 counties of Florida covering an area of about 18,000 square miles. It is comprised of the Upper St. Johns River basin in the northeastern section of the project, Kissimmee River basin in the central section north of the Lake Okeechobee-Everglades area in the central and southwestern section, and the east coast Everglades area in

southeastern section. The CERP area consists of the lands and waters within the boundary of the South Florida Water Management District, including the Everglades, the Florida Keys, and the contiguous near-shore coastal waters of South Florida.

**Previous projects.** Completed works for control of Lake Okeechobee were included in and constructed under the navigation project for Okeechobee Waterway, FL (formerly Caloosahatchee River and Lake Okeechobee drainage area, FL) and under provisions of the River and Harbor Acts of July 3, 1930 and August 30, 1935. For further information, see Annual Reports for 1948 and 1949.

**Existing projects.** The authorized project is for flood relief and water conservation and provides principally for: an east coast protective levee extending from the Homestead area north to the eastern shore of Lake Okeechobee near the St. Lucie Canal; three conservation areas for water impoundment in the Everglades area west of the east coast protective levee with control structures to effect transfer of water as necessary; local protective works along the lower east coast; encirclement of the Lake Okeechobee agricultural area by levees and canals; enlargement of portions of Miami, North New River, Hillsboro, and West Palm Beach Canals; modifications of the existing Lake Okeechobee levees and construction of new levees on the northeast and northwest shores of the lake; increased outlet capacity for improved control of Lake Okeechobee; floodway channels in the Kissimmee River basin, with suitable control structures to prevent over-drainage; an interrelated system of canals, levees, pumping stations, and structures in

southwest Dade County to control water levels; and facilities for regulating floods in Upper St. Johns River basin; a system of canals and control structures for gravity drainage of Martin County and distribution of available water supplies to portions of Martin and St. Lucie Counties; and works to improve the supply, distribution, and conservation of water resources in central and southern Florida, including the Lake Okeechobee agricultural area, Everglades National Park, and other related areas. The project will provide water control and protection from recurrence of the devastating floodwaters from the Everglades and local sources, for the highly developed urban area along the lower east coast of Florida and for the productive agricultural areas around Lake Okeechobee (including towns around the lake), in the Upper St. Johns and Kissimmee River basins, and in South Dade County. The project includes a total of 990 miles of levees, 978

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

miles of canals, 30 pump stations, 212-floodway control and diversion structures, 56 railroad bridge relocations, and 2 highway bridge relocations. The project also provides that upon completion, local interests assume operation and maintenance of all completed works except levees, channels, locks, and control works for regulation of Lake Okeechobee and the main control structures of conservation areas, which will be operated and maintained by the United States Army Corps of Engineers. The principal features of the hurricane gates, constructed under previous projects for Okeechobee Waterway and maintained under existing project since July 1, 1950, are set forth in Table 9-L. Also, see Table 9-N for principal features of locks and dams. (See Table 9-B for Authorizing Legislation.)

The Comprehensive Everglades Restoration Plan (CERP) is the ecosystem restoration component of the Central and Southern Florida Project. The authorized project shall develop a comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida Ecosystem. The comprehensive plan shall provide for the protection of incoming water quality and the reduction of loss of Everglades' fresh water. The comprehensive plan shall include such features as are necessary to provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central and Southern Florida Project. The comprehensive plan shall be developed in consultation with the Task Force.

Projects identified for design and construction of any Central and Southern Florida Project that are authorized may use funds that are available, provided that they will accelerate the restoration, preservation, and protection of the South Florida ecosystem; will be generally consistent with the conceptual framework specified in the report entitled "Conceptual Plan for the Central and Southern Florida Project Restudy"; and be compatible with the overall authorized purposes of the Central and Southern Florida Project.

**Local Cooperation.** (See Table 9-M for local cash contribution.) Local interests must also: provide lands, rights-of-way, and spoil disposal areas; hold the United States Army Corps of Engineers free from damages; bear the cost of maintenance and operation of all works except those having to do with regulation of Lake Okeechobee and the main control structures of conservation areas; construct and maintain lateral drainage facilities; prohibit encroachment on flood-carrying capacity of the improved channels; and assume cost of all new highway bridges, relocations of

existing bridges and alterations to utilities incident to construction of the project. In addition, for small boat navigation channels, local interests must provide, maintain, and operate adequate public landings, sanitary and access facilities, and establish regulations prohibiting discharge of pollutants into the waters of the locks and channels by users thereof. Assurances of local cooperation have been accepted by the District Engineer for all items of work authorized to date.

The Comprehensive Plan shall be developed in cooperation with the non-Federal sponsor and in consultation with the Task Force. The non-Federal cost share is 50%, except for water quality, which is 100% with the exclusion of that needed for Everglades restoration, for which the share is 50%. The value of lands or interests in land acquired by non-Federal interests will be included in the total cost of the activity and credited against the non-Federal share of the cost of the activity.

**Operations and results during fiscal year:** (See Table 9-N for work accomplished.)

### *Operations and care.*

a. Features completed under previous navigation project for Okeechobee Waterway and being maintained under this project are: a levee about 70 miles long following in general the south shore of Lake Okeechobee and a north shore levee 15.8 miles long; spillways at Ortona and St. Lucie Locks; 5 hurricane gates; and 16 spillways along St. Lucie Canal.

b. Features completed under existing project that are to be maintained with operation and maintenance funds are: (1) Levees 47, 48, 49 and 50 -- total length 63 miles and enlargement of existing levees L-D1, L-D2, L-D3, L-D4, and L-D9, (2) spillway structures S-10, S-11, S-12, S-18C, S-77, and S-78 (3) C-43, Section 4 (Caloosahatchee River), and (4) W.P. Franklin Lock and Dam.

In addition to the actual facilities listed above it is necessary under operation and maintenance to continue meteorological studies, water level records, stream gauging stations, etc., for proper regulation of the level of Lake Okeechobee and storage of water in Conservation Areas 1, 2 and 3.

Corps of Engineers - The Corps of Engineers operates and maintains the major outlets to Lake Okeechobee and Water Conservation Area Nos. 1, 2A and 3A in central and southern Florida.

## JACKSONVILLE, FL DISTRICT

South Florida Water Management District - SFWMD is responsible for operation and maintenance of the project facilities, including major pumping stations, spillways, locks (except on Okeechobee Waterway), levees and culverts.

**Condition at end of fiscal year.** Extensive planning and design efforts are underway on many of the 52 projects included in CERP. Much of the effort is with the South Florida Water Management District where design is proceeding according the Design Agreement executed in May 2000. Currently, 9 project implementation reports (PIR) are ongoing, 3 have been completed and have moved on to the design phase: Indian River Lagoon, Picayune Strand, and Site 1; which were also authorized in WRDA 2007. Design of the 4 pilot projects are underway. The Corps is continuing with the design and construction of the portions of the Upper St. Johns Basin, West Palm Beach Canal (STA-1E/C-51), South Dade County (C-111), Manatee Pass Gates projects. One Feasibility Study is underway: Southwest Florida Feasibility Study. In addition, 2 special reports are also underway: Aquifer Storage and Recovery Regional and Master Recreation Plan. The CERP RECOVER efforts are underway.

The Central and Southern Florida Project consists of the following projects:

- West Palm Beach Canal (C-51): Completed repair of Structure 365A; constructed cofferdam at Structure 375; and awarded construction contract for repair/replace for work at Structure 361/Structure 377.
- South Dade County (C-111): Continued development of plans and specs and continued testing Interim Pump Station 332B.
- Manatee Pass Through Gates: Under construction.  
As a component of the C&SF project, CERP consists of the following projects:
- ASR Regional Study: Calibrated the regional groundwater model to simulate flow and solute transport.. Model output, and ecotoxicological data obtained during cycle testing so far will enable better estimation of recovered water effects (if any) in Lake Okeechobee.
- Biscayne Bay Coastal Wetlands: Completed Draft PIR.
- Broward County Water Preserve Area: Prepared groundwork for reformulation effort. Property values were updated in preparation for 2010 reformulation of the project.

- Caloosahatchee River West Basin Storage Reservoir (C-43): Completed the land valuation Policy and cost estimates for construction of the West Basin Storage Reservoir in process.
- Caloosahatchee River Watershed: Prepared the Project Management Plan.
- C-111 Spreader Canal: Developed Draft Project Implementation Report and completed policy and public review of the draft report.
- WCA 3 Decompartmentalization: Developed preliminary array of alternatives for PIR 1. Developed the draft Environmental Assessment, Engineering Report, and Science Plan completed for the Installation of the Decomp Physical Model.
- Indian River Lagoon South (C-44): USACE assumed efforts for C-44 Reservoir and STA construction from SFWMD and initiated efforts for conversion of Plans and Specifications.
- L-31 North Seepage Management Pilot Project: Developed Final Pilot Project Documentation Report, completed independent external peer review, and completed final plans and specs.
- Lake Okeechobee ASR: Continued the cycle 2 testing, which will complete in January 2010.
- Lake Okeechobee Watershed: Identified the Tentatively Selected Plan (TSP).
- Master Recreation Plan: Continued efforts to complete documentation of the Master Recreation Plan.
- Melaleuca Eradication: Completed draft Project Implementation Report and prepared final Project Implementation Report. Approval of the PIR and award of design and construction of the Mass Rearing Facility is expected in FY10.
- North Palm Beach County Part 1: Continued Plan formulation to complete the PIR.
- Picayune Strand Restoration Project: Completed Plans and Specs and advertised for Merritt Pump Station Construction Contract.
- Site 1 Impoundment: Completed the Intermediate level design of the impoundment and related features
- Southwest Florida Feasibility Study: Completed draft Southwest Florida Feasibility Study AFB Package.

## 78. EVERGLADES & SOUTH FLORIDA ECOSYSTEM RESTORATION

**Location.** The area consisting of the lands and waters within the boundary of the South Florida Water Management District, including the Everglades, the Florida Keys, and the contiguous near-shore coastal waters of South Florida.

**Existing Project.** This project is called the Critical Restoration Projects Program. Nine quick-start projects designed to restore the South Florida ecosystem are in progress or complete across the lower part of the state. These projects are spreading early restoration as partnering agencies prepare to construct the Comprehensive Everglades Restoration Plan.

If the Secretary of the Army determines, in cooperation with the non-Federal sponsor and the Task Force, that a restoration project for the South Florida ecosystem will produce independent, immediate, and substantial restoration, preservation, and protection benefits, and will be generally consistent with the conceptual framework specified in the "Conceptual Plan for the Central and Southern Florida Project Study" published by the Governor's Commission for a Sustainable South Florida, the Secretary shall proceed expeditiously with the implementation of the restoration project. (See Table 9-B for authorizing legislation.)

Estimated cost of the project \$95,000,000 Federal and \$155,350,000 non-Federal.

**Local Cooperation.** The non-Federal share of the cost of work performed under this program is 50%. Congress has authorized \$95 million to be appropriated to the Department of the Army to pay the Federal share of the cost. The Federal share of the cost of carrying out any 1 project is limited to \$25 million. The cost of features to improve water quality essential to Everglades restoration will be cost shared as above; the cost to improve water quality for other purposes will be solely the responsibility of the local sponsor. Credit may be provided to a non-Federal sponsor for the reasonable costs of any work that has been performed or will be performed in connection with a study or activity if the non-Federal sponsor's work is necessary, will substantially expedite completion of a critical restoration project, and is granted pursuant to a project-specific agreement that prescribes the terms and conditions of the credit or reimbursement.

Regardless of the date of acquisition, the value of lands or interests in land acquired by non-Federal

interests shall be included in the total cost of the activity and credited against the non-Federal share of the cost of the activity, given that the lands proposed for credit are compatible with a specific project in this program. The operation and maintenance of projects will be a non-Federal responsibility with the exception of the Seminole Big Cypress Water Conservation Plan, for which the operations and maintenance costs will be split 50-50 between the Seminole Tribe and the U.S. Army Corps of Engineers.

**Operations and results during fiscal year.** Reservoirs \$86,674; Channels & Canals \$62,693; Dams \$151,697; Engineering and design cost was \$1,321,048; Construction management cost was \$453,599.

**Condition at end of fiscal year.** This program consists of the following nine projects:

- East Coast Canal Structures: Complete
- Tamiami Trail Culverts: Design is complete. Western features were built under the CERP Picayune strand project. Construction of the eastern features await availability of funds.
- Western C-11 Water Quality Treatment: Complete.
- Florida Keys Carrying Capacity Study: Complete.
- Seminole Big Cypress Water Conservation Plan: The Phase 1 Canal System construction is complete. There are 4 basins included in Phase 2. The construction was completed on the first Contract of Phase 2. The three basins remaining are expected to be awarded.
- Southern CREW: Under construction.
- Lake Okeechobee Water Retention Areas: Post-construction repairs ongoing. Project is being monitored for compliance with FDEP's water quality permit requirements.
- Ten Mile Creek: Construction physically complete.
- Lake Trafford: Under construction. Will be completed in 2011.

## 79. FLORIDA KEYS WATER QUALITY IMPROVEMENTS

*Water Quality Improvements pursuant to Section 109, Public Law 106-554.*

**Location.** The Florida Keys Water Quality Improvements Program study area lies within the Florida Keys National Marine Sanctuary, which includes 2,800 square nautical miles of near shore waters beginning just south of Miami, Florida and

## JACKSONVILLE, FL DISTRICT

extending to the Dry Tortugas. The Sanctuary is part of a complex ecosystem that includes the Everglades, Florida Bay and adjacent areas. The Keys themselves are a chain of more than 800 islands that extend approximately 220 miles southwest from the southern tip of the Florida peninsula and through the sanctuary. The Florida Keys Water Quality Improvements Program is targeting the portion of the Keys from Key Largo to Key West, approximately 110 miles.

**Existing Project.** Under the authority of Public Law 106-554, date December 21, 2000, the Corps of Engineers is authorized to provide technical and financial assistance to carry out projects for planning, design, and construction of treatment works to improve water quality in the Florida Keys. As a result of concerns regarding the water quality in the Florida Keys, the Monroe county Year 2010 Comprehensive Plan mandated that nutrient loading be reduced in the Keys marine ecosystem by the year 2010. In 1998, The Governor issued Executive Order 98-309, which directed both local and state agencies to coordinate with Monroe County to implement the Year 2010 Comprehensive Plan. This includes the elimination of cesspits, failing septic systems and other substandard on-site sewer systems.

*Estimated cost:* The total cost of the program is in excess of \$600M. However, the Federal Government has been authorized to spend up to \$100M. The non-Federal share will be \$53.8M.

**Local Cooperation.** 6 Municipalities within Monroe County serve as the local cost sharing sponsors for the program. These are Key Largo, Islamorada, Marathon, Layton, Key Colony Beach and Key West. The South Florida Water Management District, an agency of the State of Florida, is serving as a liaison between the Federal Government and local governments. They are not the project sponsor or cost-sharing partner. It is important to note that the 6 separate Municipalities will be directly funding the non-Federal portion of the project. South Florida Water Management District's role will consist of coordinating with the various municipalities in Monroe County who will be paying for the non-Federal share.

**Operations and results during fiscal year.** Engineering, design and construction: \$7,058,453.

**Condition at the end of the fiscal year.** Currently, environmental documentation for all six municipalities involved in the Florida Keys Water Quality Improvements Program has been completed.

Decision documents outlining recommendations for implementation have also been completed for all six municipalities. Individual Program Cooperation Agreements will be developed based on Program Implementation Guidance received from USACE HQ in December 2006. Once complete, these Program Cooperation Agreements will be forwarded to the Corps of Engineers' South Atlantic Division and Headquarters for review for all six municipalities. Once approved, the Corps of Engineers will be able to begin reimbursements for construction of wastewater and storm water facilities as well as sunk planning and design costs which have been incurred since signing of the Program Cooperation Agreements.

## 80. KISSIMMEE RIVER, FLORIDA

**Location.** The Kissimmee River Basin comprises 3,013 square miles, and extends from Orlando southward to Lake Okeechobee, the second largest freshwater lake in the United States. The area is bounded on the north by the lakes of the Orlando area, on the west by the Peace River Basin, on the south by Lake Okeechobee, and in the east by the Upper St. John's and the Taylor Creek-Nubbin Slough Basins. The watershed is about 105 miles long and has a maximum width of 35 miles.

**Existing Project.** The purpose of this project is to implement the 1991 Final Integrated Feasibility Report and Environmental Impact Statement, for restoration of the Kissimmee River and flood plain ecosystem. It is expected that this restoration project will restore the ecological integrity of the river system and provide for environmental improvements through modification of operations for Lake Kissimmee, Cypress, and Hatchineha. The project will include canal and/or structure improvements and real estate acquisition. Construction will include the backfilling of approximately 22 miles of canal C-38. This will result in the restoration of almost 29,000 acres of wetlands in the floodplain. Two structures will be removed and two bridges and associated utilities will be relocated. Real estate interests will be acquired for affected portions of the floodplain. (See Table 9-B for Authorizing Legislation.)

Estimated cost of the project for Kissimmee River (Upper and Lower Basins) \$330,555,000 Federal and \$330,555,000 non-Federal.

**Local Cooperation.** The South Florida Water Management District, an agency of the State of Florida,

is the project sponsor and cost-sharing partner. Local cost for the Headwater Revitalization is to be credited towards the total project cost. The authorization calls for the restoration to be cost-shared 50%-50% and that the lands be credited toward the total cost of the Kissimmee River Restoration. A Project Cooperation Agreement (PCA) was executed on March 22, 1994.

**Operations and results during fiscal year.** New work: Lands, \$197,875; Channels and Canal cost \$8,593,453; Floodway control structure cost \$13,586,961; Engineering and Design cost \$5,014,695; and Construction management cost \$1,059,743. There were no buildings, grounds, and utility costs.

**Condition at the end of the fiscal year.** Ongoing construction for S-68 Spillway, Isotokpoga Canal, and second Reach 4 backfill (3.5 miles). Award of contracts for S-65DX1 Retrofit and River Acres Flood Reduction.

## 81. MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK

**Location.** The Modified Water Deliveries to the Everglades National Park (MWD) project area is located in Broward and Miami-Dade Counties, Florida. It includes the original area of Everglades National Park (ENP), the East Everglades Expansion Area which was added to the park in 1989, Water Conservation Area (WCA) 3A, and WCA-3B. It is bounded on the west by the Big Cypress National Preserve, on the north by the Everglades Agricultural Area (EAA) and WCA-2, and on the east by Levee 30 (L-30), L-31N, and L-31W, which serve as flood control levees that separate the developed areas in the east from the remaining natural areas owned by the state and federal governments.

**Existing Project.** There are four main components of the MWD project: (1) flood mitigation for the 8.5 Square Mile Area (SMA) or Las Palmas community which is a residential and agricultural area directly adjacent to ENP; (2) conveyance and seepage features to facilitate flow through the system from WCA-3A to WCA-3B and limit seepage eastward from WCA-3B and ENP; (3) modifications to the Tamiami Trail to facilitate flow under the road; and (4) Project Implementation Support, which includes monitoring and operational changes. All four components are necessary and work together to restore flows from WCA-3A to WCA-3B under Tamiami Trail to the historic headwaters of the NESRS in the Everglades Expansion Area. Flood mitigation features and removal

of barriers to flow (Tamiami Trail) must be completed before changing water control operations to send water (conveyance) through the WCAs and into the Park, restoring park hydrology to the extent practicable under this project. MWD provides the foundation for further Everglades restoration efforts contemplated under the Comprehensive Everglades Restoration Plan (CERP) authorized in December 2000 and will significantly benefit habitat within ENP, including the 109,000-acre East Everglades Expansion area.

**Local Cooperation.** The local sponsor is the South Florida Water Management District (SFWMD). The Florida Department of Transportation (FDOT) has also provided direct support to this project. The SFWMD and USACE have executed a project cooperation agreement and two amendments. Through FY 2005, the MWD project was funded entirely by Department of Interior. In FYs 2006-2008 the project was jointly cost shared by the USACE and the DOI. Through FY 2010, DOI has provided \$313.4M and the USACE has provided \$77.5M to carry out the project. Another \$23.4M thru FY13 is proposed to complete the project.

**Operations and results during fiscal year.** Engineering & Design: \$4,725,996; Construction Management: \$313,082; Construction: \$5,369,626; Real Estate: \$4,502,018.

**Condition at the end of the fiscal year.** Tamiami Trail construction contract awarded to Kiewit Southern Company on 28 September 2009. Construction of 1-mile eastern bridge and road reinforcement to allow 8.5 ft stage in L-29 Canal will begin in 2010. ENP completed a Pilot Spreader Swale EIS and monitored and modeled culvert hydrology at the Tamiami Trail. ENP will decide whether or not to implement pilot spreader swales at two culvert locations in 2010. Operational testing of the finished 8.5 SMA features took place in 2009. Further operational testing is expected in 2010. Scoping for the remaining conveyance and seepage features took place in 2009. Alternative development and an environmental assessment will be drafted in 2010. USACE continues coordination with the US Fish and Wildlife Service under Section 7 of the Endangered Species Act to update the biological assessment and in turn the biological opinion for the Interim Operational Plan (IOP) for Protection of the Cape Sable Seaside Sparrow. The IOP biological opinion expires in October 2010. Proposed adjustments to IOP for multi-species management (Everglades Restoration Transition Plan Phase I) are being analyzed and will be reviewed in an

JACKSONVILLE, FL DISTRICT

environmental assessment to be released in June 2010.

**82. RESTORATION WORK UNDER SPECIAL AUTHORIZATION**

*Restoration Activities Pursuant to Section 1135, Public Law 99-662.*

Fiscal year costs were: Caloosahatchee Oxbows Restoration \$4,126; La Esperanza, PR \$42,428; Lake Jessup, FL \$170,921; Sarasota Bay \$4,126; Virginia Beach Key, FL \$46,777; Section 1135 Coordination \$20,979; Total FY 2009 Cost \$289,358.

*Restoration Activities Pursuant to Sec 206, Public Law 104-303.*

Fiscal year costs were: Aquatic Ecosystem Restoration, Rose Bay, FL \$334,660; Big Fishweir Creek, FL \$25,802; Coordination Account (206) \$31,239; Hogan's Creek \$42,677; Stevenson Creek Estuary, FL \$308,064; Turkey Creek, FL \$13,164; Total FY 2009 Cost \$755,606.

**83. WETLAND AND OTHER AQUATIC HABITAT CREATION UNDER SPECIAL AUTHORIZATION**

Estuary Habitat Restoration Program: Pelican Island \$6,010; Alligator Creek 2,179.

*Wetland Activities Pursuant to Sec 204 Public Law 102-560.*

Fiscal year costs were: Sec 204 Coordination Account \$5,538.

**84. OTHER PROGRAMS AND ACTIVITIES**

Fiscal year costs were: Seepage correction studies \$720,167.

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

**TABLE 9-A COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
1. Aquatic Plant Control (R&H Act of 1965)	New Work:					
	Approp.	30,000	-	-	-	39,471,100
	Cost	28,839	-	12,255	-	39,471,047
2. Arecibo Harbor, PR (Federal Funds) (ARRA Funds)	New Work:					
	Approp.	-	-	-	-	1,128,075 <sup>1</sup>
	Cost	-	-	-	-	1,128,075 <sup>1</sup>
	Maint:					
	Approp.	-	-	-	91,140	7,619,571
	Cost:	-	-	-	81,085	7,609,516
	Maint:					
	Approp.	-	-	-	100,000	100,000
	Cost	-	-	-	99,975	99,975
3. Atlantic Intracoastal Waterway between Norfolk, VA and St. Johns River, FL	New Work:					
	Approp.	-	-	-	-	361,225 <sup>2</sup>
	Cost	-	-	-	-	361,225 <sup>2</sup>
	Maint:					
	Approp.	444,000	2,092,000	33,000	21,100	15,012,572
	Cost:	444,000	2,081,879	42,352	732	14,991,435
4. Bakers Haulover Inlet, FL (Federal Funds)	New Work:					
	Approp.	-	-	-	-	243,235 <sup>3</sup>
	Cost	-	-	-	-	243,235 <sup>3</sup>
	Maint:					
	Approp.	-	-	-	-	185,688
	Cost:	-	-	-	-	185,688
5. Canaveral Harbor, FL (Federal Funds) (ARRA Funds) (ARRA Funds) (ARRA Funds) (Contrib. Funds)	New Work:					
	Approp.	1,485,000	10,000,000	(552,000)	-	60,336,205 <sup>4</sup>
	Cost	1,249,473	81,962	9,049,635	330,622	60,107,637
	New Work:					
	Approp.	-	-	-	8,644,800	8,644,800
	Cost:	-	-	-	216,402	216,402
	Maint:					
	Approp.	3,733,000	3,231,000	5,497,000	6,673,600	141,859,616
	Cost:	2,048,756	4,521,478	5,084,385	1,674,199	135,548,533
		Maint:				
	Approp.	-	-	-	1,596,000	1,596,000
	Cost:	-	-	-	-	-
	New Work:					
	Approp.	-	-	(107,805)	-	2,528,040
	Cost	-	-	-	-	2,635,845

JACKSONVILLE, FL DISTRICT

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect.	PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
6.	Channel from Naples to Big Marco Pass, FL (Federal Funds)	New Work:					
		Approp.	-	-	-	-	305,290
		Cost	-	-	-	-	305,290
		Maint:					
		Approp.	-	-	1,402,000	1,885,060	6,691,922
		Cost	-	-	185,351	790,109	4,380,321
(ARRA Funds)		Maint.					
		Approp.:	-	-	-	2,000,000	2,000,000
		Cost:	-	-	-	-	-
(Contrib. Funds)		New Work:					
		Approp.	-	-	-	-	159,975
		Cost	-	-	-	-	159,975
7.	Charlotte Harbor, FL (Federal Funds)	New Work:					
		Approp.	-	-	-	-	533,169 <sup>5</sup>
		Cost	-	-	-	-	533,169 <sup>5</sup>
		Maint:					
		Approp.	-	-	-	-	22,815,014
		Cost:	-	-	-	-	22,815,014
8.	Eau Gallie Harbor, FL (Federal Funds)	New Work:					
		Approp.	-	-	-	-	9,627
		Cost	-	-	-	-	9,627
		Maint:					
		Approp.	-	-	-	-	2,137
		Cost:	-	-	-	-	2,137
9.	Fernandina Harbor, FL (Federal Funds)	New Work:					
		Approp.	-	-	-	-	4,639,040 <sup>6</sup>
		Cost	-	-	-	-	4,639,040 <sup>6</sup>
		Maint:					
		Approp.	1,133,000	1,594,000	1,420,000	1,842,400	58,106,623
		Cost:	1,092,681	1,594,151	1,393,520	1,182,562	57,377,732
(ARRA Funds)		Maint.					
		Approp.:	-	-	-	1,694,450	1,694,450
		Cost:	-	-	-	8,353	8,353
(Contrib. Funds)		New Work:					
		Approp.	-	-	-	-	935,000
		Cost	-	-	-	-	935,000
10.	Fort Myers Beach Channel, FL (Federal Funds)	New Work:					
		Approp.	-	-	-	-	158,140 <sup>7</sup>
		Cost	-	-	-	-	158,140 <sup>7</sup>
		Maint:					
		Approp.	-	31,000	14,000	4,500,000	7,967,231
		Cost	15,101	980	-	2,727,160	6,150,371

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

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
11.Fort Pierce Harbor, FL (Federal Funds)  (Contrib. Funds)	New Work:					
	Approp.	-	-	-	-	5,417,900
	Cost	-	-	-	-	5,417,853
	Maint:					
	Approp.	-	-	-	-	11,908,278
	Cost:	21,782	-	-	-	11,908,278
	New Work:					
	Approp.	-	-	-	-	2,503,387
Cost	-	-	-	-	2,498,659	
12.Gulf Intracoastal Waterway Caloosahatchee River to Anclote River, FL (Federal Funds)	New Work:					
	Approp.	-	-	-	-	8,112,557 <sup>8</sup>
	Cost	-	-	-	-	8,112,557 <sup>8</sup>
	Maint:					
	Approp.	888,000	-	1,215,000	2,034,480	12,487,023 <sup>9</sup>
Cost	481,371	315,487	550,387	693,716	10,315,402 <sup>9</sup>	
13.Intracoastal Waterway Jacksonville to Miami, FL (Federal Funds)  (ARRA Funds)  (Contrib. Funds)	New Work:					
	Approp.		-	-	-	19,251,598 <sup>10</sup>
	Cost		-	-	-	19,251,598 <sup>10</sup>
	Maint:					
	Approp.	6,850,000	324,000	3,739,000	4,288,620	89,205,525 <sup>11</sup>
	Cost:	6,874,163	643,847	2,844,312	2,613,412	86,415,319 <sup>11</sup>
	Maint.					
	Approp:	-	-	-	6,175,000	6,175,000
	Cost:	-	-	-	17,534	17,534
	Maint:					
Approp.	1,264,480	1,918,007	7,735,715	1,449,280	49,683,351	
Cost	6,579,989	2,839,011	5,707,436	2,200,629	48,258,258	
14. Jacksonville Harbor, FL (Federal Funds) (ARRA Funds)  (Contrib. Funds)	New Work:					
	Approp.	360,000	1,647,000	2,808,000	3,349,000	81,899,240 <sup>12</sup>
	Cost	442,267	513,740	433,906	1,050,666	75,815,071 <sup>12</sup>
	New Work					
	Approp.:	-	-	-	25,635,000	25,635,000
	Cost:	-	-	-	2,125,457	2,125,457
	Maint:					
	Approp.	3,797,000	4,806,000	5,095,000	9,492,000	151,422,022 <sup>13</sup>
	Cost:	3,688,395	3,417,060	5,767,072	2,011,808	143,114,296 <sup>13</sup>
	Rehab:					
	Approp.		-	-	-	102,813
	Cost		-	-	-	102,813
	New Work:					
	Approp.		-	-	12,181,000	13,836,311 <sup>14</sup>
Cost		-	408,033	2,590,732	4,133,780 <sup>14</sup>	
Maint:						
Approp.		-	-	-	25,000	
Cost		-	-	-	25,000	

JACKSONVILLE, FL DISTRICT

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
15.Jacksonville Hbr. (Mill Cove), FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.		-	-	-	4,104,000
	Cost		-	-	-	4,104,000
	New Work:					
	Approp.		-	-	-	2,122,649
	Cost		-	-	-	2,122,649
16.Johns Pass, FL (Federal Funds)	New Work:					
	Approp.		-	-	-	82,098 <sup>15</sup>
	Cost		-	-	-	82,098 <sup>15</sup>
	Maint:					
	Approp.		-	-	-	2,466,912
	Cost		-	-	-	2,466,912
17.Long Boat Pass, FL (Federal Funds)  (Contrib. Funds)	New Work:					
	Approp.		-	-	-	1,020,233
	Cost		-	-	-	1,020,233
	Maint:					
	Approp.		-	-	-	3,841,796
	Cost:		-	-	-	3,841,796
New Work:	Approp.		-	-	-	172,324
	Cost		-	-	-	172,324
18.Manatee Harbor, FL (Federal Funds)  (Contrib. Funds)	New Work:					
	Approp.	9,888,000	-	-	-	38,101,270
	Cost	2,765,842	4,219,296	1,396,666	291,095	36,756,854
	Maint:					
	Approp.	2,010,000	2,190,000	2,681,700	1,368,340	18,040,957
	Cost:	631,547	627,487	949,207	4,285,618	16,284,166
New Work:	Approp.	-	-	-	-	11,748,632
	Cost	-	-	42,297	289,533	12,080,462
19.Mayaguez Harbor, PR (Federal Funds)	New Work:					
	Approp.	-	-	-	-	168,187
	Cost	-	-	-	-	168,187
	Maint:					
	Approp.	-	-	-	-	1,061,561
	Cost	-	-	-	-	1,061,561

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

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
20.Melbourne Harbor, FL (Federal Funds)	New Work: Approp. Cost Maint: Approp. Cost:	- - - - -	- - - - -	- - - - -	- - - - -	17,696 17,696 634,864 634,864
21.Miami Harbor, FL (Federal Funds)	New Work: Approp. Cost Maint: Approp. Cost:	22,100,000 19,678,594 1,513,000 1,512,463	- 1,025,913 - 26,051	- 60,795 70,000 100,487	- (337,018) - 32,294	91,327,343 <sup>16</sup> 89,448,869 <sup>16</sup> 9,199,063 9,197,757
(Contrib. Funds)	New Work: Approp. Cost	- 717,418	- 1,380,614	582,876 3,050	(36,270) 604,719	9,667,150 <sup>17</sup> 9,638,921 <sup>17</sup>
22.New Pass Sarasota, FL (Federal Funds)	New Work: Approp. Cost Maint: Approp. Cost:	- - - - -	- - - - -	- - - - -	- - - - -	45,811 <sup>18</sup> 45,811 <sup>18</sup> 8,277,826 8,277,826
23.Okeechobee Waterway, FL (Federal Funds)	New Work: Approp. Cost Maint: Approp. Cost:	- - 6,044,000 5,849,902	- - 1,999,500 2,141,085	- - 1,872,500 1,868,044	- - 4,120,900 4,020,929	21,756,418 <sup>19</sup> 21,756,418 <sup>19</sup> 116,754,491 <sup>20</sup> 116,593,566 <sup>20</sup>
(ARRA Funds)	Maint. Approp.: Cost:	- - -	- - -	- - -	3,168,000 1,003,138	3,168,000 1,003,138
24.Oklawaha River, FL (Federal Funds)	New Work: Approp. Cost Maint: Approp. Cost:	- - - - -	- - - - -	- - - - -	- - - - -	1,065,264 <sup>21</sup> 484,733 <sup>21</sup> 2,923,976 <sup>22</sup> 2,923,976 <sup>22</sup>
(ARRA Funds)	Maint. Approp.: Cost:	- - -	- - -	- - -	750,000 169,469	750,000 169,469

JACKSONVILLE, FL DISTRICT

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
25.Palm Beach Harbor, FL (Federal Funds)	New Work:					
	Approp.	-	-	-	-	6,924,021 <sup>23</sup>
	Cost	-	-	-	-	6,924,021 <sup>23</sup>
	Maint:					
	Approp.	2,650,000	2,658,000	2,862,000	2,169,720	53,787,554 <sup>24</sup>
	Cost	1,018,578	3,560,096	2,750,064	2,256,561	52,904,001 <sup>24</sup>
(ARRA Funds)	Maint.					
	Approp.:	-	-	-	4,000,000	4,000,000
	Cost:	-	-	-	367,524	368,524
26.Palm Valley Bridge, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	(592,120)	-	-	-	20,659,517
	Cost	-	-	-	-	20,659,471
	New Work:					
	Approp.	-	-	-	-	1,465,892
	Cost	-	-	-	-	1,465,892
27.Ponce de Leon Inlet, FL (Federal Funds) (ARRA Funds) (Contrib. Funds)	New Work:					
	Approp.	1,222,000	-	657,000	1,148,000	5,307,217
	Cost	175,426	54,148	70,143	243,625	2,823,467
	Maint:					
	Approp.	(235,000)	-	-	2,642,000	37,304,721
	Cost	(233,330)	-	-	437,462	35,100,182
	Maint.					
	Approp.:	-	-	-	2,786,100	2,786,100
	Cost:	-	-	-	60,000	60,000
	New Work:					
	Approp.	50,000	-	-	-	2,502,600
	Cost	-	-	-	47,590	2,500,190
Maint:						
Approp.	-	-	-	-	1,379,000	
Cost	-	-	-	-	1,377,883	
28.Ponce Harbor, PR (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	-	-	2,227,260 <sup>25</sup>
	Cost	-	-	-	-	2,227,260 <sup>25</sup>
	Maint:					
	Approp.	-	-	-	-	1,779,270
	Cost:	-	-	-	-	1,779,270
New Work:						
Approp.	-	-	-	-	717,304	
Cost	-	-	-	-	717,304	

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

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
29.Port Everglades Harbor, FL (Federal Funds)	New Work:					
	Approp.	371,000	-	703,000	1,435,000	56,947,162 <sup>26</sup>
	Cost	379,496	-	703,000	1,435,000	56,947,162 <sup>26</sup>
	Maint:					
	Approp.	-	-	-	-	4,225,728
	Cost:	48,979	-	-	-	4,225,728
30.Removal of Aquatic Growth (Federal Funds) (ARRA Funds)	Maint:					
	Approp.	4,054,000	3,325,000	3,287,000	4,020,940	110,281,456
	Cost	3,767,572	3,342,694	3,519,961	3,876,192	110,090,737
	Maint.					
	Approp.:	-	-	-	4,910,900	4,910,900
	Cost:	-	-	-	346,155	346,155
32.St. Johns River, FL Jacksonville to Lake Harney (Federal Funds)	New Work:					
	Approp.	-	-	-	-	1,171,243 <sup>28</sup>
	Cost	-	-	-	-	1,171,243 <sup>28</sup>
	Maint:					
	Approp.	-	-	-	-	1,300,299 <sup>29</sup>
	Cost:	-	-	-	-	1,300,299 <sup>29</sup>
33.St. Lucie Inlet, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	1,384,000	-	1,873,000	3,732,000	23,049,970 <sup>30</sup>
	Cost	229,271	126,225	165,861	4,301,009	20,883,338 <sup>30</sup>
	Maint:					
	Approp.	7,700,000	-	-	5,000	24,945,456
	Cost:	106,199	7,592,082	1,990	-	24,940,455
	New Work:					
	Approp.	-	-	-	1,199,300	4,299,300 -
	Cost	-	-	-	157,766	3,257,366 -
	Maint:					
	Approp.	4,300,365	-	-	-	11,251,347
	Cost:	-	3,439,385	4,394	-	10,394,761
35.Tampa Harbor, FL (Main Channel) (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	-	-	173,767,440 <sup>33</sup>
	Cost	-	-	-	-	173,767,440 <sup>33</sup>
	Maint:					
	Approp.	18,865,000	7,056,000	2,740,000	4,139,520	134,359,990 <sup>34</sup>
	Cost	14,834,216	9,039,809	3,532,888	1,639,143	130,600,276 <sup>34</sup>
	New Work:					
	Approp.	-	-	-	-	1,038,711
Cost	-	-	-	-	1,038,711	

JACKSONVILLE, FL DISTRICT

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
35.Tampa Harbor, FL (East Bay - Branch Channels) (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	(300,000)	(283,563)	10,496,557
	Cost	-	-	(583,563)	-	10,496,557
	New Work:					
	Approp.	-	(375,000)	17,443	-	4,560,040
	Cost	-	-	583,563	-	4,560,040
35.Tampa Harbor, FL (Port Sutton) (Federal Funds)	New Work:					
	Approp.	939,000	-	-	(300,000)	1,677,870
35.Tampa Harbor (Big Bend) (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	4,609,000	(2,000,000)	-	-	3,532,946
	Cost	128,382	48,939	755	-	1,102,778
	New Work:					
	Approp.	-	-	-	-	48,333
	Cost:	-	-	-	-	41,516
35.Tampa Harbor (Alafia River) (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	-	-	1,257,553
	Cost	16,625	-	-	-	1,256,028
	New Work:					
	Approp.	-	-	-	-	125,000
	Cost	78,346	-	-	-	90,841
35.Tampa Harbor, FL (GRR) (Federal funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	433,000	478,000	3,956,898
	Cost	9,361	-	142,763	676,425	3,838,966
	New Work:					
	Approp.	-	375,000	(17,443)	-	1,357,557
	Cost	490,119	408,790	231,483	17,597	1,307,163
39.Brevard County, FL (Federal Funds)  (Contrib. Funds)	New Work:					
	Approp.	495,000	-	187,000	7,478,000	38,672,228
	Cost	318,962	247,087	43,197	410,842	31,344,568
	Maint:					
	Approp.	-	-	-	-	29,001
	Cost	-	-	-	-	29,001
	New Work:					
	Approp.	-	400,000	-	-	20,081,069
	Cost	343,366	244,184	321,066	124,109	18,389,126

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

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
40.Broward County, FL Beach Erosion Control & Hillsboro Inlet, FL Navigation Proj. (Federal Funds) (Contrib. Funds)	New Work: Approp. Cost Maint: Approp. Cost New Work: Approp. Cost	2,842,000 1,404,277 - - - -	- 1,704,674 - - - -	1,230,000 550,230 - - - -	1,101,000 986,521 - - 246,000 25,602	27,898,095 26,661,983 26,884 26,884 3,706,990 <sup>35</sup> 3,486,592 <sup>35</sup>
40.Hillsboro Inlet, FL (Federal Funds)	New Work: Approp. Cost	- - -	- - -	- - -	- - -	706,717 706,717
41.Duval County, FL (Federal Funds) (Contrib. Funds)	New Work: Approp. Cost New Work: Approp. Cost	2,000,000 18,482 - 129,977	- (166,407) - 140,787	- 4,201 - 103,600	- 109,020 - 173,257	27,144,160 25,086,309 2,104,567 20,216,769
42.Ft. Pierce Beach, FL (Federal Funds) (Contrib. Funds)	New Work: Approp. Cost New Work: Approp. Cost:	2,644,000 146,316 - 534,609	- 1,738,221 1,812,000 1,708,231	- 618,629 - -	- 397,180 1,500,000 2,328,348	17,071,970 16,878,136 13,709,304 13,566,044
43.Indian River County, FL (Federal Funds)	New Work: Approp. Cost	- - -	- - -	- - -	- - -	523,677 523,677
44.Lee County, FL (Federal Funds) (Contrib. Funds)	New Work: Approp. Cost New Work: Approp. Cost	2,833,000 230,199 (4,200,000) 6,249,558	- 2,562,982 - 2,368	936,000 974,602 (573,558) -	191,009 185,432 - 2,083	10,576,907 10,562,117 10,173,742 9,827,263
45.Manatee County, FL (Federal Funds) (Contrib. Funds)	New Work: Approp. Cost New Work: Approp. Cost:	- - - -	- - - -	1,737,000 1,736,676 - -	- - - -	10,348,688 10,347,574 3,337,348 3,337,320

JACKSONVILLE, FL DISTRICT

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
46.Martin County, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	1,000,000	-	-	-	12,302,385
	Cost	(28,822)	513,066	352,989	108,163	12,176,896
	New Work:					
	Approp.	-	-	-	-	10,189,835
	Cost	-	-	253,929	138,491	9,922,203
47.Nassau County, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	2,209,000	6,500,00	5,439,000	-	16,465,551
	Cost	327,511	432,728	10,536,523	2,587,018	16,201,324
	New Work:					
	Approp.	-	-	4,025,507	(619,129)	3,406,378
	Cost	-	-	2,412,300	979,078	3,391,378
48.Palm Beach County, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	7,425,000	-	-	-	30,851,847
	Cost	4,257,848	53,066	319,183	123,886	25,898,912
	Maint:					
	Approp.	-	-	-	-	13,621
	Cost	-	-	-	-	13,621
	New Work:					
	Approp.	-	-	(115,000)	-	1,280,073
	Cost	1,258,550	5,592	-	-	1,265,142
48.Lake Worth Transfer Plant, FL (Federal Funds)	New Work:					
	Approp.	-	-	1,813,000	478,000	2,918,077
	Cost	(158.90)	-	8,432	70,730	705,559
49.Palm Beach Island, FL (Federal Funds)	New Work:					
	Approp.	-	-	-	-	1,793,000
	Cost	-	-	-	-	1,793,000
50.Pinellas County, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	4,485,000	-	389,000	6,699,000	86,225,684
	Cost	17,070,672	2,526,685	259,989	696,123	79,754,339
	Maint:					
	Approp.	-	-	-	-	5,625
	Cost	-	-	-	-	5,625
	New Work:					
	Approp.	1,990,000	-	-	-	52,484,140
	Cost	10,228,257	2,175,119	280,800	552,740	52,167,827

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

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
51.St. Johns County, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	181,000	7,000,000	31,309,937
	Cost	546,909	(74,328)	75,748	472,870	24,600,954
	New Work:					
	Approp.	-	-	-	-	6,116,700
	Cost:	580,467	-	-	-	6,116,181
52.Sarasota County, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	1,000,000	-	-	-	24,024,950
	Cost	584,488	(2,069,676)	245,430	326,649	21,487,644
	New Work:					
	Approp.	-	(1,152,971)	-	-	6,777,134
	Cost	178,073	140,121	-	35,568	6,765,395
55.Cedar Hammock (Wares Creek), FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	742,000	4,770,000	4,681,000	3,828,000	15,535,556
	Cost	84,655	402,952	322,656	615,237	2,916,890
	New Work:					
	Approp.	-	-	-	-	227,901
	Cost	6,119	-	-	-	227,249
56.Dade County, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	3,836,000	-	-	-	76,033,886 <sup>37</sup>
	Cost	372,812	296,993	448,429	240,384	73,538,712 <sup>37</sup>
	New Work:					
	Approp.	-	-	-	-	58,547,803 <sup>38</sup>
	Cost	(1,021.36)	-	132,787	560,440	52,725,564 <sup>38</sup>
57.Dade County, N. of Haulover Beach, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	-	-	6,801,611
	Cost	-	-	-	-	6,801,611
	New Work:					
	Approp.	-	-	-	-	8,082,927
	Cost	-	-	-	-	8,082,927
58.Four River Basins, FL (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	-	-	-	-	75,993,395 <sup>39</sup>
	Cost	(3,655)	-	-	-	75,989,647 <sup>39</sup>
	New Work:					
	Approp.	-	-	-	-	14,095,058
	Cost	(3,033)	-	-	-	14,092,025

JACKSONVILLE, FL DISTRICT

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
60.Portugues and Bucana Rivers, PR (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	8,899,000	5,115,000	31,727,000	40,987,000	490,649,866
	Cost	3,632,194	4,961,722	13,293,358	42,151,345	467,842,887
	New Work:					
61.Rio de la Plata, PR (Federal Funds) (ARRA Funds) (Contrib. Funds)	Approp.	-	46,814	5,000,000	-	20,839,963
	Cost	558,449	359,752	1,142,291	3,981,506	19,474,960
	New Work:					
	Approp.:	-	-	-	1,500,000	1,500,000
62.Rio Grande de Arecibo, PR (Federal Funds) (Contrib. Funds)	Cost:	-	-	-	362,300	362,300
	New Work:					
	Approp.	-	-	-	-	994,088
	Cost	932	17,193	25,451	15,953	599,342
63.Rio Grande de Loiza, PR (Federal Funds) (Contrib. Funds)	New Work:					
	Approp.	3,951,000	12,520,000	-	-	22,804,041
	Cost	3,396,389	2,152,761	7,104,956	2,096,063	21,040,824
	New Work:					
64.Rio Manati, Barceloneta, PR (Federal Funds) (Contrib. Funds)	Approp.	400,000	600,000	550,000	-	4,350,000
	Cost	1,534,473	669,964	51,702	552,542	4,063,815
	New Work:					
	Approp.	-	-	-	-	3,867,625
65.Rio Puerto Nuevo, PR (Federal Funds) (ARRA Funds) (Contrib. Funds)	Cost	-	-	-	-	3,867,071
	New Work:					
	Approp.	237,000	1,363,000	-	-	13,760,852
	Cost	617,089	367,012	613,169	403,586	13,686,500
65.Rio Puerto Nuevo, PR (Federal Funds) (ARRA Funds) (Contrib. Funds)	New Work:					
	Approp.	250,000	-	1,080,000	-	5,445,831
	Cost	554,998	279,418	16,082	353,701	4,564,693
	New Work:					
65.Rio Puerto Nuevo, PR (Federal Funds) (ARRA Funds) (Contrib. Funds)	Approp.	18,800,000	20,000,000	10,724,000	11,171,000	195,812,059
	Cost	12,168,963	11,566,412	4,734,284	14,677,423	178,180,649
	New Work:					
	Approp.	-	-	-	1,253,800	1,253,800
65.Rio Puerto Nuevo, PR (Federal Funds) (ARRA Funds) (Contrib. Funds)	Cost	-	-	-	248,131	248,131
	New Work:					
	Approp.	3,402,000	-	4,000,000	-	41,928,540
	Cost	2,392,577	1,641,853	(784,929)	876,385	36,190,381

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

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
73.General	New Work:					
Regulatory	Approp.	13,442,976	12,361,588	14,889,558	15,189,558	185,040,317 <sup>40</sup>
(Federal Funds)	Cost	12,431,833	12,281,848	14,396,675	15,747,464	183,887,099 <sup>40</sup>
(ARRA Funds)	New Work:					
	Approp.	-	-	-	1,925,887	1,925,887
	Cost	-	-	-	220,768	220,768
76.Alligator Creek	New Work:					
(Federal Funds)	Approp.	-	-	-	-	400,000
(Contrib. Funds)	Cost	6,350	19,731	166,423	2,179	218,156
	New Work:					
	Approp.	-	-	140,000	-	140,000
	Cost	-	-	135,463	262	135,725
77.Central and Southern Florida	New Work:					
(Federal Funds)	Approp.	76,058,000	88,189,000	78,185,000	87,315,000	104,964,235,736 <sup>36</sup>
(ARRA Funds)	Cost	71,922,503	67,150,811	80,172,700	64,522,669	101,991,552,807 <sup>36</sup>
	New Work					
	Approp.:	-	-	-	52,220,350	52,220,350
	Cost:	-	-	-	39,575	39,575
	Maint:					
	Approp.	18,008,000	14,193,000	13,425,000	12,038,320	310,824,406
(ARRA Funds)	Cost	15,928,615	14,762,520	13,787,109	12,011,692	309,178,011
	Maint.					
(Contrib. Funds)	Approp.:	-	-	-	19,731,500	19,731,500
	Cost:	-	-	-	1,426,706	1,426,706
	New Work:					
	Approp.	-	-	113,699	-	86,262,059
	Cost	20,124	975,915	1,064,846	46,257	86,463,934
78.Everglades South Florida Ecosystem Restoration, FL	New Work:					
(Federal Funds)	Approp.	11,880,066	4,310,000	10,826,000	3,472,000	81,009,000
(ARRA Funds)	Cost	3,894,894	9,898,811	13,388,089	2,075,712	79,085,612
(Contrib. Funds)	New Work					
	Approp.:	-	-	-	208,500	208,500
	Cost:	-	-	-	-	-
	New Work:					
	Approp.	622,461	-	7,586,000	94,382	42,106,971
	Cost	2,936,895	54,508	4,316,162	941,192	37,070,750
79.Florida Keys Water Quality	New Work:					
(Federal Funds)	Approp.	1,822,000	3,000,000	2,017,000	2,392,000	11,248,900
(ARRA Funds)	Cost	109,953	37,030	46,338	7,058,453	8,426,908
	New Work					
	Approp.:				7,000,000	7,000,000
	Cost:				-	-

JACKSONVILLE, FL DISTRICT

**TABLE 9-A (Cont.) COST AND FINANCIAL STATEMENT**

See Sect. PROJECT	FUNDING	FY 06	FY 07	FY 08	FY 09	Total Cost To Sep. 30, 2009
80.Kissimmee River, FL (Federal Funds) (ARRA Funds)	New Work: Approp. Cost	14,948,329 15,519,372	34,102,000 35,988,942	30,968,000 12,038,600	28,361,000 28,452,727	216,483,513 198,490,117
(Contrib. Funds)	New Work Approp.: Cost:				7,516,000 -	7,516,000 -
	New Work: Approp. Cost	- 18,698	- -	- -	- -	8,825,941 8,768,105
81. Modified Water Deliveries to Everglades National Park (Federal Funds)	New Work: (COE) Approp. Cost	32,653,000 6,752,188	35,000,000 15,381,858	9,840,000 19,018,749	- 11,506,212	77,493,000 53,338,215
	New Work: (DOI) Approp. Cost	21,000,000 13,044,188	0 9,953,304	25,498,000 2,861,520	58,477,620 3,418,417	261,307,820 164,203,689

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

- <sup>1</sup>Excludes \$288,000 for contributed funds for new work.
- <sup>2</sup>Includes \$97,566 for previous project.
- <sup>3</sup>Excludes \$243,235 contributed funds for new work.
- <sup>4</sup>Excludes \$700,000 contributed by NASA in connection with construction of lock.
- <sup>5</sup>Includes \$113,000 for new work on previous project; excludes \$15,563 expended for new work on existing project in Boca Grande entrance channel from contributed funds.
- <sup>6</sup>Includes \$905,221 expended for recreation facilities.
- <sup>7</sup>Includes \$10,128 cost for reconnaissance and detailed project report prepared under Section 107 modification to the project. Excludes \$1,095 contributed funds for new work.
- <sup>8</sup>Includes \$515,479 for new work for previous projects: \$8,472 for new work on Sunshine Skyway Channel; and \$9,707 for new work for Cats Point Channel. Excludes \$14,473 contributed funds for new work for Sunshine Skyway and Boca Ciega Bay channels.
- <sup>9</sup>Includes \$450,749 for maintenance for previous project.
- <sup>10</sup>Includes \$94,776 for work for previous projects. Excludes \$2,199,842 expended from public works funds for new work.
- <sup>11</sup>Includes \$213,222 for maintenance on previous projects and \$3,179 operating and care under provisions of permanent indefinite appropriation.
- <sup>12</sup>Includes \$3,520,137 new work on previous project and \$290,013 for new work expended from public works funds.
- <sup>13</sup>Includes \$543,399 maintenance on previous projects.
- <sup>14</sup>Includes unused contributed funds of \$64,136 returned to local interests.
- <sup>15</sup>Project authorized December 2, 1964, by Chief of Engineers under Section 107 of 1960 R&H Act and by Section 110 of the 1966 R&H Act. Cost of new work excludes \$53,732 contributed funds.
- <sup>16</sup>Includes \$5,502,126 expended from public work funds for new work. Includes costs of \$6,777,906 for recreation facilities.
- <sup>17</sup>Includes \$381,479 work-in-kind and \$172,314 in costs for north jetty recreation facility.
- <sup>18</sup>Excludes \$45,811 contributed funds for new work.
- <sup>19</sup>Includes \$21,101,919 for new work under previous project, \$626,925 for recreational facilities (Code 710), and \$27,574 for reconnaissance and detailed project report prepared under Section 107 modification to the project.
- <sup>20</sup>Includes \$7,581,150 for maintenance for previous projects. Excludes \$1,000 for maintenance.
- <sup>21</sup>Includes \$3,912 for new work for previous projects.
- <sup>22</sup>Includes \$11,414 for operating and care under provisions for permanent indefinite appropriation.
- <sup>23</sup>Includes \$80,000 new work from public works funds. Excludes \$509,506 contributed funds.
- <sup>24</sup>Includes \$30,000 for maintenance from public works funds.
- <sup>25</sup>Includes \$11,588 expended for restudy, but excludes \$21,960 expended for new work from contributed funds.
- <sup>26</sup>Excludes \$1,033,069 contributed funds.
- <sup>27</sup>Includes \$71,303 for new work on previous project. Excludes \$137,500 contributed funds.
- <sup>28</sup>Baresford cutoff and completion of cutoffs and easing of bends in Putnam Lake and Volusia Counties in inactive status were deauthorized by Public Law 93-251 section 12. Includes \$29,566 for new work under previous project.
- <sup>29</sup>Includes \$25,838 under previous project.
- <sup>30</sup>Includes \$26,689 for new work under previous project.
- <sup>31</sup>Includes \$747,684 for new work under previous project. Excludes \$100,000 expended for new work from contributed funds.
- <sup>32</sup>Includes \$44,730 for maintenance from public works funds under previous project.
- <sup>33</sup>Includes \$853,050 for new work from public works funds under previous project and \$1,463,000 from emergency relief funds. Excludes \$270,466 for new work for Hillsborough River and \$13,939 for new work from contributed funds.
- <sup>34</sup>Includes \$17,107 for maintenance under previous project.
- <sup>35</sup>Includes work-in-kind.
- <sup>36</sup>Excludes \$15,543 for property received without reimbursement and R&H Funds, expended on previous projects (see cost and financial statement for Okeechobee Waterway, FL, project for these costs). Excludes \$100,000 advanced by local interests toward federal costs. Includes \$175,000 appropriation and \$175,000 cost for new work at C&SF St. Johns Water Management District.
- <sup>37</sup>Includes \$2,294,134 for reimbursement costs to Bal Harbor.
- <sup>38</sup>Excludes unused contributed funds of \$17,969 returned to local interests.
- <sup>39</sup>Includes costs of \$89,691 for recreation facilities at Moss Bluff and \$2,638,272 at Lake Tarpon.
- <sup>40</sup>Funds appropriated under General Regulatory Functions 96X3126. Include #73 permit evaluation, #74 enforcement and #75 studies.

JACKSONVILLE, FL DISTRICT

**TABLE 9-B AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Oct. 27, 1965	<b>AQUATIC PLANT CONTROL (See Section 1 of Text)</b> Control and progressive eradication of obnoxious aquatic plants, and continued research to develop best method of control.	H.Doc. 251, 89th Cong., 1st sess.
WRDA Aug. 17, 1999	<b>LOWER ST. JOHNS RIVER BASIN, FL</b> May apply the computer model developed under the feasibility study to assist non-Federal interests in developing strategies for improving water quality at 50 percent cost share.	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Oct. 12, 1996	<b>TAMPA, FL</b> May enter into a cooperative agreement under section 229 with the Museum of Science and Industry, Tampa, Fl to provide technical, planning, and design assistance to demonstrate the water quality functions found in wetlands, at an estimated total Federal cost of \$500,000.	P.L. 104-303, Oct. 12, 1996 104th Cong.
WRDA Oct. 12, 1996	<b>WEST DADE, FL</b> Conduct a reconnaissance study to determine the Federal interest in using the West Dade, FL, reuse facility to improve water quality in, and increase the supply of surface water to, the Everglades in order to enhance fish and wildlife habitat.	P.L. 104-303, Oct. 12, 1996 104th Cong.
<b>NAVIGATION PROJECTS</b> Aug. 26, 1937	<b>ARECIBO HARBOR, PR (See Section 2 of Text)</b> Construction of breakwater 1,200 feet long and dredging channel 25 feet deep and 400 feet wide with flare at entrance and widening at inner end to form a maneuvering area.	Rivers and Harbors Committee Doc. 43, Cong., 75th 1st sess.
WRDA Oct. 12, 1996	<b>ATLANTIC INTRACOASTAL WATERWAY, ST. JOHNS COUNTY, FL</b> Project for navigation. Operation, maintenance, repair, replacement and rehabilitation shall be a non-Federal responsibility, and the non-Federal interest shall assume ownership for the bridge.	P.L.104-303, Oct. 12, 1996 104th Cong.
Mar. 4, 1913	<b>ATLANTIC INTRACOASTAL WATERWAY BETWEEN NORFOLK, VA AND THE ST. JOHNS RIVER, FL (See Section 3 of Text)</b> Channel 7 x 100 feet.	H.Doc. 898, 62nd Cong., 2d sess.
Jun. 20, 1939	Channel 12 feet deep and 90-150 feet wide with cutoffs.	H.Doc. 618, 75th Cong., 3d sess.
Jul. 14, 1960	<b>BAKERS HAULOVER, FL (See Section 4 of Text)</b> Channel 11 x 200 feet in ocean entrance, thence 8 x 100 feet to Intracoastal Waterway; Marina basin 8 x 200 feet; reconstruction of jetties and protection of inlet shores.	H.Doc. 189, 86th Cong., 1st sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Mar. 2, 1945	<b>CANAVERAL HARBOR, FL (See Section 5 of Text)</b> Entrance channel jetties, a turning basin enclosed by a dike, and a barge canal with a lock.	H.Doc. 367, 77th Cong., 1st sess.
Oct. 23, 1962	Maintain improved channel, turning basin, enlarge barge channel and lock, relocate dike, provide channel and turning basin west of 35-foot turning basin, construct and operate sand-transfer plant.	S.Doc. 140, 87th Cong., 2d sess.
Report of the Chief of Engineers Oct. 1985	Mitigation of fish and wildlife losses at Port Canaveral West Turning Basin Project.	P.L. 99-662, Nov. 17, 1986 99th Cong., 2d sess
Report of the Chief of Engineers Jul. 24, 1991	Project for navigation, Canaveral Harbor, FL, as modified by the letter of the Secretary dated Oct. 10, 1991	P.L. 102-580, Oct. 13, 1992 102nd Cong., 2d sess.
WRDA Oct. 12, 1996	Modification of navigation project to reclassify the removal and replacement of stone protection on both sides of the channel as general navigation features.	P.L. 104-303, Oct. 12, 1996 104th Cong.
WRDA Jan. 04, 2007	Construct a sediment trap if the Secretary determines construction of the sediment trap is feasible.	P.L 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.
Jun. 20, 1938	<b>CHANNEL FROM NAPLES TO BIG MARCO PASS, FL (See Section 6 of Text)</b> Interior channel 6 x 70 feet.	H.Doc. 596, 75th Cong., 3d sess.
Jul. 14, 1960	Channel 12 x 150 feet from the Gulf to Gordon Pass, thence 10 x 100 feet to a point 400 feet south of U.S. Highway 41 Bridge, thence 10 x 70 feet to bridge and two turning basins.	H.Doc. 183, 86th Cong., 1st sess.
Jul. 25, 1912	<b>CHARLOTTE HARBOR, FL (See Section 7 of Text)</b> Channel 24 x 300 feet through Gulf through Boca Grande entrance.	H.Doc. 699, 62nd Cong., 2d sess.
Mar. 3, 1925	Depth of 27 feet at entrance and width of 500 feet at bend.	H.Doc. 113, 66th Cong., 1st sess.
Jul. 3, 1930	Channel 10 x 100 feet to Punta Gorda and a turning basin.	Rivers and Harbors Committee, Doc. 1, 70th Cong., 1st sess.
Aug. 26, 1937	Depth of 30 feet at entrance and width of 700 feet at bend.	Rivers and Harbors Committee Doc.95, 74thCong., 2d sess.

JACKSONVILLE, FL DISTRICT

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
May 17, 1950	Depth of 32 feet in entrance channel.	H.Doc. 186, 81st Cong., 1st sess.
Jun. 20, 1938	<b>EAU GALLIE HARBOR, FL (See Section 8 of Text)</b> Channel 8 x 100 feet and a turning basin.	H.Doc. 497, 75th Cong., 3 sess.
Jun. 14, 1880	<b>FERNANDINA HARBOR, FL (See Section 9 of Text)</b> Entrance jetties.	Annual Report 1879
Jul. 13, 1892	Raising and extending jetties to provide a 19-foot depth.	Annual Report 1891 & 1896
Mar. 2, 1907	Improvement of inner harbor to obtain 20 to 24-foot depth and 400 to 600-foot channel width.	H.Doc. 388, 59th Cong., 1st sess.
Jun. 25, 1910	Combining improvement of Fernandina Harbor and Cumberland Sound under the general heading of Fernandina Harbor.	
Mar. 3, 1925	Provided for a 26-foot channel.	H.Doc. 227, 68th Cong., 1st sess.
Jun. 20, 1938	Provided for the 28-foot channel and turning basin.	H.Doc. 548, 75th Cong., 3d sess.
Mar. 2, 1945	Provided for reducing the maximum width of turning basin from 1,000 to 800 feet, for shifting channel line in this vicinity vicinity 50 feet northwesterly and for including in authorized project small area dredged by Rayonier, Inc.	H.Doc. 284, 87th Cong., 1st sess.
May 17, 1950	Provided for 32-foot channel and turning basin.	H.Doc. 662, 80th Cong., 2d sess.
WRDA Nov. 28, 1990	Re-designated location of turning basin until Section 107 (R&H Act of 1960) study is completed and the resulting project constructed	P.L. 101-640, Nov. 28, 1990 101st Cong.? sess.
WRDA Jan. 24, 2000	Realign the access channel in the vicinity of the Fernandina Beach Municipal Marina 100 feet to the west and cost shall be a non-Federal expense.	P.L. 106-541, Jan. 24, 2000 106 <sup>th</sup> Cong., 2 <sup>nd</sup> sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Jul. 14, 1960	<b>FORT MYERS BEACH, FL (See Section 10 of Text)</b> 12 x 150 foot channel in San Carlos Bay, thence 11 x 125 feet in Matanzas Pass to upper shrimp terminals.	H.Doc. 183, 86th Cong., 1st sess.
Auth. by Chief of Engineers Dec. 6, 1968 under Sec. 107 of 1960 R&H Act	Extension of 11 x 125 foot channel easterly about 2,000 feet to and including a turning basin adjacent to natural deep water in Matanzas Pass.	
Def. Act of Mar. 4, 1931	<b>FORT PIERCE HARBOR, FL (See Section 11 of Text)</b> Expenditure of \$20,000 for dredging channel, maintenance by local interests.	Specified in Act
War Dept. Approp. Act, Mar. 4, 1933	Expenditure of up to \$30,000 for dredging channel.	Specified in Act
Aug. 30, 1935	Maintaining channels, jetties, and revetments, and enlarging channels and turning basin to existing project dimensions.	H.Doc. 252, 72nd Cong., 1st sess. and Rivers and Harbors Committee Doc. 21, 74th Cong., 1st sess.
Report of the Chief of Engineers Dec. 14, 1987	Deepening and enlarging channels and turning basin. Total cost of \$6,742,000.	P.L. 100-676, Nov. 17, 1988 100th Cong., 2d sess.
Mar. 2, 1945	<b>INTRACOASTAL WATERWAY, CALOOSAHATCHEE RIVER TO ANCLOTE RIVER, FL (See Section 12 of Text)</b> 9 x 100 foot channel; deepening channel at Casey's Pass to 9 feet and construction of Highway Bridge at Venice.	H.Doc. 371, 76th Cong., 1st sess.
Jun. 30, 1948	Original route may be modified at no excess cost to U.S.	Specified in Act
May 17, 1950	Any route in Venice-Lemon Bay area may be used.	Specified in Act
Sep. 3, 1954	Use of alternate Route C-1 in Venice-Lemon Bay area.	Specified in Act
May 10-16, 1957	Local interests to bear costs of Venice Avenue highway bridge and any other necessary crossing over Route C-1.	H.Doc. 109, 85th Cong., 1st sess.

JACKSONVILLE, FL DISTRICT

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Auth. Mar. 1, 1962 by Senate and House Public Works Comm	Sunshine Skyway Channel to be improved and maintained to. 9 x 100 feet	
Auth. by Chief of Engineers, Mar.1, 1963, under Sec 107 of 1960 R&H Act	6 x 80 foot channel in Boca Ciega Bay.	
<b>INTRACOASTAL WATERWAY, JACKSONVILLE TO MIAMI, FL (See Section 13 of Text)</b>		
Jan. 21, 1927	Channel 8 x 75 feet from Jacksonville to Miami.	H.Doc. 586, 69th Cong., 2d sess.
Jul. 3, 1930	Channel width of 100 feet.	S.Doc. 71, 71st Cong., 2d sess.
PARA Jun. 26, 1934	Operation and care of Palm Valley Bridge.	Specified in Act
Aug. 26, 1937	Turning basin at Jacksonville Beach.	H.Doc. 180, 75th Cong., 1st sess.
Mar. 2, 1945	Channel 12 x 125 feet.	H.Doc. 740, 79th Cong., 2d sess.
Mar. 2, 1945	Side channel and turning basin at Sebastian (deauthorized).	H.Doc. 336, 76th Cong., 1st sess.
Mar.2, 1945	Turning basin at Vero Beach.	H.Doc. 261, 76th Cong., 1st sess.
Jul. 3, 1958	Maintenance of side channel at Daytona Beach.	H.Doc. 222, 85th Cong., 1st sess.
Chief of Engineers Report of Jul. 22, 1960, Mod. 12-foot Channel	Channel 10 x 125 feet from Ft. Pierce to Miami.	

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
<b>JACKSONVILLE HARBOR, FL (See Section 14 of Text) ST. JOHNS RIVER, FL OPPOSITE THE CITY OF JACKSONVILLE</b>		
Mar. 2, 1907	The 24-foot area from Hogan Creek to Florida East Coast Railroad Bridge.	H.Doc 663, 59th Cong., 1st sess.
Nov. 17, 1986	Deauthorized the 24-foot area from Hogan Creek to Florida East Coast Railroad bridge.	P.L. 99-662, Nov. 28, 1986 99th Cong., 2d sess.
WRDA Aug. 17, 1999	Project for navigation.	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
<b>JACKSONVILLE HARBOR (MILL COVE), FL (See Section 15 of Text)</b>		
Report of the Chief of Engineers Feb. 12, 1982	Enlarge weir structure and west opening controlling flow into Mill Cove, to reduce shoaling and improve navigation as well as circulation.	P.L. 99-662, Nov. 17, 1986 99th Cong., 2d sess
WRDA Oct. 12, 1996	Modification to carry out a project for mitigation consisting of measures for flow and circulation improvement within Mill Cove.	P.L. 104-303, Oct. 12, 1996 104th Cong.
<b>JOHN'S PASS, FL (See Section 16 of Text)</b>		
Auth. by Chief of Engineers Dec. 2, 1964 under Sec. 107 of 1960 R&H Act and Sec. 110 of 1966 R&H Act	Channel 10 x 100 feet in gulf, 8 x 100 feet inside pass, 6 x 100 feet to IWW, 2.6 miles long.	
<b>LAKE WORTH INLET, FL</b>		
WRDA Oct. 12, 1996	Project for navigation and shoreline protection subject to final report to be completed not later than December 31, 1996.	P.L. 104-303, Oct. 12, 1996 104th Cong.
<b>LONGBOAT PASS, FL (See Section 17 of Text)</b>		
Auth. by Chief of Engineers, Apr. 20, 1976 under Sec. 107 of 1960 R&H Act, as amended	12 x 150 foot entrance channel from Gulf of Mexico to Longboat Bridge; 10 x 100 foot channel from Longboat Bridge northeasterly to IWW; channel from north channel to Cortez Bridge.	

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Report of the Chief of Engineers May 12, 1980	<b>MANATEE HARBOR, FL (See Section 18 of Text)</b> Provide for maintenance of the existing 40-foot deep draft navigation channel and turning basin from Tampa Bay to Port Manatee. Initial construction of a widener at Manatee Harbor and deepen area adjacent to berthing area.	P.L. 99-662, Nov. 17, 1986 99th Cong., 2d sess.
WRDA	Modified the project for navigation authorized by the	P.L.101-640,
Nov. 28, 1990	WRDA of 1986 to construct substantially in accordance with the post authorization change report dated April 1990.	Nov. 28, 1990, 101st Cong.
Aug. 30, 1935	<b>MAYAGUEZ HARBOR, PR (See Section 19 of Text)</b> Approach channels 30 feet deep to and along deep-water terminal.	H.Doc. 215, 72nd Cong., 1st sess. & River and Harbor Committee Doc. 1,73rd Cong., 1st sess.
Aug. 26, 1937	<b>MELBOURNE HARBOR, FL (See Section 20 of Text)</b> Channel 8 x 100 feet and a turning basin.	H.Doc. 390, 74th Cong., 2d sess.
Jul. 3, 1930	<b>MIAMI HARBOR, FL (See Section 21 of Text)</b> <b>MIAMI RIVER</b> The 15-foot channel in Miami River, 150 feet wide at the mouth.	Specified in Act
PWA Program Sep. 6, 1933	The channel at Dinner Key Airport.	S.Doc. 95, 72nd Cong., 1st sess. and Specified in Act
Jun. 13, 1902	An 18-foot channel in a land cut across the peninsula and construction of the north jetty.	H.Doc. 622, 56th Cong., 1st sess. (Annual Report 1900, p. 1987)
Mar. 2, 1907	Construction of the south jetty and increase of channel width to 100 feet.	Specified in Act
Mar. 4, 1913	Modification of local cooperation requirements imposed by the Act of July 25, 1912.	Specified in Act
Mar. 3, 1925	A channel 25 feet deep with present widths from the ocean to Biscayne Bay, thence 200 feet wide across the bay to but not including the municipal turning basin, and extension of both jetties.	H.Doc. 516, 67th Cong., 4th sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Jul. 3, 1930	A channel width of 300 feet across the bay and enlarging the municipal turning basin, with expenditures thereon limited. to \$200,000	Rivers and Harbors Committee Doc. 15, 71st Cong., 2d sess.
Aug. 30, 1935	A depth of 30 feet from the ocean to and in the turning basin, with the existing authorized project widths, including the 300-foot width in the channel across the bay.	Sen. Comm. Print. 73rd Cong., 2d sess.
Aug. 26, 1937	Extending the turning basin 200 feet to the southward.	Rivers and Harbors Committee Doc. 86, 74th Cong., 2d sess.
Mar. 2, 1945	The Virginia Key improvement.	S.Doc. 251, 79th Cong., 2d sess.
Mar. 2, 1945	For incorporation of the project for Miami River in that for Miami Harbor, the widening at the mouth of Miami River to existing project widths; the channels from the mouth of Miami River to the turning basin and to Government Cut; and the channel from Miami River to the harbor of refuge, provided that local interests contribute one-third of the cost.	H.Doc. 91, 79th Cong., 1st sess.
Jul. 14, 1960	Deletion of Virginia Key development and the Dinner Key, approach channel widening the existing ship channel by easing the ocean bend and increasing the width of the 300-foot wide section to 500 feet, enlarging the existing turning basin 300 feet along both the south and northeasterly sides, and dredging a turning basin along the north side of Fisher Island about 39 acres in extent and 30 feet in depth.	S.Doc. 71, 85th Cong., 2d sess.
Aug. 13, 1968	Enlarging existing entrance channel to 38 x 500 feet, deepening existing 400-foot wide channel across Biscayne Bay to 36 feet; deepening existing turning basins at Biscayne Boulevard terminal and Fisher Island to 36 feet.	S.Doc. 93, 90th Cong., 2d sess.
WRDA Nov. 17, 1986	Deauthorized the widening at the mouth of Miami River to existing project widths; and the channels from the mouth of Miami River to the turning basin, to Government Cut, and to a harbor of refuge in Palmer Lake.	P.L. 99-662, Nov. 17, 1986, 99th Cong., 2d sess
Report of the Chief of Engineers Sep. 25, 1989	The project for navigation, Miami Harbor Channel.	P.L. 101-640, Nov. 28, 1990, 101st Cong

JACKSONVILLE, FL DISTRICT

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
WRDA Oct. 12, 1996	The project for navigation, Miami Harbor Channel subject to a final report to be completed no later than 31 December 1996.	P.L. 104-303, Oct. 12, 1996 104th, Cong
WRDA Aug. 17, 1999	Miami Harbor Channel project modified to include construction of artificial reefs and related environmental mitigation.	P.L. 106-53, Aug. 17, 1999, 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Jan. 04, 2007	The project for navigation, Miami Harbor, Miami-Dade County, Florida: Report of the Chief of Engineers dated April 25, 2005.	P.L 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.
Auth. by Chief of Engineers Apr. 20, 1964 under Sec. 107 of 1960 R&H Act	<b>NEW PASS, SARASOTA, FL (See Section 22 of Text)</b> 10 x 150 foot entrance channel; 8 x 100 foot inner channels; and 8-foot deep turning basins at Payne Terminal and City Pier.	
PARA Jun. 26, 1934	<b>OKEECHOBEE WATERWAY, FL (See Section 23 of Text)</b> Operation and care of locks and dams provided for with funds from R&H appropriations.	Specified in Act
Aug. 26, 1937	New lock and weir structure in St. Lucie Canal.	Rivers and Harbors Committee Doc. 28, 75th Cong., 1st sess.
Mar. 2, 1945	Deepening to 8 feet from Ft. Myers to Jacksonville-Miami waterway near Stuart via channel across lake from Clewiston.	H.Doc. 696, 76th Cong., 3d sess.
Mar. 2, 1945	Channel to yacht basin at Ft. Myers and a basin at Stuart.	H.Doc. 736, 79th Cong., 2d sess.
WRDA Nov. 17, 1986	Deauthorized basin at Stuart.	PL 99-662, Nov. 17, 1986 99th Cong., 2d sess.
Auth. by Chief of Engineers Nov. 5, 1968, under Sec. 107 of 1960 R&H Act	Enlarge existing 8 x 90 foot section of Okeechobee Waterway for about 5 miles upstream from Ft. Myers to 10 x 100 feet.	

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Sep. 19, 1890	<b>OKLAWAHA RIVER, FL (See Section 24 of Text)</b> Clearing obstructions for channel 4 feet deep from mouth to Leesburg.	Annual Report 1889, p.1360
Mar. 2, 1907	Channel 6 feet deep from mouth to head of Silver Springs Run.	H.Doc. 782, 59th Cong., 1st sess.
Jun. 25, 1910 Jul. 25, 1912	Maintenance of levels in the lakes at head of river.	Specified in Acts
Jul. 27, 1916	Acceptance of certain artificial waterways in lieu of portions of natural riverbed.	Specified in Act
PARA Jun. 26, 1934	Operation and care of lock and dam provided for with funds from appropriations for rivers and harbors.	Specified in Act
WRDA Nov. 17, 1986	De-authorized channel 6 feet deep from mouth to head of Silver Springs Run	P.L. 99-662, Nov. 17, 1986 99th Cong., 2d sess.
Mar. 13, 1934	<b>PALM BEACH HARBOR, FL (See Section 25 of Text)</b> Maintenance of improvement previously constructed by local interests.	H.Doc. 185, 73rd Cong., 2d sess.
Dec. 10, 1934	Deepening the channels and turning basin, as constructed by local of interests, to 20 feet.	Recommended by Chief Engineers to Public Works Administration Oct. 17, 1934
Aug. 30, 1935	Authorized the work previously approved by Public Works Administration, and widening the channels to existing project dimensions, enlarging the 700-foot square turning basin eastward removing the obstructive point on south side of the and inlet, revetting the banks of the inlet restoring existing jetties.	H.Doc. 185, 73rd Cong., 2d sess. and Rivers and Harbors Comm. H. Doc. 42, 74th Cong., 1st sess.
Mar. 2, 1945	Deepening the channels and turning basin to 25 feet.	H.Doc. 530, 78th Cong., Cong., 2d sess.
May 17, 1950	Extending the turning basin 550 feet southward over a 900-foot width, with a flare to the east; provided that local interests may be reimbursed not to exceed \$305,000 for work done by them on this modification subsequent to July 1, 1949.	H.Doc. 704, 80th Cong., 2d sess.

JACKSONVILLE, FL DISTRICT

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Jul. 14, 1960	An entrance channel 35 feet deep, 400 feet wide, and 0.8 mile long merging with an inner channel 33 feet deep, 300 feet wide and 0.3 mile long, thence flaring into a turning basin, 1,400 feet north-south by a minimum of 1,200 feet east-west.	H.Doc. 283, 86th Cong., 1st sess. (contains latest published map)
Report of the Chief of Engineers Dec. 10, 1985	Assume maintenance of locally expanded turning basin to a depth of 25 feet on north side of existing basin.	P.L. 99-662, Nov. 17, 1986, 99th Cong., 2d sess.
WRDA Oct. 12, 1996	<b>PALM VALLEY BRIDGE, FL (See Section 26 of Text)</b> Replacement of a two lane bridge.	P.L.104-303 Oct. 12, 1996
Oct. 27, 1965	<b>PONCE DE LEON INLET, FL (See Section 27 of Text)</b> Widening and deepening channels; jetties on north and south sides of inlet; a weir in the north jetty and an impoundment basin inside the weir	104 <sup>th</sup> Cong.  H.Doc. 74, 89th Cong., 1st sess.
WRDA Aug. 17, 1999	Project for navigation and related purposes.	P.L. 106-53, Aug. 17, 1999, 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
Mar. 3, 1925	<b>PONCE HARBOR, PR (See Section 28 of Text)</b> Dredging 3 continuous areas, aggregating 153 acres, to depths of 30, 18, and 9 feet, and construction of a seawall, costs to be shared by U.S. and local interests.	H.Doc. 532, 67th Cong., 4th sess.
Aug. 30, 1935	Modified conditions of local cooperation to provide that U.S. undertake all dredging at Federal expense and return local funds previously contributed for dredging, all other portions of the improvement hereafter to be at the expense of local interests.	Rivers and Harbors Committee Doc. 18, 72nd Cong., 1st sess.
Mar. 2, 1945	Eliminate previously authorized 9-foot dredging area, and provided for dredging 30-foot depth area and 18 acres off the municipal pier and for construction of the breakwater off Punta Carenero.	H.Doc. 745, 79th Cong., 2d sess.
H.R. Sep. 23, 1976, S.R. Oct. 1, 1976	Eliminate previously authorized 18-foot and a portion of the 30-foot project outside the proposed 36-foot and a portion adjacent to the municipal bulkhead. Channel 36 x 600 feet from Caribbean Sea to harbor; channel 36 x 400 feet into harbor; and a 36-foot turning basin.	H.Doc. 532, 94th Cong., Cong., 2d sess.
Jul. 3, 1930	<b>PORT EVERGLADES HARBOR, FL (See Section 29 of Text)</b> Maintenance of harbor constructed by local interests.	Cong., 2d sess.
Aug. 30, 1935	Enlarge entrance channel and complete turning basin to 1,200 feet square.	Rivers and Harbors Committee Doc. 25, 74th Cong., 1st sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Jun. 20, 1938	Widen turning basin 350 feet on north side.	H.Doc. 545, 75th Cong., 3d sess.
Jul. 24, 1946	Widen turning basin 200 feet on north side, 500 feet on south side and enlarge flare at entrance channel.	H.Doc. 768, 78th Cong., 2d sess.
Jul. 3, 1958	Deepen and widen entrance channel on a new alignment and increase turning basin in size and depth.	H.Doc. 346, 85th Cong., 2d sess.
H.R. May 9, 1974; S.R. May 31, 1974	Deepen and widen entrance channel, enlarge turning basin, widen Pier 7 channel, maintenance of Berth 18 channel, and planning for a south jetty fishing walkway with construction contingent upon need as developed by detailed post authorization studies.	H.Doc. 144, 93rd Cong., 1st sess.
WRDA Jan. 24, 2000	Reimbursement of the non-Federal interest for the project for navigation, \$15,003,000 for the Federal share of costs incurred by the non-Federal interest in carrying out the project and determined by the Secretary to be eligible for reimbursement under the limited reevaluation report dated April 1998.	P.L. 106-541, Jan. 24, 2000 106 <sup>th</sup> Cong., 2d sess.
Report of the Chief of Engineers Sep. 23, 1991	Project for navigation.	P.L. 102-580, Oct.31, 1992 102nd Cong., 2d sess.
<b>REMOVAL OF AQUATIC GROWTH FROM NAVIGABLE WATERS IN THE STATE OF FLORIDA (See Section 30 of Text)</b>		
Mar. 3, 1899	Construction and operation of a suitable vessel and use of log booms for removal of water hyacinths in the navigable waters of the State.	Annual Report 1899
Jun. 13, 1902	Extermination and removal of water hyacinths by any mechanical, chemical or other means.	Specified in Act
Mar. 3, 1905	Prohibits use of any chemical process injurious to cattle.	Specified in Act
<b>ST. AUGUSTINE HARBOR, FL (See Section 31 of Text)</b>		
Jun. 20, 1938	Channel 27 x 200 feet protected by a groin.	H.Doc. 555, 75th Cong., 3d sess.
May 17, 1950	Channel 16 x 200 feet across bar, and thence 12 feet deep to Intracoastal Waterway; jetty on south side of inlet; future landward extension of groin and jetty; and channel 10 x 100 feet in San Sebastian River.	H.Doc. 133, 81st Cong., 1st sess.

JACKSONVILLE, FL DISTRICT

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
<b>ST. JOHNS RIVER, FL, JACKSONVILLE TO LAKE HARNEY (See Section 32 of Text)</b>		
Mar. 3, 1899	A channel 13 feet deep and 200 feet wide from Jacksonville to Palatka.	H.Doc. 523, 55th Cong., 2d sess. and Annual Report 1899 p. 1343
Mar. 2, 1919	The improvement of Deep Creek.	H.Doc. 699, 63rd Cong., 2d sess.
Jun. 14, 1880	Two jetties at Volusia Bar (Maintenance only; new work completed under previous project).	Annual Report for 1879, pp. 795-798
Jun. 25, 1910	A channel 100 feet wide, 8 feet deep from Palatka to Sanford with a side channel to Enterprise, and thence 5 feet deep to Lake Harney.	H.Doc. 1111, 60th Cong., 2d sess.
Jul. 3, 1930	Cutoffs at Butcher Bend, Shake Creek, and Starks Landing, and easing bends at other points.	H.Doc. 691, 69th Cong., 2d sess.
Mar. 2, 1945	A channel 10 feet deep and 100 feet wide from Palatka to Sanford, with a side channel to Enterprise and with cutoffs and easing of bends. (Cutoffs de-authorized)	H.Doc. 603, 76th Cong., 3d sess.
Mar. 2, 1945	Combining the two projects above into a single project for St. Johns River, FL, Jacksonville to Lake Harney, and for a cutoff 5 feet deep and 75 feet wide between Lake Monroe and the vicinity of Osteen Bridge (Woodruff Creek Cutoff).	H.Doc. 445, 78th Cong., 2d sess.
Jul. 24, 1946	A channel 12 feet deep and 100 feet wide from Palatka to Sanford, and in the branch to Enterprise.	S.Doc. 208, 79th Cong., 2d sess.
<b>ST. LUCIE INLET, FL (See Section 33 of Text)</b>		
Mar. 2, 1945	Channel 10 x 200 feet.	H.Doc. 391, 77th Cong., 1st sess.
Nov. 7, 1966	Modification to maintain existing channel 6 x 100 feet.	H.Doc. 508, 89th Cong., 2d sess.
H.R. May 9, 1974 S.R. May 31, 1974	Extending north jetty and modifying existing jetty to provide a sand bypass weir section; excavation of sand impoundment basin; construction of south jetty with a walkway for recreational fishing; channel 10 x 500 feet through bar cut, tapering to 150 feet through the inlet, and 100 feet and 7 feet deep to the Intracoastal Waterway; and transfer of 380,000 cubic yards of material to the south beach during each two-year maintenance period.	H.Doc. 294, 93rd Cong., 1st sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Aug. 8, 1917	<b>SAN JUAN HARBOR, PR (See Section 34 of Text)</b> Anchorage (inner harbor) area of 206 acres and San Antonio Channel to 30-foot depth.	H.Doc. 865, 63rd Cong., 2d sess.
Sep. 22, 1922	Substitution of a 68-acre area 30 feet deep along southeasterly side of anchorage area, for one 25 acres in extent and of same depth extending easterly from eastern end of the San Antonio project channel.	Specified in Act
Jul. 3, 1930	Modified condition of local cooperation.	H.Doc. 45, 71st Cong., 2d sess.
Aug. 30, 1935	Entrance channel across outer bar 38 feet deep and 800 feet wide, and thence across bay to anchorage area (Anegado Reach Channel) 30 feet deep and 700 feet wide and increasing anchorage area to 239 acres to 30-foot depth.	R&H Comm. Doc. 38, 74th Cong., 1st sess.
Aug. 26, 1937	Widening Anegado Reach Channel and increasing anchorage area to 329 acres	R&H Comm. Doc. 42, 75th Cong., 1st sess.
Oct. 17, 1940	Removal to 8-foot depth of Anegado, Largo, and Capitanejo Shoals, and dredging to 30-foot depth the entrance channel and turning basin to the Graving Dock.	H.Doc. 364, 76th Cong., 1st sess.
Mar. 2, 1945	Maintenance of the 30-foot depth entrance channel and turning basin to the Army Terminal.	Specified in Act
Jul. 3, 1958	Deepening portions of entrance and approach channels and basins to Army Terminal and San Antonio Pier areas to 35-45 feet; new 32-foot depth Puerto Nuevo Channel; new 36-foot depth anchorage.	H.Doc. 38, 85th Cong., 1st sess.
Aug. 4, 1976	A bar channel 48 x 800 feet, shifting the centerline 350 feet west; deepening Anegado Channel in steps from 46 to 40 feet while reducing width to 800 feet; deepening Army Terminal Channel and turning basin to 40 feet while widening the channel to 450 feet; deepening Puerto Nuevo Channel to 40 feet and widening it to 400 feet; deepening Graving Dock Channel to 40 feet at existing 400-foot width; deepening San Antonio Channel to 38 feet at varying widths, minimum of 500 feet; deepening cruise ship basin at 30 x 250 feet; provide a 38-foot depth in Anchorage Area "E" with irregular width; six mooring dolphins for vessels using the area.	H.Doc. 574, 94th Cong., 2d sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Report of the Chief of Engineers Dec. 23, 1982	Modification of the authorized project to provide the deepening of the Bar Channel to 48 feet and shifting its alignment 350 feet to the west; deepening Anegado, and Army Terminal to 40 feet; deepening Graving Dock Channel, and Cruise Ship Basin, Puerto Nuevo Channel, and San Antonio Channel to 36 feet; and deepening Anchorage Area "E" to 38 feet while reducing its size and constructing six mooring dolphins within its limits. A 1,500-foot long extension to San Antonio Channel would be added to the Federal project and Sabana approach deepened to 32 feet.	P.L. 99-662 Nov. 17, 1986 99th Cong., 2d sess
WRDA Oct. 12, 1996	Modification of the project to deepen the bar channel to depths varying from 49 feet to 56 feet below mean low water with other modifications to authorized interior channels as described in the General Reevaluation Report and Environmental Assessment dated March 1994.	P.L. 104-303, Oct.12, 1996 104th Cong.
<b>TAMPA HARBOR, FL (See Section 35 of Text) TAMPA BAY</b>		
Mar. 3, 1899	For a channel 27 feet deep from the Gulf of Mexico to Port Tampa, 500 feet wide across the bar and 300 feet wide in the bay.	H.Doc. 52, 55th Cong., 3d sess. (Also printed in Annual Report 1899, p. 1640) Channel dimensions specified in Act
Mar. 3, 1905	For a channel depth of 26 feet with sufficient width from the Gulf of Mexico to Port Tampa.	Specified in Act
<b>TAMPA AND HILLSBOROUGH BAYS</b>		
Jun. 25, 1910	For a depth of 24 feet in Hillsborough Bay.	H.Doc. 634, 61st Cong., 2d sess.
Aug. 8, 1917	For a 27-foot depth from Gulf of Mexico up to and in the several channels of Hillsborough Bay, the widths to be 500 feet on the bar, 300 feet in Tampa Bay, Ybor, and Garrison Channels, and 200 feet in Hillsborough Bay, Sparkman, and Seddon Channels, with turning basins at the mouth of Hillsborough and at Ybor Estuary.	H.Doc. 634, 61st Cong., 1st sess.
<b>HILLSBOROUGH RIVER</b>		
Mar. 3, 1899	For a 12 x 200 foot channel to within 100 feet of the Lafayette St. highway bridge (maintenance only; new work completed under a previous project under title Improving Hillsborough Bay, FL).	H.Doc. 545, 55th Cong., 2d sess. and Annual Report 1898, pp 1357- 1360

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Sep. 22, 1922	<b>TAMPA HARBOR, FL</b> Consolidation of the above projects to form a single project for Tampa Harbor.	Specified in Act
Jul. 3, 1930	Increasing the depth of Egmont Channel to 29 feet and the width of Sparkman Channel to 300 feet.	H.Doc. 100, 70th Cong., 1st sess.
Aug. 30, 1935	For a depth of 32 feet and a width of 600 feet on Egmont Bar, a depth of 30 feet and a width of 400 feet in Mullet Key Cut, and a depth of 30 feet and a width of 300 feet in all other project channels in Tampa Harbor (except in Hillsborough River and in the channel leading to Alafia River); and for a turning basin 2,000 feet long and 500 feet in maximum width at the entrance to the Port Tampa terminals.	S.Doc. 22, 72nd Cong., 1st sess.
Jun. 20, 1938	For widening the bend between Sparkman Channel and Cut D of Hillsborough Bay Channel by 250 feet; widening Ybor Channel to 400 feet and extending the turning basin at the west end of Garrison Channel (mouth of Hillsborough River) easterly for 300 feet.	S.Doc. 164, 75th Cong., 3d sess.
Jun. 20, 1938	For construction of a breakwater at Peter O. Knight Field, Davis Islands, its maintenance to be assumed by local interest.	Sen. Comm. Print. 76th Cong., 1st sess.
Mar. 2, 1945	For widening Sparkman Channel to 400 feet and Ybor Channel to 500 feet; widening the bend between Sparkman and Garrison Channels an additional 250 feet to extend the turning basin westerly and widening the bend between Seddon and Garrison Channels by 150 feet (in lieu of 300 feet previously authorized) to extend the turning basin easterly.	S.Doc. 183, 78th Cong., 2d sess.
Mar. 2, 1945	For a channel 9 feet deep and 100 feet wide in the Hillsborough River for about 2.4 miles above the upper end of the existing 12-foot channel, and for the removal of obstructions thence to the Florida Avenue Bridge.	H.Doc. 119, 77th Cong., 1st sess.
Mar. 2, 1945	For a channel 25 feet deep and 150 feet wide from the Hillsborough Bay channel to and including a turning basin in the Alafia River. (Revoked by Act of May 17, 1950).	S.Doc. 16, 77th, Cong., 1st sess.

JACKSONVILLE, FL DISTRICT

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
May 17, 1950	For deepening Egmont Channel to 36 feet; enlarging Mullet Key Cut, Tampa Bay Channel, Hillsborough Bay Channel, Port Tampa Channel and Port Tampa turning basin to present project dimensions; deepening Sparkman Channel and Ybor turning basin to 34 feet; a channel 30 feet deep and 200 feet wide from Hillsborough Bay Channel to and including a turning basin in Alafia River, 700 feet wide and 1,200 feet long (in lieu of the improvement previously authorized); and substantial widening at entrance, bends, and turns.	H.Doc. 258, 81st Cong., 1st sess.
Sep. 3, 1954	Extended removal of obstructions in Hillsborough River to City Water Works Dam. Maintenance of cleared channel to be assumed by local interests.	H.Doc. 567, 81st Cong., 2d sess.
Oct. 23, 1962	Channel and turning basin at Port Sutton 30 feet deep, Ybor Channel 34 x 400 feet.	H.Doc. 529, 87th Cong., 2d sess.
Dec. 31, 1970	For federal maintenance of Port Sutton Channel, 280 feet wide and an irregularly shaped turning basin both to a depth of 34 feet.	H.Doc. 150, 91st Cong., 1st sess.
Do.	Enlarge entrance channel across Egmont Bar to 46 x 700 feet from the Gulf to Mullet Key.	H.Doc. 401, 91st Cong., 2d sess.
Do.	Enlarge Mullet Key Cut Channel to 44 x 600 feet.	Do.
Do.	Enlarge Tampa Bay Channel to 44 x 500 feet from Mullet Key Cut through Tampa Bay to the junction of Hillsborough Bay and Port Tampa Channels.	Do.
Do.	Enlarge Hillsborough Bay Channel to 44 x 500 feet from the junction with Tampa Bay and Port Tampa Channels to the junction with Port Sutton entrance channel, and thence deepening to a depth of 42 feet at the existing width of 400 feet to the junction with Seddon and Sparkman Channels.	Do.
Do.	Enlarge Port Sutton entrance channel to 44 x 400 feet.	Do.
Do.	Enlarge Port Sutton turning basin to a depth of 44 feet and a turning diameter of 1,200 feet.	Do.
Do.	Deepening Sparkman Channel to 42 x 400 feet.	Do.
Do.	Deepening Ybor Channel to 40 x 300 feet.	Do.
Do.	Enlarge turning basin at the entrance to Ybor Channel to a depth of 42 feet and an additional width of 200 feet on the southwest edge of the present basin.	Do.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Do.	Deepening Port Tampa Channel to 42 feet at its existing width from the junction with Hillsborough and Tampa Bay Channels to the turning basin.	Do.
Do.	Deepening the Port Tampa turning basin to 42 feet over its existing length of 2,000 feet and width of 900 feet.	Do.
Do.	An entrance channel in East Bay 44 x 400 feet and 500 feet north from the Port Sutton turning basin for a distance of about 2,000 feet.	Do.
Do.	A turning basin in East Bay at a depth of 44 feet and with a turning diameter of 1,200 feet.	Do.
Do.	An approach channel in East Bay 44 x 300 feet north from the East Bay turning basin for a distance of about 2,500 feet.	Do.
Do.	Maintenance of Port Sutton Terminal channel to 44 x 200 feet for a distance of 4,000 feet.	Do.
Aug. 15, 1985	Maintenance of East Bay channel to 34 x 300 feet for a distance of 5,500 feet.	H.Doc. 236, 99th Cong., 1st sess.
Report of the Chief of Engineers Mar. 28, 1988	Port Sutton Channel deepening to 43 feet for a distance of 3,700 feet and a width of 200 feet.	P.L. 100-676, Nov. 17,1988, 100th Cong., 2d sess.
WRDA Nov. 28, 1990	Maintenance of Alafia Channel to a depth of 34 feet, if a Non-Federal Sponsor agrees to reimburse the Secretary	
WRDA Aug. 17, 1999	Project for navigation, Tampa Harbor-Big Bend Channel	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Aug. 17, 1999	Expedite completion of report for Alafia Channel and proceed to project preconstruction, engineering, and design if justified.	P.L. 106-53 Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Jan. 24, 2000	Project for navigation, Port Sutton, FL	P.L.106-541 Jan. 24,2000 106 <sup>th</sup> Cong. 2 <sup>nd</sup> sess.
WRDA Jan. 04, 2007	Modified total cost for Port Sutton, Florida.	P.L 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
WRDA Jan. 04, 2007	The project for navigation, Tampa Harbor-Big Bend Channel, Florida, modified to direct the Secretary to credit, in accordance with section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d-5b), toward the non-Federal share of the cost of the project the cost of planning, design, and construction work carried out by the non-Federal interest for the project before the date of the partnership agreement for the project.	P.L 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.
WRDA Jan. 04, 2007	The project for navigation, Tampa Harbor, Florida, modified to authorize the Secretary to construct passing lanes in an area approximately 3.5 miles long and centered on Tampa Harbor Cut B if the Secretary determines that such improvements are necessary for navigation safety. The non-Federal share of the cost of the general reevaluation report for Tampa Harbor, Florida, being conducted on June 1, 2005, shall be the same percentage as the non-Federal share of the cost of construction of the project. The Secretary shall enter into a new partnership agreement with the non-Federal interest to reflect the new cost sharing.	P.L 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.
<b>TAMPA HARBOR BRANCH CHANNELS, FL</b>		
Report of the Chief of Engineers Jan. 25, 1979	Enlarging Hillsborough Bay Cut D, Sparkman Channel, Port Tampa Channel and existing turning basins at the entrance to Ybor Channel and at Port Tampa, all to a depth of 41 feet with varying lengths and widths and deepening Ybor Channel to a depth of 39 feet. This work will be associated with the Main Channel deepening.	P.L. 99-662, Nov. 17, 1986, 99th Cong., 2d sess
<b>TAMPA HARBOR EAST BAY CHANNEL, FL</b>		
WRDA Nov.17, 1986	Maintenance dredging at an average annual cost of \$471,000.	P.L. 99-662, Nov.17, 1986 99th Cong., 2d sess.
<b>TAMPA HARBOR ALAFIA RIVER,FL</b>		
Dec. 21, 2000	Deepen and widen the Alafia Channel	P.L. 106-554 Dec. 1,2000 106 <sup>th</sup> Cong. Appendix D
<b>BEACH EROSION CONTROL PROJECTS</b>		
<b>BREVARD COUNTY, FL (See Section 39 of Text)</b>		
Aug. 13, 1968	Federal participation in cost of shore protection project.	H.Doc. 352, 90th Cong., 2d sess.
WRDA Oct. 12, 1996	Shoreline protection project for periodic nourishment over the 50-year life of the project subject to completion of report no later than Dec. 13, 1996.	P.L.104-303, Oct. 12, 1996 104th Cong.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
WRDA Aug. 17, 1999	Use services of independent coastal expert, who shall consider all relevant studies and shall mitigate any damage to the shore protection project that is a result of Federal navigation project. Costs of the mitigation shall be allocated to the Federal navigation project as operation and maintenance costs	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Jan. 24, 2000	Prepare a general reevaluation report on the project of the 7.1 mile reach deleted from the Report of the Chief of Engineers.	P.L. 106-541, Jan. 24, 2000, 106 <sup>th</sup> Cong., 2 <sup>nd</sup> sess.
WRDA Jan. 04, 2007	Modified to authorize the Secretary to include the mid-reach as an element of the project from the Florida department of environmental protection monuments 75.4 to 118.3, a distance of approximately 7.6 miles. The restoration work shall only be undertaken upon a determination by the Secretary, following completion of the general reevaluation report, that the shoreline protection is feasible.	P.L. 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.
<b>BROWARD COUNTY, FL BEACH EROSION CONTROL AND HILLSBORO INLET, FL, NAVIGATION PROJECT (See Section 40 of Text)</b>		
Oct. 27, 1965	Improvement for beach erosion control in Broward County, FL and a combined beach erosion and navigation improvement to Hillsboro Inlet and the shore south thereof to Port Everglades.	H.Doc. 91, 89th Cong., 1st sess.
WRDA Nov. 17, 1986	Deauthorized navigation improvement to Hillsboro Inlet.	P.L. 99-662, Nov. 17, 1986, 99th Cong., 2d sess.
WRDA Nov. 28, 1990	Continued authorization for Hillsboro Inlet dredging for 5 years.	P.L. 101-640, Nov. 28, 1990 101st Cong., 2d sess
WRDA Oct. 12, 1996	Periodic beach nourishment for a period of 50 years beginning on the date of initiation of construction of segments II and III.	P.L. 104-303, Oct. 12, 1996
WRDA Aug. 17, 1999	Project for shore protection is modified to authorize the Secretary, on execution of a contract to construct the project, to reimburse the non-Federal interest for the Federal share of the cost of preconstruction planning and design for the project, if work is compatible with and integral to the project.	P.L. 106-53, Aug. 17, 1999, 106 <sup>th</sup> Cong., 1st sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
WRDA Jan. 04, 2007	Modified to direct the Secretary to credit, in accordance with section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d-5b), toward the non-Federal share of the cost of the project the cost of mitigation construction and derelict erosion control structure removal carried out by the non-Federal interest for the project before the date of the partnership agreement for the project.	P.L. 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.
<b>CHARLOTTE COUNTY, FL</b>		
Report of the Chief of Engineers 2 Apr. 1982	Shoreline protection.	P.L. 99-662, Nov. 12, 1986 99th Cong., 2d sess.
<b>DADE COUNTY, FL (See Section 56 of Text)</b>		
Aug. 13, 1968	Federal participation in cost of shore protection and hurricane-flood control project.	H.Doc. 335, 90th Cong., Cong., 2d sess.
<b>DADE COUNTY-NORTH OF HAULOVER BEACH, FL (See Section 57 of Text)</b>		
Aug. 15, 1985	Federal participation in cost of shore protection and hurricane-flood control project.	H.Doc. 236, 99th Cong., 1st sess.
Report of the Chief of Engineers Dec. 17, 1983	Extending of existing shore protection project for Dade County to provide for protective beach fill and subsequent nourishment along 2.5 miles of shore north of Haulover Beach Park.	P.L. 99-662 Nov. 17, 1986, 99th Cong., 2d sess
<b>DUVAL COUNTY, FL (See Section 41 of Text)</b>		
Oct. 27, 1965	Federal participation in cost of local shore protection project.	H.Doc. 273, 89th Cong., 1st sess.
<b>FORT PIERCE BEACH, FL (See Section 42 of Text)</b>		
River and Harbor Act of 1965	Project for beach erosion control.	
WRDA Oct. 12, 1996	Periodic beach nourishment for a period of 50 years beginning on the date of initiation of construction.	P.L. 104-303, Oct.12, 1996 104th Cong.
WRDA Aug. 17, 1999	Modified to incorporate 1 additional mile into the project in accordance with a final approved general reevaluation report.	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
<b>INDIAN RIVER COUNTY, FL (See Section 43 of Text)</b>		
WRDA Nov.17, 1986	The plans provide for a 2.65 mile beach fill along the ocean shore of Vero Beach, a 1.7 mile beach fill along the ocean shore of Sebastian Inlet State Park and for periodic nourishment of the new beaches.	P.L. 99-662, Nov.17, 1986. 99th Cong., 2d sess
WRDA Aug. 17, 1999	Reauthorized if determined project is technically sound, environmentally acceptable, and economically justified.	P.L. 106-53, Aug. 17, 199, 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Dec. 31, 1970	<b>LEE COUNTY, FL (See Section 44 of Text)</b> Federal participation in cost of shore protection project.	H.Doc. 395, 91st Cong., 2nd sess.
WRDA Oct. 12, 1996	Modification of the project for shoreline protection, Captiva Island, to reimburse the non-Federal interest for beach nourishment work carried out by such interest as if such work occurred after execution of the agreement.	P.L. 104-303, Oct. 12, 1996 104th Cong.
WRDA Oct. 12, 1996	Complete a review not later than 6 months after enactment of this Act to determine if periodic beach nourishment is necessary for Captiva Island for a period of 50 years beginning on the date of initiation of construction.	P.L. 104-303, Oct. 12, 1996 104th Cong.
WRDA Aug. 17, 1999	Project for shore protection, Captiva Island, is modified to direct the Secretary to enter into an agreement with the Non-Federal interest to carry out the project in accordance with section 206 of WRDA 1992. The design memorandum approved in 1996 shall be the decision document supporting continued Federal participation in cost sharing of the project.	P.L. 106-53, Aug. 17, 1999, 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Jan. 24, 2000	Project for shore protection, Gasparilla and Estero Island segments, is modified to authorize the Secretary to enter into an agreement with the non-Federal interest to carry out the project in accordance with section 206 of WRDA 1992 if the Secretary determines that the project is technically sound, environmentally acceptable, and economically justified.	P.L. 106-541, Jan. 24, 2000, 106 <sup>th</sup> Cong., 2 <sup>nd</sup> sess.
WRDA Jan. 04, 2007	Modified to direct the Secretary to credit, in accordance with section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b), toward the non-Federal share of the cost of the project the cost of work carried out by the non-Federal interest for the project before the date of the partnership agreement for the project.	P.L. 110-114, Jan 04, 2007 110 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
R&H Act of 1970 Sec. 101	<b>LIDO KEY, SARASOTA COUNTY, FL</b> Project for shore protection	
WRDA Nov. 17, 1986	Deauthorized.	P.L. 99-662, Nov. 17, 1986 99 <sup>th</sup> Cong., 2d sess.
WRDA Aug. 17, 1999	Reauthorized project for shore protection for a 50-year period.	P.L. 106-53, Aug. 17, 1999, 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
WRDA Jan. 04, 2007	Modified to direct the Secretary to construct the project substantially in accordance with the report of the Chief of Engineers dated December 22, 2004, for periodic nourishment over the 50-year life of the project. The Secretary shall enter into a partnership agreement with the non-Federal interest in accordance with section 206 of the Water Resources Development Act of 1992 (33 U.S.C. 426i-1) for the modified project.	P.L. 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.
<b>LITTLE TALBOT ISLAND, DUVAL COUNTY, FL</b>		
WRDA Aug. 17, 1999	Project for hurricane and storm damage prevention and shore protection.	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
<b>MANATEE COUNTY, FL (See Section 45 of Text)</b>		
S.R. May 31, 1974 and H.R. Nov. 20, 1975	The plan provides for a level berm 50 feet wide at an elevation 6 feet (MLW) along 3.2 miles of shore on Anna Maria Island and nourishment of entire Gulf shore of that island as needed throughout project life.	S.Doc. 37, 93rd Cong., 1st sess.
<b>MARTIN COUNTY, FL (See Section 46 of Text)</b>		
WRDA Nov. 28, 1990	Periodic nourishment over the 50 year life of the project	P.L.101-640, Nov.28, 1990 101st Cong., 2d sess.
<b>MONROE COUNTY, FL</b>		
Report of the Chief of Engineers Apr. 22, 1984	Modification of existing project from 6,200-foot long to 8,770-foot long beach fill stabilized with 2 groins and periodic nourishment.	P.L. 99-662, Nov.17, 1986 99th Cong., 2d sess
<b>NASSAU COUNTY, FL (See Section 47 of Text)</b>		
Report of the Chief of Engineers May 19, 1986	Improvement for beach erosion control on Amelia Island	P.L. 100-676, Nov.17, 1988, 99th Cong., 2d sess
WRDA Aug. 17, 1999	Modified to construct the project for periodic nourishment over the 50-year life of the project	P.L. 106-53, Aug. 17, 1999, 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
<b>PALM BEACH COUNTY, FL, FROM MARTIN COUNTY LINE TO LAKE WORTH INLET AND FROM SOUTH LAKE WORTH INLET TO BROWARD COUNTY LINE (See Section 48 of Text)</b>		
Oct. 23, 1962	Federal participation in cost of local shore protection project and sand-transfer plant	H.Doc. 164, 87th Cong., 1st sess.
WRDA Oct. 12, 1996	Complete a review not later than 6 months after enactment of this Act to determine if periodic beach nourishment is necessary for a period of 50 years beginning on the date of initiation of construction for Jupiter/Carlin, Ocean Ridge, and Boca Raton North Beach segments.	P.L. 104-303, Oct. 12,1996 104th Cong

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
<b>PALM BEACH COUNTY, FL, FROM LAKE WORTH INLET TO SOUTH LAKE WORTH INLET, FL (See Section 48 of Text)</b>		
May 17, 1950	Federal participation in cost of local shore protection project on Palm Beach Island.	H.Doc. 772, 80th Cong., 2d sess.
Jul. 3, 1958	Federal participation in cost of local sand-transfer plant at Lake Worth Inlet and shore protection project.	H.Doc. 342, 85th Cong., 2d sess.
<b>PINELLAS COUNTY, FL (See Section 50 of Text)</b>		
Nov. 7, 1966	Federal participation in cost of shore protection project.	H.Doc. 519, 89th Cong., 2d sess.
Report of the Board of Engineers for Rivers and Harbors Apr. 23, 1985	Restoration of 5,000 feet of beach at Clearwater Beach Island, 49,000 feet of beach at Sand Key, 92,000 feet of beach at Treasure Island, and construction of 600 feet of revetment at Long Key. Also, re-nourishment of each island	P.L. 99-662, Nov.17, 1986, 99th Cong., 2d sess
<b>ST. JOHNS COUNTY, FL (See Section 51 of Text)</b>		
Report of the Chief of Engineers Feb. 26, 1980	Shoreline protection along 2.5 miles of problem area in the St. Augustine Beach and Coquina Gables area and periodic nourishment.	P.L. 99-662 Nov.17, 1986, 99th Cong., 2d sess
WRDA Aug. 17, 1999	Modified to include navigation mitigation.	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
<b>SARASOTA COUNTY, FL (See Section 52 of Text)</b>		
Report of the Chief of Engineers Feb.28, 1986	Shoreline protection along 12,600 feet of shoreline on central Longboat and 21,100 feet on Manasota Key in the vicinity of Venice, Florida and periodic nourishment of these areas	P.L. 99-662 Nov.17, 1986, 99th Cong., 2d sess.
<b>FLOOD CONTROL</b>		
<b>PROJECTS CEDAR HAMMOCK (WARES CREEK), FL (See Section 55 of Text)</b>		
WRDA Oct. 12, 1996	Project for flood control.	P.L. 104-303, Oct.12, 1996 104th Cong
<b>FOUR RIVER BASINS, FL (See Section 58 of Text)</b>		
Oct. 23, 1962	Control of floods and improvement of drainage, and for water conservation through construction of necessary canals, levees, reservoirs and control structures.	H.Doc. 585, 87th Cong., 2d sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
WRDA Nov. 17, 1986	Deauthorized Anclote River control structure and channel improvement.	P.L. 99-662, Nov. 17, 1986 99th Cong., 2d sess.
WRDA Jan. 24, 2000	Restudy flooding and water control issues in the upper Ocklawaha River basin, south of the Silver River, and the Apopka River and Palatlahaha River basins.	P.L. 106-541, Jan. 24, 2000, 106 <sup>th</sup> Cong., 2 <sup>nd</sup> sess.
WRDA Aug. 17, 1999	<b>GUANAJIBO RIVER, PR</b> Project for flood control.	P.L. 106-53 Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
Flood Control Act of 1965, 1948, 1954, 1960, 1965, and 1968; 1970: Section 201 of the Flood Control Act of 1965; and WRDA 1986, 1988, 1990, 1992, 1996 and 2007; and the Rivers and Harbors Act of 1930.	<b>HERBERT HOOVER DIKE, FL (See Section 59 of Text)</b> Project for flood damage reduction.	
Dec. 31, 1970	<b>PORTUGUES AND BUCANA RIVERS, PR</b> <b>(See Section 60 of Text)</b> <b>LAGO de CERRILLOS, PR</b> Multiple purpose dam and lake for flood control, water supply and recreation.	H.Doc. 422, 91st Cong., 2d sess.
	<b>LAGO de PORTUGUES, PR</b> Multiple purpose dam and lake for flood control, water supply and recreation.	
Report of the Chief Engineers Jan. 1989	<b>RIO DE LA PLATA, PR (See Section 61 of Text)</b> Project for flood control.	
WRDA Oct. 12, 1996	<b>RIO GRANDE DE ARECIBO, PR (See Section 62 of Text)</b> Project for flood control.	P.L. 104-303, Oct. 12, 1996 104th Cong.
Report of the Chief of Engineers Mar. 5, 1992	<b>RIO GRANDE DE LOIZA, PR (See Section 63 of Text)</b> Project for flood control.	P.L. 102-580, Oct. 31, 1992 102nd Cong., 2d sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
<b>RIO GRANDE DE MANATI, BARCELONETA, PR (See Section 64 of Text)</b>		
WRDA Aug. 17, 1999	Project for flood control.	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
<b>RIO NIGUA, SALINAS, PR</b>		
WRDA Aug. 17, 1999	Project for flood control.	P.L. 106-53, Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
<b>RIO PUERTO NUEVO, PR (See Section 65 of Text)</b>		
Report of the Chief of Engineers 25 Apr. 1986	Project for flood control.	P.L. 99-662, Nov. 17, 1986 99th Cong., 2d sess.
WRDA Nov. 28, 1990	Set maximum amount allotted under Section 205 of the Flood Control Act of 1948 at \$10,000,000.	P.L.101-640, Nov. 28, 1990, 101st Cong., 2d sess.
<b>SAVAN GUT, ST. THOMAS, VI</b>		
Sec. 205 of the Flood Control Act of 1948	Project for flood control. Increased maximum allotment to \$100,000.	P.L. 858, Jun. 30, 1948, 80th Cong, 2d sess.
<b>TURPENTINE RUN, ST. THOMAS, VI</b>		
WRDA Oct. 31, 1992	Project for flood control.	P.L. 102-580, Oct. 31, 1992 102nd Cong., 2d sess.
<b>RESTORATION PROJECTS</b>		
<b>ALLIGATOR CREEK RESTORATION PROJECT, FL(See Section 76 of Text)</b>		
Estuary Restoration Act	The Estuary Restoration Act promotes the restoration of estuary habitat by developing a national estuary habitat restoration Strategy for creating and maintaining effective estuary habitat Restoration partnerships among public agencies and private sectors.	P.L. 106-457 Nov 7, 2000
Estuary Habitat Restoration Council	Ranked Alligator Creek number one to restore 350 acres salterns - restore hydrology	Sep 25,2003
<b>CENTRAL AND SOUTHERN FLORIDA, FL (See Section 77 of Text)</b>		
Jun. 30, 1948	First phase of comprehensive plan for flood control and other purposes.	H.Doc. 643, 80th Cong., 2d sess. (Contains latest published map)
Sep. 3, 1954	Modification and expansion of authorization to include entire comprehensive plan of improvement.	H.Doc. 643, 80th Cong., 2d sess.

JACKSONVILLE, FL DISTRICT

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Jul. 14, 1960	Canals, levees, and water-control and drainage structures in the Nicodemus Slough area, Glades County.	S.Doc. 53, 86th Cong., 1st sess.
Oct. 23, 1962	Flood protection on Boggy Creek, near Orlando.	S.Doc.125, 87th Cong., 2d sess.
Do.	Flood protection in the Cutler Drain area, near Miami.	S.Doc. 123, 87th Cong., 2d sess.
Do.	Flood control and drainage works for South Dade County.	S.Doc 138, 87th Cong., 2d sess.
Do.	Project Shingle Creek between Clear Lake and Lake Tohopekaliga for flood control and major drainage, including development of Reedy Creek Swamp	S.Doc. 139, 87th Cong., 2d sess.
Do.	Improvement of easterly section of West Palm Beach Canal for flood control and major drainage.	S.Doc. 146, 87th Cong., 2d sess.
Oct. 27, 1965	Primary works for flood control and major drainage in southwest Dade County.	S.Doc. 20, 89th Cong., 1st sess.
Do.	Primary works for flood control and major drainage in Hendry County.	H.Doc. 102, 88th Cong., 1st sess.
Aug. 13, 1968	Gravity drainage in Martin County and distribution of available water supplies to portions of Martin and St. Lucie Counties.	S.Doc. 101, 90th Cong., 2d sess.
Do.	Improvement of supply, distribution and conservation of water resources in Central and Southern Florida, including Lake Okeechobee agricultural area, Everglades National Park and other related areas.	H.Doc. 369, 90th Cong., 2d sess.
Approved Dec. 17, 1970 under the provisions of Section 201 of the Flood Control Act of 1965	Navigation improvements suitable for recreational craft.	H.Doc. 394, 91st Cong., 2d sess.
WRDA Nov. 17, 1986	De-authorized flood protection on Boggy Creek, near Orlando; primary works for flood control and major drainage in southwest Dade County; and navigation improvements suitable for recreational craft.	P.L. 99-662, Nov.17, 1986, 99th Cong., 2d sess
WRDA Nov. 17, 1988	Extended modified water delivery schedules to Everglades National Park.	P.L. 100-676, Nov. 17,1988,

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Everglades National Park Protection and Expansion Act of 1989	Construct modifications to the Central and Southern Florida Project to improve water deliveries into the park and shall, to the extent practicable take steps to restore the natural hydrological conditions within the park.	P.L.101-229, Dec.13, 1989 101st Cong., 2d sess
WRDA Oct. 12, 1996	Modification of project for flood protection of West Palm Beach (C-51) to provide for the construction of an enlarged storm water detention area, Storm Water Treatment Area 1 East.	P.L. 104-303, Oct.12, 1996 104th Cong.
WRDA Oct.12, 1996	Modification of the project to implement the recommended plan of improvement for South Dade County (C-111), including acquisition by non-Federal interests of such portions of the Frog Pond and Rocky Glades areas as are needed for the project. Project consists of a comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem. The comprehensive plan shall provide for the protection of water quality in, and the reduction of the loss of fresh water from, the Everglades. The comprehensive plan shall include such features as are necessary to provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central and Southern Florida project. Project consists of a comprehensive plan for the purpose of restoring, preserving, and protecting the South Florida ecosystem. The comprehensive plan shall provide for the protection of water quality in, and the reduction of the loss of fresh water from, the Everglades. The comprehensive plan shall include such features as are necessary to provide for the water-related needs of the region, including flood control, the enhancement of water supplies, and other objectives served by the Central and Southern Florida project	P.L. 104-303, Oct. 12,1996 104th Cong.
WRDA Aug. 17, 1999	Amends WRDA 1999 S.528(e)(4) by predicating sponsor real estate credit on the applicability of sponsor-acquired real estate to specific restoration projects. Also expands authority to grant credit for sponsor-performed work done in furtherance of restoration projects.	P.L. 106-53 Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Jan. 24, 2000	Specific authorization for Pilot Projects and Initial Projects	P.L 106-541, Jan. 24,2000 106 <sup>th</sup> Cong., 2 <sup>nd</sup> sess.
WRDA Jan 04, 2007	Authorized 3 CERP projects; Indian River Lagoon South, Picayune Strand, and Site 1 Impoundment Also deauthorized the C-44 Basin Storage Reservoir (originally authorized in WRDA 2000).	P.L 110-114, Jan 04, 2007 110 <sup>th</sup> Cong, 1 <sup>st</sup> sess.

**TABLE 9-B (Continued) AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
<b>EVERGLADES AND SOUTH FLORIDA ECOSYSTEM RESTORATION (See Section 78 of Text)</b>		
WRDA Oct. 12, 1996	Authorized the Critical Projects Restoration program. If the Secretary of the Army determines, in cooperation with the non-Federal sponsor and the Task Force, that a restoration project for the South Florida ecosystem independent, immediate, and substantial Restoration, preservation, and protection benefits, and will be Generally consistent with the conceptual framework specified in the “Conceptual Plan for the Central and Southern Florida Project Study” published by the Governor’s Commission for a Sustainable South Florida, the Secretary shall proceed expeditiously with the Implementation of the restoration project.	P.L. 104-303, Oct. 12, 1996 104 <sup>th</sup> Cong.,
WRDA Aug. 17, 1999	Extension of program from 1999 until 2003 and amendment to credit and reimbursement of past and future activities to non-Federal sponsor.	P.L. 106-53 Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.
WRDA Jan. 24, 2000	Changes cost sharing of O&M activities on Seminole Big Cypress project from 100% sponsor responsibility to 50%	P.L. 106-541, Jan. 24, 2000, 106 <sup>th</sup> Cong., 2 <sup>nd</sup> sess.
<b>FLORIDA KEYS WATER QUALITY IMPROVEMENTS (See Section 79 of Text)</b>		
<b>KISSIMMEE RIVER RESTORATION, FL (See Section 80 of Text)</b>		
WRDA Nov. 28, 1990	Conduct a feasibility study for the purpose of determining modifications of the flood control project for central and southern Florida, authorized by section 203 of Flood Control Act of 1948 (62 Stat. 1176), which are necessary to provide a comprehensive plan for the environmental restoration.	P.L. 101-640, Nov.28, 1990 101st Cong., 2d sess
Report of the Chief of Engineers Mar. 17, 1992	Project for the ecosystem restoration, to construct the headwaters revitalization project, and any modifications for the environmental restoration of the Kissimmee River Basin, ensuring that implementation of the project to restore the Kissimmee River will maintain the same level of flood protection as is provided by the current flood control project.	P.L. 102-580, Oct.31, 1992 102nd Cong., 2d sess.
Sec 104 of the Everglades National Park Protection And Expansion Act of 1989	<b>MODIFIED WATER DELIVERIES TO EVERGLADES NATIONAL PARK (See Section 81 of Text)</b> The law authorized and directed the Secretary of the Army in consultation with DOI to modify the C&SF Project to “the extent practicable, take steps to restore the natural hydrological Conditions within the Park”	P.L. 101-229
<b>HILLSBORO AND OKEECHOBEE AQUIFER, FLORIDA</b>		
WRDA Aug. 17, 1999	The project for aquifer storage and recovery described in the Central and Southern Florida Water Supply Study and House Document 369	P.L. 106-53 Aug. 17, 1999 106 <sup>th</sup> Cong., 1 <sup>st</sup> sess.

**TABLE 9-C OTHER AUTHORIZED NAVIGATION PROJECTS**  
(See Section 37 of Text)

Project	For Last Full Report See Annual Report For	Cost to Sep. 30, 2009	
		Construction	Operation and Maintenance
Anclote River, FL	1974	\$ 267,427	\$ 2,754,269
Aguadilla Harbor, PR	-	-	739,000
Aquatic Plant Control, FL (R&H Acts of 1958 & 1962)	1968	1,664,910 <sup>1</sup>	-
Atlantic Gulf Ship Canal, FL	1939	5,099,153	-
Bayport, FL <sup>3</sup>	1972	58,524	-
Cedar Island, Keaton Beach, FL	-	-	55,000
Cedar Keys Harbor, FL	1977	168,569 <sup>2</sup>	76,023
Christiansted Harbor, St. Croix, VI <sup>6</sup>	1964	303,317	61,595
Clearwater Pass, FL	1980	46,349 <sup>3</sup>	2,438,551
Courtney Channel, FL <sup>1</sup>	1940	22,846	26,779
Crystal River, FL <sup>1</sup>	1941	25,000	152,208
Everglades Harbor, FL <sup>1</sup>	1964	221,509 <sup>4</sup>	51,034
Fajardo Harbor, PR <sup>3</sup>	1945	-	-
Guayanes Harbor, PR <sup>3</sup>	1945	-	-
Gulf Intracoastal Waterway St. Marks to Tampa Bay, FL <sup>3</sup>	1974	38,850	-
Hillsboro Inlet, FL <sup>24</sup>	1965	-	-
Homosassa River, FL <sup>1</sup>	1937	3,999 <sup>5</sup>	26,454
Horseshoe Cove, FL		347,521	1,663,959
Hudson River, FL <sup>3</sup>	1974	9,889	-
Intracoastal Waterway, Miami to Key West, FL <sup>3</sup>	1963	243,079	28,046
Key West Harbor, FL <sup>1</sup>	1972	1,548,892 <sup>6</sup>	534,623
Kissimmee River, FL <sup>1</sup>	1931	23,479	112,954
Lake Crescent and Dunns Creek, FL <sup>11</sup>	1931	10,276	9,035
Largo Sound Channel, FL <sup>12</sup>	1966	117,443 <sup>7</sup>	51,149
Little Manatee River, FL <sup>11</sup>	1949	11,903 <sup>8</sup>	-
Manatee River, FL <sup>15</sup>	1970	123,350	194,516
Miami River, FL	-	-	55,574,404
New River, FL <sup>1</sup>	1956	36,518	31,296
Orange River, FL <sup>1</sup>	1962	2,000	24,918
Ozona, FL, channel and turning basin <sup>1</sup>	1963	105,527	15,089
Palm Beach, FL, side channel and basin <sup>3</sup>	1946	-	-
Pass-A-Grille Pass, FL	1966	41,297 <sup>9</sup>	60,686
Pithlachascotee River, FL	1973	400,000 <sup>10</sup>	261,401
Rice Creek, FL <sup>1</sup>	1957	85,208 <sup>11</sup>	18,814
St. Petersburg Harbor, FL	1983	255,608 <sup>12</sup>	10,916,170 <sup>13</sup>
St. Thomas Harbor, VI <sup>3</sup>	1949	1,989	-
Sediment Management Pilot Program	-	-	190,880
Steinhatchee River, FL <sup>1</sup>	1940	135,053	64,270
Suwannee River, FL <sup>15</sup>	1977	76,418 <sup>14</sup>	1,256,387
Withlacoochee River, FL <sup>15</sup>	1969	614,912 <sup>15</sup>	663,960

<sup>1</sup> Excludes \$1,640,997 contributed funds.

<sup>2</sup> Includes \$82,500 expended under previous project. Excludes \$1,473 contributed funds.

<sup>3</sup> Excludes \$42,783 contributed funds.

JACKSONVILLE, FL DISTRICT

- <sup>4</sup> Excludes \$36,000 contributed funds.  
<sup>5</sup> In addition, \$1,000 expended from contributed funds.  
<sup>6</sup> Includes \$27,500 for new work under previous project. Excludes \$35,371 contributed funds.  
<sup>7</sup> Includes \$25,008 for detailed project report but excludes \$86,716 expended from contributed funds.  
<sup>8</sup> Expended on restudy.  
<sup>9</sup> Excludes \$41,297 contributed funds.  
<sup>10</sup> Excludes \$215,728 contributed funds.  
<sup>11</sup> Excludes \$93,000 contributed funds.  
<sup>12</sup> Includes \$32,689 under previous project.  
<sup>13</sup> Includes \$20,532 under previous project.  
<sup>14</sup> Includes \$10,154 expended under previous project.  
<sup>15</sup> Includes \$30,000 expended under previous project.

**TABLE 9-D OTHER AUTHORIZED BEACH EROSION PROJECTS**  
**(See Section 53 of Text)**

Project	For Last Full Report See Annual Report For	Cost to Sep 30, 2009	
		Construction	Operation and Maintenance
Cape Florida State Park, FL	1969	\$34,862	\$ -
El Tuque Beach, Ponce, PR	1985	1,396,730	-
Punta Salinas, PR	1984	855,511	-
Palm Beach County, FL, from Lake Worth Inlet to South Lake Worth Inlet	1970	195,140	6,257
San Juan, PR	1965	-	-

**TABLE 9-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS**  
**(See Section 67 of Text)**

Project	For Last Full Report See Annual Report For	Cost to Sep 30, 2009	
		Construction	Operation and Maintenance
Arch Creek, Dade County, FL	1960	\$66,485 <sup>1</sup>	-
Biscayne Bay, FL, Hurricane Protection <sup>2</sup>	1966	-	-
Hillsborough Bay, FL <sup>2</sup>	1969	-	-
Phillippi Creek Basin, FL <sup>2</sup>	1966	-	-

<sup>1</sup> Excludes \$11,734 cost of preauthorization studies. Project was authorized February 20, 1959, by Chief of Engineers under Section 205 of the 1948 Flood Control Act as modified by P.L. 685, 84th Congress.

<sup>2</sup> Deauthorized by Public Law 93-251, Section 12.

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

**TABLE 9-F DEAUTHORIZED PROJECTS**

<b>Project</b>	<b>For Last Full Report See Annual Report For:</b>	<b>Date and Authority</b>	<b>Federal Funds Expended</b>	<b>Contributed Funds Expended</b>
Central and Southern Florida (S.W. Dade Co. Area)	-	1 Jan 90 WRDA 86	-	-
Central and Southern Florida (Boggy Creek Basin)	-	do	-	-
Central and Southern Florida (Cutler Drainage Area)	-	9 Jul 95 PL 99-662	-	-
Central and Southern Florida (Hendry County)	-	do	-	-
Central and Southern Florida (Martin County Recreation)	-	do	-	-
Central and Southern Florida (Nicodemus Slough)	-	do	-	-
Central and Southern Florida (Reedy Creek Swamp)	-	do	-	-
Central and Southern Florida (Small Boat Harbor)	-	1 Jan 90 WRDA 86	-	-
Charlotte County, FL	-	18 Nov 91 PL 99-662	-	-
Cross Florida Barge Canal, FL	FY 2002	Jan 90 WRDA 90 PL 101-64	\$66,097,128	-
Four River Basin (Anclote River C-532, S-552), FL	-	1 Jan 90 WRDA 86	-	-
GIWW St. Marks to Tampa Bay, FL	-	do	38,850	-
Key West, FL	-	do	104,140	-

JACKSONVILLE, FL DISTRICT

**TABLE 9-F (Continued)**

**DEAUTHORIZED PROJECTS**

<b>Project</b>	<b>For Last Full Report See Annual Report For:</b>	<b>Date and Authority</b>	<b>Federal Funds Expended</b>	<b>Contributed Funds Expended</b>
Mullet Key, FL	-	do	436,201	187,133
Palm Beach to Lake Worth Inlet (1950 Act)	-	19 Jul 92 PL 99-662	195,140	781,188
San Juan and Vicinity, PR	-	1 Jan 90 WRDA 86	13,774,968	100,000
Virginia Key and Key Biscayne, FL	-	do	1,667,220	714,522

**TABLE 9-G**                      **NAVIGATION PROJECTS ON WHICH RECONNAISSANCE  
AND CONDITION SURVEYS ONLY WERE CONDUCTED DURING  
FISCAL YEAR**  
(See Section 36 of Text)

Project	Cost Incurred During Period
AIWW, Norfolk-St Johns River, FL	43,884
IWW, Caloosahatchee to Anclote River, FL	105,224
Clearwater Harbor, FL	43,884
Fernandina Harbor, FL	35,074
Fort Myers Beach, FL	17,537
Horseshoe Cove, FL	43,884
IWW, Jacksonville-Miami, FL	131,531
Johns Pass, FL	43,884
Cedar Keys Harbor, FL	61,381
Key West Harbor, FL	8,749
Long Boat Pass, FL	35,074
Manatee Harbor, FL	43,884
Miami River, FL	43,884
Okeechobee Waterway, FL	175,374
Palm Beach Harbor, FL	43,884
Pass-A-Grille Pass, FL	35,074
Ponce de Leon Inlet, FL	26,306
Port Everglades Harbor, FL	43,884
St. Lucie Inlet, FL	26,306
St. Petersburg, FL	43,884
Suwannee River, FL	43,884
Total	1,096,088

JACKSONVILLE, FL DISTRICT

**TABLE 9-H OKEECHOBEE WATERWAY  
OPERATIONS AND RESULTS DURING FISCAL YEAR  
(See Section 23 of Text)**

Work Performed	Cost
Operations and Maintenance:	
Operations:	
Operations of locks, dams, and reservoirs	\$739,130
Operation of service utilities	0
Operation of flood control structures	0
Environmental studies and monitoring	0
Natural resource management	0
Recreation management	0
Management of Natural Resources for Environmental Stewardship	195,693
Shoreline Management	25,209
Water Control Management	0
Condition and operation studies and activities	0
Operation/management of Recreation Areas/facilities, Reservoirs, Service Facilities and Equipment, Etc. for Recreation	301,164
Real estate management	0
National emergency preparedness program	0
Prevention of obstructive and injurious deposits	0
General regulatory functions	0
Construction Management	0
Contracting	0
Sub-Total	\$1,270,196
Maintenance:	
Maintenance of locks	\$3,429,092
Maintenance of non-recreational buildings and grounds	0
Resolution of Real Estate Encroachments for Environmental Stewardship	68,771
Maintenance of recreational facilities	256,007
Maintenance of permanent operating equipment non-recreational	0
Bank stabilization, maintenance of revetments and dikes	0
Channel and canal maintenance	0
Engineering and Design	0
Construction Management	0
Real Estate management	0
Natural Resource Management Envir	0
Security Upgrades	0
Sub-Total	\$3,753,870
Total	\$5,024,066



JACKSONVILLE, FL DISTRICT

**TABLE 9-J CENTRAL AND SOUTHERN FLORIDA PROJECT  
CONSTRUCTION COMPLETED DURING FISCAL YEAR 2009  
(See Section 76 of Text)**

Feature	Construction Period	Date transferred to Flood Control District for Operation and Maintenance
None completed	thru September 2009	Not Applicable

**TABLE 9-K CENTRAL AND SOUTHERN FLORIDA PROJECT  
STATUS OF WORK UNDER CONTRACT AT END OF FISCAL YEAR 2009  
(See Section 76 of Text)**

Feature	Construction Started	Approx. % Complete
Recreation:		
Locks:		
Manatee Pass Gates S78	January 2006	50
Pumps:		
C-111 332C	March 2004	85
C-111 S-331	May 2006	8
Channels and Canals		
C-51 Sta 1E PSTA	November 2005	100
Levees:		
USJ L-74N & S256	Aug 2004	100
USJ Three Forks Cnt 5H	July 2007	100
C51 Sta 1E Cnt5	December 2001	100
C51 Sta 1E Cnt7	July 2002	100
C51 Sta 1E Cnt6	September 2002	100
C-111 S332D Tieback Levees	June 2007	95
Floodway Control and Diversion		
USJ S-250E Cnt 4E	Sep 2005	100
USJ S-161 Mod Cnt 2B	Sep 2007	100

**TABLE 9-L            CENTRAL AND SOUTHERN FLORIDA PROJECT  
PRINCIPAL FEATURES OF HURRICANE GATES  
(See Section 77 of Text)**

<b>Gate<sup>1</sup> No.</b>	<b>Nearest Town Name</b>	<b>Distance (miles)</b>	<b>Depth Over Sills (feet)</b>	<b>Character of Founda- tion</b>	<b>Year Com- pleted</b>	<b>Actual Cost</b>
2.	Clewiston, FL	0.5	10	Pile	1935	\$309,748
3.	Lake Harbor, FL	0.5	10	Rock	1935	316,938
4.	Belle Glade, FL	4.0	10	Rock	1935	350,025
5.	Canal Point, FL	0.0	10	Rock	1935	262,465
6.	Okeechobee, FL	0.5	7	Pile	1936	373,273

<sup>1</sup>All are 50 feet wide with available length unlimited. They are constructed of concrete with steel sector Gate gates and have no lift. No. 6 has an auxiliary culvert spillway with automatic control. Moore Haven Lock serves as Hurricane Gate Structure 1.

JACKSONVILLE, FL DISTRICT

**TABLE 9-M                    CENTRAL AND SOUTHERN FLORIDA PROJECT  
LOCAL COOPERATION  
(See Section 77 of Text)**

<b>Flood Control Act</b>	<b>Work Authorized</b>	<b>Cash Contribution<sup>1</sup></b>
Jun. 30, 1948	First phase of comprehensive plan	15.0
Sep. 3, 1954	Second phase of comprehensive plan	49.7
Jul. 14, 1960	Nicodemus Slough area	31.5
Oct. 23, 1962	West Palm Beach Canal	4.3
	Boggy Creek Basin	29.7
	Shingle Creek Basin	25.9
	Reedy Creek Swamp	50.0
	Hendry County area	19.5
Aug. 13, 1968	Martin County	
	Flood Control Features	34.0
	Irrigation Features	49.0
	Backflow Features	20.0
P.L. 89-72	Recreation Features	50.0
	Water Resources - St. Lucie	20.0
	Recreation Features	50.0
Approved Dec. 17, 1970 under provisions of Section 201 of 1965 Flood Control Act (Deauthorized Jan. 1, 1990 by P.L. 99-662)	Navigation improvements suitable for recreational craft	50.0
P.L. 99-662	Upper St. Johns River Basin - non-structural flood protection	2.0
Flood Control Act of 1948, 1962 and 1968	Manatee Pass thru Gates	12.0
Flood Control Act of 1962 and 1968	Southwest Dade County	30.5
WRDA 2000 04 Jan 2007	Comprehensive Everglades Restoration Plan	50

<sup>1</sup> Computed on total contract cost and supervision and administration except for Reedy Creek Swamp and recreation features which are computed on all costs, including engineering and design and land.

**TABLE 9-N      CENTRAL AND SOUTHERN FLORIDA PROJECT  
OPERATIONS AND RESULTS DURING FISCAL YEAR  
(See Section 77 of Text)**

Work Performed	Cost
New Work:	
Channels and canal	\$ 0
Lands and damage	\$60,686
Levees	\$135,190
Pumping plants	\$2,344,521
Reconnaissance Studies	\$0
Floodway control	\$3,819,287
Feasibility	\$1,128,114
Engineering and design	\$54,220,079
Construction management	\$1,599,316
Relocations	\$0
Locks	\$1,215,476
Subtotal	\$64,522,669
Operations:	
Operation of locks, dams, reservoirs and performance system	1,306,808
Operation of service facilities	0
Operation of flood control structures	2,751,119
Environmental studies and monitoring	116,808
Natural resource management	241,904
Recreational management	235,518
Operation and maintenance of recreation facilities, service and maintenance of traffic counters, master planning	0
Condition and operation studies, periodic inspections, dam safety studies	61,101
Roads, railroads, and bridges	0
Water control management	932,915
National preparedness program	0
Prevention of obstructive and injurious deposits	0
General regulatory	0
Real estate management Contracting	0
Project operations management	2,109
Subtotal	\$ 5,648,282
Maintenance:	
Lands and damages	0
Maintenance of dams	0
Maintenance of locks	534,886
Maintenance of flood control structures	6,727,059
Maintenance of levees and floodwalls	0
Security Upgrades	0

JACKSONVILLE, FL DISTRICT

**TABLE 9-N      CENTRAL AND SOUTHERN FLORIDA PROJECT**  
**(Continued)      OPERATIONS AND RESULTS DURING FISCAL YEAR**  
**(See Section 77 of Text)**

Work Performed	Cost
Maintenance of recreational facilities	336,065
Maintenance and purchase of non-recreational permanent operating equipment	39,828
Bank stabilization	0
Environmental	0
Channel and canal maintenance	0
Engineering and Design	0
Construction Management	1,414,113
Real Estate Management	62,287
Sub-Total	\$ 9,114,238
Total	\$81,913,331

**TABLE 9-O**                      **FOUR RIVER BASINS, FLORIDA PROJECT**  
**CONDITION AT END OF FISCAL YEAR 2009**  
**(See Section 58 of Text)**

Feature	Construction Period	Date transferred to Southwest Florida For Operation and Maintenance
Bridges:		
B-194	Jul 1968 - Mar 1970	Not transferred
Alteration of Facilities B-195	May 1971 - Jan 1973	Do.
B-594	Jan 1973 - Jan 1974	Do.
Alteration of Facilities B-196	Oct 1972 - Jan 1975	Do.
SCL RR Bridge, B-196	Dec 1972 - Jul 1975	Jul 1975
Channels and Canals:		
C-135	May 1967 - Dec 1968	Dec 1968
C-135, Sec. 1A	Jul 1966 - Aug 1967	Oct 1967
C-135, Sec. 1B	May 1968 - Sep 1972	Not transferred
C-135, Sec. 1C & 2	Jan 1971 - Dec 1973	Not transferred
C-135, Sec. 3A	Dec 1972 - Apr 1975	Oct 1977
C-135, Sec. 3B	Feb 1975 - Aug 1977	Not transferred
C-135, Sec. 4A	Apr 1976 - Jan 1979	Not transferred
C-136	Aug 1975 - May 1977	Nov 1977
C-231, Phase I	Jul 1973 - Apr 1975	Dec 1975
C-231, Phase II	Jul 1973 - Jan 1974	Dec 1975
C-331	Jul 1967 - Sep 1968	Sep 1968
C-531	Apr 1966 - Jan 1969	Apr 1969
C-534	Jun 1979 - Jul 1971	Nov 1971
C-135	Mar 1977 - Oct 1980	
Structures:		
S-160	May 1967 - Dec 1968	Dec 1968
S-161	Aug 1975 - May 1977	Nov 1977
S-162	Apr 1975 - Jun 1977	Apr 1977
S-353	Jul 1967 - Sep 1968	Nov 1968
Moss Bluff Lock and Spillway	Apr 1967 - Mar 1969	Dec 1975
S-551	Jul 1970 - Feb 1972	Not transferred
Levees:		
L-212, Sec. 1	Jun 1968 - Jul 1970	Dec 1975
L-212, Sec. 2	Jul 1970 - Sep 1971	Dec 1975
L-112	Mar 1977 - Oct 1980	Oct 1980
L-112 & Floodway	May 1978 - Jul 1981	Jan 1983
S-155	May 1978 - Jul 1981	Jan 1983
S-163	May 1978 - Jul 1981	Jan 1983
S-159 Middle & Lower	Apr 1979 - Aug 1981	Oct 1981
S-159 Upper	Jun 1979 - Sep 1981	



**TABLE 9-Q FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION  
PURSUANT TO SECTION 205, PUBLIC LAW 685,  
(PREAUTHORIZATION)  
(See Section 68 of Text)**

Study Identification	Period Costs
LaGrange Gut, VI	\$ 4,809
Rio Anton Ruiz-Runta, Santiago, PR	13,730
Rio El Ojo De Agua, PR	2,084,745
Rio Fajardo, PR	898,882
Rio Patillas, PR	39,328
Section 205 Coordination	18,016
Turpentine Run, St. Thomas, VI	28,843
TOTAL FY COST	\$ 3,088,353

# MOBILE, ALABAMA, DISTRICT

This district comprises a small portion of southeastern Tennessee, western Georgia, western Florida, all of Alabama south of Tennessee River Basin, eastern Mississippi, and a small portion of southeastern Louisiana embraced in drainage basins tributary to the Gulf of Mexico, west of Aucilla River Basin, to and including the Pascagoula River Basin. The Pearl River

Basin, Mississippi was included as part of the Mobile District until October 1, 1981, when responsibilities were transferred to Vicksburg District, Lower Mississippi Valley Division. A section of the Gulf Intracoastal Water from St. Marks, Florida, to Lake Borgne Light No. 29, Louisiana is also within Mobile District.

## IMPROVEMENTS

### Navigation

	<b>Page</b>
1. Alabama-Coosa Rivers, AL and GA .....	10-3
1A. Claiborne Lock and Dam, AL .....	10-3
1B. Coosa River, Montgomery to Gadsden, AL .....	10-4
2. Apalachicola Bay, FL .....	10-4
3. Apalachicola, Chattahoochee, and Flint Rivers, AL, FL and GA .....	10-4
3A. George W. Andrews Lock and Dam, AL and GA .....	10-5
4. Aquatic Plant Control (R & H Act of 1965) .....	10-6
5. Bayou Coden, AL .....	10-6
6. Bayou La Batre, AL .....	10-6
7. Biloxi Harbor, MS .....	10-7
8. Black Warrior and Tombigbee Rivers, AL .....	10-8
9. Bon Secour River, AL .....	10-8
10. Carrabelle Harbor, FL .....	10-9
11. Dauphin Island Bay, AL .....	10-9
12. Dog and Fowl Rivers, AL .....	10-10
13. East Pass Channel From Gulf of Mexico into Choctawhatchee Bay, FL .....	10-10
14. Fly Creek, Fairhope, AL .....	10-10
15. Gulf Intracoastal Waterway between Apalachee Bay, FL and Mexican Border .....	10-11
16. Gulfport Harbor, MS .....	10-11
17. Mobile Harbor, AL .....	10-11
18. Panama City Harbor, FL .....	10-12
19. Pascagoula Harbor, MS .....	10-13
20. Pensacola Harbor, FL .....	10-13
21. Perdido Pass Channel, AL .....	10-14
22. Tennessee-Tombigbee Waterway, AL and MS .....	10-14
22A. Tennessee-Tombigbee Wildlife Mitigation, AL and MS .....	10-15

	<b>Page</b>
23. Other Authorized Navigation Projects .....	10-15
24. Other Authorized Beach Erosion Control Projects .....	10-16
25. Other Authorized Flood Control Projects .....	10-16
26. Deauthorized Projects .....	10-16
27. Navigation Work Under Special Authorization .....	10-16
28. Flood Control Work Under Special Authorization .....	10-16
29. Reconnaissance and Condition Surveys .....	10-16

### Flood Control

30. Matubbee Creek, MS .....	10-16
31. Weaver Creek, MS .....	10-16
32. Okatibbee Lake, MS .....	10-16
33. Tombigbee River (East Fork), MS and AL .....	10-17
34. Tombigbee River and Tributaries, MS and AL .....	10-17
35. Village Creek, Birmingham, AL .....	10-17
36. Flood Control Work Under Special Authorization .....	10-17
37. Inspection of Completed Flood Control Projects .....	10-18
38. Other Authorized Flood Control Projects .....	10-18

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

<b>Multiple Purpose Power Projects</b>		<b>Page</b>	<b>Tables</b>	<b>Page</b>
39.	Allatoona Dam		Table 10-A	Cost and Financial Statement..... 10-24
	Coosa River Basin, GA .....	10-18	Table 10-B	Authorizing Legislation .....
40.	Buford Dam,		Table 10-C	Other Authorized
	Lake Sidney Lanier, GA.....	10-19		Navigation Projects..... 10-38
41.	Carters Dam and Reservoir, GA.....	10-19	Table 10-D	Other Authorized Beach Control
42.	Jim Woodruff Lock and			Erosion Control Project..... 10-38
	Dam, FL and GA.....	10-19	Table 10-E	Other Authorized Flood
43.	Millers Ferry Lock and Dam, AL.....	10-20		Control Projects .....
44.	Robert F. Henry Lock and Dam, AL.....	10-20	Table 10-G	Deauthorized Projects .....
45.	Walter F. George Lock and		Table 10-H	Navigation Work Under
	Dam, AL & GA.....	10-21		Special Authorization..... 10-40
46.	West Point Lake,		Table 10-J	Flood Control Work Under
	Chattahoochee River Basin, AL and GA .....	10-21	Table 10-K	Special Authorization..... 10-41
				Reconnaissance and Condition
				Surveys..... 10-42
<b>Miscellaneous</b>				
47.	Scheduling Flood Control		Table 10-L	Alabama-Coosa Rivers, AL and GA
	Reservoir Operations.....	10-22		Development Proposed Under
48.	Flood Control and Coastal			Existing Project..... 10-42
	Emergencies (FC&CE) .....	10-22	Table 10-M	Apalachicola, Chattahoochee, and Flint
49.	National Emergency Preparedness			Rivers, AL, GA, and FL, Locks and Dams
	Program (NEPP).....	10-22		And Multiple-Purpose Development
50.	Regulatory Functions Program.....	10-22		Included in Existing Projects .....
51.	Project Modification to		Table 10-N	Black Warrior and Tombigbee
	Improve Environment .....	10-22		Rivers, AL..... 10-44
52.	Aquatic Ecosystem Restoration		Table 10-O	Tennessee-Tombigbee Waterway,
	(Sec. 206) .....	10-22		AL and MS..... 10-45
53.	Other Aquatic Habitat		Table 10-P	Completed Flood Insurance Studies
	(Sec. 204) .....	10-23		And Flood Hazard Information Reports
				For FY 1992 Through FY 2009 .....
				10-46
<b>General Investigations</b>				
54.	Surveys.....	10-23		
55.	Collection and Study of Basic Data .....	10-23		
56.	Preconstruction Engineering and Design .....	10-23		
57.	Rivers and Harbors			
	Contributed Funds.....	10-23		

## Navigation

### 1. ALABAMA-COOSA RIVERS, AL AND GA

**Location.** Alabama River is formed 18 miles above Montgomery, Alabama, by the junctions of the Coosa and Tallapoosa Rivers. It then flows southwesterly through Alabama 318 miles and unites with the Tombigbee River about 45 miles north of Mobile, in southwestern Alabama, to form the Mobile River. (See Geological Survey maps for central and southwest Alabama.) The Coosa River is formed at Rome, Georgia, in northwest Georgia, by the junction of the Oostanaula and Etowah Rivers, which have their sources in southeastern Tennessee and northern Georgia. From Rome the Coosa River flows southwesterly through Georgia and Alabama 286 miles and unites with the Tallapoosa River near Montgomery, Alabama, at about the center of the State, to form the Alabama River. (See Geological Survey maps for northeast Alabama, southeast Tennessee, and northwest Georgia.)

**Previous project.** Projects for Alabama River: for details see page 1837, Annual Report for 1915; page 725, Annual Report for 1938; and page 592, Annual Report for 1944. Projects for Coosa River: for details see page 1837, Annual Report for 1915; page 728, Annual Report for 1938; and page 594, Annual Report for 1944.

**Existing project.** The authorized project provides for full development of the Alabama-Coosa Rivers and tributaries for navigation, flood control, power, recreation, and other purposes, in accordance with plans under preparation by Chief of Engineers, subject to modifications thereof which may be advisable for increasing development of hydroelectric power. (See Table 10-B for authorizing legislation.) Public Law 436, 83rd Congress, suspended authorization of the comprehensive plan, insofar as it provides for development of hydroelectric power for Coosa River, to permit non-Federal interests to develop the Coosa River by construction of a series of dams in accordance with conditions of a license issued pursuant to Federal Power Act and in accordance with certain other provisions and requirements of the aforementioned public law. The plan was further modified by the WRDA of 1986 to authorize planning, engineering and design for the project generally in accordance with the plans contained in Design Memorandum No. 1, General Design, dated May 1982. The present phase of improvement includes the construction of Robert F. Henry and Millers Ferry multiple-purpose improvements, Claiborne Lock and Dam, and supplemental channel work providing for a nine-foot deep navigation channel from the mouth of the Alabama River to Montgomery, Alabama, and construction of Carters Dam, a multiple-purpose improvement on Coosawattee River, Georgia.

**Local cooperation.** Requirements of local cooperation will be determined as formulation of plans for development of projects

progress. No action in the matter of local cooperation has been initiated.

**Terminal facilities.** On the east bank of the river a natural landing connects with city streets at Montgomery. There are also various natural landings along the river. Facilities and natural landings on Alabama River are considered adequate for existing commerce.

#### **Operations and results during fiscal year.**

**Maintenance:** Operation and maintenance for Claiborne Lock and Dam, navigation maintenance for the waterway, snagging and clearing of channels and general charges for water control management, condition surveys, engineering and design, supervision and administration amounted to \$15,552,160.

**Condition at end of fiscal year.** Construction was initiated on Carters Dam in April 1962, on Millers Ferry Lock and Dam in April 1963, Claiborne Lock and Dam in May 1965, and Robert F. Henry Lock and Dam in June 1966. Carters Dam was completed in FY 1980. The authorized nine-foot navigation channel to Montgomery, Alabama was opened to traffic in January 1972. Overall construction is complete in Millers Ferry Lock and Dam. Construction of Robert F. Henry Lock and Dam is complete. Total Federal cost of the existing project as of September 30, 2009 is \$141,994,640, including \$3,245,400 for new work and \$138,749,240 for maintenance. (See Table 10-L.)

### 1A. CLAIBORNE LOCK AND DAM, AL

**Location.** The site is in Monroe County at mile 72.5 on the Alabama River, 15 miles northwest of Monroeville and 5.7 miles upstream from the U.S. Highway 84 bridge.

**Existing project.** The existing project consists of a short earth dike on the right bank, a combination of a fixed-crest and gated spillway extending across the river channel and into the left bank, a navigation lock and mound on the left bank, and an earth dike extending across the left overbank to high ground. Normal upper pool is elevation 35 and the minimum pool will be elevation 32 to provide storage for reregulation of Millers Ferry powerplant releases. The 60-mile long reservoir has an area of 5,850 acres and a volume of 96,360 acre-feet. For other information see description of Alabama-Coosa projects.

#### **Operations and results during fiscal year.**

**Maintenance:** Maintenance cost included under overall Alabama-Coosa Rivers, Alabama and Georgia.

**Condition at end of fiscal year.** Construction began in May 1965 and was completed in FY 1976 at a total cost of \$27,997,450. Recreation attendance during FY 2009 totaled 240,605 visits.

## 1B. COOSA RIVER, MONTGOMERY TO GADSDEN, AL

**Location.** The Coosa River is one of the two major tributaries forming the Alabama River approximately 18 miles northeast of Montgomery, Alabama. From its source at the juncture of the Etowah and Oostanaula Rivers in northwest Georgia, it flows southwesterly about 286 miles to join with the Tallapoosa River in forming the Alabama River.

**Existing project.** The improvement of the Alabama-Coosa River for navigation to Rome, Georgia was authorized by Congress in the River and Harbor Act of 1945. A report in House Document 320, transmitted to Congress on January 27, 1960, recommended that the navigation project for the Coosa River from Montgomery to Gadsden be accomplished after the waterway to Montgomery was assured. The plan of improvement identified in House Document 320 provided for a waterway 9 feet deep with widths of 200 feet to Montgomery, Alabama, and 150 feet to Rome, Georgia. The waterway to Montgomery is complete. The plan for the Coosa River segment of the waterway between Montgomery and Gadsden was further modified by the WRDA of 1986 to authorize planning, engineering and design for the project generally in accordance with the plans contained in Design Memorandum No. 1, General Design, dated May 1982. Total Federal cost of the existing project as of September 30, 2009 is \$14,988,935 for new work.

## 2. APALACHICOLA BAY, FL

**Location.** The project is on the coast of northwest Florida 160 miles east of Pensacola Harbor. (See Coast and Geodetic Survey Chart 11401.)

**Previous project.** For details, see page 1833, Annual Report for 1915, and page 689, Annual Report for 1938.

**Existing project.** The existing project provides for: (a) A channel 10 feet deep and 100 feet wide from the 10-foot depth in Apalachicola Bay, across St. George Island, to within 300 feet of the gulf shore, thence increasing uniformly in width to 200 feet at the shore and continuing with that width to the 10-foot depth in the Gulf of Mexico, with twin jetties extending from the dune line to the outer end of the channel; (b) an inner bar channel, 10 feet deep and 100 feet wide, in Apalachicola Bay; (c) a boat basin 200 feet by 880 feet and 9 feet deep at Apalachicola, Florida, with a connecting channel 9 feet deep and 80 feet wide through Scipio Creek to Apalachicola River; (d) a channel known as Link Channel, 10 feet deep and 150 feet wide, in Apalachicola Bay; (e) a channel generally parallel to the shore at Eastpoint, Florida, 6 feet deep, 100 feet wide, and about 6,000 feet long, and a connecting channel 6 feet deep and 100 feet wide to water at the same depth in St. George Sound, with twin breakwaters on either side parallel to the shore and having a total length of 5,300 feet; (f) a channel 10 feet deep and 100 feet wide through Bulkhead Shoals, connecting Apalachicola Bay with St. George

Sound; and (g) a 6-foot by 100-foot channel about one mile long, generally parallel to the shore at Two Mile, Florida, with a 6-foot by 100-foot connecting channel to water of the same depth in Apalachicola Bay. Mean range of tide throughout this harbor is 1.6 feet. Extreme range, except during storms, is about three feet. Plane of reference is mean low water. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Facilities consist of pile-and-timber wharves which are considered adequate for existing commerce.

### Operations and results during fiscal year.

Maintenance: Condition surveys and other miscellaneous costs amounted to \$5,688.

**Condition at end of fiscal year.** The existing project, authorized by the 1954 River and Harbor Act, was completed in 1959, including reimbursement to local interests for approved work, as authorized by the 1958 River and Harbor Act. Improvements at Two Mile except for modifications authorized in 1975 were completed in September 1964. Construction of the breakwater and channel improvements authorized in 1975 at Two Mile was completed in September 1977. Construction of breakwaters at Eastpoint authorized in 1983 was completed in March 1984. Total Federal cost under existing project as of September 30, 2009 is \$2,033,461 for new work and \$10,057,431 for maintenance, a total of \$12,090,892.

## 3. APALACHICOLA, CHATTAHOOCHEE, AND FLINT RIVERS, AL, GA, AND FL

**Location.** The Apalachicola River is formed at the southwest corner of the State of Georgia by the junction of the Chattahoochee and Flint Rivers and flows south 108 miles emptying into Apalachicola Bay. The Florida River enters the Apalachicola from the east at mile 45.4 and the River Styx also enters from the east at mile 36.7 and Chipola River enters from the west at mile 28.2. (See Coast and Geodetic Survey Chart 11401.) The Chattahoochee River, 418 miles long, rises in northeast Georgia and flows southwesterly to West Point, and thence southerly to join the Flint River at the southwest corner of Georgia, forming the Apalachicola River. (See Geological Survey maps for northwest Georgia.) The Flint River, 330 miles long, rises in west central Georgia, flows generally southeasterly to Albany, and thence southwest to the southwest corner of the State, where it joins the Chattahoochee River to form the Apalachicola River. (See Geological Survey maps for southwest Georgia.)

**Previous project.** For details see page 484 of Annual Report for 1963.

## MOBILE, ALABAMA, DISTRICT

**Existing project.** The authorized project provides for development of the Apalachicola, Chattahoochee, and Flint Rivers for navigation, flood control, hydropower, and recreation. Navigation features of the existing project consist of a continuous 9-foot by 100-foot channel in the Apalachicola River from the intersection of the Gulf Intracoastal Waterway to the confluence of the Chattahoochee and Flint Rivers, 104 miles, thence to Columbus, Georgia, on the Chattahoochee River, 164 miles, and to Bainbridge, Georgia, on the Flint River, 29 miles, and a 3-foot by 100-foot channel on the Flint River from Bainbridge to Albany, Georgia, 74 miles, thence a channel suitable for light draft vessels at moderate stage to Montezuma, Georgia, 79 miles to be accomplished by dredging, contract works, and construction of three locks and dams (Jim Woodruff, George W. Andrews, and Walter F. George) along the 9-foot depth channel, two multipurpose dams (West Point and Buford) on the Chattahoochee River. Three multipurpose dams (Lower Auchumpkee Creek, Lazer Creek, and Spewrell Bluff) on the Flint River were deauthorized in the Water Resources Development Act of 1986. The project also provides for minor improvements of certain streams tributary to the Apalachicola River, including a 9-foot by 100-foot side channel, approximately 2,000 feet long, from Apalachicola River to Apalachicola River Industrial Park at Blountstown, Fla. Plane side of reference is mean low water. Hydropower and flood control storage is provided at Sidney Lanier, Walter F. George, and West Point, and hydropower is provided at Jim Woodruff. For further details see Annual Report for 1962. The project was originally authorized in section 2 of the River and Harbor Act of 1945, was further modified by the WRDA of 1986 (P.L. 99-662). (See Table 10-B for authorizing legislation.)

Mean range of tide at the mouth of Apalachicola River is 1.6 feet. At the point where the river is formed the variation between low and high water is about 37 feet. On the Chattahoochee River, variation between average low and high water is about 20 feet, and extreme fluctuation is 65.3 feet at Eufaula. On the Flint River the extreme fluctuation of stage due to flood is 40 feet, while average variation between low and high water is about 21.5 feet. A Comprehensive Basin Study has been completed on the Apalachicola, Chattahoochee, Flint (ACF), and Alabama-Coosa-Tallapoosa (ACT) River Systems. No maintenance dredging has been conducted on the Apalachicola River portion of the navigation project since 2001, and the State of Florida has denied Section 401 water quality certification for the project. A report to higher headquarters was submitted in February 2006, and in July 2006 it was determined that maintenance dredging of the Apalachicola River portions of the project would be deferred.

**Local cooperation.** The six Florida Counties that originally served as local sponsors for the Florida portion of the waterway have all informed the District in writing that they no longer wish to serve as local sponsors. The State of Florida has also declined assumption of responsibilities of local sponsorship. At this time no items of local cooperation are being complied with. No local

sponsors are required for the Alabama and Georgia portions of the waterway.

**Terminal facilities.** About 200 feet of public docks, in addition to private wharves, are available at Apalachicola, Florida. There are numerous constructed and natural landings along the entire system for launching small craft. For details of other terminal facilities, which are considered adequate for existing commerce, see individual project descriptions. See also Table 10-M on locks and dams and multiple-purpose development included in existing project.

### **Operations and results during fiscal year.**

**Maintenance:** Operation and maintenance of George W. Andrew Lock and Dam is included in overall project. All other cost for the project amounted to \$2,602,251.

**Condition at end of fiscal year.** Improvement of Apalachicola River channel by dredging to provide project dimensions throughout is complete. All major construction on Lake Sidney Lanier Dam, George W. Andrews Lock and Dam, Jim Woodruff Lock and Dam, Walter F. George Lock and Dam and West Point are complete. Channel rectification in Apalachicola River was completed December 1970. More detailed information concerning condition at the end of fiscal year for individual locks and dams and multiple-purpose developments comprising the system is presented under their respective project titles elsewhere in this report. Total Federal cost under existing project as of September 30, 2009 is \$4,452,162 for new work and \$167,758,994 for maintenance, a total of \$172,211,156. (See Tables 10-A and 10-M for fiscal year costs and summaries of overall project.)

### **3A. GEORGE W. ANDREWS LOCK AND DAM, AL AND GA**

**Location.** The project is on the Chattahoochee River about 46.5 miles above its mouth and about one mile below the town of Columbia, Alabama, near the head of Jim Woodruff Reservoir. (See Geological Survey maps for southeast Alabama). The pool extends up the navigation channel about 28 miles upstream to Walter F. George Lock and Dam.

**Existing project.** This single-purpose project provides for a concrete fixed-crest spillway 340 feet long extending into the right bank with a crest at elevation 102 feet national geodetic datum, a concrete gate spillway adjacent to the lock 280 feet long with crest at elevation 82 feet national geodetic datum, a single-lift lock with usable chamber dimensions of 82 feet by 450 feet, and a maximum lift of 25 feet. Depths are 13 feet over the lower sill and 19 over the upper sill at normal pool elevation. The underlying foundation is limestone. The project provides for maintenance and care. The House Committee on Public Works, by resolution adopted May 19, 1953, approved the plan as proposed by the Chief of Engineers for a high dam at Walter F. George site and a low dam at the Fort Benning site and a high dam at the upper Columbia site, construction of which was authorized by the 1946 River and

Harbor Act as the initiation and partial accomplishment of the plan for full development of the Apalachicola, Chattahoochee, and Flint River system. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Local interests must operate all movable span bridges, provide suitable public terminals, and hold the United States free from damages. These conditions are being complied with.

**Terminal facilities.** At Columbia, Alabama, there is a public wharf with concrete deck for handling general cargo and a bulk petroleum terminal with an unloading dock. Facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.**

Maintenance: Maintenance cost included under overall Apalachicola, Chattahoochee and Flint project. Recreation attendance for FY 2009 totaled 271,535.

**Condition at end of fiscal year.** Construction of the lock and dam began in March 1959 and was completed in November 1963 at a total cost of \$13,038,427. (See also Table 10-M).

**4. AQUATIC PLANT CONTROL  
(RIVER AND HARBOR ACT OF 1965)**

**Location.** Navigable water, tributary streams, connecting channels and other allied waters in Mobile District.

**Existing project.** The existing project provides for management and control of water hyacinth, alligatorweed, Eurasian watermilfoil, hydrilla, and other obnoxious aquatic plant growths from navigable water, tributary streams, connecting channels, and other allied waters of the United States, in the combined interest of navigation, flood control, drainage, agriculture, fish and wildlife conservation, public health, and related purposes, including continued research for development of the most effective and economical control measures to be administered by the Chief of Engineers, under the direction of the Secretary of the Army, in cooperation with other Federal and State agencies. Research and planning cost prior to construction shall be borne fully by the United States. (See Table 10-B for authorizing legislation).

**Local cooperation.** Local interests shall agree to hold and save the United States free from claims that may occur from control operations and to participate to the extent of 50 percent of such operations. Requirements are being met in the State of Alabama by the Department of Conservation and Natural Resources.

**Operations and results during fiscal year.** Environmental studies amounted to \$13,859.

**Condition at end of fiscal year.** Total Federal cost under the exiting project as of September 30, 2009 is \$995,633. Contributed funds for maintenance amount to \$21,225.

**5. BAYOU CODEN, AL**

**Location.** The project is located in a small tidal stream on the southern coast of Mobile County, Alabama, emptying into Mississippi Sound about 7.6 miles northwest of Cedar Point, the southern tip of western mainland shore of Mobile Bay. (See Coast and Geodetic Survey Chart 11376.)

**Previous project.** For details see Annual Report for 1945, page 843.

**Existing project.** The existing project provides for a channel 8 feet deep by 60 feet wide extending from La Belle Avenue bridge south for about 3,000 feet through the bayou to Portersville Bay, thence 8 feet deep by 100 feet wide extending about 2.3 miles westward across Portersville Bay to connect with the Bayou La Batre channel, and a turning basin 8 feet deep by 60 feet wide by 100 feet long on the west side of the bayou channel about 500 feet south of the La Belle Avenue bridge. Mean tidal range is 1.75 feet, and extreme, except during storms, is 3.5 feet. Plane of reference is mean low water. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Small privately-owned timber dock piles used in connection with fishing industry in this locality are adequate for existing commerce. A small ship building facility is located near the upper limits of the channel. The marina which will accommodate about 12 small recreational craft, and a slip with facilities for loading oyster shells are located near the mouth of the bayou, and are maintained by the Alabama Department of Conservation.

**Operations and results during fiscal year.**

Maintenance: No funds were appropriated or expended this fiscal year, condition surveys were funded from the project condition survey account.

**Condition at end of fiscal year.** That portion of the project authorized prior to the 1969 modification was completed in 1956. Construction authorized in 1969 was initiated March 31, 1975 and completed March 26, 1976. Total Federal cost under existing project as of September 30, 2009 is \$330,701 for new work and \$3,466,503 for maintenance, a total of \$3,797,204. Contributed funds expended for new work amount to \$100,000 and \$131,912 for maintenance.

**6. BAYOU LA BATRE, AL**

**Location.** Bayou La Batre is a tidal stream about 10 miles long, emptying into Mississippi Sound on the southern coast of Mobile County, AL., about 10 miles northwest of Cedar Point, the southern tip of the western mainland shore of Mobile Bay. (See Coast and Geodetic Survey Chart 11373.)

## MOBILE, ALABAMA, DISTRICT

**Previous project.** For details see Annual Report for 1945, page 844.

**Existing project.** The existing project provides for a 18-foot by 120-foot channel from Pascagoula Ship channel, connecting with the GIWW, along the GIWW alignment, connecting with an extension of the previous 12-foot channel alignment, through Mississippi Sound to the mouth of the bayou, a total distance of approximately 20 miles; then provides for a 12-foot by 100-foot channel to a point about 2,800 feet south of the highway bridge, thence a channel 12 feet deep by 75 feet wide to the bridge, with the channel widened at a point 0.6 mile below the bridge to provide a turning basin 12 feet deep and about 2.6 acres in area. Authorized by the Water Resources Development Act of 1990, the plan of improvement includes deepening channel to 18-foot by 100-foot from the mouth through the turning basin, a distance of about 1.8 miles; deepen channel from turning basin to 0.29 miles above highway 188 bridge to 14-feet by 75-feet, a distance of about 0.89 miles; extend a 14-foot by 50-foot channel from turning basin into Snake Bayou for about 730 feet and a 12-foot by 50-foot channel within Snake Bayou about 790 feet. Mean tidal range is 1.75 feet, and extreme, except during storms, is 3.75 feet. Plane of reference is mean low water. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Wooden wharves have been provided at seafood processing plants and public launching ramps are available. Several boatways for construction of small seagoing vessels are also available. Facilities are adequate for existing commerce.

### **Operations and results during fiscal year.**

New work: None.

Maintenance: Condition surveys, environmental permits and miscellaneous costs amounted to \$597,846.

**Condition at end of fiscal year.** The existing project was modified December 30, 1966 under the discretionary authority of the Chief of Engineers to include a turning basin. The project was completed in March 1967. The contract for deepening the Sound Channel was completed in May 1994. The construction of the Bayou Channel was completed in September 1997. Total Federal cost under existing project as of September 30, 2009 is \$5,755,195 for new work and \$13,018,229 for maintenance, a total of \$18,773,424. Contributed funds from local interests for new work amount to \$678,618.

## **7. BILOXI HARBOR, MS**

**Location.** The project is located on Mississippi Sound in southeastern Mississippi, 32 miles by water west of Pascagoula Harbor, Mississippi, and 14 miles east of Gulfport Harbor, Mississippi (See Coast and Geodetic Survey Chart 11373.)

**Previous project.** For details see page 584, Annual Report for 1962.

**Existing project.** The existing project provides for a continuous channel 12 feet deep, 150 feet wide and 23 miles long from the Gulf Intracoastal Waterway through Mississippi Sound east of Deer Island, Biloxi Bay, Back Bay, Cranes Neck, and a land cut to Gulfport lake, including a 500-foot by 2,600-foot basin in the lake, thence a 12-foot deep by 100-foot wide channel for about two miles westward from the west end of the lake, terminating in a 300-foot by 500-foot basin; a 12-foot by 100-foot channel from the main channel in Big Lake to and up Bayou Bernard to the Air Force oil terminal at about mile 2.6; a 12-foot by 150-foot spur channel from the main channel in Biloxi Bay for about one mile, terminating in a 400-foot by 600-foot turning basin opposite Ott Bayou; continuation of maintenance of the 12-by 150-foot lateral channel westward about 2.2 miles to Biloxi's south waterfront; a 10-foot by 150-foot channel from Mississippi Sound, passing west of Deer Island to a point where it connects to the 12-foot by 150-foot lateral channel at Biloxi's south waterfront. Construction for the modifications lateral channel authorized by River and Harbor Act of November 7, 1966 was commenced in FY 1974 and completed in February 1975. Further modifications to the project were authorized by the Chief of Engineers on March 28, 1979, which provided for a channel 10 feet deep, 100 feet wide and 300 feet long extending northward from the Biloxi Lateral Channel, and into a rectangular basin, approximately 300 by 370 feet, for use by commercial small craft, and an East Harrison County Canal project which provides for a 12-foot project depth, 130-foot wide and about 2,100 feet long, and a 300 by 300 foot turning basin also to a 12-foot project depth. This work was completed in April 1980.

Cost of modification as authorized by the 1966 River and Harbor Act was \$664,390. That portion of the project providing for an entrance channel 6 feet deep, 50 feet wide,

and about 1,800 feet long into Old Fort Bayou, as authorized by the 1945 River and Harbor Act, is inactive. Estimated cost (1954) of this portion was \$6,000. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** A number of wooden piling-and-timber piers for small craft and fishing boats, a bulk gasoline terminal, several boat ways, and concrete products plant are available.

### **Operations and results during fiscal year.**

Maintenance: Condition surveys, supervision and administration and miscellaneous costs totaled \$11,674.

**Condition at end of fiscal year.** The existing project, prior to the modification authorized in 1966, was commenced in 1931 and completed in 1962. The 1966 modification was completed in FY 1975. The 1979 modification was completed in 1980. Total Federal cost under existing project as of September 30, 2009 is

\$1,431,919 for new work and \$23,594,063 for maintenance, a total of \$25,025,982. Contributed funds for new work amount to \$102,600. Contributed funds for maintenance amount to \$238,640.

## 8. BLACK WARRIOR AND TOMBIGBEE RIVERS, AL

**Location.** Black Warrior River rises in northern Alabama above Birmingham and flows generally southwesterly to unite with the Tombigbee River at Demopolis, Alabama. Thence the Tombigbee flows south, uniting with the Alabama River to form the Mobile River 45 miles above the head of Mobile Bay. Distance by water from Mobile to vicinity of Birmingham is about 430 miles.

**Previous project.** For details see page 732, Annual Report for 1938.

**Existing project.** The existing project provides for a channel 9 feet deep and 200 feet wide from the mouth of the Tombigbee River, 45 miles above Mobile, to the vicinity of Birmingham, via the Tombigbee and Black Warrior Rivers, to mile 430.4 on Sipsey Fork, mile 429.6 on Mulberry Fork and mile 407.8 on Locust Fork, and for maintenance by snagging of Mobile River above the mouth of Chickasaw Creek, a total waterway distance of about 408 miles. The total lift of 255 feet is accomplished by six locks and dams. The original construction program, consisting of 17 dams and 18 lifts, was completed in 1915. Replacement of the original structures with new 110-by 600-foot locks and dams, under the modernization program is as follows: William Bacon Oliver replaced locks 10, 11, and 12; Armistead I. Selden replaced locks 8 and 9; Demopolis replaced locks 4, 5, 6, and 7; Coffeerville (Jackson) replaced locks 1, 2, and 3; and Holt replaced locks 13, 14, 15, and 16. Thus, 16 of the original locks have been replaced by five new locks. Bankhead Lock and Dam (Lock 17) rehabilitation to replace the original double lift lock with a single lift lock was completed in 1980. The Coffeerville Lock and Dam wildlife refuge, authorized in 1960, includes 4,250 acres within the reservoir area and along its boundaries. A replacement lock for the old Oliver Lock located 2,300 feet downstream has been completed. The replacement lock has dimensions of 110 feet by 600 feet. A fixed crest spillway extends 800 feet across the river. Minimum provision was provided to allow construction of a hydropower plant. (See Table 10-B for authorizing legislation.)

Tidal influence extends upstream from Mobile 101.6 miles to Coffeerville Lock and Dam, where tidal effect is apparent only at low stages of the river. At Mobile the mean and extreme tidal ranges are 1.5 and 3.6 feet, respectively. These are at times slightly increased by the effect of winds. The greatest fluctuation of river stages is at Demopolis, Ala., the maximum being 59.7 feet. Maximum fluctuations at other points are 40 feet at old lock 1, which is 100.6 miles from Mobile; 57.8 feet at Tuscaloosa, 346.1 miles from Mobile; 13 feet at Birminghamport, 404.9 miles from Mobile; and 27 feet at Cordova, 424.3 miles from Mobile. Ordinary fluctuations at these points are at old lock 1, 20 feet; at

Demopolis, 35 feet; at Tuscaloosa, 40 feet; at Birminghamport, four feet; and at Cordova, seven feet. Works of improvement reduced the amount of fluctuations at different points by three to 10 feet.

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Docks, storage facilities, and handling equipment have been provided as required at most loading and unloading points along the waterway. These include facilities for handling petroleum and petroleum products, coal, ores, sand and gravel, pulpwood, manufacturers, and various other commodities. While most terminal facilities are privately owned, many are available for use by the general public. Facilities are considered adequate for existing commerce. (See Table 10-N for existing locks and dams.)

### Operations and results during fiscal year.

Maintenance: Contract dredging of the river system, condition surveys, engineering and design cost supervision, administration and other general charges for the overall river project totaled \$20,186,000. Recreation attendance for FY 2009 totaled 4,036,500 visits.

**Condition at end of fiscal year.** Work on the project, commenced in 1887, was essentially completed in 1915. Since then three of the original locks and dams (10, 11 and 12) were replaced by William Bacon Oliver (Tuscaloosa) Lock and Dam which was opened to navigation in August 1939; four original lock and dams (4, 5, 6 and 7) were replaced by Demopolis Lock and Dam which was opened to navigation in August 1954; two original locks and dams (8 and 9) were replaced by Warrior Lock and Dam which was opened to navigation in October 1957; three original locks and dams (1, 2 and 3) were replaced by Coffeerville Lock and Dam which was opened to navigation in August 1960; and four original locks and dams (13, 14, 15 and 16) were replaced by Holt Lock and Dam which was opened to navigation in June 1966. Rehabilitation of the spillway at John Hollis Bankhead Lock and Dam commenced in 1966, and physically completed February 6, 1970. Replacement of the double lift lock with a single lift lock at John Hollis Bankhead Lock and Dam commenced in April 1970 and was completed in 1980. The power plant at John Hollis Bankhead Lock and Dam and Holt Lock and Dam, was built and is operated by the Alabama Power Co. Construction of the new Oliver Lock and Dam is completed with the new lock open to traffic as of July 1991. Project construction began in November 1986 and is scheduled for completion in January 1996. Total Federal cost under existing project as of September 30, 2009 is \$88,461,935 for new work and \$613,446,519 for maintenance, and \$52,292,880 for major rehabilitation, a total of \$754,201,334.

## 9. BON SECOUR RIVER, AL

## MOBILE, ALABAMA, DISTRICT

**Location.** Rises 2 miles south of Foley, Ala., and flows southerly about 8 miles, emptying into Bon Secour Bay, an arm of Mobile Bay in southwest Alabama.

**Existing project.** A 10- by 80-foot channel from Gulf Intracoastal Waterway through Bon Secour Bay to mouth of Bon Secour River and extending up river to vicinity of Swifts Landing, thence 6 by 80 feet up river to a point about 600 feet above Oak Landing with two turning and maneuvering areas 150 feet wide and 1,100 to 1,200 feet long opposite Swifts Landing and ice loading dock. Also a 10 by 80 foot South Fork channel from the intersection with the Bon Secour channel, 1.14 miles to a 150 x 150 foot turning basin. Plane of reference is mean low water. Overall length of improvement is about 4.7 miles. Mean tidal range is about 1.5 feet and extreme, except during storms, is 3.5 feet. Existing project was authorized by Chief of Engineers, May 16, 1963, under authority in Section 107, River and Harbor Act of 1960.

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** A number of pile-and-timber marginal wharves used by the seafood industry and a marine ways are located along the existing project. These, together with numerous privately owned piers, are considered adequate for existing commerce.

### **Operations and results during fiscal year.**

Maintenance: Condition surveys, supervision and administration and miscellaneous cost \$11,259.

**Condition at end of fiscal year.** Project was commenced in July and completed in October 1964. Total Federal cost under existing project as of September 30, 2009 is \$150,615 for new work and \$2,891,686 for maintenance, a total of \$3,042,301. Contributed funds for new work amounted to \$9,700.

## 10. CARRABELLE HARBOR, FLORIDA

**Location.** Carrabelle Bar and Harbor is located 50 miles south, southeast of Tallahassee, Florida, on St. George Sound and the Gulf of Mexico.

**Existing Project.** The existing project provides for a 27- by 200-foot channel from the Gulf of Mexico for 3 miles to a point west of Dog Island, thence a 25- by 150-foot channel for 5 miles through St. George Sound and Carrabelle River to a turning basin 500 feet square and 25 feet deep at the town of Carrabelle, a 10- by 100-foot channel from turning basin for 0.6 mile to U.S. 98 bridge, thence a 10- by 80-foot channel for 3 miles to the confluence of New and Crooked Rivers. Plane of reference is mean low water. Channels above the turning basin were authorized May 17, 1965 by Chief of Engineers under authority in Section 107 of the River and Harbor Act of July 14, 1960. Other features of existing project were authorized by River and Harbor Act of September 3, 1954. The mean tidal range is 2.2 feet, and extreme is 3.0 feet, exclusive of storms.

**Local Cooperation.** Items of local cooperation have been furnished by the Board of County Commissioners, Franklin County, Florida.

**Terminal Facilities.** Existing terminal facilities are adequate for the current needs of the project.

### **Operations and results during fiscal year.**

Maintenance: Miscellaneous cost \$0.

**Condition at end of fiscal year.** All new work for this project was completed in 1965. Total Federal cost of the existing project as of September 30, 2009 is \$481,627 for new work and \$1,067,101 for maintenance, a total of \$1,548,728.

## 11. DAUPHIN ISLAND BAY, AL

**Location.** The project is located between Dauphin and Little Dauphin Island on the west side of the entrance to Mobile Bay, about 30 miles south of Mobile, Alabama and 55 miles west of Pensacola, Florida. (See Coast and Geodetic Survey Chart 11376.)

**Existing project.** The existing project provides for: (a) A channel 7 feet deep and 150 feet wide from Mobile Bay to an anchorage basin of the same depth, and about 7 acres in area, in the marsh just north of Fort Gaines on Dauphin Island; a channel 6 feet deep and 40 feet wide from the anchorage basin to Dauphin Island Bay; and a jetty and revetment to protect the entrance channel; and (b) an anchorage basin 7 feet deep and 500 feet square at Dauphin Island Village, with an entrance channel of like depth, 100 feet wide and about 8,300 feet long, extending to the 7-foot hydrographic contour in Mississippi Sound. Mean tidal range is 1.1 feet, and extreme, except during storms is about 4 feet. Plane of reference is mean low water. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Several privately-owned wharves for handling seafood, a public dock and mooring slip, and a pier for recreational craft are located on the village basin. A marina, public launching ramp, and a number of private piers are located on the bay. Facilities are considered adequate for existing commerce.

### **Operations and results during fiscal year.**

Maintenance: Condition surveys, supervision and administration and miscellaneous costs \$14.

**Condition at end of fiscal year.** The project was completed in July 1959. Total Federal cost under existing project as of September 30, 2009 is \$292,864 for new work and \$6,134,817 for maintenance, a total of \$6,427,681.

## 12. DOG AND FOWL RIVERS, AL

**Location.** Dog and Fowl Rivers are primarily tidal streams emptying into the west side of Mobile Bay, 8.5 and 17 miles, respectively, south of central Mobile (See Coast and Geodetic Survey Chart 11376.)

**Existing project.** The Dog River project provides for a 7 by 100-foot channel with a total length of 4.5 miles to provide access to the Mobile ship channel.

The Fowl River project provides for a channel 8 feet deep and 100 feet wide from Mobile Bay into and up Fowl River to deep water about 6,700 feet above its mouth. Total length of the channel is about 2.6 miles. Plane of reference is mean low water. Mean range of tide is about 1.5 feet in Dog River. Extreme range during storms is about 3.6 feet. This segment of the project was completed in November 1973. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Existing facilities consist of a boatyard for fabricating steel vessel hulls, nine marinas, four marine ways, a yacht basin on Dog River; two marinas on Fowl River, and numerous timber piers and docks on both rivers. Facilities are considered adequate for existing commerce.

### Operations and results during fiscal year.

Maintenance: No funds were appropriated or expended this fiscal year. Condition surveys were funded from the project condition survey account.

**Condition at end of fiscal year.** The existing Fowl River portion of the project was commenced in August 1973 and completed in November 1973. Work on the Dog River channel realignment was initiated and completed during FY 1986. Total Federal cost on the existing project as of September 30, 2009 is \$8,871,091; \$391,354 for new work and \$8,479,737 for maintenance. Contributed funds for new work amounted to \$195,626.

## 13. EAST PASS CHANNEL FROM GULF OF MEXICO INTO CHOCTAWHATCHEE BAY, FL

**Location.** East Pass Channel is located in the entrance from the Gulf into Choctawhatchee Bay at eastern end of Santa Rosa Island, 48 miles east of the entrance into Pensacola Bay and 49 miles west of the new entrance to St. Andrews Bay. (See Coast and Geodetic Survey Chart 11388.)

**Previous project.** For details see page 672 of Annual Report for 1937.

**Existing project.** The existing project provides for a 12-foot by 180-foot channel from the Gulf of Mexico into Choctawhatchee Bay, and a 6-foot by 10-foot channel from East

Pass Channel into Old Pass Lagoon. The project consists also of two converging jetties spaced 1,000 feet apart at the seaward end. Mean range of tide is 1.3 feet; extreme range, except during storms, is 2.5 feet. Plane of reference is mean low water. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Small privately-owned pile-and-timber piers used in connection with the fishing industry in this locality are considered adequate for existing commerce.

### Operations and results during fiscal year.

Maintenance: Maintenance dredging, condition surveys, supervision and administration and miscellaneous cost \$296,464.

**Condition at end of fiscal year.** Construction of the 1965 modification was commenced October 1967 and completed January 1969. Total Federal cost under existing project as of September 30, 2009 is \$916,715 for new work and \$17,532,554 for maintenance, a total of \$18,449,269. Contributed funds for new work from local interests amount to \$398,000.

## 14. FLY CREEK, AL

**Location.** Fly Creek (Volanta Bayou) is a small stream about 4.5 miles long rising in Baldwin County, Alabama, 3 miles east of town of Fairhope, from whence it flows northerly, thence westerly and southerly, to form an estuary on eastern shore of Mobile Bay just north of Fairhope and about 13 miles southeast of Mobile, Alabama. (See U.S. Coast and Geodetic Survey Chart No. 11376.)

**Existing project.** Provides for a channel 6 feet deep, 80 feet wide, and about 1,650 feet long from 6-foot depth in Mobile Bay to a turning basin of same depth, 100 feet wide and 350 feet long, in Fly Creek. Mean tidal range in vicinity of project is about 1.3 feet, and extreme, except during storms, is 3.5 feet.

Existing project was authorized by the River and Harbor Act of May 17, 1950, (H. Doc. 194, 81st Cong., 1st Sess.). The project document contains the latest published map.

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Fairhope Yacht Club has facilities for small recreational craft on the south bank near mouth of creek, consisting of a pile-and-timber service wharves, several sheet metal boat sheds, boat slips, and other mooring facilities. There is also a commercial marina on north bank of creek.

### Operations and results during fiscal year.

Maintenance: No funds were appropriated or expended this fiscal year. Condition surveys were funded from the project condition survey account.

**Condition at end of fiscal year.** Project was commenced in August and completed in October, 1957. Total project costs as of September 30, 2009 amounted to \$1,148,835 of which \$29,000 was for new work and \$1,119,835 for maintenance.

## 15. GULF INTRACOASTAL WATERWAY BETWEEN APALACHEE BAY, FL AND MEXICAN BORDER (MOBILE DISTRICT)

**Location.** The project extends westward from Apalachee Bay, Florida, along the Gulf coast to the Rigolets, Louisiana, via a series of coastal lakes, bays, sounds, and land cuts. (For further details see Annual Report for 1962.)

**Previous project.** For details see page 906, Annual Report for 1930.

**Existing project.** The existing project provides for a waterway 12 feet deep and 125 feet wide at mean low water from Apalachee Bay, Florida, to Mobile Bay, Alabama, and 12 feet deep and 150 feet wide from Mobile Bay, Alabama to Rigolets, Louisiana (Lake Borgne Light No. 29), and for a tributary channel (Gulf County Canal), 12 feet deep, 125 feet wide and about six miles long connecting Intracoastal Waterway at White City, Florida, with St. Joseph Bay. The waterway between the 12-foot depth contours in Apalachee Bay and Lake Borgne Light No. 29 at the Rigolets is 379 miles long. (See Table 10-B for authorizing legislation.)

**Local cooperation.** None.

**Terminal facilities.** Facilities are available for public use at Carrabelle, Apalachicola, Panama City, and Pensacola, Florida; Mobile and Bayou La Batre, Alabama; and Pascagoula, Biloxi, Gulfport, Pass Christian, and Bay St. Louis, Mississippi. Facilities are considered adequate for existing commerce.

### Operations and results during fiscal year.

Maintenance: Dredging navigation channel maintenance, condition surveys, and supervision and administration cost totaled \$6,248,191.

**Condition at end of fiscal year.** The existing project is completed except for the portion between Apalachicola Bay and St. Marks, Florida, which has been deauthorized. Modification of the Gulf County Canal to provide a 12-foot by 125-foot channel was commenced July 1968 and completed June 1969. Total cost of the existing project as of September 30, 2009 is \$152,695,884, of which \$6,480,299 was for new work and \$146,215,585 for maintenance.

## 16. GULFPORT HARBOR, MS

**Location.** The project is located on Mississippi Sound in southeastern Mississippi, about 35 miles west of Pascagoula, Mississippi, and 60 miles east of New Orleans. (See Coast and Geodetic Survey Chart 11373.)

**Previous project.** For details see page 747. Annual Report for 1938, and page 995, Annual Report for 1948.

**Existing project.** The existing project provides for: (a) A channel 32 feet deep, 300 feet wide, and about eight miles long across Ship Island Bar, a channel 30 feet deep, 220 feet wide, and about 11 miles long through Mississippi Sound, and an anchorage basin at Gulfport 30 feet deep, 1,320 feet wide, and 2,640 feet long; and (b) maintenance of the existing commercial smallboat harbor about 26 acres in area, and a straight-approach channel, 100 feet wide and about 4,300 feet long, from deep water in Mississippi Sound to a smallboat basin, all at a depth of 8 feet. Under ordinary conditions mean tidal range is about 1.75 feet, and extreme range, except during storms, is about 3.5 feet. Plane of reference is mean low water. The project is authorized in the Water Resources Development Act (WRDA) 1986, and further amended by WRDA 1988 to modify the existing ship channel to 36 by 300 feet in Mississippi Sound, and 38 by 400 feet across the bar, with changes in the channel alignment and the turning basin for safe and unrestricted navigation. The FY 91 construction appropriation provided for constructing an increment of the authorized project and provide a 36 by 220 feet channel in Mississippi Sound and 38 by 300 feet across the bar. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Existing modern rail-connected terminal facilities at this port are considered adequate for existing commerce. (See Port Series 19, revised in 1979.)

### Operations and results during fiscal year.

Maintenance: Contract dredging, condition surveys, supervision and administration and miscellaneous costs \$6,706,937.

**Condition at end of fiscal year.** The main harbor was commenced 1932 and completed April 1950. Maintenance for small boat harbor and approach channel, constructed by local interests in 1950, was authorized by 1958 River and Harbor Act. Awarded thin-layer monitoring contract in June 1991 under the authority of WRDA 1986 and 1988. The channel contract was awarded in April 1992, and completed in September 1996. Total Federal cost under existing project as of September 30, 2009 is \$26,821,354 for new work and \$96,984,972 for maintenance, a total of \$123,806,326. Contributed funds for new work amounted to \$9,268,054.

## 17. MOBILE HARBOR, AL

**Location.** The project is located along the lower 5 miles of Mobile River, and channel extends thru Mobile Bay and into Gulf of Mexico, in southwestern Alabama, 91 miles by water west of Pensacola Harbor, Florida, 90 miles east of Gulfport Harbor, Mississippi, and 144 miles by water northeast of mouth

of Mississippi River. (See Coast and Geodetic Survey Chart 11376.)

**Previous project.** For details see page 503, Annual Report for 1963.

**Existing project.** The existing project provides for: (a) A 47-foot by 600-foot channel about 1.5 miles long across Mobile Bar; (b) a 45-foot by 400-foot channel in Mobile Bay to mouth of Mobile River; (c) a 40-foot channel in Mobile River to highway bridge, varying from 500 to 775 feet wide; (d) a 25-foot channel from highway bridge to and up Chickasaw Creek to a point 400 feet south of mouth of Shell Bayou, widths being 500 feet in Mobile River and 250 feet in Chickasaw Creek; (e) a turning basin 40 feet deep, 2,500 feet long, and 800 to 1,000 feet wide, opposite Alabama State Docks; (f) a turning basin 40 feet deep, 1,000 feet wide, and 1,600 feet long opposite Magazine Point; (g) a 27-foot by 150-foot channel from Mobile Bay Channel along Arlington pier to a turning basin 800 feet long and 600 feet wide opposite Brookley Complex ocean terminal, and continuing thence a turning basin 250 feet wide and 800 feet long in Garrows Bend, thence a 22-foot by 150-foot channel to the causeway linking McDuffie Island to the mainland; (h) a channel serving the Theodore Industrial Park 40 feet deep and 400 feet wide from the main ship channel in Mobile Bay and extending northwesterly for about 5.3 miles to the shore of Mobile Bay, including an anchorage basin near the shoreline, thence a land cut 40 feet deep, 300 feet wide and 1.9 miles long to and including a 42 acre trapezoid turning basin 40 feet deep, and a barge channel 12-by 100-feet, extending 6,500 feet and terminating in a 300- by 300-foot turning basin; and (i) maintenance of Three Mile Creek by snagging, from its intersection with Industrial Canal to Mobile River. The project provides also for an anchorage area 32 feet deep, 100 feet wide, and 200 feet long opposite site formerly occupied by the U.S. Quarantine Station at McDuffie (Sand) Island. Prior to widening the Mobile Bay Channel as authorized in 1954, the Quarantine Station anchorage area was maintained to a project width of 200 feet. Construction by local interests of a solid-fill causeway across Garrows Bend Channel between McDuffie Island and the mainland is also provided for under existing project. Total length of the bay and river channel is about 41.7 miles. Plane of reference is mean low water. Under ordinary conditions mean tidal range at the lower end of the improvement is 1.2 feet and at the upper end 1.5 feet. Extreme tidal range is 3.4 feet at the lower end and 3.6 feet at the upper end.

Further authorization provides for future development to deepen and widen entrance channel over the bar to 57 feet by 700 feet about 7.4 miles long, deepen and widen bay channel to 55 feet by 550 feet about 27.0 miles long, deepen and widen an additional 3.6 miles of bay channel to 55 feet by 650 feet and provide 55 foot deep anchorage area and turning basin in vicinity of Little Sand Island. All dredged material will be placed in an approved disposal area in the Gulf of Mexico. (See Table 10-B for authorizing legislation.)

**Local cooperation.** A local cooperation agreement was signed by the local sponsor to construct the project for the first increment of work.

**Terminal facilities.** Modern rail-connected terminal facilities at this port are considered adequate for existing commerce. (See Port Series No. 18, revised in 1979.)

**Operations and results during fiscal year.**

**Maintenance:** Contract dredging, condition surveys, engineering and design and supervision and administration cost \$13,453,920.

**Condition at end of fiscal year.** Phase I of the project modification was completed in June 1990. Current estimated Federal cost is \$218,548,000, and non-Federal cost is \$178,452,000. Total Federal cost under existing project as of September 30, 2009 is \$103,205,760 for new work and \$503,734,590 for maintenance, a total of \$606,940,350. Contributed funds expended amounted to \$21,706,615 for maintenance. New work contributed funds amounted to \$202,040.

**18. PANAMA CITY HARBOR, FL**

**Location.** The project is located on the northwest coast of Florida, 102 miles east of entrance to Pensacola Harbor. (See Coast and Geodetic Survey Chart 11389.)

**Previous project.** For details see page 710, Annual Report for 1938.

**Existing project.** The existing project provides for a channel about 3.5 miles long, extending from deep water in St. Andrew bay through barrier peninsula, known as Lands End, to the Gulf of Mexico, 300 feet wide and 32 feet deep in the bay through Lands End; and 450 feet wide and 34 feet deep in the gulf, protected by east, west jetties, extending 2,075 feet and 2,896 feet respectively; a channel 100 feet wide and 8 feet deep in Grand Lagoon to a point about 2,400 feet east of State Highway 392 Bridge, with branches to serve terminal facilities; and the maintenance of a channel in Watson Bayou, an arm of St. Andrew Bay, 100 feet wide and 10 feet deep from that depth in bay to highway bridge.

Authorized modifications includes branch channels 38 feet deep and 300 feet wide, leading from the inner end of the main entrance channel westward to the Port Authority terminal at Dyers Point and eastward to the Bay Harbor terminal, about 3.4 and 3.6 miles in length, respectively; turning and maneuvering areas comprising about 55 acres opposite Dyers Point, and 42 acres opposite Bay Harbor, both at a depth of 38 feet; and an anchoring and loading basin for LASH type intermodal carriers, 40 feet deep and containing about 177 acres in St. Andrew Bay near the inner end of the main entrance channel. Mean tidal range

## MOBILE, ALABAMA, DISTRICT

is about normally 1.3 feet and 3.0 feet extreme. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Available terminal facilities are considered adequate for existing commerce. (See Port Series No. 19.)

### **Operations and results during fiscal year.**

Maintenance dredging, condition surveys and maintenance: Miscellaneous costs \$885,057.

**Condition at end of fiscal year.** The existing project (prior to modifications) was completed in November 1949. Repairs to jetties were commenced in June 1961 and completed October 1968. Modifications to the project at Grand Lagoon were completed in January 1972. Total Federal cost under existing project as of September 30, 2009 is \$4,751,613 for new work and \$17,742,059 for maintenance, a total of \$22,493,672. Contributed funds expended for new work amount to \$1,974,463.

## **19. PASCAGOULA HARBOR, MS**

**Location.** The project is located along lower 6.8 miles of Pascagoula River, the lower six miles of Dog River, and in Bayou Casotte (about four miles east of the mouth of Pascagoula River), and through Mississippi Sound into the Gulf of Mexico, in southeastern Mississippi, about 38 miles west of Mobile, Alabama, and about 100 miles east of New Orleans, Louisiana. (See Coast and Geodetic Survey Chart 11373.)

**Previous project.** For details see page 741, Annual Report for 1938.

**Existing project.** The existing project provides for (a) An entrance channel 44 feet deep and 450 feet wide from the Gulf of Mexico through Horn Island Pass Channel 44 feet deep and 600 feet wide, including an impounding area for littoral drift, 44 feet deep, 200 feet wide, and about 1,500 feet long adjacent to the channel at the west end of Petit Bois Island; (b) a lower sound channel 42 feet deep and 350 feet wide and an upper sound channel 38 feet deep and 350 feet wide in Mississippi Sound and Pascagoula River to the railroad bridge at Pascagoula, including a turning basin 2,000 feet long and 950 feet wide (including channel area) on the west side of the river below the railroad bridge; (c) a channel 42 feet deep and 350 feet wide from the ship channel in Mississippi Sound to the mouth of Bayou Casotte, thence 42 feet deep and 350 feet wide for about one mile to a turning basin 42 feet deep, 1,000 feet wide, and 1,750 feet long; (d) a 22-foot deep by 150-foot wide channel up Pascagoula River from the railroad bridge to the mouth of Escatawpa (or Dog) River, then up Escatawpa River to Highway 613 (formerly 63) bridge; (e) a 12-foot by 125-foot channel from the highway

bridge; via Robertson and Bounds Lakes, to mile 6 on Escatawpa River; and (f) a 12-foot by 80-foot channel extending from deep water in the Pascagoula River (about one-half mile north of the railroad bridge) to a turning basin in Krebs Lake a distance of about 1,500 feet, then along the south bank of the lake a channel 10-foot by 60-foot and terminating at a second turning basin, a distance of 2,700 feet from the first. Under ordinary conditions mean tidal range is 1.75 feet, and extreme range is 3.75 feet. Plane of reference is mean low water.

Further authorization provides for widening gulf entrance channel to 550 feet and deepen upper Mississippi Sound portion to 42 feet. Disposal of all new material in Gulf of Mexico. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Modern rail-connected terminal facilities at this port are considered adequate for existing commerce. (See Port Series No. 19.)

### **Operations and results during fiscal year.**

Maintenance: Contract dredging, condition surveys, supervision and administration and miscellaneous costs totaled \$7,627,189.

**Condition at end of fiscal year.** The existing project was completed in August 1965 and the Krebs Lake project was completed in November 1983. The General Design Memorandum (GDM) was approved in June 1992 for deepening and widening channels. Preconstruction Engineering and Design is complete. The channel dredging contract was awarded in September 1994, and completed November 2001. Total Federal cost of existing project as of September 30, 2009 is \$40,800,046 for new work and \$122,579,241 for maintenance, a total of \$163,379,287. Contributed funds expended for new work amounted to \$12,990,220. Contributed funds expended for maintenance amounted to \$9,561,139.

## **20. PENSACOLA HARBOR, FL**

**Location.** The project is located in a landlocked bay on the coast of northwest Florida about 50 miles east of the entrance to Mobile Bay. (See Coast and Geodetic Survey Charts 490 and 11382.)

**Previous project.** For details see Annual Report for 1938.

**Existing project.** The existing project provides for: (a) A 35-foot by 500-foot entrance channel about five miles long, from the Gulf of Mexico to lower Pensacola Bay; (b) a 33-foot by 300-foot bay channel; (c) two 33-foot by 300-foot parallel approach channels to opposite ends of the inner harbor channel; (d) an inner harbor channel 500 feet wide, 33 feet deep, and 3,950 feet long; (e) a 30-foot by 250-foot approach channel to the pierhead

line south of Muscogee wharf; and (f) a 15-foot by 100-foot entrance channel into Bayou Chico, thence a channel 14 feet deep, 75 feet wide, and about 4,400 feet long to a turning basin 14 feet deep and 500 feet square. Mean range of tide throughout the harbor is about 1.1 feet near the entrance and about 1.6 feet at the head of bay. Extreme tidal range, except during storms, is about three feet. Plane of reference is mean low water. Modification of the Bayou Chico project to provide for enlarging the entrance channel to 21 by 100 feet, the bayou channel to 20 feet by 100 feet, and deepening the turning basin to 20 feet has been deferred for restudy. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Modern rail-connected terminal facilities at this port are considered adequate for existing commerce. (See Port Series No. 19, revised in 1979.)

**Operations and results during fiscal year.**

Maintenance: Dredging, condition survey, environmental permits, support activities and miscellaneous costs totaled \$2,413,360.

**Condition at end of fiscal year.** New work is completed except for features which are deferred for restudy. The modification authorized in 1962 was commenced in March and completed in May 1965. Total Federal cost of the existing project as of September 30, 2009 is \$1,469,693 for new work and \$13,531,765 for maintenance, a total of \$15,001,458. Contributed funds for maintenance amount to \$312,350.

**21. PERDIDO PASS CHANNEL, AL**

**Location.** The project is located about midway between Pensacola, Florida, and Mobile, Alabama. (See Coast and Geodetic Chart 11378.)

**Existing project.** The existing project provides for a channel 12 feet deep and 150 feet wide for about 1,300 feet from the Gulf of Mexico into the inlet, thence 9 feet deep and 100 feet wide for about 2,200 feet to the highway bridge, where the channel branches into two arms, each having dimensions of 9 by 100 feet, one of which extends about 3,400 feet into Terry Cove and the other about 3,200 feet into the southern arm of Perdido Bay. The project also provides for two jetties spaced 600 feet apart at the seaward end. The east jetty has a low weir section, 1000 feet long to permit passage of littoral drift into a dredged deposition basin 800 feet by 1,200 feet located between the east jetty and the navigation channel. Mean tidal range is 1.1 feet and extreme is 2.8 feet. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Terminal facilities.** Six marinas, numerous timber piers, docks, and several launching ramps are available. These facilities are considered adequate for existing commerce.

**Operations and results during fiscal year.**

Maintenance: Jetty repairs, condition surveys and miscellaneous cost \$3,453,871.

**Condition at end of fiscal year.** The existing project was commenced in May 1968 and completed in May 1969. Total Federal cost of the existing project as of September 30, 2009 is \$629,860 for new work and \$20,641,111 for maintenance, a total of \$21,270,971. Contributions from local interest amount to \$510,000 for new work and \$10,325 for maintenance.

**22. TENNESSEE-TOMBIGBEE WATERWAY, AL AND MS**

**Location.** The waterway extends from mile 215 in Pickwick pool on the Tennessee River, southerly through northeastern Mississippi and western Alabama, a total of 234 miles, to the confluence of the Black Warrior and Tombigbee Rivers at Demopolis, Alabama.

**Previous project.** For details see Annual Report for 1953.

**Existing project.** The existing project provides for a waterway 234 miles long, connecting the Tennessee and Tombigbee Rivers via the East Fork of Tombigbee River and Mackeys and Yellow Creeks and consists of three sections as follows: (1) the river section, a 9-foot by 300-foot channel for 149 miles between Demopolis and Amory, Mississippi; (2) the canal section, 12 feet by 300 feet for 46 miles from Amory to Bay Springs; and (3) the divide section, a 12-foot by 300-foot channel (except in the 27 mile long divide cut in which the bottom width is 280 feet) for 39 miles from Bay Springs through the dividing ridge to the Tennessee River. The total lift of 341 feet is accomplished by 10 locks (See Table 10-B for authorizing legislation.)

**Local cooperation.** Local interests have made and are maintaining alterations in highways and highway bridges and in sewer, water-supply, and drainage facilities and provide and maintain suitable and adequate river and canal terminals. Officials of the State of Mississippi were notified of these requirements on December 13, 1949, and officials of the State of Alabama were notified on December 20, 1949. Legislation enabling boards of supervisors of the various counties concerned to enter into agreements with the United States relative to navigation projects was adopted by the State of Mississippi in 1950. A compact between the States of Alabama, Mississippi, Tennessee, Kentucky and Florida has been formed for the purpose of promoting the project. The name of this organization is the Tennessee-Tombigbee Waterway Development Authority.

## MOBILE, ALABAMA, DISTRICT

During its 1962 session the Mississippi Legislature authorized the formation of the Tombigbee River Valley Water Management District. The District was organized in accordance with the enabling legislation and is empowered to fulfill the requirements of local cooperation for the portion of the project in Mississippi. A satisfactory resolution has been furnished. During its 1967 session the Alabama Legislature authorized the formation of a public corporation to be named the Tombigbee Valley Development Authority for the purpose of further development of the Tombigbee River and tributary streams. The organization was formed in accordance with the enabling legislation and in a referendum held December 5, 1967 the voters of Alabama authorized a bond issue not to exceed \$10,000,000 of finance participation in this project and the Tombigbee River and Tributaries project. A satisfactory resolution has been furnished.

**Terminal facilities.** Docks, storage facilities and handling equipment are still being developed along this new waterway. As of September 30, 1998, twelve such facilities were operational, while five were under construction, and five more are planned. The operational facilities are handling grain, wood chips, and logs. When all facilities are complete, about half will be publicly owned and operated. Additional ports and terminals must be completed before the waterway can achieve its full potential. (See Table 10-N for existing locks and dams.)

### **Operations and results during fiscal year.**

Maintenance: Contract maintenance dredging, condition surveys, supervision and administration and miscellaneous navigation costs totaled \$149,000. Total cost for operation and maintenance of the project for FY 2009 amounted to \$22,491,000. Recreation attendance for FY 2009 totaled 2,360,499 visits.

**Condition at end of fiscal year.** Total Federal cost under the existing project as of September 30, 2009 is \$1,053,001,011 for new work, and \$545,482,912 for maintenance for a total of \$1,598,483,923. Construction formally began December 12, 1972 and overall project is essentially complete. The waterway was opened for navigation in January 1985.

## **22A. TENNESSEE-TOMBIGBEE WATERWAY WILDLIFE**

### **MITIGATION PROJECT, AL AND MS**

**Location.** This project is in Alabama and Mississippi at the following locations:

(1) Existing Project Lands - Approximately 72,500 acres of Tennessee-Tombigbee Project Lands have been designated for mitigation purposes. An additional 20,100 acres have also been designated at Coffeetown Lake, Demopolis Lake, Claiborne Lake and Dannelly Lakes in Alabama and at Okatibbee Lake in Mississippi.

(2) Separable Lands - Acquisition and management of 88,000 separable lands including not less than 20,000 acres in the

Mobile-Tensaw Delta, Alabama, and not less than 25,000 acres in the Pascagoula, Pearl, and Mississippi Delta Basins in Mississippi; and the balance at any location in the two states.

**Previous project.** None. This project was a new construction start in Fiscal year 1990. It was authorized by Section 601 of the Water Resources Development Act of 1986.

**Existing project.** The authorized project called for the acquisition of separable lands at the above named locations. The Alabama Department of Conservation and Natural Resources, Mississippi Department of Wildlife Fisheries and Parks, and the U.S. Fish and Wildlife Service (FWS) assisted in the selection of separable lands. The selected lands were purchased from willing sellers at fair market value. Emphasis was placed on forested wetlands, with a minimum of 34,000 acres of bottomland hardwoods being purchased.

Management of Lands, the separable lands and the existing project lands designated for mitigation purposes are being managed for wildlife. The States are primarily responsible for managing these lands in accordance with management plans jointly developed by the States, Corps and the FWS. However, due to operational constraints it is necessary for the Corps to retain management responsibility for some of the existing project lands included in the mitigation program.

**Local cooperation.** A local cooperation agreement is not required since the cost of this project is a 100% Federal responsibility.

**Operations and results during fiscal year.** Total cost for the wildlife mitigation program in FY 2009 was \$2,182,000, with \$1,870,000 being used to reimburse State efforts.

**Condition at end of fiscal year.** Initial funding for the project was received in January 1990. At the end of September 1998, 21,182 acres had been acquired in the Mobile-Tensaw Delta; 13,433 acres in the Pascagoula Basin; 18,542 acres in the Mississippi Delta; 7,655 acres in the Pearl Basin; 14,378 acres in northeast Mississippi; and 12,292 acres in other areas of Alabama. A variety of activities also continued to intensively manage the 92,600 acres of existing project lands included in the Mitigation Program. The total project cost is estimated to be \$94,042,000. Total Federal cost of the project as of September 30, 2009 is \$92,175,850 for new work. \$2,375,365 for environmental efforts, and \$15,025,520 for maintenance, a total of \$109,576,735.

## **23. OTHER AUTHORIZED NAVIGATION PROJECTS**

(See Table 10-C)

**24. OTHER AUTHORIZED BEACH EROSION CONTROL PROJECTS**

(See Table 10-D)

**25. OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

(See Table 10-E)

**26. DEAUTHORIZED PROJECTS**

(See Table 10-G)

**27. NAVIGATION WORK UNDER SPECIAL AUTHORIZATION**

Navigation activities pursuant to Section 107, Public Law 86-645, as amended (Preauthorization). Studies conducted under this authority amounted to \$-153,928 in FY 2002. (See Table 10-H.)

**28. FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION**

(See Table 10-J.)

**29. RECONNAISSANCE AND CONDITION SURVEYS**

(See Table 10-K.)

**FLOOD CONTROL**

**30. MATUBBEE CREEK AT COONTAIL ROAD, MS**

**Location.** The project site is located along 500 feet of both banks of Matubbee Creek which runs parallel and adjacent to Coontail Road in rural Monroe County near Aberdeen, Mississippi.

**Existing project.** The emergency streambank protection project consists of rebuilding and armoring the left descending (southeast) bank of Matubbee Creek with riprap and filter fabric; placement of a riprap-filled toe trench along the left descending bank; grading, grassing, and armoring the adjacent road shoulder; removal and backfill of the failed grout materials along the left descending bank; grading and grassing of both banks and adjacent drainage ditches; and replacing guard rails along the road adjacent to the left descending bank.

**Operations and results during fiscal year.** New Work: None.

**Condition at end of fiscal year.** The project was awarded in January 2003. Construction was initiated in May 2003. Total Federal cost to date is \$457,238 for new work. Contributed funds expended amounted to \$215,203 for new work.

**31. WEAVER CREEK AT HATLEY ROAD**

**Location.** The project site is located along both banks above and below the Hatley Road Bridge crossing at Weaver Creek in rural Monroe County near Amory, Mississippi.

**Existing project.** The emergency streambank protection project consists of reconditioning and armoring the endangered slope with riprap and filter fabric; removal and backfill of the failed grout materials at the wingwalls; grading and grassing of banks and adjacent drainage ditches; and replacing adjacent guard rails.

**Operations and results during fiscal year.** New Work: None.

**Condition at end of fiscal year.** The project was awarded in January 2003. Construction was initiated in May 2003. Total Federal cost to date is \$71,517 for new work. Contributed funds expended amounted to \$60,476 for new work.

**32. OKATIBBEE LAKE, MS**

**Location.** The project is located on Okatibbee Creek 37.7 miles above its mouth, in Lauderdale County, Mississippi, seven miles northwest of Meridian.

**Existing project.** The project provides for a dam and reservoir for flood control, water supply, water quality control, fish and wildlife, and recreation. The dam consists of a compacted earth fill 6,540 feet long with the top elevation 369.8 feet above national geodetic datum, with top width of 18 feet. The spillway, which is located 1,500 feet east of the east end of the dam, is an unpaved free overflow type, 1,500 feet long with a fixed crest at elevation 359. A sluice intake structure near the center of the dam serves a 9.0-foot diameter concrete conduit. Storage allocated for water supply and water quality control varies seasonally from 21,400 acre-feet to 34,300 acre-feet between a minimum elevation of 328 and top-of-conservation-pool elevation varying from 339 to 343. Storage varying from 46,500 to 59,500 acre-feet between the top of the conservation pool and elevation 352 has been reserved exclusively for storage of flood waters. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Requirements have been fully complied with.

**Operations and results during fiscal year.**

Maintenance: Costs for the year for ordinary maintenance and recreational management amount to \$1,900,000. Recreation attendance at the reservoir during FY 2009 totaled 834,820 visits.

**Condition at end of fiscal year.** Construction began in June 1965, and was completed in November 1968. Total Federal cost of the existing project as of September 30, 2009 is \$2,145,134.

**33. TOMBIGBEE RIVER (EAST FORK),  
MS AND AL**

**Location.** The project is located on the Tombigbee River and its tributaries between the junction of the Browns and Mackeys Creek in Itawamba County, Mississippi, for a distance of 53 miles along the East Fork of the Tombigbee River, from Walkers Bridge at the junction of Browns and Mackeys Creeks to the Monroe County line.

**Existing project.** Provides for alleviation of floods from the Tombigbee River by clearing and snagging and excavation of 13 cut-off channels, and other related channel improvements. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Fully complied with on work done under the 1963 Flood Control Act. Work to be done under authority of the 1941 Flood Control Act requires local interest to provide all lands, easements, and rights-of-way for project construction; hold and save the United States free from damages due to construction of the project; and maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army.

**Operations and results during fiscal year.**

Maintenance: Routine maintenance of channels cost \$187,778.

**Condition at end of fiscal year.** The project for Itawamba County, as authorized in the 1936 Flood Control Act, was completed during fiscal year 1940. No work has been done on the extension of the project authorized in the 1941 Flood Control Act. Total Federal cost of the existing project as of September 30, 2009 is \$125,000 for new work and \$5,228,970 for maintenance, a total of \$5,363,771.

**34. TOMBIGBEE RIVER  
TRIBUTARIES, MS AND AL**

**Location.** The Tombigbee River rises in extreme northeast Mississippi and flows southerly through eastern Mississippi and western Alabama, emptying into the Mobile River about 45 miles above its mouth at Mobile, Alabama. Tributaries to be improved for flood control are all in northeast Mississippi and northwest Alabama. Luxapalila Creek project consists of 32 miles of completed channel modifications. Approved estimate of cost for new work is \$42,108,000; consisting of \$37,743,000 Federal funds, and \$4,365,000 non-Federal funds. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Local interests must furnish lands and rights-of-way for construction; make all roads, highway bridge, and utility changes, alterations, additions, and relocations necessary for the project; hold the United States free from damages; prevent future encroachments along the improved

channels; maintain all works after completion, with the exception of Twenty Mile Creek from mile 11.7 to mile 22.0.

**Operations and results during fiscal year.**

New work: None.

**Condition at end of fiscal year.** Construction commenced in July 1965. Total project is complete. Total Federal cost of existing project as of September 30, 2009 is \$40,020,744 for new work. Contributed funds for new work amounted to \$570,113.

**35. VILLAGE CREEK,  
BIRMINGHAM, AL**

**Location.** The project is located in central Alabama, Jefferson County, in the city of Birmingham, Alabama.

**Existing project.** None. The project is basically non-structural and includes evacuating 642 structures, in six (6) separate neighborhoods, from the floodplain; enlarging 2 miles of the stream channel in the vicinity of the Municipal Airport which also involves modification of three (3) bridges, demolishing two (2) unused bridges, and relocating two (2) waterlines and other utilities, installing three (3) emergency floodwarning devices; and creating an area of 210 acres which can be utilized for future recreation development. Channel enlargements (2 miles) will reduce annual damages near Municipal Airport by 82 percent and evacuation of 642 structures will reduce annual damages in residential areas by 61 percent. The channel segment is not being constructed at the request of the sponsor.

**Local cooperation.** The Local Cooperation Agreement with the city of Birmingham, Alabama was executed on December 14, 1988. The local sponsor has also agreed to make all required payments concurrently with the project construction.

**Operations and results during fiscal year.**

New work: None.

**Condition at end of fiscal year.** Real Estate acquisition started January 1989. The project is complete with acquisition of 634 tracts. Total Federal cost under existing project as of September 30, 2009 is \$22,887,742 for new work. Contributed funds for new work amounted to \$7,196,238.

**36. FLOOD CONTROL WORK UNDER  
SPECIAL AUTHORIZATION**

Flood Control activities pursuant to Section 205, Public Law 858, 80th Congress, as amended (Preauthorization).

Snagging and Clearing for flood control pursuant to Section 208 of Flood Control Act of 1954, as amended.

Emergency streambank and shoreline protection pursuant to Section 14 of the Flood Control Act of 1946, as amended.

(See Table 10-J)

Emergency flood control activities - repair, flood fighting, and rescue work under Public Law 99, 84th Congress, and antecedent legislation, and disaster relief and assistance under Public law 288, 93d Congress. (See Table 10-J)

### **37. INSPECTION OF COMPLETED FLOOD CONTROL PROJECTS**

Local flood protection works for which inspection is performed under this heading consist of levee projects at West Point, Georgia, on the Chattahoochee River; Beaver Creek at Montezuma, Georgia, in the Flint River Basin; Elba and Geneva, Alabama in the Choctawhatchee River Basin; Rome, Georgia, and Little Wills Creek at Collinsville, Alabama, in the Alabama-Coosa River Basin. Channel rectification projects include Little Cove Creek, Glencoe, Alabama and Black Creek, Gadsden, Alabama in the Alabama-Coosa River Basin; Big Brown Creek, Donivan Creek, Twenty Mile Creek and Mantachie Creek, near Fulton, Mississippi, Burketts Creek and Stanifer Creek near Amory, Mississippi, Houlka Creek and Sakatonchee Creek in Chickasaw and Clay Counties, Mississippi, James Creek in Monroe County, Mississippi, and Luxapalila Creek, Lowndes County, Mississippi, all in the Tombigbee River Basin; Sowashee Creek, Meridian, Mississippi in the Pascagoula River Basin; Burnt Corn and Murder Creeks, Brewton, Alabama in the Conecuh River Basin; Autauga Creek, Prattville, Alabama; Poley Bridge, Goose Pond and Walnut Creeks, Clanton, Alabama; Pinchgut Creek, and Cahaba River, Trussville, Alabama; Town Creek, Americus, Georgia; and Lake Douglas in Bainbridge, Georgia. Shore protection and erosion control projects include Harrison County, Mississippi; Chattahoochee River at La Grange, Troup County, Georgia; Pumpkinvine Creek, Emerson, Georgia; and Chickasawbogoe Creek, US Highway 43 Bridge, Linden, Alabama. The project at Rome and Montezuma, Georgia and Collinsville, Alabama include pumping stations. Inspections are made annually to determine the extent of compliance with approved regulations for maintenance and operation of the project. Responsible local officials are advised of inadequacies in the maintenance and operation of the local flood protection works under their jurisdiction where appropriate. Followup for compliance of the deficient projects continued during the year. Fiscal year costs were \$70,917. Total cost as of September 30, 2008 is \$928,029 charged to maintenance.

### **38. OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

(See Table 10-E.) Multiple-Purpose Projects Including Power

#### **Multiple Purpose Power Projects**

### **39. ALLATOONA DAM, COOSA RIVER BASIN, GA**

**Location.** The project is on Etowah River in Bartow County, Georgia, about 48 miles upstream from Rome, Georgia, about five miles due east of Cartersville, Georgia, and about 2,000 feet downstream from mouth of Allatoona Creek. The reservoir extends about 28 miles up the Etowah River at maximum power-pool elevation of 840 feet above mean sea level.

**Existing project.** The authorized project provides for a dam and reservoir for flood control, regulation of streamflow for navigation, and development of hydroelectric power. Height above the river bottom of the concrete, gravity-type dam is about 190 feet, from elevation 690 feet to 880 feet national geodetic datum. The spillway, with crest at elevation 835, is controlled by nine tainter gates, 40 feet wide by twenty-six feet high, and two tainter gates, 20 feet wide by twenty-six feet high; having a combined discharge capacity of 321,000 cubic feet per second with the water surface at elevation 870.3. One 48-inch diameter sluicing conduit with a free discharge valve and four sluices, 5 feet-8 inches wide by 10 feet high, are included in dam. Installed generating capacity consists of two 36,000 kilowatt units and one 2,000 kilowatt unit, or a total of 74,000 kilowatts. The reservoir, covering 19,200 acres at elevation 860, has a storage capacity of 670,000 acre-feet. The initial construction cost was \$31,424,738, excluding the addition of recreation facilities at the completed project. (See Table 10-B for authorizing legislation.)

**Local cooperation.** None required. (Sec. 2, Flood Control Act of June 28, 1938, applies).

#### **Operations and results during fiscal year.**

**Maintenance:** Operation and maintenance of the dam, reservoir, powerhouse, service and recreational activities, and administration totaled \$6,688,000. Gross power generation amounted to 55,177 megawatt hours during FY 2009. Recreation attendance at Allatoona Lake during FY 2009 totaled 5,281,347 visits.

**Condition at end of fiscal year.** Construction of the existing project began in 1944 and was completed in 1950. Total Federal cost under existing project as of September 30, 2009 was

## MOBILE, ALABAMA, DISTRICT

\$35,709,085 for new work and \$194,698,503 for maintenance, a total of \$230,407,588.

### 40. BUFORD DAM, LAKE SIDNEY LANIER, GA

**Location.** Buford Dam is on the Chattahoochee River about 348.9 miles above its mouth, 50 miles above Atlanta and five miles northwest of Buford, Georgia. The reservoir, Lake Sidney Lanier, extends about 47 miles upstream along the Chattahoochee River, and about 21 miles up the Chestatee River, which enters the Chattahoochee River 14.5 miles above the dam.

**Existing project.** The authorized project provides for a rolled-earth dam 1,630 feet long with crest elevation 1,106 feet national geodetic datum, or about 192 feet above streambed elevation; three earth saddle dikes with a total length of 5,406 feet; a chute spillway with crest at elevation 1,085; a powerhouse in a deep cut with steel penstocks in tunnels, and concrete intake structure at the upstream end of the tunnels; and a flood control sluice tunnel paralleling the power tunnels. The Lake Sidney Lanier reservoir has a gross capacity of 2,554,000 acre-feet of which 637,000 acre-feet of storage is reserved for flood control storage. The power installations consist of one generating unit of 6,000 kilowatts and two units of 40,000 kilowatts each, or a total of 86,000 kilowatts. (See Table 10-B for authorizing legislation.)

**Local cooperation.** None required.

#### **Operations and results during fiscal year.**

Maintenance: Operation and maintenance cost \$7,871,891. Gross power generation amounted to 108,338 megawatt hours during FY 2009. Recreational attendance at Lake Sidney Lanier during FY 2009 totaled 7,738,041 visits.

**Condition at end of fiscal year.** Construction commenced in March 1950 and was completed in June 1960. The reservoir was in useful operation for flood control in February 1956. The first power generating unit was placed on the line June 19, 1957; the second on July 26, 1957; and the third on October 10, 1957. Total Federal cost under existing project as of September 30, 2009 is \$53,030,038 for new work, major rehabilitation cost \$29,878,420 and \$241,321,977 for maintenance, a total of \$324,230,435. (See also Table 10-M.)

### 41. CARTERS DAM AND RESERVOIR, GA

**Location.** The damsite is in Murray County, Georgia, on the Coosawattee River 26.8 miles above its junction with Conasauga

River, one of the headwater tributaries of the Alabama-Coosa system. It is 60 miles north of Atlanta near the town of Oakman, Georgia. The reservoir is in both Murray and Gilmer Counties.

**Existing project.** The existing project consists of a 1,950-foot long rockfill dam across the river, three saddle dikes on the left bank, a 258-foot long high-level, gated spillway on the left bank, a powerhouse on the right bank having two conventional units with a generating capacity of 125,000 kilowatts each and two pump-generating units of the same size, and a regulating dam 2,855 feet long with a gated spillway 208 feet long 1.5 miles downstream from the main dam. The lake has an area of 3,220 acres, at maximum pool power elevation 1,072, total capacity of 472,800 acre-feet, of which 134,900 acre-feet is usable for power and 95,700 acre-feet reserved for flood control and 242,200 acre-feet dead storage. For other information see description of Alabama-Coosa project.

#### **Operations and results during fiscal year.**

Maintenance: Operation and maintenance of the dam, reservoir, powerhouse, service and recreational activities and administration totaled \$10,306,000. Gross power generation amounted to 514,340 megawatt hours during FY 2009. Recreation attendance during FY 2009 totaled 538,337 visits.

**Condition at end of fiscal year.** Construction which commenced in April 1962 and completed in September 1980. Total Federal cost of the existing project as of September 30, 2009 is \$283,402,497, including \$111,140,340 for new work and \$172,262,157 for maintenance.

### 42. JIM WOODRUFF LOCK AND DAM, GA AND FL

**Location.** The project is located on the Apalachicola River 107.6 miles above its mouth, about 1,000 feet below confluence of the Chattahoochee and Flint Rivers, and 1.5 miles northwest of Chattahoochee, Florida. Reservoir extends about 46.5 miles upstream along the Chattahoochee River to the vicinity of Columbia, Alabama, and about 47 miles upstream along Flint River, or 17 miles above Bainbridge, Georgia. (See Geological Survey maps for southwest Georgia.)

**Existing project.** The existing project provides for a concrete open-crest spillway 1,634 feet long on the right bank, with a crest at elevation 79 feet national geodetic datum; a single-lift lock with usable chamber dimensions of 82 by 450 constituting a portion of the dam; an earth section 506 feet, a maximum lift of 33 feet, and depth over the sills of 14 feet; a gated spillway 766 feet long with the bridge at elevation 107 feet national geodetic datum, or about 67 feet above the streambed elevation; a

powerhouse with an intake section constituting a portion of the dam; an earth section 506 feet long to accommodate the switchyard and substation; and an overflow dike section 2,130 feet long on the left bank, with a crest at elevation 85. The underlying foundation is limestone. At the normal pool elevation of 77, the reservoir has a total capacity of 406,160 acre-feet. The power installation consists of three units of 10,000 kilowatts each, or a total of 30,000 kilowatts. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Required cooperation is being fulfilled. Easements for rights-of-way and spoil-disposal areas were provided as required along the Apalachicola River. Adequate public terminals were constructed by local interests at Bainbridge, Georgia, on the Flint River, and at Columbia, Alabama, on the Chattahoochee River. Facilities are being planned for other localities on the project.

**Terminal facilities.** A public wharf with concrete deck for handling general cargo, a bulk storage terminal for petroleum, a grain elevator, and private riverside facilities at Bainbridge, Georgia, on the Flint River, are considered adequate for existing commerce.

**Operations and results during fiscal year.**

Maintenance: Operation and maintenance cost \$8,506,000. Gross power generation amounted to 163,271 megawatt hours during FY 2009. Recreational attendance at Lake Seminole during FY 2009 totaled 1,292,092 visits.

**Condition at end of fiscal year.** Construction of the lock was commenced in 1947, and completed in 1957. The pool was opened to navigation in May 1954, and the pool was raised to project level in January 1957. The first power-generating unit was placed on-the-line on February 1, the second on March 1, and the third April 26, 1957. Total Federal cost under existing project as of September 30, 2009 is \$47,978,858 for new work, major rehabilitation cost \$32,196,538 and \$187,249,049 for maintenance, a total of \$267,424,445. (See also Table 10-M.)

**43. MILLERS FERRY LOCK AND DAM, AL**

**Location.** The site is in Wilcox County at mile 142.2 on the Alabama River, 10 miles northwest of Camden, Alabama, and 30 miles southwest of Selma.

**Existing project.** The existing project consists of an earth dike on the right bank, a concrete, gravity-gated spillway in the river channel, a lock and mound on the left bank, an earth dike extending downstream paralleling the lock, to the powerhouse

intake structure; a powerhouse, and an earth dike extending to high ground on the left bank. Normal upper pool is at elevation 80. The powerplant contains two 25,000 kilowatt units and one 30,000 kilowatt unit. The 103-mile long reservoir has an area of 17,200 acres at normal pool level and a total capacity of 331,800 acre-feet. The lock chamber is 84 by 600 feet with a 13-foot depth over the miter sills. For other information see description of Alabama-Coosa project.

**Operations and results during fiscal year.**

Maintenance: Operation and maintenance of lock, dam, powerhouse, reservoir, and administration cost \$5,359,000. Gross power generation amounted to 259,359 megawatt hours during FY 2009. Recreation attendance at William "Bill" Dannelly Reservoir during FY 2009 totaled 1,474,073 visits.

**Condition at end of fiscal year.** Construction began in April 1963. The lock was placed in temporary operations in June 1968 and opened to full use in November 1969. The powerhouse units were placed on line during April and May 1970. The project was completed in 1980. Total Federal cost of the project as of September 30, 2009 is \$63,125,300 for new work and \$127,636,644 for maintenance, a total of \$190,761,944.

**44. ROBERT F. HENRY LOCK AND DAM, AL**

**Location.** The site is in Lowndes and Autauga Counties at mile 281.2 on the Alabama River, 26 miles west of Montgomery.

**Existing project.** The existing project provides for a navigation lock, a gated spillway, and a power plant located at mile 281.2. The normal upper pool is at elevation 125.0 and the minimum lower pool due to the Millers Ferry Lock and Dam is at elevation 80.0. The structures consist of earth dikes and a power plant on the right bank, a gated spillway in the river channel, a lock and mound on the left bank, and an earth dike extending upstream parallel to the Western Railway of Alabama. The total length of the structures is about 14,962 feet with maximum height above the foundation at the power plant intake about 101 feet. The power plant contains four 20,500-kw. units. The 88-mile long reservoir has an area of 12,300 acres at normal pool level and a total capacity of 234,200 acre-feet. The lock has a chamber 84 feet wide and 600 feet long and provides a 12-foot depth over the lower miter sill. For other information see description of Alabama-Coosa project.

**Operations and results during fiscal year.**

Maintenance: Operation and maintenance costs amounted to \$4,657,000. Gross power generation amounted to 201,099 megawatt hours during FY 2009. Recreation attendance during FY 2009 totaled 1,396,901 visits.

**Condition at end of fiscal year.** Construction began in March 1966 and is complete. The first powerhouse unit was placed in operation in June 1975, with the last unit on line in November 1975. Total Federal cost of the project as of September 30, 2009 is \$184,024,231, including \$83,360,800 for new work and \$100,663,431 for maintenance.

**45. WALTER F. GEORGE LOCK AND DAM, AL AND GA**

**Location.** The project is on the Chattahoochee River about 75.2 miles above its mouth and about 1.5 miles above Fort Gaines, Georgia. (See Geological Survey maps for southwest Georgia.)

**Existing project.** The existing project provides for a concrete dam, gated spillway, and single-lift lock, with earth embankments at either side. The non-overflow section of the dam includes a powerhouse and an intake structure. The gated spillway is 708 feet long with a fixed crest at elevation 163 feet national geodetic datum. The two earth embankments, of almost equal lengths, have a total length of 12,128 feet, with a crest elevation at 215, and a maximum height of about 68 feet. The nonoverflow section of the concrete dam is 200 feet long, with the deck of the powerhouse section at elevation 208. The lock, with usable chamber dimensions of 82 feet by 450 feet, has a lift of 88 feet with the normal upper pool elevation at 190. Depths are 13 feet over the lower sill and 18 feet over the upper sill at normal pool elevation. The underlying foundation is limestone. Total reservoir capacity is 934,400 acre-feet, with 244,000 acre-feet reserved for power. The power installation consists of four units of 32,500 kilowatts each, or a total of 130,000 kilowatts. The project provides for maintenance, including operation and care. (See Table 10-B for authorizing legislation.)

**Local cooperation.** Local interests must maintain and operate all utility and highway facilities which may be relocated or otherwise altered as part of the improvement, provide suitable public terminal facilities, and hold the United States free from damages. Local agencies and other organizations have indicated their willingness and ability to comply.

**Terminal facilities.** Public wharves at Eufaula and Phenix City, Alabama, and Columbus, Georgia, are considered adequate for existing commerce.

**Operations and results during fiscal year.**

Maintenance: Operation and maintenance cost for FY 2009 was \$8,080,000. Gross power generation amounted to 242,063 megawatt hours during FY 2009. Recreational attendance during FY 2009 totaled 3,799,469 visits.

**Condition at end of fiscal year.** Construction was completed in 1963. The lock was opened to navigation in June 1963. The first power generating unit was placed on-the-line in March, the second in May, the third in September, and the fourth in November 1963. Total Federal cost under existing project as of September 30, 2009 is \$88,330,669 for new work, major rehabilitation cost \$52,914,362 and \$219,629,449 for maintenance, a total cost of \$360,874,480. (See also Table 10-M.)

**46. WEST POINT LAKE, CHATTAHOOCHEE RIVER BASIN, GA AND AL**

**Location.** The damsite is on the Chattahoochee River 2.8 miles upstream from West Point, Georgia, 201.4 miles above the mouth of the Chattahoochee River, and 309.2 miles above the mouth of the Apalachicola River. At the full power pool elevation of 635 feet above national geodetic datum, the reservoir would lie in Troup and Heard Counties, Georgia, and in Chambers and Randolph Counties, Alabama (See Geological Survey maps of Georgia and Alabama.)

**Existing project.** The existing project provides for flood control, power, recreation, fish and wildlife development, and streamflow regulation for downstream navigation. The project provides for a gravity-type concrete dam 896 feet long with earth embankments at either end 1,111 feet long on the east end and 5,243 feet long on the west end. The total length of the dam and spillway is 7,250 feet. The main dam consists of a concrete non-overflow section, 185 feet long on the west side and an earth embankment retaining wall on the east side; a gravity concrete spillway 390 feet long, including piers and abutments, with six tainter gates, each 50 feet by 41 feet. A monolith intake-powerhouse section and erection bay 321 feet long is constructed directly west and adjacent to the spillway. At the full power-pool elevation of 635 the reservoir provides a total storage of 605,000 acre-feet of which 307,000 acre-feet is usable. During the critical flood season the reservoir is operated with maximum power pool elevation at 625 feet to provide flood storage between elevations 625 and 635. The initial power installation of 73,375 kilowatts consisting of units 1, 2 and 3 were placed in operation in March and April, 1975. (See Table 10-B for authorizing legislation.)

**Local cooperation.** None required.

**Operations and results during fiscal year.**

Maintenance: Operation and maintenance of the project totaled \$6,912,000. Gross power generation amounted to 99,556

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

megawatt hours during FY 2009. Recreational attendance during FY 2009 totaled 2,361,491 visits.

**Condition at end of fiscal year.** Construction of the project, which was initiated in June 1966, and completed at the end of FY 1984. Total Federal cost under existing project as of September 30, 2009 is \$131,565,760 for new work and \$178,636,816 for maintenance, a total of \$310,202,576 (See also Table 10-M.)

**47. SCHEDULING FLOOD CONTROL RESERVOIR OPERATIONS**

Mobile District monitors flood control operations of Alabama Power Company's Weiss, H. Neely Henry, and Logan Martin Dams on Coosa River, Alabama, and their Lewis Smith Dam on Sipsey Fork (headwaters of Black Warrior River, Alabama), for compliance with regulation plans prepared in accordance with Public Law 436, 83rd Congress, and Federal Power Commission licenses. Fiscal year cost for these activities on the Weiss, H. Neely Henry, and Logan Martin Dams are included under operation and maintenance costs for the Alabama-Coosa Rivers. Fiscal year cost for the Lewis Smith Dam is included under the overall operation and maintenance costs for the Black Warrior-Tombigbee Rivers System.

**48. FLOOD CONTROL AND COASTAL EMERGENCIES (FC & CE)**

Disaster Preparedness Program.....	\$3,831,839
Emergency Operations.....	\$3,463,246
Rehabilitation.....	\$19,305,073
Miscellaneous Reimbursable .....	\$3,316,066
Total FC & CE	\$29,916,224

**49. NATIONAL EMERGENCY PREPAREDNESS PROGRAM (NEPP)**

National Preparedness.....	\$65,575
Local Preparedness .....	\$10,301
Emergency Facilities.....	0
Training and Exercise .....	0
Other Programs/Activity.....	\$14,214
Total NEPP	\$90,090

**50. REGULATORY FUNCTIONS PROGRAM**

Permit Evaluation.....	\$3,805,952
Enforcement.....	\$113,372
Studies.....	0
Other Navigational Regulations .....	0
Coastal Mississippi Environmental Impact Statement.....	0
Administrative Appeals.....	\$3,973
Total Regulatory	\$3,923,297

**51. PROJECT MODIFICATION TO IMPROVE ENVIRONMENT (SECTION 1135)**

Coordination Account Funds .....	\$13,074
Longwood Cove, GA .....	0
Mantachie Creek .....	0
Total Improvement (Section 1135, P.L. 99-662)	\$13,074

**52. AQUATIC ECOSYSTEM RESTORATION (SECTION 206)**

Coordination Account Funds .....	\$14,025
Butler Creek Detention Pond, Cobb County, GA .....	\$28,438
Allatoona Creek, Cobb County, GA .....	\$33,691
Proctor Creek, Cobb County, GA .....	\$32,859
Chattahoochee River Dam Removal, GA	\$659,895
Crooked Creek, Gwinnett, GA	\$13,471
Anneewakee Creek Watershed, Douglas County	\$21,645
Settingdown Creek Watershed, Forsyth County	\$24,190
Little River Watershed, Hall County, GA	\$86,815
Mountain Park Dam, GA.....	0
Total Restoration (Section 206, P.L. 104-303)	\$915,029

MOBILE, ALABAMA, DISTRICT

**53. OTHER AQUATIC HABITAT  
(SECTION 204)**

Coordination Account Funds .....	\$5,095
Dauphin Island Parkway, AL.....	0
Deer Island Marsh, MS .....	688
Cadet Bayou Marsh Creation, Hancock County, MS .....	0
Grand Batture Island, MS .....	0
Helen Wood Park, AL.....	0
Isle Aux Herbes .....	29
 Total Other Aquatic (Section 204, P.L. 102-560)	 \$5,812

**57. RIVERS AND HARBORS  
CONTRIBUTED FUNDS**

Contributed funds expended for authorized Federal studies included:	
Brewton and East Brewton, AL .....	0
Walton County, MS .....	125,277
Metro Atlanta Watershed, GA .....	32,922
Planning Assistance to States.....	278,460
Village Creek, AL.....	3,240
 Total Contributed Funds	 \$439,899

**GENERAL INVESTIGATIONS**

**54. SURVEYS**

During FY 2009, costs of \$1,398,391 were incurred as shown below:

Flood Damage Preventive Studies .....	\$774,056
Navigation Studies .....	-61,550
Special Studies .....	301,340
Shoreline Protection Studies .....	-3,690
Miscellaneous Activities .....	56,915
Coordination with Other Agencies and Non-Federal Interests.....	331,320
 Total Surveys	 \$1,398,391

**55. COLLECTION AND STUDY OF  
BASIC DATA**

Collection and study of basic data continued during the fiscal year with the initiation of Flood Insurance studies, the cost of which was reimbursable by FEMA. In addition, Flood Plain Management Services were performed at a cost of \$438,759 and \$0 expended for Hydrologic Studies. (See Table 10-P for listings of studies completed during FY 2009.)

**56. PRECONSTRUCTION ENGINEERING  
AND DESIGN**

Total FY 2009 expenditures for Preconstruction, Engineering and Design (PED) was \$17,596.

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

**TABLE 10-A COST AND FINANCIAL STATEMENT**

See Section In Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
<b>Navigation</b>							
1.	Alabama-Coosa Rivers, AL and GA	New Work:					
		Approp.	-	-	-	-	3,245,400
		Cost	-	-	-	-	3,245,400
		Maint.:					
		Approp.	2,829,000	-	-256,148	-	138,749,839 <sup>24</sup>
		Cost	1,889,199	140,895	920,826	-	138,749,240 <sup>24</sup>
1A.	Claiborne Lock and Dam, AL	New Work:					
		Approp.	-	-	-	-	27,997,450
		Cost	-	-	-	-	27,997,450
1B.	Coosa River, Montgomery to Gadsden, AL	New Work:					
		Approp.	-	-	-	-	14,986,400 <sup>23</sup>
		Cost	-	-	-	-	14,988,935 <sup>23</sup>
2.	Apalachicola Bay, FL	New Work:					
		Approp.	-	-	-	-	2,033,461 <sup>1</sup>
		Cost	-	-	-	-	2,033,461 <sup>1</sup>
		Maint.:					
		Approp.	9,979	20,000	-9,075	-	10,057,431 <sup>2</sup>
		Cost	10,202	6,267	5,689	-	10,057,431 <sup>2</sup>
3.	Apalachicola, Chattahoochee And Flint Rivers, AL and GA	New Work:					
		Approp.	-	-	-	-	4,452,162 <sup>26</sup>
		Cost	-	-	-	-	4,452,162 <sup>26</sup>
		Maint.:					
		Approp.	2,411,000	3,411,000	2,386,000	3,109,540	169,414,040 <sup>27</sup>
		Cost	1,496,337	2,602,251	2,161,872	3,413,384	167,758,994 <sup>27</sup>
3A.	George W. Andrews Lock and Dam AL and GA	New Work:					
		Approp.	-	-	-	-	13,038,427 <sup>29</sup>
		Cost	-	-	-	-	13,038,427 <sup>29</sup>
		Maint.:					
		Approp.	-	-	-	-	30
		Cost	-	-	-	-	30
4.	Aquatic Plant Control (Contributed Funds)	New Work:					
		Approp.	-	-	-	-	1,018,087
		Cost	5,991	7,625	-	845	995,633
		Maint.:					
		Contrib.	-	-	-	-	21,225
		Cost	-	-	-	-	21,225
5.	Bayou Coden, AL (Contributed Funds)	New Work:					
		Approp.	-	-	-	-	330,701 <sup>3</sup>
		Cost	-	-	-	-	330,701 <sup>3</sup>
		Maint.:					
		Approp.	-	-	-	-	3,466,674
		Cost	6,483	120	-	-	3,466,503
		New Work:					
		Contrib.	-	-	-	-	100,000
		Cost	-	-	-	-	100,000
		Maint.:					
		Contrib.	-	-	-	-	134,357
		Cost	-	-	-	-	131,912
6.	Bayou La Batre, AL (Contributed Funds)	New Work:					
		Approp.	-	-	-	-	5,755,195
		Cost	-	-	-	-	5,755,195
		Maint.:					
		Approp.	-	35,000	-	-	13,025,326
		Cost	-	12,658	7,251	7,994	13,018,229
		New Work:					
		Contrib.	-	-	-	-	678,618 <sup>4</sup>
		Cost	-	-	-	-	678,618 <sup>4</sup>
7.	Biloxi Harbor, MS (Contributed Funds)	New Work:					
		Approp.	-	-	-	-	1,431,919 <sup>5</sup>
		Cost	-	-	-	-	1,431,919 <sup>5</sup>
		Maint.:					
		Approp.	991,800	-36,066	1,156,000	-	23,609,222 <sup>6</sup>
		Cost	1,067,649	10,756	11,674	1,143,812	23,594,063 <sup>6</sup>
		New Work:					
		Contrib.	-	-	-	-	102,600
		Cost	-	-	-	-	102,600
		Maint.:					
		Contrib.	-	-	-	-	238,640
		Cost	-	-	-	-	238,640

## MOBILE, ALABAMA, DISTRICT

TABLE 10-A (continued)

## COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
8.	Black Warrior and Tombigbee Rivers, AL	New Work:					
		Approp.	-	-	-	-	88,461,935 <sup>7</sup>
		Cost	-	-	-	-	88,461,935 <sup>7</sup>
		Maint.:					
		Approp.	22,880,000	21,485,500	19,451,600	22,767,148	616,076,508 <sup>8</sup>
		Cost	23,058,441	19,586,721	19,219,523	22,932,738	613,446,519 <sup>8</sup>
		Major Rehab.					
		Approp.	-	-	-	-	52,292,880
		Cost	-	-	-	-	52,292,880
8A.	Oliver Lock and Dam (Replacement), AL	New Work:					
		Approp.	-	-	-	-	61,373,200
		Cost	-	-	-	-	61,373,200
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	63,164,125
		Cost	-	-	-	-	63,128,156
9.	Bon Secour River, AL	New Work:					
		Approp.	-	-	-	-	150,615
		Cost	-	-	-	-	150,615
		Maint.:					
		Approp.	-	-	-	-	2,894,758
		Cost	-	-	-	-	2,891,686
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	9,700
		Cost	-	-	-	-	9,700
10.	Carrabelle Bar and Harbor, FL	New Work:					
		Approp.	-	-	-	-	481,627
		Cost	-	-	-	-	481,627
		Maint.:					
		Approp.	-	-	-	-	1,067,264
		Cost	-	-	-	-	1,067,101
11.	Dauphin Island Bay, AL	New Work:					
		Approp.	-	-	-	-	292,364
		Cost	-	-	-	-	292,864
		Maint.:					
		Approp.	295,388	-244	-	-	6,134,817
		Cost	299,756	200	14	283	6,134,817
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	41,422
		Cost	-	-	-	-	41,422
12.	Dog and Fowl Rivers, AL	New Work:					
		Approp.	-	-	-	-	391,354
		Cost	-	-	-	-	391,354
		Maint.:					
		Approp.	-5,675	-	-	-	8,802,922
		Cost	452	200	-	-	8,479,737
	(Contributed Funds)	Maint.:					
		Contrib.	-	-	-	-	197,450
		Cost	-	-	-	61,550	257,176
12A.	Dog River Pilot, AL	New Work:					
		Approp.	-3,000	-	-	-	658,000
		Cost	4,584	13,816	12,189	9,917	527,946
13.	East Pass Channel From Gulf of Mexico into Choctwhatchee Bay, FL	New Work:					
		Approp.	-	-	-	-	916,715
		Cost	-	-	-	-	916,715
		Maint.:					
		Approp.	861,499	74,995	238,075	-	17,535,171
		Cost	860,982	7,172	296,464	7,335	17,532,554
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	398,000
		Cost	-	-	-	-	398,000
14.	Fly Creek, AL	New Work:					
		Approp.	-	-	-	-	29,000
		Cost	-	-	-	-	29,000
		Maint.:					
		Approp.	-	-	-	-	1,119,840
		Cost	-	-	-	-	1,119,835
15.	Gulf Intracoastal Waterway between Apalachee Bay, FL and Mexican Border	New Work:					
		Approp.	-	-	-	-	6,480,299 <sup>9</sup>
		Cost	-	-	-	-	6,480,299 <sup>9</sup>
		Maint.:					

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

**TABLE 10-A (continued) COST AND FINANCIAL STATEMENT**

See Section In Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
		Approp.	3,332,000	5,392,975	4,720,000	5,657,540	146,411,612 <sup>10</sup>
		Cost	4,048,780	3,920,604	6,248,191	5,712,359	146,215,585 <sup>10</sup>
16.	Gulfport Harbor, MS	New Work:					
		Approp.	1,091,000	-	-	-150,000	27,863,660 <sup>11</sup>
		Cost	39,406	-	-	2,530	26,821,354 <sup>11</sup>
		Maint.:					
		Approp.	8,063,302	3,643,000	4,920,000	9,800,000	102,256,534 <sup>12</sup>
		Cost	7,004,022	2,223,042	6,706,938	6,126,509	96,984,972 <sup>12</sup>
		Maint.: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	20,400,000	20,400,000
		Cost	-	-	-	-	-
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	9,288,980
		Cost	46,426	5,655	-	8,178	9,268,054
17.	Mobile Harbor, AL	New Work:					
		Approp.	1,879,000	3,750,000	877,000	4,728,000	109,237,475 <sup>13</sup>
		Cost	562,788	1,130,556	1,454,502	2,114,948	103,205,760 <sup>13</sup>
		Maint.:					
		Approp.	20,381,000	20,317,000	18,002,000	19,613,720	514,155,147 <sup>14</sup>
		Cost	23,156,000	22,549,076	13,453,921	14,455,404	503,734,590 <sup>14</sup>
		Maint.: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	17,249,250	17,249,250
		Cost	-	-	-	2,143,357	2,143,357
	(Contributed Funds)	Maint.:					
		Contrib.	730,000	1,920,000	-75,886	-	21,706,614
		Cost	280,361	2,300,516	1,429	-	21,706,615
		New Work:					
		Contrib.	-	-	-	-	202,040
		Cost	-	-	-	-	202,040
18.	Panama City Harbor, FL	New Work:					
		Approp.	-	-	22,398	4,170	4,751,613 <sup>15</sup>
		Cost	-	-	22,503	5,000	4,751,613 <sup>15</sup>
		Maint.:					
		Approp.	804,000	-	882,000	949,620	18,661,724 <sup>16</sup>
		Cost	600,579	197,893	885,057	32,427	17,742,059 <sup>16</sup>
	(Contributed Funds)	New Work:					
		Contrib.	-	32,376	-	-	2,712,376
		Cost	3,304	-	-22,363	-	1,974,463
19.	Pascagoula Harbor, MS	New Work:					
		Approp.	3,151,000	-	-	-	43,977,924 <sup>17</sup>
		Cost	-23,764	-	-226	-	40,800,046 <sup>17</sup>
		Maint.:					
		Approp.	5,076,000	5,501,590	9,840,000	7,840,000	131,733,546 <sup>18</sup>
		Cost	4,270,172	6,999,631	7,627,189	1,699,014	122,579,241 <sup>18</sup>
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-186,997	-	13,057,757
		Cost	101,830	-	226	-	12,990,220
	(Contributed Funds)	Maint.:					
		Contrib.	219,991	-	-	-	9,633,687
		Cost	5,138	72,543	92,356	-	9,561,139
19A.	Bayou Casotte, MS	New Work:					
		Approp.	-	-	-	-	2,090,100
		Cost	-	-	-	-	2,090,100
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	713,191
		Cost	-	-	-	-	713,191
20.	Pensacola Harbor, FL	New Work:					
		Approp.	-	-	-	-	1,469,693 <sup>19</sup>
		Cost	-	-	-	-	1,469,693 <sup>19</sup>
		Maint.:					
		Approp.	1,167,000	812,000	865,000	60,760	13,555,484 <sup>20</sup>
		Cost	603,553	139,197	2,413,361	47,974	13,531,765 <sup>20</sup>
	(Contributed Funds)	Maint.:					
		Contrib.	-	-	-	-	312,350
		Cost	-	-	-	-	312,350

## MOBILE, ALABAMA, DISTRICT

TABLE 10-A (continued)

## COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
21.	Perdido Pass Channel, AL	New Work:					
		Approp.	-	-	-	-	629,860
		Cost	-	-	-	-	629,860
		Maint.:					
		Approp.	4,880,000	-	150,000	-	20,825,050
		Cost	1,416,750	4,278	3,453,872	23,346	20,641,111
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	510,000
		Cost	-	-	-	-	510,000
	(Contributed Funds)	Maint.:					
		Contrib.	-	-	-	-	10,325
		Cost	-	-	-	-	10,325
22.	Tennessee-Tombigbee Waterway, AL and MS	New Work:					
		Approp.	-	-	-	-	1,053,001,016 <sup>21</sup>
		Cost	-	-	-	-	1,053,001,011 <sup>21</sup>
		Maint.:					
		Approp.	22,057,800	22,338,700	27,683,800	24,607,332	546,324,045 <sup>22</sup>
		Cost	24,488,453	22,334,192	24,738,067	26,828,996	545,482,912 <sup>22</sup>
22A.	Tenn-Tom Wildlife Mitigation	New Work:					
		Approp.	-	-	-	-	92,176,726
		Cost	-575	-	-	-	92,175,850
		Maint.:					
		Approp.	2,625,200	1,498,300	1,835,000	2,777,070	15,711,970
		Cost	2,260,103	1,787,186	1,900,568	2,116,821	15,025,520
22B.	Tenn-Tom Wildlife Environmental	New Work:					
		Approp.	-	-	-	-	2,375,440
		Cost	-	-	-	-	2,375,365
		<b>Flood Control</b>					
31.	Cedar Point Extension Bay St. Louis, MS	New Work:					
		Approp.	-	-	-	-	684,300
		Cost	-	-	-	-	605,316
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	56,010
		Cost	-	-	-	-	
32.	Choctawhatchee and Pea Rivers, AL and FL	New Work:					
		Approp.	-	-	-	-	381,000
		Cost	-	-	-	-	381,000
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	150,988
		Cost	-	-	-	-	150,988
32A.	Choctawhatchee and Pea Rivers, Elba and Geneva Levees, AL	New Work:					
		Approp.	-	-	-	-	629,400
		Cost	-	-	-	-	629,400
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	338,835
		Cost	-	-	-	-	338,835
33.	Dane Avenue Waveland, MS	New Work:					
		Approp.	-	-	-	-	1,000,000
		Cost	-	-	-	-	1,000,000
	(Contributed Funds)	New Work:					
		Approp.	-	-	-	-	524,810
		Cost	-	-	-	-	524,810
34.	Graveline Bayou East Jackson County, MS	New Work:					
		Approp.	-15,905	-	-	-	241,241
		Cost	-10,050	-	-	-	241,233
	(Contributed Funds)	New Work:					
		Approp.	-12,789	-	-	-	91,511
		Cost	10,050	-	-	-	91,510
35.	Gulf Breeze Wetlands Gulf Breeze, FL	New Work:					
		Approp.	-	-	-	-	139,185
		Cost	-	-	-	-	139,186
	(Contributed Funds)	New Work:					
		Approp.	-	-	-	-	6,235
		Cost	-	-	-	-	6,235
36.	Gulf of Mexico, Highway 193 Mobile County, AL	New Work:					
		Approp.	-	-	-	-	1,000,000
		Cost	-	-	-	-	1,000,000
	(Contributed Funds)	New Work:					

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

**TABLE 10-A (continued) COST AND FINANCIAL STATEMENT**

See Section In Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
		Contrib.	-	-	-	-	632,034
		Cost	-	-	-	-	632,034
37.	Gulfside Seawall Waveland, MS	New Work:					
		Approp.	-	-	-	-	668,503
		Cost	-	-	-	-	666,754
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	337,483
		Cost	-	-	-	-	337,483
38.	Texas Flat Road Hancock County, MS	New Work:					
		Approp.	-	-	-	-	190,900
		Cost	-	-	-	-	190,900
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	81,236
		Cost	-	-	-	-	81,236
39.	Okatibbee Dam, MS	New Work:					
		Approp.	-	-	-	-	9,739,528
		Cost	-	-	-	-	9,739,528
		Maint.:					
		Approp.	2,258,000	1,519,000	1,553,200	1,862,000	42,756,169
		Cost	1,529,743	2,145,134	1,637,060	1,687,639	42,529,228
40.	Tombigbee River (East Fork) MS and AL	New Work:					
		Approp.	-	-	-	-	134,801
		Cost	-	-	-	-	134,801
		Maint.:					
		Approp.	151,000	209,000	125,000	122,500	5,500,478
		Cost	150,297	187,778	111,567	156,988	5,497,525
41.	Tombigbee River Tributaries, MS and AL	New Work:					
		Approp.	-	-	-	-	40,032,795
		Cost	-	-	-	-	40,020,744
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	570,113
		Cost	-	-	-	-	570,113
42.	Upper Gordon Creek Hattiesburg, MS	New Work:					
		Approp.	-	-	-	-	3,916,000
		Cost	-	435	-	-	3,915,750
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	130,720
		Cost	-	-	-	-	130,689
43.	Village Creek, Birmingham, AL	New Work:					
		Approp.	-	-	-	-	22,894,000
		Cost	-	-	-	-	22,887,742
	(Contributed Funds)	New Work:					
		Contrib.	-	-	-	-	7,199,710
		Cost	-	-	-	-	7,196,238
<b>Multiple Purpose Power Projects</b>							
47.	Allatoona Dam, Coosa River Basin, GA	New Work:					
		Approp.	-	-	-	-	35,709,085 <sup>25</sup>
		Cost	-	-	-	-	35,709,085 <sup>25</sup>
		Maint.:					
		Approp.	6,474,488	6,728,500	6,454,400	6,695,588	195,264,962
		Cost	5,228,621	6,440,845	7,134,325	7,053,775	194,698,503
48.	Buford Dam, Lake Sidney Lanier, GA	New Work:					
		Approp.	-	-	-	-	53,030,038 <sup>28</sup>
		Cost	-	-	-	-	53,030,038
		Maint.					
		Approp.	7,793,000	7,774,500	7,621,700	7,995,372	242,548,405
		Cost	7,288,004	7,871,892	7,435,375	7,663,338	241,321,977
		Major Rehab.					
		Approp.	3,580,000	-	-	-	29,879,672
		Cost	431,127	2,791,515	362,998	100	29,878,420
49.	Carters Dam and Reservoir, GA	New Work:					
		Approp.	-	-	-	-	111,140,340
		Cost	-	-	-	-	111,140,340
		Maint.:					
		Approp.	10,609,000	7,360,500	6,911,700	7,007,000	172,957,192
		Cost	10,305,775	7,393,356	7,014,547	7,186,223	172,262,157

## MOBILE, ALABAMA, DISTRICT

TABLE 10-A (continued)

## COST AND FINANCIAL STATEMENT

See Section In Text	Project	Funding	FY 06	FY 07	FY 08	FY 09	Total Cost to Sept. 30, 2009
50.	Jim Woodruff Lock and Dam, GA and FL	New Work:					
		Approp.	-	-	-	-	47,978,858 <sup>31</sup>
		Cost	-	-	-	-	47,978,858 <sup>31</sup>
		Maint.:					
		Approp.	6,977,000	7,961,500	7,114,700	9,208,369	189,329,664
		Cost	6,267,126	7,683,686	6,805,355	8,564,733	187,249,049
		Cost	-	-	-	-	47,978,858 <sup>31</sup>
		Maint.:					
		Approp.	6,977,000	7,961,500	7,114,700	9,208,369	189,329,664
		Cost	6,267,126	7,683,686	6,805,355	8,564,733	187,249,049
	Major Rehab.						
		Approp.	531,000	-	-	-	31,818,284
		Cost	206,049	179,376	73,126	64,598	32,196,538
51.	Millers Ferry Lock and Dam, AL	New Work:					
		Approp.	-	-	-	-	63,125,300
		Cost	-	-	-	-	63,125,300
		Maint.:					
		Approp.	6,488,000	-	-	-5,073	127,636,646
		Cost	5,358,466	930,948	246,236	-	127,636,644
52.	Robert F. Henry Lock and Dam, AL	New Work:					
		Approp.	-	-	-	-	83,360,800
		Cost	-	-	-	-	83,360,800
		Maint.:					
		Approp.	5,596,000	-	-	-1,943	100,663,432
		Cost	4,657,065	710,784	263,955	-	100,663,431
53.	Walter F. George Lock and Dam, AL and GA	New Work:					
		Approp.	-	-	-	-	88,330,669 <sup>32</sup>
		Cost	-	-	-	-	88,330,669 <sup>32</sup>
		Maint.:					
		Approp.	6,306,000	7,689,000	6,858,000	7,968,048	221,371,994
		Cost	6,044,983	7,351,272	6,509,324	7,257,078	219,629,449
		Major Rehab.:					
		Approp.	5,480,000	16,723,000	-	-	61,576,320
		Cost	1,420,591	4,158,386	4,758,253	3,208,646	52,914,362
		Maint.: (American Recovery and Reinvestment Act)					
		Approp.	-	-	-	13,838,000	13,838,000
		Cost	-	-	-	19,631	19,631
53A	Walter F. George Secant Wall, AL and GA	Major Rehab.:					
		Approp.	-	-	-	-	60,888,777
		Cost	7,526	23	-	-	60,888,777
54.	West Point Lake, Chattahoochee River Basin, GA and AL	New Work:					
		Approp.	-	-	-	-	131,565,760 <sup>33</sup>
		Cost	-	-	-	-	131,565,760 <sup>33</sup>
		Maint.:					
		Approp.	9,456,000	9,514,000	11,269,000	6,831,196	178,618,953
		Cost	7,752,803	11,130,656	8,682,577	9,674,840	178,636,816

1. Includes \$134,613 for previous projects and \$28,500 for DPR on Two-Mile.

2. Includes \$168,766 for previous projects.

3. Includes \$5,650 for previous projects.

4. Cost for providing spoil dikes for work authorized by 1965 River and Harbor Act.

5. Includes \$44,382 for previous projects of which \$5,000 was contributed funds.

6. Includes \$96,509 for previous projects of which \$10,200 was contributed funds.

7. Includes \$606,931 for previous projects and \$1,243,661 for recreational facilities on completed projects.

8. Includes \$50,000 for previous projects.

9. Includes \$45,605 for previous projects.

10. Includes \$65,137 for previous projects.

11. Includes \$269,017 for previous projects.

12. Includes \$2,312,297 for previous projects and \$442,836 Special O and M Funds.

13. Includes \$6,683,104 for previous projects, \$14,000 Public Work Funds, and \$41,242 Emergency Relief funds.

14. Includes \$4,096,681 for previous projects and \$494,136 Special O and M funds.

15. Includes \$203,560 for previous projects, \$581,959 Public Works Funds, \$457,467 rehabilitation of jetties under existing project and \$48,001 for Grand Lagoon modification.

16. Includes \$513,604 for previous projects.

17. Includes \$904,442 for previous projects.

18. Includes \$412,624 for previous projects, \$124,565 Special O and M funds, and \$829,472 Emergency Work Funds.

19. Includes \$594,688 for previous projects.

20. Includes \$126,649 for previous projects.

21. Includes \$1,993,000 transferred to National Park Service; \$210,249 GI funds expended during FY 1957 thru FY 1961. Previous project cost amounted to \$197,651.

22. Includes \$234,331 for previous projects.

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

**TABLE 10-A (continued)**

23. Includes \$3,692,483 for previous projects.
24. Includes \$2,978,050 for previous projects.
25. Includes \$3,347,489 for recreational facilities.
26. Includes \$1,883,193 Federal funds, \$1,924 contributed funds for previous projects; and \$809,553 for Lazer Creek design and \$301,310 for Rysco Channel.
27. Includes \$2,246,233 for previous projects.
28. Includes \$8,233,325 for recreational facilities.
29. Includes \$84,014 for recreational facilities.
30. Included under maintenance for overall Apalachicola, Chattahoochee and Flint Rivers projects.
31. Includes \$1,515,822 for recreational facilities.
32. Includes \$2,441,029 for recreational facilities.
33. Includes \$35,045 for previous project costs.

MOBILE, ALABAMA, DISTRICT

**TABLE 10-B AUTHORIZING LEGISLATION**

Acts	Work Authorized	Documents
Mar. 2, 1907	<b>APALACHICOLA BAY, FL</b> (See Section 2 of Text) Channel 18 feet deep through West Pass and Link Channels. Ten feet deep across the inner bar, and 9 feet deep through Bulkhead Shoals.	H. Doc. 422, 59th Cong., 1 <sup>st</sup> Sess.
Jan. 21, 1927	Modify project to provide for channel 10 feet deep from mouth of inner bar channel to Gulf via Link and West Pass Channels, and 10-foot depth in Bulkhead Shoals Channel.	H. Doc. 106, 69th Cong., 1 <sup>st</sup> Sess.
Sep. 3, 1954	At Eastpoint, Fl., a channel 6 feet deep, 100 feet wide, and about 6,000 feet long, parallel to shore, with connecting channel 6 feet deep, and 100 feet wide to St. George Sound, and at Apalachicola, Fl., a small-boat basin 200 feet and 9 feet deep, with a connecting channel 9 feet deep and 80 feet wide through Scipio Creek to the Apalachicola River.	H. Doc. 156, 82d Cong., 1 <sup>st</sup> Sess.
Sep. 3, 1954	Modify project to provide for a channel 10 feet deep and 100 feet wide from the 10-foot depth in Apalachicola Bay across St. George Island to within 300 feet of the Gulf shore, thence increasing uniformly in width to 200 feet at shore and continuing at this width to the 10-foot depth in the Gulf, with two jetties extending from the dune line on St. George Island to the outer end of channel, and for abandonment of West Pass Channel upon completion of channel through St. George Island.	H. Doc. 557, 82d Cong., 2d Sess.
Jul. 3, 1958	Modify improvement of Apalachicola Bay, Fl., authorized by River and Harbor Act of Sept. 3, 1954 to provide that the Secretary of the Army shall reimburse local interests for such approved work as they may have done based upon the reduction in the amount of material which will have to be removed to provide project dimensions at such time as Federal dredging of the channel is undertaken.	
Nov. 21, 1963 <sup>1</sup>	A channel 6 feet deep, 100 feet wide, and about 1 mile long, parallel to shore at Two Mile, Fl., with a 6-by 100-foot connecting channel to water of the same depth in Apalachicola Bay.	DPR (Sec. 107)
Feb. 5, 1975 <sup>1</sup>	A channel 6 feet deep and 100 feet wide extending from the eastern end of the existing Two Mile channel and generally paralleling the shoreline for a distance of about 9,000 feet to intersect with the Gulf Intracoastal Waterway about 1,650 feet south of Gorrie Bridge at Apalachicola, and a breakwater built to elevation 4.0 feet above mean low water along the seaward side of the existing channel parallel to the shore at Two Mile. The total length of the breakwater of about 6,150 feet, includes two 860-foot legs paralleling the existing entrance channel.	DPR (Sec. 107)
Aug. 11, 1983 <sup>1</sup>	Modify Eastpoint project to include breakwaters with a total length of 5,300 feet.	DPR (Sec. 107)
Jul. 3, 1958	<b>AQUATIC PLANT CONTROL</b> (See Section 4 of Text)	
Oct. 23, 1962	Aquatic plant control for N.C., S.C., Ga., Fl., Al., Ms., and La.	H. Doc. 37, 85th Cong., 1 <sup>st</sup> Sess.
Oct. 27, 1965	Research and planning costs to be borne by U.S.	Public Law 87-874, 87th Cong.
Nov. 17, 1986	Provided for continued research.	H. Doc. 251, 89th Cong., 1 <sup>st</sup> Sess.
	Increased non-federal cost-sharing from 30% to 50%.	Water Resources Development Act of 1986 (P.L. 99-662)
Mar. 2, 1945	<b>BAYOU CODEN, AL</b> (See Section 5 of Text) Channel 4 by 40 feet.	H. Doc. 824, 77th Cong., 2d Sess.
Jun. 2, 1969 <sup>1</sup>	Channel 8 by 60 feet to connect with Bayou La Batre channel	DPR (Sec. 107)
Oct. 27, 1965	<b>BAYOU LA BATRE, AL</b> (See Section 6 of Text) A 12- by 100-foot channel from that depth in Mississippi Sound to a point about 2,800 feet south of the highway bridge, thence a channel 12 by 75 feet to the bridge, an overall distance of about 33,500 feet.	H. Doc. 327, 88th Cong., 2d Sess.
Nov. 28, 1990	Deepen existing channel to 18 feet to the bridge; to 14 feet above bridge, and into Snake Bayou at a depth of 12 feet.	Water Resources Development Act of 1990 (P.L. 101-640)
Jul. 3, 1930	<b>BILOXI HARBOR, MS</b> (See Section 7 of Text) Channel 10 feet deep and 150 feet wide from Mississippi Sound west and north of Deer Island to deep water in Back Bay of Biloxi.	H. Doc. 754, 69th Cong., 2d Sess.
Jun. 20, 1938	Relocation of channel.	H. Doc. 639, 75th Cong., 3d Sess.
Mar. 2, 1945	Entrance channel 6 feet deep and 50 feet wide into Old Fort Bayou.	H. Doc. 258, 76th Cong., 1 <sup>st</sup> Sess.
Mar. 2, 1945	Entrance channel 8 feet deep and 100 feet wide through Cranes Neck into Bayou Bernard.	H. Doc. 326, 76th Cong., 1 <sup>st</sup> Sess.
May 17, 1950	Maintain channel 6 feet deep and 40 feet wide from Biloxi Harbor to Ott Bayou.	H. Doc. 256, 81st Cong., 1 <sup>st</sup> Sess.
Jul. 14, 1960	Continuous channel 12 feet deep from Mississippi Sound the Air Force terminal on Bayou Bernard via Back Bay and Cranes Neck.	H. Doc. 271, 86th Cong., 2d Sess.
Nov. 7, 1966	A 23-mile-long through channel 12 feet deep and 150 feet wide from the Gulf Intracoastal Waterway through: Mississippi Sound, Biloxi Bay (east of Deer Island), Back Bay, Big Lake, and via land cut to Gulfport Lake, including a 500 by 2,600-foot turning basin in the lake, thence, a channel 12 by 100 feet from the western end of Gulfport lake for about 2 miles to a 300- by 500-foot turning basin; adoption for maintenance of a 12- by 150-foot spur channel from the main channel in Biloxi Bay, westward about 1 mile to a 400- by 600-foot turning basin opposite Ott Bayou, and	H. Doc. 513, 89th Cong., 2d Sess.

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

TABLE 10-B (Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
	abandonment of the existing 6- by 40-foot channel into Ott Bayou; continuation of maintenance of the 12- by 150-foot lateral channel westward about 2.2 miles from the main channel in Biloxi Bay to a point opposite Oak Street; continuation of maintenance of the channel west of Deer Island.	
Mar. 28, 1979 <sup>1</sup>	A channel 10 feet deep; 100 feet wide and 300 feet long extending northward from the Biloxi Lateral Channel and, into a rectangular basin approximately 300 feet by 370 feet.	DPR (Sec. 107)
Aug. 15, 1985	A channel 12-feet deep; 130-feet wide and 2,100-feet long, and a 300 by 300 foot turning basin also to a 12-foot depth.	DPR (Sec. 107)
	<b>BLACK WARRIOR AND TOMBIGBEE RIVERS, AL</b> (See Section 8 of Text)	
Jul. 5, 1884	Original appropriation for improving Black Warrior River. Original project for slack-water improvement authorized by Secretary of War, Apr. 19, 1887	Annual Report, 1887, pt. 2, p. 1302.
Mar. 3, 1899	Construction of the first locks between Tuscaloosa and Demopolis.	
Sep. 19, 1890	(Maintenance of the section of Tombigbee River below lock 1 to its mouth (66 miles) included in the existing project.)	
Sep. 19, 1890	Construction of locks and dams, 1, 2, and 3. Merging of the individual project for the Black Warrior and Warrior Rivers and the Tombigbee River below Demopolis	H. Doc. 178, 56th Cong., 2d Sess., and Annual Report, 1901, pt. 3, p. 1858 H. Doc. 165, 57th Cong., 1 <sup>st</sup> Sess., and Annual Report, 1902, p. 1293
Mar. 2, 1907	Construction of locks and dams 14, 15, 16, and 17.	
Mar. 3, 1909	Provides for reconstruction of obsolete structures, modified in plan and location, to provide efficient and economical maintenance and operation.	Public Law 317
Aug. 22, 1911	Lift of lock 17 changed to 63 feet, and construction of locks and dams 18 and 19 eliminated from the project. Extension of slack-water improvement on Sanders Ferry on Mulberry Fork and Nichols Shoal on Locust Fork.	H. Doc. 72, 62d Cong., 1 <sup>st</sup> Sess.
Mar. 2, 1919	Raising of various dams 2 feet and raising the lock walls 2 feet at lock 1 to provide a minimum depth of 8 feet at low water, widening the channel to 150 feet where practicable.	Annual Report, 1918, P. 876
Aug. 30, 1935	For snagging Mobile River from the mouth of Chickasaw Creek to the junction of the Alabama and Tombigbee Rivers.	H. Doc. 728, 71st Cong., 3d Sess.,
Aug. 30, 1935	Increase channel dimensions to 9 by 200 feet; construct crest gates at lock and dam 17; add flashboards at all dams; Sunflower Bend Cutoff.	H. Doc. 56, 73d Cong., 1 <sup>st</sup> Sess., and Rivers and Harbors and Committee Doc. 45 73d Cong. Rivers and Harbors Committee
Aug. 30, 1935	Construction of a lock and dam below Tuscaloosa to replace original locks and dams 10, 11, and 12.	Doc. 26., 74 <sup>th</sup> Cong., 1 <sup>st</sup> Sess.
Jun. 26, 1934	Operation and care of locks and dams provided for with funds from War Department appropriations for rivers harbors.	
Dec. 22, 1944	Recreation facilities.	
Mar. 2, 1945	Construction of a lock and dam near Demopolis to replace existing dams 4, 5, 6, and 7.	H. Doc. 276, 76th Cong., 1 <sup>st</sup> Sess.
Mar. 2, 1945	Provide increased spillway capacity at dam 1.	H. Doc. 382, 76th Cong., 1 <sup>st</sup> Sess.
Jul. 14, 1960	Coffeeville Lock and Dam Wildlife Refuge.	S. Doc. 50, 86th Cong., 1 <sup>st</sup> Sess.
Dec. 21, 1982	Provides for a wider navigation opening at the Franklin Ferry Bridge, Jefferson County, AL.	Public Law 97, 377
Jul. 30, 1983	Authorized to widen, as necessary for safe passage, the navigation opening of Franklin Ferry Bridge, Jefferson County, AL.	Public Law 98-63
Nov. 17, 1986	Conduct a feasibility study of protection from erosion problems on the southern bank from river mile 253 to river mile 255.	Water Resource Development Act of 1986 (P.L. 99-662)
	<b>OLIVER LOCK AND DAM (REPLACEMENT), AL</b> (See Section 8A of Text)	
Aug. 15, 1985	Construction and land acquisition for Oliver Lock Replacement	The Supplemental Appropriations Act, 1985 (P.L. 99-88)
Nov. 17, 1986	Construction of a lock and dam to replace the William Bacon Oliver Lock and Dam.	Water Resources Development Act of 1986 (P.L. 99-662)
	<b>BON SECOUR RIVER, AL</b> (See Section 9 of Text)	
May 16, 1963 <sup>1</sup>	A 10- by 100-foot channel from Gulf Intracoastal Waterway through Bon Secour Bay to mouth of Bon Secour River and extending up river to vicinity of Swift's Landing, thence 6 by 80 feet up river to a point 600 feet above Oak Landing, with two turning and maneuvering areas 150 feet wide and 1,100 and 1,200 feet long opposite Swift's Landing and ice loading dock. Overall length of improvement is about 4.7 miles.	DPR (Sec. 107)

## MOBILE, ALABAMA, DISTRICT

## TABLE 10-B (Continued)

## AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Sep. 3, 1954	<b>CARRABELLE HARBOR, FL</b> (See Section 10 of Text) Entrance channel 27- by 200-foot, harbor channel 25- by 150-foot, turning basin 25- by 100-foot.	H. Doc. 451, 83d Cong., 2d Sess.
Mar. 2, 1945	<b>DAUPHIN ISLAND BAY, AL</b> (See Section 11 of Text) A channel 7 feet deep and 150 feet wide from Mobile Bay to an anchorage basin of same depth, about 7 acres in area, in marsh just north of Fort Gaines on Dauphin Island; a channel 4 feet deep and 40 feet wide from anchorage basin	H. Doc. 333, 76th Cong., 1 <sup>st</sup> Sess.
Sep. 3, 1954	to Dauphin Island Bay; and a jetty and revetment to protect entrance channel; and (b) an anchorage basin 7 feet deep and 500 feet square at Dauphin Island Village, with an entrance channel of like depth, 100 feet wide and about 8,300 feet long, extending to 7-foot hydrographic contour in Mississippi Sound.	H. Doc. 394, 82d Cong., 2d Sess.
Aug. 16, 1991	Deepen existing 4-foot channel to 7-feet and 40-feet wide from anchorage basin to Dauphin Island Bay.	DPR (Sec. 107)
Jun. 23, 1993	Provides 400 feet of stone protection along the shoreline near the pier and erosion protection for shoreline in the immediate vicinity of Fort Gaines.	DPR (Sec. 14)
May 19, 1969 <sup>1</sup>	<b>DOG AND FOWL RIVERS, AL</b> (See Section 12 of Text) To provide small craft navigation on west side of Mobile Bay.	DPR (Sec. 107)
Jul. 3, 1930	<b>EAST PASS CHANNEL FROM GULF OF MEXICO INTO CHOCTAWHATCHEE BAY, FL</b> (See Section 13 of Text) Maintenance of 6-foot channel by 100-foot channel from Choctawhatchee Bay into Gulf.	H. Doc. 209, 70th Cong., 1 <sup>st</sup> Sess.
Oct. 24, 1951	Maintenance of 12-foot channel from Choctawhatchee Bay into Gulf, and maintenance of 6-foot channel into Old Pass Lagoon.	H. Doc. 470, 81st Cong., 2d Sess.
Oct. 27, 1965	Construction of twin jetties. (Present project dimensions.)	H. Doc. 194, 88th Cong., 2d Sess.
Oct. 1, 1980	Modifications to provide a channel length of approximately 3,800 feet in lieu of 2,000 feet from the East Pass Channel into Old Pass Lagoon, with no changes in width and depth.	Energy and Water Development Appropriation
May 17, 1950	<b>FLY CREEK, FAIRHOPE, AL</b> (See Section 14 of Text) A channel 6 feet deep, 80 feet wide, and about 1,650 feet long from 6-foot depth in Mobile Bay to a turning basin of same depth, 100 feet wide and 350 feet long, in Fly Creek.	H. Doc. 194, 81st Cong., 1 <sup>st</sup> Sess.
Jun. 25, 1910	<b>GULF INTRACOASTAL WATERWAY BETWEEN APALACHEE BAY, FL, AND MEXICAN BORDER</b> (Mobile District) (See Section 15 of Text) <b>APALACHICOLA RIVER TO ST. ANDREW BAY, FL</b> A channel 5 feet deep at mean low water and 65 feet wide at the bottom. A channel 9 feet deep at mean low water and 100 feet wide at the bottom.	H. Doc. 670, 61st Cong., 2d Sess. Rivers and Harbors Committee Doc. 52.; 72d Cong., 2d Sess.
Aug. 30, 1935	<b>CHOCTAWHATCHEE BAY TO WEST BAY, FL</b> A channel 9 feet deep at mean low water and 100 feet wide at the bottom.	H. Doc. 259, 72d Cong., 1 <sup>st</sup> Sess.
Jun. 25, 1910	A channel 6 feet deep at mean low water, with no reference to width.	H. Doc. 565, 61st Cong., 2d Sess.
Aug. 30, 1935	<b>CHOCTAWHATCHEE BAY TO PENSACOLA BAY, FL</b> A channel 9 feet deep at mean low water and 100 feet wide at the bottom.	Rivers and Harbors Committee Doc. 42, 73d Cong., 2d Sess.
Jul. 3, 1930	<b>PENSACOLA BAY, FL, TO MOBILE BAY, AL</b> A channel 9 feet deep at mean low water and 100 feet wide at the bottom.	H. Doc. 42, 71st Cong., 1 <sup>st</sup> Sess.
Jul. 3, 1930	<b>MOBILE BAY, AL, TO NEW ORLEANS, LA</b> A channel 300 feet wide and 10 feet from the 10 foot contour in Mobile Bay to the 10-foot contour in Mississippi Sound,	Rivers and Harbors Committee Doc. 4, 71st Cong., 1st Sess.
Jul. 3, 1930	A channel 100 feet wide and 9 feet deep from Lake Pontchartrain to Mississippi Sound.	H. Doc. 341, 71st Cong., 2d Sess.
Jul. 23, 1942	<b>APALACHEE BAY, FL, TO NEW ORLEANS, LA</b> A channel 12 feet deep and 125 feet wide at mean low water, except in the section between Mobile, Al., and New Orleans, La, where the width is to be 150 feet.	Public Law 675, 77 <sup>th</sup> Cong., 2d Sess., and H. Doc. 96, 79 <sup>th</sup> Cong., 1 <sup>st</sup> Sess.
Jun. 17, 1943	Conditional acquisition of Gulf County Canal, Fl. And enlargement of the canal to 9 feet deep and 100 feet wide.	H. Doc. 257, 76th Cong., 1 <sup>st</sup> Sess., and P. L. 75, 78th Cong., 1st Sess.
Mar. 2, 1945	Construction of a movable span in the Georgia, Florida and Alabama R.R. bridge crossing the Ochlockonee River.	H. Doc. 442, 76th Cong., 1 <sup>st</sup> Sess.
May 17, 1950	Abandonment and closure of original channel between Big Lagoon and Pensacola Bay and construction of a new channel to enter the bay north of original entrance.	H. Doc. 325, 81st Cong., 1 <sup>st</sup> Sess.

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

TABLE 10-B (Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Nov. 7, 1966	Authorized enlargement of Gulf County Canal to 12 by 125 feet.	P. L. 89-789, 89 <sup>th</sup> Cong. 2d Sess.
Mar. 3, 1899	<b>GULFPORT HARBOR, MS</b> (See Section 16 of Text) A channel 19 feet deep and 300 feet wide from the anchorage basin at Ship Island to Gulfport, Ms., and an anchorage basin next to the shore end 19 feet deep and not less than 2,640 feet by 1,320 feet in area.	H. Doc. 120, 55th Cong., 3d Sess.
Mar. 2, 1907 Feb. 27, 1911	Combined Ship Island Pass with Gulfport Harbor project. Increased depth to 26 feet and width to 300 feet across Ship Island Bar and depth to 19 feet in channel from anchorage basin at Ship Island to anchorage basin at Gulfport.	H. Doc. 2, 60th Cong., 1 <sup>st</sup> Sess.
Jan. 21, 1927 Jul. 23, 1930	Authorized relocation of channel across Ship Island Bar. Increased depth to 27 feet and width to 300 feet across Ship Island Bar, 26 feet deep and 220 feet wide through Ms. Sound and depth of 26 feet in the anchorage basin at Gulfport.	H. Doc. 692, 69th Cong., 2d Sess.
Jun. 30, 1948	Increased depth of 32 feet and width to 30 feet across Ship Island Bar, 30 feet deep and 220 feet wide through Ms. Sound and a depth of 30 feet in the anchorage basin at Gulfport.	H. Doc. 112, 81st Cong., 1 <sup>st</sup> Sess.
Jul. 3, 1958	Maintenance of the existing commercial small-boat harbor and an approach channel 100 feet wide and 4,300 feet long, from deep water in Ms. Sound to the small-boat basin, all at a depth of 8 feet.	S. Doc. 123, 84th Cong., 2d Sess.
Aug. 15, 1985	Modify the existing Ship Channel to 36 x 300 feet in Mississippi Sound, and 38 x 400 feet across the bar, with changes in the channel alignment and the entrance to the anchorage basin for safe and unrestricted navigation.	The Supplemental Appropriations Act, 1985 (P.L. 99-88)
Nov. 17, 1986	Modification of FY 1985 Supplemental Appropriations Act. Dredged material from project shall be disposed of in open water in the Gulf of Mexico in accordance with all provisions of Federal law.	Water Resources Development Act of 1986 (P.L. 99-662)
Nov. 17, 1988	Modify of WRDA of 1986 and authorize disposal of dredged material in open waters of the Gulf of Mexico; and by Thin-layer disposal in Mississippi Sound under a demonstration program.	Water Resources Development Act of 1988 (P.L. 100-676)
Aug. 26, 1937	<b>MOBILE HARBOR, AL</b> (See Section 17 of Text) For improvement of Threemile Creek by snagging from Mobile River to the Industrial Canal.	Rivers and Harbors Committee Doc. 69, 74th Cong., 1st Sess.
Mar. 2, 1945	Adoption of existing channel through Garrows Bend from Choctaw Point in Arlington pier, 27 feet deep and 150 feet wide, with 2 turning basins. Adoption of the existing channel alongside Arlington pier from the of Garrows Bend Channel, 27 feet deep and 150 feet wide. A channel 25 feet deep and generally 500 feet wide in Mobile River from the highway bridge to the mouth of Chickasaw Creek, then 25 feet deep and 250 feet wide in Chickasaw Creek to a point about 400 feet below Shell Bayou.	H. Doc. 739, 79th Cong., 2d Sess.,
Sep. 3, 1954	Enlarging Mobile Bay Channel to 42 by 600 feet. Enlarging Mobile Bay Channel to 40 by 400 feet. Deepening Mobile River Channel below highway bridge to 40 feet over present widths, including existing turning basin and anchorage areas. Widening river channel opposite Mazagine Point to provide a 40- by 800- by 1,400-foot turning basin. The turning basin was further modified for maintenance by SAD letter of November 27, 1973 under authority contained in ER-1130-2-307 to increase the turning basin's dimensions to 1000' by 1600'.	H. Doc. 74, 83d Congress, 1 <sup>st</sup> Sess.
Sep. 3, 1954	Closure of Garrows Bend Channel by construction and operation of an earth-filled causeway across said channel (work to be done by local interests).	H. Doc. 74, 83d Cong., 2d Sess.
Jul. 26, 1970 (SR)	To provide a channel 40 feet deep and 400 feet wide from the main ship channel in Mobile Bay and extending northwesterly for about 5.3 miles to the shore of Mobile	(Under provision of Section 201 of the 1965 Flood Control)
Dec. 15, 1970 (HR)	Bay including an anchorage and turning basin near the shoreline, thence a land-cut 40 feet deep, 300 feet wide and about 1.9 miles long to and including a trapezoidal turning basin 40 feet deep and approximately 42 acres, 40 feet deep; a barge channel 12- by 100-feet extending 6500-feet and terminating in a 300-foot by 300-foot terminal basin.	The Supplemental Appropriations Act.
Aug. 15, 1985	Deepen and widen entrance channel over the bar to 57 by 700 feet, a distance of about 7.4 miles, deepen and widen Mobile Bay Channel from mouth of bay to south of Mobile River, 55 by 550 feet, a distance of about 27.0 miles, deepen and widen an additional 4.2 miles of Mobile Bay Channel to 55 by 650 feet, provide 55 foot deep anchorage area and turning basin in vicinity of Little Sand Island, and construct a 1710 acre disposal area adjacent to the Brookley Industrial Complex.	The Supplemental Appropriations Act.
Nov. 17, 1986	Modification of FY 1985 Supplemental Appropriations Act. Dredged material from project shall be disposed of in open water in the Gulf of Mexico in accordance with all provisions of Federal law.	Water Resources Development Act of 1986 (P.L. 99-662)
Nov. 17, 1986	<b>PANAMA CITY BEACHES, FL</b> Shoreline protection to provide a 110-foot wide beach with an artificial dune system and stabilization of vegetation.	Water Resources Development Act of 1986 (P.L. 99-662)
Aug. 30, 1935	<b>PANAMA CITY HARBOR, FL</b> (See Section 18 of Text) Channels 27 and 29 feet deep. Abandonment of project adopted by act of June 25, 1910.	H. Doc. 33, 73d Cong., 1 <sup>st</sup> Sess.
Mar. 2, 1945	Maintenance of a channel in Watson Bayou 100 feet wide and 10 feet deep	H. Doc. 555, 76th Cong., 3d Sess.

MOBILE, ALABAMA, DISTRICT

TABLE 10-B (Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Jun. 30, 1948	from that depth in St. Andrew bay to the highway bridge. Channels 32 and 34 feet deep.	H. Doc. 559, 80th Cong., 2d Sess.
Mar. 23, 1967 <sup>1</sup>	A channel 8 by 100 feet in Grand Lagoon from St. Andrew Bay to a point about 2,400 feet east of State Highway 392. Bridge with branches to serve shore facilities which terminate at the bridge.	DPR (Sec. 107)
Jun. 14, 1972	Channels 38, 40, 42 feet deep.	H. Doc. 196, 92d Cong., 2d Sess.
<b>PASCAGOULA HARBOR, MS</b> (See Section 19 of Text)		
Mar. 4, 1913	Provides for through channel from the Gulf to mile 4 on Dog River 25 by 300 feet through Horn Island Pass, thence 22 by 225 feet across Mississippi Sound and up 150 feet in Pascagoula River above bridge, and up Dog River to mile 4, all subject to financial participation by local interests.	H. Doc. 682, 62d Cong.,
Mar. 4, 1915	Waived requirement for financial participation by local interests.	River and Harbor Committee Doc. 12, 63d Cong., 2d Sess.
May 17, 1950	Cutoff channel, 12 by 125 feet, from State Highway 63 bridge to mile 4 on Dog River, via Robertson and Bounds Lakes.	H. Doc. 188, 81st Cong., 1 <sup>st</sup> Sess.
Sep. 3, 1954	Modification to provide for channel dimensions of 35 by 325 feet through Horn Island Pass, thence 30 by 275 feet across Mississippi Sound and up Pascagoula River to the railroad bridge, and a turning basin just below the bridge.	H. Doc. 98, 96th Cong.,
Jul. 3, 1958	Reimbursement of local interests for work done on Dog River cutoff (\$44,000).	H. Doc. 98, 86th Cong., 1 <sup>st</sup> Sess.
Jul. 14, 1960	Modification to provide for maintenance of 12- by 125-foot channel to mile 6 on Dog River, and maintenance of 30-by 225-foot side channel from main ship channel in Mississippi Sound to the mouth of Bayou Casotte, thence 30 by 300 feet in Bayou Casotte to a turning basin of the same depth 1 mile above the mouth.	H. Doc. 98, 86th Cong., 1 <sup>st</sup> Sess.
Jul. 14, 1967	Deepening the Horn Island Pass channel to 38 feet and deepening the main ship channel in Mississippi Sound, the river channel to the railroad bridge, and the turning basin all to 33 feet.	Chief of Engineers Report dated Nov. 3, 1960.
Oct. 23, 1962	Enlarging Horn Island Pass Channel to 40 by 350 feet provision of an impounding area adjacent to and east of channel 40 feet deep, 200 feet wide, and about 1,500 feet long, enlarging main channel in Mississippi Sound and river channel to railroad bridge to 38 by 350 feet, and deepening turning basin in river and Bayou Casotte channels and basin to 38 feet.	H. Doc. 560, 87th Cong., 2d Sess.
Jul. 11, 1983 <sup>1</sup>	Modification to provide for channel dimensions 12 by 80 feet extending about 2,750 feet from deep waters in the Pascagoula River into Krebs Lake to a turning basin, thence, along the south bank of the lake a channel with dimensions of 10 x 60 feet terminating at a second turning basin, a distance of about 2,750 feet. The project was constructed by hydraulic dredging with the disposal placed in an upland diked area.	DPR (Sec. 107)
Nov. 17, 1986	Deepen and widen gulf entrance channel to 44 by 550 feet; widen Horn Island channel to 600 feet, relocating that channel about 500 feet westwardly; deepen Mississippi Sound portion to 42 feet; widen and deepen Bayou Casotte to 42 by 350 feet and construct turning basin. Disposal of all new work material in Gulf of Mexico.	Water Resources Development Act of 1986 (P.L. 99-662)
<b>PENSACOLA HARBOR, FL</b> (See Section 20 of Text)		
Jun. 13, 1902	A channel 30 feet deep at mean low water and 500 feet wide from the Gulf of Mexico to the dock line at the east end of the city of Pensacola, and also provided that \$150,000 may be used in constructing or purchasing a seagoing suction dredge.	H. Doc. 253, 72d Cong., 1 <sup>st</sup> Sess.
Aug. 30, 1935	Modified the existing project for the present inner channels and the deepening of the entrance channel to 32 feet.	H. Doc. 253, 72d Cong., 1 <sup>st</sup> Sess.
Aug. 26, 1937	Improvements of Bayou Chico.	Rivers and Harbors Committee Doc. 96, 74th Cong., 2d Sess.
Aug. 27, 1962	Maintenance of the entrance channel from the Gulf of Mexico to lower Pensacola Bay, a distance of about 5 miles to dimensions of 35 feet deep and 500 feet wide; maintenance of a channel along the south side of the aircraft carrier mooring basin, a distance of about 2.5 miles, to dimensions of 33 feet deep and 300 feet wide; a bay channel 33 feet deep, 300 feet wide, and about 2.1 miles long; parallel approach channels to opposite ends of the inner-harbor channel, about 1.3 and 1.4 miles in length, each 33 feet deep, 300 feet wide, and flared at the junctions with the inner-harbor channel; and deepening the existing 500-foot wide inner-harbor channel to a depth of 33 feet and lengthening it to 3,950 feet.	H. Doc. 528, 87th Cong., 2d Sess.
<b>PERDIDO PASS CHANNEL, AL</b> (See Section 21 of Text)		
Oct. 27, 1965	A 12- by 150-foot channel stabilized by twin rubblemount jetties, from the Gulf of Mexico into Perdido Pass, thence 9 by 100 feet into Perdido Bay with a spur channel of the same dimensions into Terry Cove.	H. Doc. 94, 88th Cong., 2d Sess.
<b>TENNESSEE-TOMBIGBEE WATERWAY, AL AND MS</b> (See Section 22 of Text)		
Jul. 24, 1946	A waterway connecting Tennessee and Tombigbee Rivers via East Fork of Tombigbee River, Mackeys and Yellow Creeks. Plan of improvement consists of three sections: river section, 9- by 300-foot channel for 149 miles between Demopolis and Amory, Ms.;	H. Doc. 486, 79th Cong., 2d Sess.

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

TABLE 10-B (Continued)

AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
	canal section, 12 by 300 feet for 46 miles from Amory to Bay Springs; divide section, 12 by 300 feet (except in the 27 mile-long divide cut in which bottom width be 280 feet) for 39 miles from Bay Springs through dividing ridge to Tennessee. Total lift of 341 feet to be accomplished by 10 locks. Total length of project is 234 miles.	
Nov. 17, 1986	<b>TENNESSEE-TOMBIGBEE WILDLIFE MITIGATION</b> (See Section 22A of Text) Acquire from willing sellers in a timely manner at fair market value 88,000 acres of land for mitigation of wildlife losses resulting from construction and operation of the project for the Tennessee-Tombigbee Waterway.	Water Resource Development Act of 1986 (P.L. 99-662)
Sep. 5, 2002	<b>CEDAR POINT EXTENSION, BAY ST. LOUIS, MS</b> (See Section 31 of Text) Construction of a 4,500 foot concrete/sheetpile wall in front of existing concrete seawall.	DPR (Sec. 14)
1946 Flood Control Act	<b>MATUBBEE CREEK AT COONTAIL ROAD, MS</b> (See Section 32 of Text) Rebuild and armor left descending (southeast) bank of Matubbee Creek with riprap and filter fabric; remove and backfill failed grout materials along left descending bank; and replace guard rails along the road adjacent to left descending bank.	DPR (Sec. 14)
1946 Flood Control Act	<b>WEAVER CREEK AT HATLEY ROAD, MS</b> (See Section 33 of Text) Remove and backfill failed grout materials at the wingwalls; grade and grass banks and adjacent drainage ditches and replace adjacent guard rails.	DPR (Sec. 14)
Oct. 23, 1962	<b>OKATIBBEE LAKE, MS</b> (See Section 34 of Text) Provides for a dam and reservoir for flood control, water supply, water quality control, and recreation.	H. Doc. 549, 87th Cong., 2d Sess.
Aug. 18, 1941	<b>TOMBIGBEE RIVER (EAST FORK), MS AND AL</b> (See Section 35 of Text) Provides for alleviation of floods from the Tombigbee River by clearing, snagging, and excavation of 13 cut-off channels, and other related channel improvements.	Special Report on Record in Oct. (P.L. 222) 77th Cong., 1st Sess.
Jul. 23, 1958 Jul. 8, 1980	<b>TOMBIGBEE RIVER TRIBUTARIES, MS AND AL</b> (See Section 36 of Text) Provides for improvement of 22 tributaries of Tombigbee River. Extends project limits on Twenty Mile Creek and eliminates local cooperation for this remedial work.	H. Doc. 167, 84th Cong., 1 <sup>st</sup> Sess. Supplemental Appropriations and Recession Act
Nov. 17, 1986	<b>VILLAGE CREEK, JEFFERSON COUNTY, BIRMINGHAM, AL</b> (See Section 37 of Text) Basically nonstructural and includes evacuating 642 structures in six separate neighborhoods from floodplain; enlarge 2 miles of channel and relocate necessary facilities; Install flood warning devices.	Water Resources Development Act of 1986 (P.L. 99-662)
Nov. 28, 1990	Authorized the Secretary to acquire private vacant lands within the definite project boundaries established in the Real Estate Design Memorandum as a nonstructural element of the project.	Water Resources Development Act of 1990 (P.L. 101-640)
Mar. 2, 1945	<b>MULTIPLE PURPOSE PROJECTS INCLUDING POWER ALABAMA-COOSA RIVERS, AL AND GA</b> (See Section 1 of Text) Provides for full development of Alabama-Coosa Rivers and tributaries for navigation, flood control, power, recreation, and other purposes. Authorized construction of Carters Lake, GA, Claiborne Lock and Dam, AL, Jones Bluff Lock and Dam, AL, and Millers Ferry Lock and Dam, AL.	H. Doc. 414, 77th Cong., 1 <sup>st</sup> Sess.
Jun. 28, 1954	Suspended comprehensive plan to permit non-Federal interests to develop Coosa River by constructing series of dams.	Public Law 436, 83 <sup>rd</sup> Cong.
May 25, 1982 Nov. 17, 1986	Designated change of name from Jones Bluff to Robert F. Henry Lock and Dam. Modification to the plan for the Coosa River segment of the waterway between Montgomery and Gadsden, AL to carry out planning, engineering and design in accordance with the Montgomery to Gadsden, Coosa River Channel, AL Design Memorandum No. 1, General Design, dated May 1982.	S.2034 97 <sup>th</sup> Cong., 2d Sess. Water Resources Development Act of 1986 (P.L. 99-662)
Aug. 18, 1941	<b>ALLATOONA DAM, COOSA RIVER BASIN, GA</b> (See Section 41 of Text) Provides for dam and reservoir for flood control, regulation of stream flow for navigation, development of hydroelectric power and recreation.	Public Law 228, 77 <sup>th</sup> Cong., 1 <sup>st</sup> Sess.
Dec. 22, 1944		H. Doc. 674, 76 Cong., 3d Sess.
Mar. 2, 1945	<b>APALACHICOLA, CHATTAHOOCHEE AND FLINT RIVERS, AL, GA AND FL</b> (See Section 3 of Text) Development of Apalachicola, Chattahoochee, and Flint Rivers for navigation, flood control, hydropower, and recreation.	H. Doc. 342, 76th Cong., 1 <sup>st</sup> Sess.
Jul. 24, 1946	Modified general plan for full development of Apalachicola, Chattahoochee, and Flint River System and authorized construction of Lake Sidney Lanier multipurpose reservoir.	H. Doc. 300, 80th Cong., 1 <sup>st</sup> Sess.

## MOBILE, ALABAMA, DISTRICT

TABLE 10-B (Continued)

## AUTHORIZING LEGISLATION

Acts	Work Authorized	Documents
Dec. 22, 1944	Authorized recreation facilities.	
Jan. 27, 1981 <sup>1</sup>	Modified the existing project to provide for 9- foot deep by 100-foot wide side channel into the Apalachicola River Industrial Park, Blountstown, Fl.	DPR (Sec. 107)
Nov. 17, 1986	<p><b>APALACHICOLA, CHATTAHOOCHEE, AND FLINT</b>  Modified Rivers and Harbors Act of 1945 to restore and maintain access to bendways and interconnecting waterways in the course of routine maintenance dredging; and to acquire lands for and to construct, operate, and maintain water-related public use and access facilities.</p>	Water Resources Development Act of 1986 (P.L. 99-662)
Jul. 24, 1944	<p><b>BUFORD DAM, LAKE SIDNEY LANIER, GA</b> (See Section 42 of Text)  Provision of recreation facilities.</p>	
Jul. 24, 1946	<p><b>GEORGE W. ANDREWS LOCK AND DAM, AL AND GA</b>  (See Section 3A of Text)  Construction of high dam at Walter F. George site and low dam at George W. Andrews site.</p>	H. Doc. 300, 80th Cong., 1 <sup>st</sup> Sess.
Dec. 22, 1944	Provided recreation facilities.	
Dec. 22, 1944	<p><b>JIM WOODRUFF LOCK AND DAM, GA AND FL</b>  (See Section 44 of Text)  Provided for recreation facilities.</p>	
May 19, 1953	<p><b>WALTER F. GEORGE LOCK AND DAM, AL AND GA</b>  (See Section 47 of Text)  Authorized construction of high dam at Walter F. George site and low dam at Columbia site.</p>	H. Comm. On Public Works
Oct. 23, 1963	<p><b>WEST POINT LAKE, CHATTAHOOCHEE RIVER BASIN, GA AND AL</b> (See Section 48 of Text)  Authorized construction for flood control, power, recreation, fish and wildlife development, and streamflow regulation for downstream navigation.</p>	H. Doc. 570, 87th Cong., 2d Sess.

1. Authorized by Chief of Engineers under Section 107 of 1960 River and Harbor Act, as amended.
2. Authorized by Chief of Engineers under Section 205 of Flood Control Act of 1948, as amended.
3. Authorized by Chief of Engineers under Section 208 of Flood Control Act of 1954, as amended.
4. Authorized by Chief of Engineers under Section 14 of Flood Control Act of 1946, as amended.

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

**TABLE 10-C OTHER AUTHORIZED NAVIGATION PROJECTS**

	For Last Full Report See Annual Report For	Cost to September 30, 2009	
		Construction	Operation Maintenance
Blackwater River, FL	1981	\$41,650	\$330,433
Bluff Creek, MS <sup>1</sup>	1963	1,000	6,883
Cadet Bayou, MS	1984	87,921	2,181,608
Cahaba River, AL <sup>2</sup>	1894	45,000	-
Choctawhatchee River, FL and AL	1973	171,885	291,694
Escambia-Conecuh Rivers, AL and FL	1981	208,499	3,438,413
Helicopter Lidar Bathymeter	-	-	38,313,113
Holmes Creek, FL	1931	8,562	36,800
LaGrange Bayou, FL	1972	289,496	209,089
Leaf and Chickasawhay River, MS <sup>2</sup>	1919	23,090	42,676
Mobile Area Digital Mapping, AL	-	-	3,024,348
Noxubee River, MS <sup>1</sup>	1902	47,528	14,472
Ochlockonee (Ochlockney) River, GA and FL <sup>1 2</sup>	1900	5,000	-
Old Town Creek <sup>1 2</sup>	1887	3,000	-
Oostanula and Coosawattee River, GA <sup>1 2</sup>	1907	32,656	-
Panacea Harbor, FL	1979	122,383	106,446
Pascagoula River, MS	1956	15,000	179,535
Pass Christian Harbor, MS	1976	59,313	868,135
Port St. Joe Harbor, FL	1984	1,960,862	3,511,567
Removing Water Hyacinths	1984	-	1,100,471
Sediment MGT Pilot PGM	-	-	2,830,496
St. Marks River, FL	1965	1,710,809	87,379
Tallapoosa River, AL <sup>2</sup>	1893	43,972	-
Tombigbee River at Columbus Port, MS	1988	500,500	-
Upper Chipola River, FL from Marianna to its' mouth <sup>1 2</sup>	1941	36,781	63,193
Wolf and Jordan Rivers, MS	1979	29,195	1,335,853

1. Abandonment recommended in H. Doc. 467, 69th Cong.
2. Uncompleted portion of project deauthorized by H. Doc. 96-157, 1st Session.

**TABLE 10-D OTHER AUTHORIZED BEACH EROSION CONTROL PROJECT**

	For Last Full Report See Annual Report For	Cost to September 30, 2009	
		Construction	Operation Maintenance <sup>2</sup>
Harrison County, MS, shore protection <sup>1</sup>	1953	\$1,133,000	-
Panama City Beaches, FL	1999	10,125,192	-

1. Completed.
2. Operation and maintenance is the responsibility of local interests.

## MOBILE, ALABAMA, DISTRICT

**TABLE 10-E OTHER AUTHORIZED FLOOD CONTROL PROJECTS**

	For Last	Cost to September 30, 2009	
	Full Report	See Annual Report For	Operation Maintenance <sup>2</sup>
		Construction	
Alabama River at Montgomery, AL <sup>1</sup>	1965	\$144,194	-
Armuchee Creek, GA	1966	115,547	-
Bayview Court, Bay St. Louis, MS	1998	247,400	-
Beaver Creek, Montezuma, GA	1958	149,815	-
Big Brown Creek, Prentiss County, MS	1987	137,500	-
Biloxi River at Lorraine Road, Harrison County, MS	1985	132,174	-
Black Creek, Gadsden, AL	1953	125,389	-
Black Warrior River, Northport Leveel, AL	2000	4,807,566	-
Black Warrior River, U.S. Hwy. 11 Bridge, Fosters, AL	1986	181,500	-
Boggy Bayou, Valparaiso, FL	1994	147,200	-
Boligee Canal, Boligee, AL	1987	178,600	-
Burketts Creek, Amory, MS	1984	1,366,454	-
Chattahoochee River, Eufaula, AL	1988	206,600	-
Chickasaw Bogue Creek, U.S. Highway 43 Bridge, Linden, AL	1985	121,718	-
Clanton, AL	1964	274,024	-
Collinsville, AL	1940	71,119	-
County Line Road Bridge, Itawamba County, MS	1992	116,800	-
County Road 55, Etowah County, AL	1996	242,348	-
Cribbs Mill Creek, Tuscaloosa, AL	1994	1,848,327	-
Dauphin Island Shoreline, AL	1996	352,479	-
East End Dauphin Island, AL	1996	318,580	-
Eslava Creek, Mobile, AL	1997	4,732,721	-
Fort Toulouse, Wetumpka, AL	1994	368,000	-
Gadsden Water Treatment Plant, AL	1996	360,000	-
Goodfood Creek, Chickasaw County, MS	1988	91,500	-
Gordons Creek, Hattiesburg, MS	1985	802,026	-
Gulf Breeze, Santa Rosa County, FL	1991	147,432	-
Hancock County Seawall, Hancock County, MS	1998	307,000	-
Highway 39 Bridge, Gainesville, AL	1990	71,000	-
Hintonville Road Bridge, Perry County, MS	1991	268,691	-
Houlka Creek, Chickasaw & Clay Counties, MS	1982	238,219	-
Houston School Rd. Bridge, Itawamba County, MS	1988	59,300	-
Hurricane Creek, Prentiss County, MS	1992	52,803	-
Interstate 59 Bridges, Fosters, AL	1987	155,200	-
Kings Creek, Tupelo, MS	1998	499,930	-
Lake Douglas, Decatur County, GA	1970	164,998	-
Leaf and Bowie Rivers, Hattiesburg, MS	1990	1,585,000	-
Leaf River, County Road Bridge, Mahned, MS	1986	231,618	-
Little Cove Creek, Glencoe, AL	1991	144,047	-
Magby Creek, Columbus, MS	1991	156,508	-
Martin Creek, Prentiss County, MS	1988	78,500	-
Mill Creek, Dalton, GA	1992	474,065	-
Mill Creek, Sumrall, MS	1994	157,340	-
Mound State Park, Moundville, AL	1994	789,000	-
Murder and Burnt Corn Creeks, Brewton, AL	1980	190,974	-
Murder Creek, Brewton, AL	1994	1,215,000	-
Murder Creek, East Brewton, AL	1986	903,474	-
Noxubee River Relief Bridge, Shuqualak, MS	1988	119,500	-
Old Hwy. 82 Bridge, Columbus, MS	1987	143,936	-
Osborne Creek, Highway 362 Bridge, Prentiss County, MS	1985	250,000	-
Portersville Bay East, Mobile County, AL	1996	490,750	-
Prattville, Autauga County, AL	1946	649,280	-
Proctor Creek, Atlanta, GA	1994	870,000	-
Pumpkinvine Creek, Emerson, GA	1985	85,029	-
Raccoon Creek, Baconton, GA	1994	385,300	-
Rome, Coosa River, GA	1955	384,550	-
Saint Louis Bay, Bay St. Louis, MS	1998	237,400	-
Sewerline Protection, Valley, AL	1989	180,937	-
Silver Creek, Rome, GA	1992	604,719	-
Sope Creek, Marietta, GA	1990	1,538,555	-
Sowashee Creek, Meridian, MS	1998	1,218,036	-
Sun Creek, Okibbeha County, MS	1984	55,569	-
Tallabinella Creek, Chickasaw County, MS	1988	81,000	-
Tallahala Creek, Pascagoula River, MS	1988	3,945,757	-
Tallahalla Creek, Laurel, MS	1996	641,058	-
Three Mile Creek, Mobile, AL	2000	17,384,782	-
Tombigbee River Bridge #6, Monroe County, MS	1996	331,323	-
Town Creek, Americus, GA	1965	340,409	-
Trim Cane Creek, Okibbeha County, MS	1984	145,519	-
Trussville, AL	1965	141,334	-
Twenty Mile Creek, Airport Road Bridge, Frankstown, MS	1986	215,860	-
West Point, Chattahoochee River, GA	1955	599,637	-
Whorton's Bend Road, Etowah County, AL	1991	448,956	-
Wolf Creek, Highway 362 Bridge, Prentiss County, MS	1985	114,753	-
Wolf Creek, U.S. Highway 45 Bridge, Prentiss County, MS	1986	154,641	-
Yellow Jacket Creek, Hogansville, GA	1966	330,734	-

1. Engineering, design, supervision, and administration (no construction work has been done. Includes \$17,000 for pre-authorization studies.)

2. Operation and maintenance is the responsibility of local interests.

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

**TABLE 10-G DEAUTHORIZED PROJECTS**

Project	Type	Year of Last Full Report	Deauthorization Document	Date Deauthorized
Bayou Galere, MS <sup>1</sup>	Navigation	1946	H. Doc. 192, 94th Cong., 1st Session, as amended.	Aug. 5, 1977
Buttahatchee Creek, MS <sup>2</sup> (Auth. P.L. 96-304)	Flood Control	1989	Public Law 99-662 99th Congress	Jul. 9, 1995
Coosa River Channel, Gadsden, AL to Rome, GA (Auth. 1945 Act)	Navigation	1955	Public Law 99-662 99th Congress	Aug. 18, 1996
GIWW; Apalachicola Bay to St. Marks River, FL	Navigation	1986	Public Law 99-662, 99th Congress	Nov. 17, 1986
Highway 39 Bridge, Gainesville, AL (Appropriation Act, 1986)	Flood Control	1990	Public Law 99-88	Apr.16,2002
Lazer Creek Lake, GA	Hydroelectric power	1986	Public Law 99-662, 99th Congress	Nov. 17, 1986
Little Browns Creek, AL <sup>2</sup> (Auth. P.L. 96-304)	Flood Control	1989	Public Law 99-662 99th Congress	Jul. 9, 1995
Lower Auchumpkee Creek, GA	Hydroelectric power	1986	Public Law 99-662, 99th Congress	Nov. 17, 1986
Montgomery to Gadsden, AL (Auth. 1945 Act)	Navigation		Public Law 99-88	Apr. 16, 2002
Noxubee River, MS <sup>2</sup> (Auth. P.L. 96-304)	Flood Control	1989	Public Law 99-662 99th Congress	Jan. 1, 1990
Pensacola Harbor Modification, FL	Navigation	1986	Public Law 99-662 99th Congress	Nov. 17, 1986
Sipsey River, AL <sup>2</sup> (Auth. P.L. 96-304)	Flood Control	1989	Public Law 99-662 99th Congress	Jan. 1, 1990
Tallahala Creek, MS (Auth. 1945 Act)	Flood Control	2000	Public Law 99-662	Apr. 16, 2002
Tombigbee River, AL & MS <sup>2</sup> (Auth. 1941 Act)	Flood Control	n/a	Public Law 99-662 99th Congress	Jan. 1, 1990
Westfork, MS <sup>2</sup> (Auth. P.L. 96-304)	Flood Control	1989	Public Law 99-662 99th Congress	Jan. 1, 1990

1. H. Doc. 96-157 deauthorized uncompleted portions of certain projects as shown in Table 10-C.
2. Deauthorized tributaries of Tombigbee River improvements.

**TABLE 10-H NAVIGATION WORK UNDER SPECIAL AUTHORIZATION**

Study	Authority	Fiscal Year 2009 Costs
Bayou Cadet, Hancock County, MS	107	0
Biloxi Channel, Harrison County, MS	107	0
Ocean Springs Harbor, Jackson County, MS	107	0
Old Pass Lagoon, Destin, FL	107	0
Section 107 Coordination Account	107	0
<b>Total</b>		<b>\$0</b>

## MOBILE, ALABAMA, DISTRICT

**TABLE 10-J FLOOD CONTROL WORK UNDER SPECIAL AUTHORIZATION**

<b>Study</b>	<b>Authority</b>	<b>Fiscal Year 2009 Costs</b>
Big Cedar Creek, Cedartown, GA	205	0
Black Warrior River, Northport, AL	205	0
Catoma Creek, AL	205	0
Jasper, AL	205	0
Little Cahaba River, Moody, AL	205	0
Mill Creek, Eton, GA	205	0
Mixons Creek, Lamar County, MS	205	2,610
Section 205 Coordination Account	205	19,854
Turkey Creek, Jefferson County, AL	205	0
Turkey Creek, Harrison County, MS	205	0
Upper Gordon's Creek, Hattiesburg, MS	205	0
Walton County, FL	205	0
Dye Branch, Fort Payne, AL	14	0
Macon County, AL	14	0
Matubbee Creek, Monroe County, MS	14	0
Plum Bluff Road, MS	14	-33,367
Portersville Bay, West Alabama	14	0
Section 14 Coordination Account	14	5,557
Weaver Creek, Monroe County, MS	14	0
Whorton Bend Road, Etowah County, AL	14	173
Portersville Bay, East, AL	14	0
Dauphin Island Shoreline, AL	14	0
Dauphin Island East End, AL	14	0
Gulf of Mexico, Highway 193, AL	14	0
		-
Total		- \$5,173

**TABLE 10-K RECONNAISSANCE AND CONDITION SURVEYS**

Project	Cost During Fiscal Year 2009
Shoals - Airborne Lidar Bathymetry	\$5,333,477
Channel Condition Surveys on Alabama, Florida and Mississippi projects	253,932
Total	\$5,587,409

**TABLE 10-L ALABAMA-COOSA RIVERS, AL AND GA  
DEVELOPMENT PROPOSED UNDER EXISTING PROJECT  
(See Section 1 of Text)**

Proposed Structures	Claiborne Lock and Dam	Millers Ferry Lock and Dam	Robert F. Henry Lock and Dam	Carters Lake Dam <sup>3</sup>	Allatoona Dam
Miles above mouth of river	72.5 <sup>1</sup>	133.0 <sup>1</sup>	245.4 <sup>1</sup>	26.8 <sup>2</sup>	47.8 <sup>4</sup>
Nearest town	Claiborne, AL	Camden, AL	Benton, AL	Carters, GA	Cartersville, GA
Distance (miles)	7	10	3	2	4
Greatest lock length available for full width (feet)	600	600	600	-	-
Width of lock chamber (feet)	84	84	84	-	-
Maximum lift (feet)	30	48	47	-	-
Elevation of normal pool surface (mean sea level)	35	80	125	1072	840
Depth over sills at low water (feet)	13	Upper 15 Lower 13	Upper 15 Lower 12	-	-
Character of foundation	Rock	Rock	Rock	Rock	Rock
Kind of spillway	Gated and Fixed Crest	Gated	Gated	Gated	Gated
Height of dam (feet)	95.5	99.5	94	451	190
Type of construction	Concrete	Concrete	Concrete	Rock-fill Earth Core	Concrete
Total reservoir capacity (acre-feet)	96,360	331,800	234,200	472,800	670,050
Power development (kw)	-	75,000	68,000	500,000	74,000
Percent complete	100	100	100	100	100
Cost to date: <sup>5</sup>	\$27,997,450	\$63,125,300	\$83,360,800	\$111,140,340	\$35,709,085

1. Above mouth of Alabama River (river miles).
2. Above mouth of Coosawattee River (river miles).
3. Reregulation dam (Carters) 25.3 (river miles).
4. Above mouth of Etowah River (river miles).
5. Includes cost of added recreation facilities as shown in Table 10A.

MOBILE, ALABAMA, DISTRICT

**TABLE 10-M**

**APALACHICOLA, CHATTAHOOCHEE, AND FLINT RIVERS, AL, GA, AND FL,  
LOCKS AND DAMS AND MULTIPLE-PURPOSE  
DEVELOPMENT INCLUDED IN EXISTING PROJECT  
(See Section 3 of Text)**

	Existing Projects				
	Jim Woodruff Lock and Dam	George W. Andrews Lock and Dam	Walter F. George Lock and Dam	West Point Lake	Buford Dam Lake Sidney Lanier
Miles above mouth	107.6 <sup>1</sup>	46.5 <sup>2</sup>	75.0 <sup>2</sup>	201.4 <sup>2</sup>	348.3 <sup>2</sup>
Nearest town	Chattahoochee, FL	Columbia, AL	Ft. Gaines, GA	West Point, GA	Buford, GA
Distance (miles)	1	1	2	2.8	5
Greatest lock length and available for full width (feet)	450	450	450	-	-
Width of chamber (feet)	82	82	82	-	-
Maximum lift (feet)	33	25	88	-	-
Elevation of normal pool surface (msl)	77	102	190(Summer) 185(Winter)	635(Summer) 625(Winter)	1071(Summer) 1070(Winter)
Depth over sills at low water (feet)	14	13	13	-	-
Character of foundation	Limestone	Limestone	Limestone	Rock	Rock
Kind of spillway	Fixed-gated	Fixed-gated	Gated	Gated	Fixed
Height of dam (feet)	67	72	114	95	192
Type of construction	Concrete and Earth	Concrete	Concrete and Earth	Concrete and Earth	Earth
Total reservoir capacity (acre-feet)	367,300	18,180	934,400	604,500	2,554,000
Power-development (kilowatts)	30,000	-	130,000	73,375	86,000
Percent complete 100	100	100	100	100	100
Year opened to navigation	1954	1962	1963	-	-
Cost to date: <sup>3</sup>	\$79,652,247 <sup>5</sup>	\$13,038,427	\$127,699,155 <sup>4</sup>	\$131,565,760	\$79,322,718 <sup>6</sup>

1. Above mouth of Apalachicola River (river miles).
2. Above mouth of Chattahoochee River (river miles).
3. Includes cost of added recreational facilities as shown in Table 10-A.
4. Includes \$30,976,527 cost of land for wildlife refuge and \$10,932,884 for major rehabilitation.
5. Includes \$29,738,986 for major rehabilitation.
6. Includes \$17,202,324 for major rehabilitation.



## MOBILE, ALABAMA, DISTRICT

TABLE 10-O

**TENNESSEE-TOMBIGBEE WATERWAY,  
ALABAMA AND MISSISSIPPI  
(See Section 21 of Text)**

	Existing Projects									
	Gainesville Lock and Dam	Aliceville Lock and Dam	Columbus Lock and Dam	Aberdeen Lock and Dam	Lock A and Spillway	Lock B and Spillway	Lock C and Spillway	Lock D and Spillway	Lock E and Spillway	Bay Springs Lock and Dam
Miles above mouth <sup>1</sup>	266	307	335	358	371	376	39	398	407	412
Nearest town	Gainesville, AL	Aliceville, AL	Columbus, MS	Aberdeen, MS	Amory, MS	Smithville, MS	Fulton, MS	Fulton, MS	Belmont, MS	Tupelo, MS
Greatest lock length available for full width (feet)	600	600	600	600	600	600	600	600	600	600
Width of Chamber (feet)	110	110	110	110	110	110	110	110	110	110
Maximum lift (feet)	36	27	27	27	30	25	25	30	30	84
Elevation of normal pool surface (msl)	109	136	163	190	220	245	270	300	330	(Summer) 414 (Winter) 409
Depth over sills at low water (feet)	15	15	15	15	15	18	18	18	18	18
Character of foundation	Mooreville Chalk	Eutaw Form. Sand & Clay	Eutaw Form. Sand & Clay	Eutaw Form. Sand	Eutaw Form. Lam. Sand	Eutaw Form. Sand & Clay	Gordo Form. Clay	Eutaw Form. Sand	Gordo Form. Clay	Sandstone and Shale
Kind of spillway	Fixed & Gated	Fixed & Gated	Gated	Gated	Gated	Gated	Gated	Gated	Gated	N/A
Height of dam (feet)	56	57	57	57	46	48	53	52	44.5	103
Type of construction	Concrete	Concrete & Earth	Concrete & Earth	Concrete & Earth	Concrete & Earth	Concrete & Earth	Concrete & Earth	Concrete & Earth	Concrete & Earth	Concrete & Earth
Total reservoir capacity (acre-feet)	45,290	655	59,483	31,564	4,400	19,000	13,300	24,900	6,900	(Summer)180,000 (Winter) 143,000
Percent complete	100	100	100	100	100	100	100	100	100	100
Year opened to navigation	1978	1979	1981	1984	1985	1985	1985	1985	1985	1985
Estimated Cost	\$103,214,000	151,255,000	182,650,000	128,262,000	102,685,000	96,905,000	71,375,000	98,205,000	88,173,000	147,000,000
Cost to Date	\$100,010,600	143,190,800	174,620,500	112,620,200	92,190,500	93,106,700	62,197,000	89,610,800	76,917,700	130,398,000

1. Miles above Mobile, Alabama (Mile 0.00 is at Bankhead Tunnel on U.S. Highway 90).

**TABLE 10-P COMPLETED FLOOD INSURANCE STUDIES AND FLOOD HAZARD INFORMATION REPORTS FOR FY 1996 THROUGH FY 2009<sup>1</sup>**

	Requesting Agency	Date Completed	Federal Cost
<b>Flood Insurance Studies</b>			
Tuscaloosa, AL	Federal Emergency Management Agency (FEMA)	Jan 1997	182,000
Dougherty County, GA	Federal Emergency Management Agency (FEMA)	Feb 1997	244,000
Meridian, MS	Federal Emergency Management Agency (FEMA)	Jan 1996	119,000
<b>Special Flood Hazard Information</b>			
Thompson Creek, MS	Richton, MS	Aug 1996	44,000
Black Creek, MS	Forrest County, MS	Aug 1997	35,000
Leaf River, MS	McLain, MS	Sep 1997	19,000
Tanyard Creek, AL	Jasper, AL	Oct 1996	32,000
Cane Creek & Tribs, AL	Oakman, AL	May 1997	45,000
Magby Creek, MS	Lowndes County, MS	Apr 1996	5,700
Coosa River	Wetumpka, AL	Sep 1998	24,000
Chickasawhay	Shabuta, MS	Sep 1998	62,000
Walnut Creek	Chilton County, AL	Nov 1998	4,000
Big Dry Creek	Floyd County, GA	May 1999	62,000
Noxabee River	Macon, MS	Sep 1099	67,000
Spring Creek	Lafayette, GA	Aug 1999	7,000
Galbrith Mill Creek	Montgomery, AL	Sep 1999	14,000
Okeelala Creek	Baldwyn, MS	Oct 1999	53,000
Coosa River	Riverside, AL	Oct 1999	5,000
Black Warrior River	City of Northport	Jun 2000	50,000
Graves Creek	Roanoke, AL	Jul 2001	55,000
Perkins Creek	Lamar County, MS	Sep 2000	63,000
Ryan Creek	Cullman, AL	Jan 2001	59,000
Carteycar River	Gilmer County, GA	Sep 2001	60,000
Halawakee Creek	Opelika, AL	Feb 2002	56,000
Pascagoula Creek	George County, MS	Mar 2002	8,000
Bogue Homo Creek	Heidelberg, MS	Aug 2002	58,000
Big Creek	Jackson County, MS	Sep 2004	50,000
Cowart Creek	Houston County, AL	Oct 2005	50,000
Stone Mill Creek	Gulf County, FL	Oct 2006	50,000
Long Swamp Creek	Pickens County, GA	Nov 2006	83,000
Flint River and Tribs	Albany, GA	Sep 2009	364,000

1. For list of reports completed by Mobile District for FY 1965 thru FY 1974, see FY 1974 Annual Report, page 10-50; reports completed in FY 1975 see FY 1975 Annual Report, page 10-44; and for reports completed in FY 1976 and FY 1977, see FY 1977 Annual Report, page 10-46. See page 10-48 FY 1978 Annual Report for FY 1978 reports, and see page 10-43 FY 1984 Annual Report for FY 1978 through FY 1984 reports.