HARRISONVILLE AND IVY LANDING DRAINAGE AND LEVEE DISTRICT NO. 2, ILLINOIS

(H. Doc. 542, 87th Cong.)

Location.—Harrisonville and Ivy Landing Drainage and Levee District No. 2, including Moredock and Ivy Landing Drainage District No. 1, lies in the Mississippi River flood plain in Monroe County, Ill., between river miles 141 and 156 above the Ohio River.

Authority.—House Public Works Committee Resolution adopted June 17, 1948. Senate Public Works Committee resolution adopted July 18, 1959.

Existing project.—The existing Federal project for Harrisonville and Ivy Landing Drainage and Levee District No. 2 provides for raising and enlarging 21.4 miles of riverfront and flank levee and constructing appurtenant works, including eight gravity drainage structures. Construction of the work was completed in 1957.

Flood problem.—Althought the menace of direct flooding from the Mississippi River has been largely eliminated by levees, there remains the problem of removing impounded interior drainage. The sources of the impounded water are precipitation on the protected lowlands, accumulation of runoff from tributary hill lands, and seepage from the Mississippi River. Most of the accumulated water collects near the middle third and lower end of the district.

Recommended plan of improvement.—Provide pumping plants adjacent to the gravity outlets of Maeystown Creek and Fountain Creek. The greatest excess of benefits over costs would be realized with pumping capacities of 600 and 30 cubic feet per second, respectively. Raise the grade of the levee for 1,000 feet on each side of the pumping plants to prevent possible overtopping and crevassing in the immediate vicinities.

Estimated cost (price level of July 1960).—

Federal	$1,112,000
Non-Federal	700
Total	1,112,700

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization			$42,800
Maintenance, operation, and major replacement		$28,800	28,800
Total		28,800	71,600
Annual benefits:			
Damages prevented			110,000
Increased land use			36,500
Total			146,500

Benefit-cost ratio.—Maeystown Creek, 2.1; Fountain Creek, 1.7.

Local cooperation.—(*a*) Provide without cost to the United States all lands, easements, and rights-of-way for the construction of the project; (*b*) hold and save the United States free from damages due to the construction works; (*c*) maintain and operate the project, in-

cluding the pumping plants, after completion in accordance with regulations prescribed by the Secretary of the Army; and (*d*) prevent encroachment on improved channels and ponding areas and, if ponding areas and capacities are impaired, provide substitute storage capacity or equivalent pumping capacity promptly without cost to the United States.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.

State of Illinois: Favorable.

Comments of the Bureau of the Budget.—No objection.

COLUMBIA DRAINAGE AND LEVEE DISTRICT NO. 3, ILLINOIS

(H. Doc. 543, 87th Cong.)

Location.—Mississippi River flood plain in Monroe County, Ill., between river miles 156 and 166 above the Ohio River.

Authority.—House and Senate Public Works Committee resolutions adopted June 17, 1948, and June 18, 1957, respectively.

Existing project.—The existing Federal project for Columbia Drainage and Levee District No. 3 provides for raising and enlarging 20.1 miles of riverfront and flank levee and constructing appurtenant works, including nine gravity-drainage structures. Construction of the work was essentially completed in 1958.

Flood problem.—Although the menace of direct flooding from the Mississippi River has been largely eliminated by levees, there remains the problem of removing impounded interior drainage. The sources of the impounded water are precipitation on the protected lowlands, accumulation of runoff from tributary hill lands, and seepage from the Mississippi River. The accumulated water collects near the middle third and lower end of the district. Under ordinary circumstances, this area is drained by Franey Lake ditch, Long slash, Dogwood Slough, and Shehan Lake ditch.

Recommended plan of improvement.—The district engineer finds that the most suitable plan for reducing impoundment flooding would be to provide pumping plants adjacent to the outlets of Long slash and Franey Lake ditch. Drainage from Shehan Lake ditch and Dogwood Slough would be diverted to Long slash by ditches 1,300 and 1,200 feet in length. He finds that the greatest excess of benefits over costs would be realized with pumping capacities of 200 and 30 cubic feet per second, respectively. The district engineer proposes to raise the grade of the levee by 2 feet for a distance of 1,000 feet on each side of the pumping stations to prevent possible overtopping and crevassing in the immediate vicinities. Local interests would construct on-farm drainage ditches on about 700 acres of land.

Estimated cost (price level of January 1961).—

Federal	$986,000
Non-Federal	6,000
Total	992,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Long slash ditch:			
Interest and amortization	$31,320	$170	$31,490
Maintenance and operation		7,700	7,700
Major replacement		1,660	1,660
Loss of productivity		50	50
Total	31,320	9,580	40,900
Franey Lake ditch:			
Interest and amortization	6,735	85	6,820
Maintenance and operation		3,900	3,900
Replacements		560	560
Loss of productivity		20	20
Total	6,735	4,565	11,300

	Long slash ditch	Franey Lake ditch	Total
Annual benefits: Damages prevented	$33,200	$8,200	$41,400
	19,700	7,500	27,200
Total	52,900	15,700	68,600

Benefit-cost ratio.—Long slash ditch, 1.3; Franey Lake Ditch, 1.4.

Local cooperation.—Provide without cost to the United States all lands, easements, and rights-of-way for the construction of the project; hold and save the United States free from damage due to the construction works; maintain and operate the project, including the pumping plants, after completion in accordance with regulations prescribed by the Secretary of the Army; and prevent encroachment on improved channels and ponding areas, and, if ponding areas and capacities are impaired, provide substitute storage capacity or equivalent pumping capacity promptly without cost to the United States.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.

Department of Agriculture: Favorable.

State of Illinois: Favorable.

Comments of the Bureau of the Budget.—No objection.

PRAIRIE DU PONT LEVEE AND SANITARY DISTRICT, ILL.

(H. Doc. 540, 87th Cong.)

Location.—The district lies on the left bank of the Mississippi River between miles 166 and 175 above the mouth of the Ohio River.

Authority.—House Public Works Committee, June 17, 1948, and August 20, 1957; Senate Public Works Committee, July 18, 1957.

Existing project.—The existing Federal project for Prairie du Pont Levee and Sanitary District provides for raising and enlarging 15.2 miles of riverfront and flank levee and constructing appurtenant works, including nine gravity-drainage structures. The work was scheduled for completion in 1961. Nine main ditches and streams traverse the lowest portions of the area.

Flood problem.—Substantial and repetitive damages have occurred due to blocked interior drainage when stages on the Mississippi River

exceeded 15 to 30 feet on the Market Street gage at St. Louis, Mo. Drainage would be blocked at least once almost every year, varying in duration from a few days to a maximum of 147 days. The Palmer Creek drainage area, the largest in the district, is affected by a river stage of 15 feet. Old Prairie du Pont Creek (East) area is affected by a river stage of 20 feet, and the remaining areas are affected by a river stage of 30 feet. Blocked drainage occurs generally during the planting season, March through July.

Recommended plan of improvement.—Provide pumping plants adjacent to the outlets of Palmer Creek, Old Prairie du Pont Creek (West), Falling Spring Ditch, and Old Prairie du Pont Creek (East). The greatest excess of benefits over costs would be realized with pumping capacities of 225, 35, 5, and 17 cubic feet per second, respectively. District engineer proposes to raise the grade of the levee by 2 feet for a distance of 1,000 feet on each side of the pumping stations to insure against overtopping in the immediate vicinities.

Estimated cost (price level of July 1961).—

Federal	$921,000
Non-Federal	4,300
Total	925,300

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	(1)	(1)	
Maintenance and operation	(1)	$16,800	
Total			$52,100
Annual benefits:			
Damages prevented			$157,800
Increased land use			53,800
Total			211,600

[1] Breakdown not available.

Benefit-cost ratio.—4.1.

Local cooperation.—Provide without cost to the United States all lands, easements, and rights-of-way for the construction of the project; hold and save the United States free from damages due to the construction works; maintain and operate the project, including the pumping plants, after completion in accordance with regulations prescribed by the Secretary of the Army; and prevent encroachment on improved channels and ponding areas, and if ponding areas and capacities are impaired, provide substitute storage capacity or equivalent pumping capacity promptly without cost to the United States.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.

State of Illinois: Favorable.

Comments of the Bureau of the Budget.—No objection.

RICHLAND CREEK, ILL.

(H. Doc. 571, 87th Cong.)

Location.—Richland Creek lies in Monroe, St. Clair, and Randolph Counties, in southeastern Illinois.

Authority.—Senate Public Works Committee resolutions adopted September 16, 1948, and July 18, 1957, and House Public Works Committee resolution adopted August 20, 1957.

Existing project.—None.

Flood problem.—The urban area of the city of Belleville has experienced floods with some loss of life. The rural area (reach 3) a mainly agricultural and, being generally flat, floods with accompanying destruction of crops.

Recommended plan of improvement.—The district engineer has determined that the plan of improvement which would afford the greatest overall benefit to the Richland Creek Basin would consist of (*a*) the two detention reservoirs proposed by the Soil Conservation Service; and (*b*) urban channel improvement of maximum capacity consistent with space limitations through Belleville, including necessary bridge modifications, and clearing, cleaning, and rectification of the existing channel in the rural reach 3 by the Corps of Engineers. These improvements would provide protection against the standard project flood in the urban reach through Belleville and against the 2-year flood in reach 3.

Estimated cost (price level of January 1961).—

Federal	$4,995,000
Non-Federal	574,000
Total	5,569,000

Project economics.—

Annual charges	233,400
Annual benefits:	
Damages prevented	273,900
Other (enhancement)	36,300
Total	310,200

Benefit-cost ratio.—1.3.

Local cooperation.—(*a*) Provide without cost to the United States all lands, easements, and rights-of-way necessary for construction of the project; (*b*) provide without cost to the United States all alterations of highways, highway bridges, utilities, and related facilities made necessary by construction of the project; (*c*) hold and save the United States free from damages due to the construction works; (*d*) maintain the improved channel after completion in accordance with regulations prescribed by the Secretary of the Army; (*e*) prevent encroachment on the improved channel; and (*f*) at least annually inform interests affected that the project will not provide protection in the agricultural reaches against major floods. Local interests are willing to furnish the requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.

Department of Agriculture: Favorable. Suggest coordination with Soil Conservation Service prior to construction.

State of Illinois: Favorable.

Comments of the Bureau of the Budget.—No objection.

JOANNA RESERVOIR, SALT RIVER, MO.

(H. Doc. 507, 87th Cong.)

Location.—Salt River rises in Schuyler County, Mo., about 12 miles south of the Missouri-Iowa State line, and flows generally southeast about 192 miles to the Mississippi River near Louisiana, Mo. Joanna Dam would be located on Salt River about 16 miles southwest from Hannibal, Mo.

Authority.—Flood Control Act, June 22, 1936.

Existing project.—Flood Control Act of 1936 authorized participation with the Riverland Levee District in levee construction adjacent to the mouth of Salt River. The River and Harbor Act of 1937 authorized acquisition of lands damaged by flooding resulting from operation of Mississippi River navigation project. The Flood Control Act of June 28, 1938, authorized the Joanna Dam project in connection with the general comprehensive plan for flood control and other purposes in the upper Mississippi River Basin. A Federal project provides for raising and enlarging approximately 14.6 miles of levee in the Riverland Levee District near the mouth of the river. The levee system, affording partial protection to about 5,800 acres, was built by local interests with Federal assistance. About 2,720 acres of lowlands near the mouth of Salt River, which were damaged by the Mississippi River navigation project, have been acquired by the United States.

Flood problem.—Rainstorms cause the streams to rise rapidly. Flow usually returns to bank full within 3 to 4 days.

Recommended plan of improvement.—Construction of a dam and pumped power facilities to serve the functions of flood control, power, low-flow augmentation for Mississippi River navigation, water supply, recreation, and fish and wildlife.

Estimated cost (price level of January 1961).—Federal, $63,300,000.[1]

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$2,485,900	$69,000	$2,554,900
Maintenance and operation	392,400	7,000	399,400
Loss of taxes	187,200		187,200
Total	3,065,500	76,000	3,141,500
Annual benefits, damages prevented:			
Flood control			1,317,500
Navigation			3,100
Power			1,089,700
Water supply			105,000
Fish and wildlife			261,500
Recreation			1,380,000
Total			4,156,800

Benefit-cost ratio.—1.3.

Local cooperation.—Pay $1,908,000 toward construction costs and $7,000 annually for operation and maintenance and replacements as allocated to local interests because of water supply.

[1] $1,908,000 to be repaid by local interests for water supply.

Comments of States and Federal agencies.—
State of Missouri: Favorable.
Department of Interior: Favorable.
Department of Agriculture: Favorable.
Federal Power Commission: Favorable.
Department of Health, Education, and Welfare: Favorable.
Department of Commerce: Favorable.

Comments of the Bureau of the Budget.—No objection to submission of report to Congress. However, the Bureau of the Budget notes that a substantial proportion of the benefits used to justify the project result from fish and wildlife and general recreation, and that the recently approved administration standards for the formulation and evaluation of water resources projects provide appropriately for the consideration of these purposes. The Bureau states that consideration is currently being given to the problems of cost allocation and of reimbursement and cost sharing between the Federal Government and non-Federal bodies—matters not dealt with fully in the policies and standards recently approved by the President, and that there is also under consideration the development of detailed standards to supplement the new principle for estimating recreation benefits, including those derived from the recreational aspects of fish and wildlife. Accordingly, the Bureau would expect that prior to any requests for funds to initiate construction of this project, it would be reevaluated in the light of the administration's standards and policies applicable at that time.

PECATONICA RIVER, ILL. AND WIS.

(H. Doc. 539, 87th Cong.)

Location.—In south-central Wisconsin and north-central Illinois.
Authority.—Flood Control Act of 1946.
Existing project.—An authorized local protection project at Freeport, Ill.
Flood problem.—This basin is subject to flooding during all seasons of the year.
Recommended plan of improvement.—Consists of about 6,000 feet of channel improvement, 4,500 feet of levee, 780 feet of concrete floodwall, three closure structures, a pumping plant, drainage facilities, and modification of a highway bridge.
Estimated cost (price level).—

Federal	$850,000
Non-Federal	182,000
Total	1,032,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$31,400	$8,500	$39,900
Maintenance and operation		3,200	3,200
Total	31,400	11,700	43,100
Annual benefits: Damages prevented			45,100

Benefit-cost ratio.—1.05.

Local cooperation.—Provide all lands, easements, and rights-of-way, including borrow areas and spoil-disposal areas, necessary for the construction of the project; accomplish all relocations and alterations of buildings, utilities, highway bridges, roads, and other facilities necessary for construction of the project; hold and save the United States free from damages due to the construction works; maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army; prevent any encroachment on the flood channels and ponding areas which would decrease the effectiveness of the flood control improvements, and if ponding areas and capacities are impaired, promptly provide substitute storage capacity or equivalent pumping capacity; and at least annually notify those affected that the project will not provide complete flood protection.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.
Department of Agriculture: Favorable.
State of Illinois: Favorable.
State of Wisconsin: Favorable.

Comments of Bureau of the Budget.—No objection.

MISSISSIPPI RIVER URBAN AREAS FROM HAMPTON, ILL., TO CASSVILLE, WIS.

(H. Doc. 450, 87th Cong.)

Location.—The reach of the Mississippi River from Hampton, Ill., mile 491.8 to the vicinity of Cassville, Wis., mile 606.7, above the mouth of the Ohio River.

Authority.—This interim report is in partial response to two resolutions adopted September 18, 1944, by the Committee on Flood Control of the House of Representatives.

Existing project.—The only existing Corps of Engineers local flood control project in this reach is a levee with appurtenant works to protect the town of Sabula, Iowa. Construction was completed in November 1957 at a Federal cost of $411,915.

Flood problem.—The flood plain in the reach of the Mississippi River considered in this report contains 17 urban areas. The problem is the reoccurring flood damage in these urban areas. Ten major floods of record occurred during the period 1880 to 1954. Average annual flood damages under present conditions of development at the communities investigated are estimated at $1,336,800, of which 90 percent are at Dubuque and Clinton.

Recommended plan of improvement.—The plan provides for improvements for flood control at Dubuque, Iowa, consisting of levees, floodwalls, and appurtenant works, including a navigation opening at the mouth of Dubuque Harbor.

Estimated cost (price level, July 1959).—

Federal	$5,350,000
Non-Federal	150,000
Total	5,500,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$200,900	$7,350	$208,250
Maintenance and operation		12,750	12,750
Total	200,900	20,100	221,000
Annual benefits: Damages prevented			291,400

Benefit-cost ratio.—1.3.

Local cooperation.—Provide without cost to the United States all lands, easements, and rights-of-way necessary for the construction of the project; hold and save the United States free from damages due to the construction works; maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army; modify or relocate buildings, utilities, sewers, and other facilities where necessary in the construction of the project, including necessary widening of levees to provide for roadways; and obtain legal control over pondage areas and prevent encroachment until substitute pondage or increased pumping capacity has been provided at local expense. Officials of the city of Dubuque have indicated their willingness to comply with items of local cooperation.

Comments of the States and Federal agencies.—

State of Illinois: Favorable.

State of Iowa: Favorable.

Department of Interior: Favorable.

Department of Agriculture: Favorable.

Comments of the Bureau of the Budget.—No objection.

KICKAPOO RIVER, WIS.

(H. Doc. 557, 87th Cong.)

Location.—The Kickapoo River rises in Monroe County, in southwestern Wisconsin, and flows south and southwest through Vernon, Richland, and Crawford Counties, and empties into the Wisconsin River near Wauzeka, about 16 miles upstream from the junction of the latter stream with the Mississippi River.

Authority.—Section 6 of the Flood Control Act of June 22, 1936, as amended by section 5 of the Flood Control Act approved August 28, 1937.

Existing project.—There are no existing flood-control projects in the river basin. The Soil Conservation Service has constructed two runoff retarding dams on the headwaters of the west branch of the Kickapoo River under the pilot watershed program.

Flood problem.—The Kickapoo Valley is subject to a destructive flood practically every year. About 13,000 acres of agricultural lands and 8 urban areas below La Farge sustain damage during major floods. Average annual damages are $765,000, of which approximately 50 percent are urban. Recurrence of the July 1951 flood would cause damages totaling $1,900,000.

Recommended plan of improvement.—A dam and reservoir on Kickapoo River, about 1 mile upstream from the village of La Farge, operated for flood control, fish and wildlife conservation, general

recreation, and a reduction in aggradation downstream from the reservoir. The reservoir would have a total capacity of 75,000 acre-feet at the maximum pool of the spillway design flood, 66,000 acre-feet for the reservoir design flood, and 10,250 acre-feet for the conservation pool. About 14.5 miles of channel enlargement would be required for suitable operation of the reservoir. Supplemental flood protection would be provided at Soldiers Grove by the construction of a levee extending along the right bank about 3,200 feet long and a levee on the left bank about 2,800 feet. A short levee embankment about 70 feet long would be provided at the upstream end of the former railroad cut near the north limits of the village. Interior drainage would be pumped. Two bridges would be raised, and the channel enlarged near the bridges. Supplemental flood protection would be provided at Gays Mills by construction of a levee on the left bank of about 6,000-foot length which would surround the built-up portion of Gays Mills on three sides. Interior drainage would be ponded and pumped. The highway bridge would be raised and the channel would be enlarged.

Estimated cost (price level of December 1960).—

	La Farge Dam and Reservoir	Soldiers Grove levee	Gays Mills levee	Total
Federal	$14,894,000	$271,000	$405,000	$15,570,000
Non-Federal	0	190,000	142,000	332,000
Total	14,894,000	461,000	547,000	15,902,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
La Farge Reservoir	$484,800		$484,800
Soldiers Grove levees	7,900	$9,200	17,100
Gays Mills levee	11,700	7,800	19,500
Total	504,400	17,000	521,400

	Flood control	General recreation	Fish and wildlife	Total
Annual benefits:				
La Farge Reservoir	$488,100	$112,800	$11,000	$611,900
Soldiers Grove levees	22,000			22,000
Gays Mills levee	32,400			32,400
Total	542,500	112,800	11,000	666,300

Benefit-cost ratio.—La Farge Reservoir, 1.3; Soldiers Grove levees, 1.3; Gays Mills levee, 1.7; overall, 1.3.

Local cooperation.—Prior to construction of levees at Soldiers Grove and Gays Mills, local interests agree to provide all lands, easements, and rights-of-way necessary for construction of the project; hold and save the United States free from damages due to the construction works; maintain and operate each usable element of the work after completion, and all of the works after completion thereof

in accordance with regulations prescribed by the Secretary of the Army; make all necessary relocations of buildings, utilities, highway bridges, sewers, roads, and other structures required in connection with the work; and prevent encroachments on improved channels, floodways, and ponding areas unless and until substitute storage capacity or equivalent pumping capacity is provided without cost to the United States. Local interests have indicated willingness and ability to furnish required cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.
Department of Agriculture: No objection.
Department of Commerce: Favorable.
Department of Health, Education, and Welfare: Favorable.
Federal Power Commission: Favorable.
State of Wisconsin: Favorable.

Comments of the Bureau of the Budget.—No objection.

WARROAD RIVER AND BULL DOG CREEK, MINN.

(H. Doc. 449, 87th Cong.)

Location.—In north-central Minnesota near the international boundary. Warroad River flows into Lake of the Woods, a boundary lake which is a part of the Hudson Bay drainage system. Bull Dog Creek is a principal tributary of Warroad River.

Authority.—Flood Control Act approved December 22, 1944.

Existing project.—No existing Federal project for flood control. Local interests have constructed numerous drainage ditches throughout the basin.

Flood problem.—Agricultural development is greatly hampered by flooding.

Recommended plan of improvement.—Construction of 34 miles of channel improvement along Warroad River, East Branch, Bull Dog Creek, County Ditch No. 10, and County Ditch No. 6, and appurtenant works.

Estimated cost (price level of April 1960).—

Federal	$972,000
Non-Federal	367,000
Total	1,339,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$36,500	$17,600	$54,100
Maintenance and operation		6,800	6,800
Total	36,500	24,400	60,900
Annual benefits:			
Flood damages prevented			79,500
Increased land use			22,200
Total			101,700

Benefit-cost ratio.—1.7.

Local cooperation.—Contribute in cash or equivalent construction work 9.9 percent of the gross Federal construction cost (exclusive of county ditch No. 6), an amount presently estimated at $93,000, to be paid either in a lump sum prior to start of construction, or in installments prior to start of pertinent work items in accordance with construction schedules as required by the Chief of Engineers, the final contribution to be determined after actual costs are known; provide without cost to the United States all lands, easements, and rights-of-way necessary for construction of the project including changes to highway channel crossings and miscellaneous utilities; hold and save the United States free from damages due to the construction works; maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army; prevent encroachment on the proposed rights-of-way and improved channels; provide an organization capable of furnishing the required local cooperation; and construct and maintain the associated drainage works needed to effectively use the improved outlet system. It is considered that local interests are financially able and willing to meet all conditions of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.
Department of Commerce: Favorable.
Department of Agriculture: Favorable.
State of Minnesota: Favorable.

Comments of the Bureau of the Budget.—No objection.

RIVER ROUGE, MICH.

(H. Doc. 148, 87th Cong.)

Location.—The River Rouge Basin is located in the southeastern corner of the lower peninsula of the State of Michigan and lies within the counties of Wayne, Oakland, and Washtenaw. The basin is fan shaped and extends about 24 miles from north to south and about 33 miles from east to west.

Authority.—Flood Control Act approved June 30, 1948.

Existing project.—None.

Flood problem.—An investigation of the flood problems of the River Rouge and its tributaries indicates that the reaches upstream of Michigan Avenue experience annual flooding. The flood of April 1947, the largest of record, inundated the utility tunnels of the Ford Motor Co. plant, employing 40,000 persons, and caused complete shutdown of the plant. Average annual flood damages in the reach below Michigan Avenue, adjusted for future conditions, are estimated at $853,000.

Recommended plan of improvement.—Improvement of River Rouge, Mich., for flood control, by channel straightening and enlargement from Michigan Avenue to the navigation turning basin.

Estimated cost (price level, December 1959).—

Federal	$8,659,000
Non-Federal	10,877,300
Total	19,536,300

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$314,200	$421,700	$735,900
Maintenance and operation	0	25,000	25,000
Total	314,200	446,700	760,900
Annual benefits:			
Damages prevented	----------	----------	820,600
Other: Savings to local interests in future sewer constructions	----------	----------	98,700
Total	----------	----------	919,300

Benefit-cost ratio.—1.2.

Local cooperation.—(*a*) Furnish without cost to the United States all lands, easements, rights-of-way, and suitable spoil-disposal areas necessary for construction of the project; (*b*) hold and save the United States free from damages due to the construction works; (*c*) maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army; (*d*) prescribe and enforce regulations satisfactory to the Secretary of the Army designed to prevent encroachments on the proposed rights-of-way and the improved channel, and to keep non-pile-supported bank loads a minimum distance of 50 feet from the top of the bank; (*e*) construct new highway bridges as required; and (*f*) make all alterations and additions to highway bridges, utility crossings, sewer outlets, and interfering structures within the proposed channel rights-of-way. Local interests have indicated ability and willingness to furnish requirements.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.

Department of Commerce: Favorable.

Department of Health, Education, and Welfare: Favorable.

State of Michigan: Favorable.

Comments of the Bureau of the Budget.—No objection.

SANDUSKY RIVER, OHIO

(S. Doc. 136, 87th Cong.)

Location.—The Sandusky River is located in north-central Ohio. The river rises in Richland County, flows generally northwestward, and empties in the western end of Sandusky Bay, an arm of Lake Erie, about 70 miles west of Cleveland.

Authority.—Partial response to a resolution by the Committee on Public Works of the U.S. Senate adopted on February 24, 1948.

Existing project.—There are no existing Federal improvements for flood control in the basin.

Flood problem.—Flood problems in the Sandusky River Basin are due principally to development of flood-plain areas without provision of alternate routes in floodflows. The channel is not sufficiently large to contain high discharges, and ice jams which frequently form on the lower portions of the river result in high stages at Fremont.

Recommended plan of improvement.—Provides for channel widening, deepening, and straightening together with levees, floodwalls, and appurtenant works at Fremont, Ohio.

Estimated cost (price level, March 1961).—

Federal	$4,300,000
Non-Federal	490,000
Total	4,790,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$127,300	$20,800	$148,100
Maintenance and operation		14,000	14,000
Surveys and inspection	200		200
Total	127,500	34,800	162,300
Annual benefits: Damages prevented			283,500

Benefit-cost ratio.—1.7.

Local cooperation.—Provide without cost to the United States all lands, easements, and rights-of-way, including borrow and sump areas, necessary for construction of the project; hold and save the United States free from damages due to the construction works; accomplish all relocations and alterations of streets, buildings, pipelines, utilities, bridges, and other structures (except railroad facilities) made necessary by the construction work; maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army; prescribe and enforce regulations to prevent encroachment on channels, rights-of-ways, and ponding areas necessary to proper functioning of the project; and at least annually inform interests affected that the proposed improvements will not provide protection against floods of a magnitude equivalent to that of March 1913. Local interests have indicated willingness and ability to furnish local cooperation.

Comments of the State and Federal agencies.—

Department of Interior: Favorable.

Department of Agriculture: Favorable.

State of Ohio: Favorable.

Comments of the Bureau of the Budget.—No objection.

TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA

(H. Doc. 435, 87th Cong.)

Location.—The Truckee River Basin, in northeastern California and western Nevada, originates at the outlet of Lake Tahoe, flows for 110 miles generally north and east, and terminates in Pyramid Lake, Nev.

Authority.—1938 Flood Control Act.

Existing project.—Existing flood control improvements by the Corps of Engineers consist of channel clearing and snagging through the city of Reno upstream to the California-Nevada State line. Enlargement of the outlet channel at Lake Tahoe and 7.5 miles of channel improvements downstream from Reno are under construction.

Bureau of Reclamation improvements include controlled storage in Lake Tahoe for irrigation and power, completed in 1915; the Boca Reservoir, completed in 1939, on Little Truckee River for irrigation; and the authorized multiple-purpose reservoirs at the Stampede site on Little Truckee River and the Prosser Creek site.

Flood problem.—Floods caused by rainfall from November through Marc' and characterized by high peaks and short durations result in extensive damages, particularly at Reno and vicinity, to expensive hotels, industrial and commercial firms, offices, and residences. The flood problem is aggravated by bedload deposition in the channel and by large amounts of drift which collect at the street bridges.

Recommended plan of improvement.—A 15,000-acre-foot reservoir for flood control at the Martis Creek site about 32 miles upstream from Reno, together with channel improvements in Reno.

Estimated cost (1959 price level).—

Federal	$2,385,000
Non-Federal	75,000
Total	2,460,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$89,000	$3,500	$92,500
Maintenance and operation	14,000	12,000	26,000
Total	103,000	15,500	118,500
Annual benefits: Damages prevented			164,600

Benefit-cost ratio.—1.4.

Local cooperation.—Provide a channel capacity of 14,000 cubic feet per second in Truckee River through Reno, including necessary modifications and relocations of existing structures and facilities; maintain the channel through Reno to preserve the channel capacity of 14,000 cubic feet per second; prevent encroachment in the channel; maintain the channel between Reno and the California Nevada State line clear of all debris and drift; and adequately inform interests affected that the project does not provide protection against maximum floods. They have indicated willingness to meet the requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: Makes several comments including that of the Fish and Wildlife Service which is concerned about the passage of fish upstream through the ungated outlet works. The Chief of Engineers has replied to the Secretary of the Interior that appropriate consideration will be given to the views of the Department during the planning stage and after construction, if the project is authorized by Congress.

Department of Commerce: Favorable.

Department of Agriculture: Favorable.

Federal Power Commission: Favorable.

Public Health Service: Favorable.

State of Nevada: Favorable.

State of California: Makes several comments including that

further consideration be given to including a gated outlet works for conservation use. The Chief of Engineers has replied indicating that full consideration will be given to the views of the State after construction, if the project is authorized by Congress.

Comments of the Bureau of the Budget.—No objection.

ALAMEDA CREEK, CALIF.

(S. Doc. 128, 87th Cong.)

Location.—Alameda Creek rises in Santa Clara County and flows generally westward to enter the southern arm of San Francisco Bay.

Authority.—Senate Public Works Committee resolutions adopted April 15, 1949, and June 17, 1949.

Existing project.—There is no existing Federal project.

Flood problem.—The flood problem consists of overbank flooding in the Coastal Plain area and Livermore Valley, erosion and inundation in Niles Canyon, and inadequate drainage in Livermore Valley.

Recommended plan of improvement.—Channel improvements and levees for the Coastal Plain and Federal participation in the multiple-purpose Del Valle Dam and Reservoir to be constructed by the State of California.

Estimated cost (price level of December 1960).—

	Del Valle Reservoir	Coastal Plain	Total
Federal	[1] $4,070,000	$10,610,000	$14,680,000
Non-Federal	8,300,000	2,400,000	10,700,000
Total	12,370,000	13,010,000	25,380,000

[1] Consists of $3,800,000 cash contribution to the State and $270,000 for Federal cost of engineering, design supervision, and administration.

Project economics.—

	Del Valle Reservoir (Federal participation for flood control)		
	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$148,200	$500	$148,700
Maintenance and operation	[1] 28,000	0	28,000
Total	176,200	500	176,700

[1] Present worth of $773,000 to be paid in lump sum to State.

	Coastal Plain improvements		Total
	Federal	Non-Federal	
Annual charges:			
Interest and amortization	$458,000	$144,000	$602,000
Maintenance and operation		132,000	132,000
Loss of land productivity		16,000	16,000
Total	458,000	291,000	749,000

	Del Valle Reservoir	Coastal Plain improvements
Annual benefits: Damages prevented	$240,000	$1,680,000

Benefit-cost ratio.—Del Valle Reservoir 1.4; coastal plain 2.2.

Local cooperation.—(*a*) Coastal plain improvements: Provide without cost to the United States all lands, easements, and rights-of-way necessary for construction of the project; hold and save the United States free from damages due to the construction works; relocate all highway bridges, and approaches thereto, and utilities necessary for the construction and maintenance of the project; maintain and operate the completed works; prevent any encroachment on flood channels and ponding areas which would decrease the effectiveness of the project for flood control; and adjust all claims regarding water rights which might be affected by the project.

(*b*) Del Valle Reservoir (Federal participation for flood control): Provided that prior to making any contribution an agreement be made that operation of project for flood control will provide the benefits and will be operated in accordance with rules and regulations prescribed by the Secretary of the Army, Federal monetary contributions be administered where it does not exceed 30.7 percent of construction cost and that the total Federal contributions toward the cost of the Del Valle project not exceed $4,080,000, design and construct project subject to review and approval by Chief of Engineers, prevent encroachment, adjust all claims regarding water rights, and hold and save. Local interests have indicated willingness to furnish requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.

Department of Agriculture: Favorable.

Department of Commerce: Favorable.

Department of Health, Education, and Welfare: Favorable.

Federal Power Commission: Favorable.

State of California: The State in commenting on the report stated that it could not concur in the concept of deducting from the Federal share of the project costs, the non-Federal hypothetical and relocation savings in the coastal plain. After due consideration, the Chief of Engineers concluded that the benefits are widespread and should be borne by the Federal Government.

Comments of the Bureau of the Budget.—No objection.

CORTE MADERA CREEK, MARIN COUNTY, CALIF.

(H. Doc. 545, 87th Cong.)

Location.—Corte Madera Creek and its tributaries drain an area of about 29 square miles in Marin County, Calif., on the west side of San Francisco Bay.

Authority.—1944 Flood Control Act.

Existing project.—There is no existing Federal project. Local interests have constructed noncontinuous bank protection works and Phoenix Lake Reservoir on Ross Creek for water supply.

Flood problems.—Floods in the basin result from winter rains, and are of short duration. Major flood problems arise from inadequate channel capacities and unstable bank conditions.

Recommended plan of improvement.—Channel improvements on Corte Madera, San Anselmo, Sleepy Hollow, Tamalpais, Unnamed, and Fairfax Creeks. Improvements include channel enlargement, concrete lining, levees, and debris removal,. and provide for interior drainage of protected areas and for improved fish migration and spawning conditions.

Estimated cost (1961 price level).—

Federal	[1] $5, 692, 000
Non-Federal	1, 180, 000
Total	6, 872, 000

[1] Excludes $78,000 for preauthorization studies.

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$216, 200	$57, 800	$274, 000
Maintenance and operation		26, 200	26, 200
Loss of land productivity		5, 800	5, 800
Total	216, 200	89, 800	306, 000
Annual benefits:			
Flood damages prevented			310, 000
Erosion damages prevented			60, 000
Saving in cost of bank protection			26, 000
Land enhancement			27, 000
Total			423, 000

Benefit-cost ratio.—1.4.

Local cooperation.—Provide lands, easements, and rights-of-way needed, including the modification of bridges and utilities; hold and save the United States free from damage due to the works; maintain and operate the project, including prevention of encroachments; and adjust all claims for water rights. Local interests have indicated willingness to furnish requirements of local cooperation.

Comments of the State and Federal Agencies.—

Department of the Interior: Favorable.
Department of Agriculture: Favorable.
Department of Commerce: Favorable.
Public Health Service: Favorable.
State of California: Favorable.

Comments of the Bureau of the Budget.—No objection. However, the Bureau would recommend that authorization of the project be

subject to a local cash contribution of at least 50 percent of that part of the project cost associated with land enhancement resulting from creation of new and usable land out of tidal marsh by placement of dredged material.

Remarks.—The Secretary of the Army recommends the improvement as proposed by the Chief of Engineers subject to the additional requirement that local interests contribute in cash 3 percent of the Federal construction cost of the Ross Valley unit, an amount presently estimated at $158,000. With this change, the net Federal cost for construction is estimated at $5,534,000, which has been accepted by the committee.

NEW MELONES PROJECT, STANISLAUS RIVER, CALIF.

(H. Doc. 453, 87th Cong.)

Location.—The Stanislaus River rises on the western slope of the Sierra Nevada Mountains and enters the lower San Joaquin River south of Stockton, Calif.

Authority.—House Public Works Committee resolution adopted April 12, 1961.

Existing project.—The present Federal project, authorized in 1944 without power, provides for storage of 450,000 acre-feet initially and 1,100,000 acre-feet ultimately as part of the lower San Joaquin River and tributaries project. No construction work has been done.

Flood problem.—The area subject to flooding along the Stanislaus River extends from the foothill line to the San Joaquin River and contains about 35,000 acres, most of which is highly developed cropland. Railroads, highways, and suburban areas of Ripon, Oakdale, and Riverbank lie in the flood plain. Stanislaus River flows contribute to flooding of 50,000 acres along the San Joaquin River, 60,000 acres in the upper delta and 125,000 acres in the lower delta, which contain highly developed field and truck croplands, a number of public and commercial installations, several important military facilities, suburban developments, and vital railway, highway, and communications facilities.

Recommended plan of improvements.—Modification of the authorized dam and reservoir project to provide for storage of 2,400,000 acre-feet and a powerplant with an installed capacity in the order of 150,000 kilowatts.

Estimated cost (price level of July 1960).—All Federal, $113,717,000.

Project economics.—

Annual charges (all Federal):	
Interest and amortization	$4,468,000
Maintenance and operation	820,000
Taxes foregone	935,000
Total	6,223,000
Annual benefits:	
Damages prevented	1,030,000
Irrigation	4,443,000
Power	3,993,000
Recreation	350,000
Total	9,816,000

Benefit-cost ratio.—1.6.

Local cooperation.—Upon completion of construction the project would become an integral part of the Central Valley project and be operationally and financially integrated with it; operation and maintenance of the project would be accomplished by the Secretary of the Interior; the flood control operation of the project would be in accordance with rules and regulations prescribed by the Secretary of the Army; and provided that local interests agree to maintain the existing levees on the Stanislaus River from Goodwin Dam to the San Joaquin River and prevent encroachment on the channel and floodway between the levees so as to preserve a safe carrying capacity throughout that reach of at least 8,000 cubic feet per second. The Chief of Engineers to make such adjustments in the project plan as he may find to be in the public interest after consultation with the Bureau of Reclamation and the State of California and to maintain, as necessary, suitable channel conditions to preserve the present nondamaging capacity of 8,000 cubic feet per second from Goodwin Dam to the San Joaquin River. Local interests are willing to meet requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.
Department of Agriculture: Favorable.
Department of Commerce: Favorable.
Federal Power Commission: Favorable.
State of California: Favorable.

Comments of the Bureau of the Budget.—No objection.

Remarks.—The legislation provides that before initiating any diversions of water from the Stanislaus River Basin in connection with the operation of the Central Valley project, the Secretary of the Interior shall determine the quantity of water required to satisfy all existing and anticipated future needs within that basin and the diversions shall at all times be subordinate to the quantities so determined. In this connection it is the committee's opinion that ultimate Stanislaus River development will necessitate the construction of economically justified upstream developments in both Tuolumne and Calaveras Counties.

The Stanislaus River should be developed as an entire basin and the only economically feasible means of providing water retention and distribution systems to serve these mountain counties of origin is to tie these projects into the larger New Melones project. Therefore, it is the hope of the committee that the present upstream studies being conducted in these counties by the Bureau of Reclamation may be expedited to permit timely consideration of this development.

HIDDEN RESERVOIR, FRESNO RIVER BASIN, CALIF.

(S. Doc. 37, 87th Cong.)

Location.—Fresno River is the most southerly of the major east-bank tributaries of San Joaquin River in Central Valley, Calif. It rises on the western slope of the Sierra Nevada and flows westerly through the mountains and foothills and thence across a flat valley. The river drains an area about 60 miles long with average width of 10 miles.

Authority.—Senate Public Works Committee resolution adopted June 26, 1958.

Existing project.—There is no Federal flood control project in the Fresno River Basin. Projects of the Bureau of Reclamation consist of the existing Friant Dam and the existing Madera Canal which deliver irrigation water from the reservoir to the local service areas. The State of California is constructing levees along the San Joaquin River which will extend up Fresno River to the Chowchilla Canal.

Flood problems.—The flood plain of Fresno River extends from the foothill line to San Joaquin River, and contains about 145,000 acres, including the city of Madera. Floods on the stream result mainly from rainfall in the season from November through April, and are characterized by high peak flows and short durations. The majority of flood damages are crop losses. In addition there is a need for irrigation water and development of recreation facilities.

Recommended plan of improvement.—A multiple-purpose reservoir for flood control, irrigation, recreation at the Hidden site on Fresno River, about 15 miles northeast of the city of Madera; supplemental channel improvements, together with levees and appurtenant works, on Fresno River for about 7 miles upstream from the Chowchilla Canal.

Estimated cost, (price level of July 1959).—

Federal	[1] $14,338,000
Non-Federal	220,000
Total	14,558,000

[1] The sum of $3,698,000 will be reimbursed to the United States for irrigation.

Project economics—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$534,000	$11,000	$545,000
Maintenance and operation	[1] 80,000	6,000	86,000
Total	614,000	17,000	631,000
Annual benefits:			
Damages prevented			615,000
Irrigation			246,000
Recreation			70,000
Total			931,000

[1] Includes $17,000 apportioned to local interests for irrigation.

Benefit-cost ratio.—1.5.

Local cooperation.—(*a*) Hidden Dam and Reservoir: (1) Prior to construction of the dam and reservoir for irrigation, Secretary of the Interior make necessary arrangements for repayment of that part of the construction cost and annual operation and maintenance cost allocated to irrigation, presently estimated at $3,698,000 and $17,000, respectively, such repayment to be financially integrated into the Central Valley project of the Bureau of Reclamation. (2) Insofar as compatible with law and overall project requirements: *a.* After authorization, such reasonable modifications be made in project facilities and operation as may be found justified by the Commissioner of the U.S. Fish and Wildlife Service and agreed upon by the Chief

of Engineers; and *b*. The Chief of Engineers operate the dam and reservoir for irrigation in accordance with regulations prescribed by the Bureau of Reclamation. (3) Local interests sponsoring any permanent pool for fish and wildlife and/or recreation be required to settle all water rights pertaining to permanent pool for these purposes. (*b*) Channel improvements.—(1) Provide, without cost to the United States all lands, easements, and rights-of-way; (2) make necessary relocations and alterations to existing improvements; (3) hold and save the United States free from damages; (4) maintain and operate; and (5) preserve, or restore and thereafter maintain the Fresno River channel from the Hidden Dam downstream to the channel work recommended herein at capacities prevailing in 1959. Local interests are willing to meet requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: The Department of the Interior makes several comments including its recognition of the views of the House Subcommittee on Public Works Appropriations during the fiscal year 1960 hearings, that construction should not be initiated on six of the Corps of Engineers projects in California, including the Hidden Dam on Fresno River, until repayment contracts have been negotiated. The Chief of Engineers has replied to the Secretary of the Interior that consideration was given to this matter and that his final report so recommends, and further that appropriate consideration would be given to the other views of the Department during the planning stage of the project, if authorized.

Department of Agriculture: Favorable.

Federal Power Commission: Favorable.

State of California: Favorable.

Comments of the Bureau of the Budget.—The Bureau notes that $1,055,000 of the investment in the proposed project has been allocated to recreation although the specific investment involved in providing the contemplated recreation facilities is estimated to be only $140,000. The Bureau of the Budget states that the President, in his natural resources message to the Congress, instructed the Bureau of the Budget to reevaluate current standards for appraising the feasibility of water resources projects. A review of current standards is now underway. If the Fresno River Basin project is authorized by the Congress, the Budget would expect that, prior to the negotiation of irrigation repayment arrangements with the water users and a request for funds to initiate construction, the Corps of Engineers would reallocate the costs of the project to the extent necessary to conform with the evaluation standards adopted by the administration. The Bureau of the Budget advises that there would be no objection to the submission of the report to the Congress.

BUCHANAN RESERVOIR, CHOWCHILLA RIVER BASIN, CALIF.

(S. Doc. 98, 87th Cong.)

Location.—Chowchilla River is a major east-bank tributary of the San Joaquin River in central California. It enters the San Joaquin River about 18 miles west of Chowchilla.

Authority.—Senate Public Works Committee resolution adopted June 26, 1958.

Existing project.—There is no Federal flood control project in the Chowchilla River Basin.

Flood problem.—Floods on the stream result chiefly from rainfall in the season from November through April and are characterized by high peak flows and short durations. Crop losses account for the major part of the flood damages. Floodflows of the Chiwchilla River also contribute to flooding along the San Joaquin River.

Recommended plan of improvement.—A multiple-purpose reservoir at the Buchanan site on Chowchilla River, about 16 miles northeast of the city of Chowchilla, and supplemental channel improvements, together with levees and appurtenant works, on Ash Slough for about 5 miles upstream from the Chowchilla Canal.

Estimated cost (price level of July 1960).—

Federal	[1] $13,585,000
Non-Federal	150,000
Total	13,735,000

[1] The sum of $6,341,000 to be reimbursed by local interests for irrigation.

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$519,000	$8,000	$527,000
Maintenance and operation	[1] 92,000	2,000	94,000
Total	611,000	10,000	621,000
Annual benefits:			
Damages prevented			579,000
Irrigation			388,000
Recreation			75,000
Total			1,042,000

[1] Includes $43,000 apportioned to local interests for irrigation.

Benefit-cost ratio.—1.7.

Local cooperation.—*a.* Buchanan Dam and Reservoir: (1) Prior to construction of the dam and reservoir, the Secretary of the Interior make necessary arrangements for repayment, under the provisions of reclamation law, of that part of the construction cost and annual operation and maintenance cost allocated to irrigation, presently estimated at $6,341,000 and $43,000, respectively, the final cost allocation to be made by the Secretary of the Army, with the assistance of the Secretary of the Interior; such repayment to be financially integrated into the Central Valley project of the Bureau of Reclamation; (2) insofar as compatible with law and overall project requirements: (*a*) After authorization, such reasonable modifications be made in project facilities and method of operation as may be found justified by the Commissioner of the U.S. Fish and Wildlife Service and agreed upon by the Chief of Engineers; and (*b*) the Chief of Engineers operate the dam and reservoir for irrigation in accordance with regulations prescribed by the Bureau of Reclamation; (3) the local interests sponsoring any permanent pool in the reservoir for fish and wildlife or recreation be required to settle all claims for water rights pertaining to establishment and use of a permanent pool for these purposes;

b. Channel improvements: Local interests, prior to construction, give assurances satisfactory to the Secretary of the Army that they will: (1) Furnish without cost to the United States all lands, easements, and rights-of-way necessary for construction of the project; (2) make all necessary relocations and alterations to existing improvements, including highway facilities, which may be required for construction of the project; (3) hold and save the United States free from damages due to the construction works; (4) maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army; and (5) preserve, or restore and thereafter maintain, the other channels of Chowchilla River and Ash and Berenda Sloughs from Buchanan Dam downstream to the Chowchilla Canal at the capacities existing in 1960. Local interests are willing to meet the requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: The Department of the Interior has no objection to authorization of the project at this time; but believes that the question of physical integration with the Central Valley project deserves further consideration. In reply to the Secretary of the Interior, the Chief of Engineers indicated that the report provides for financial and functional integration with the Central Valley project, that negotiations concerning this matter are in process, and he concurs that authorization of the Buchanan project need not be delayed pending these negotiations.

Department of Agriculture: Favorable.

Department of Health, Education, and Welfare: Favorable.

State of California: Favorable.

Comments of the Bureau of the Budget.—No objection.

RUSSIAN RIVER, CALIF., DRY CREEK BASIN

(H. Doc. 547, 87th Cong.)

Location.—The Russian River Basin is located in Mendocino and Sonoma Counties in the central part of California near the Pacific coast. Russian River rises in the Coastal Range about 130 miles north of San Francisco and flows southerly and westerly to the Pacific ocean.

Authority.—This report is in partial response to House Public Works Committee resolution adopted July 1, 1958, with reference to problems on Dry Creek, Big Sulphur Creek, Mark West Creek and other creeks in Russian River reports.

Existing project.—The existing Federal project provides for Coyote Valley Dam forming Lake Mendocino and channel stabilization works along the Russian River.

Flood problems.—Severe winter storms in the Russian River Basin cause frequent flooding of agricultural and urban areas. In addition to the flood problem, there is an increasing need for adequate supplies of water for agricultural, municipal, and industrial uses.

Recommended plan of improvement.—The plan of improvement for Dry Creek provides for construction of a dam at the Warm Springs site, and channel improvements downstream, for flood control, water supply, and recreation.

Estimated cost (price level of December 1960).—

Federal	$42,400,000
Non-Federal	20,000
Total	42,420,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$1,169,000	$591,000	$1,760,000
Maintenance and operation	207,000	62,000	269,000
Total	1,376,000	653,000	2,029,000
Annual benefits:			
Flood damage prevented			655,000
Increased land use			204,000
Water conservation			850,000
Recreation			855,000
Total			2,564,000

Benefit-cost ratio.—1.3.

Local cooperation.—Local interests will be required to hold and save the United States free from damage; maintain and operate the channel improvement; prevent encroachment on the channel improvement; adjust all claims for water rights; provide all lands, easements and rights-of-way; make all utility and highway bridge modifications for the channel work and reimburse the United States for costs allocated to water supply, in accordance with the Water Supply Act of 1958, presently estimated at $11,730,000 for construction and $50,000 for maintenance. Sonoma County Flood Control and Water Conservation District would assume requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.
Department of Commerce: Favorable.
Department of Agriculture: Favorable.
Department of Health, Education, and Welfare: Favorable.
Federal Power Commission: Favorable.
State of California: Favorable.

Comments of the Bureau of the Budget.—No objection. However, the Bureau would expect that prior to any request for funds to initiate construction of the project, it would be reevaluated in the light of the administration's standards and policies, pertaining to recreation, applicable at that time.

REDWOOD CREEK, HUMBOLDT COUNTY, CALIF.

(H. Doc. 497, 87th Cong.)

Location.—Redwood Creek is on the western slopes of the coast range mountains in northwestern California. The stream drains about 283 square miles and enters the Pacific Ocean about 50 miles south of the Oregon boundary.

Authority.—1954 Flood Control Act.

Existing project.—There are no Federal or effective local flood protection projects, or related water control projects, on Redwood Creek.

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Flood problem.—The runoff from winter rainstorms causes frequent flooding along the lower 4 miles of the stream, including the community of Orick which was severely damaged in January 1953.

Recommended plan of improvement.—The improvements consist of an improved channel, levees, and revetment along the lower 4 miles of the stream.

Estimated cost (July 1960 price level).—

Federal	$2,580,000
Non-Federal	270,000
Total	2,850,000

Project economics.—

	Federal	Non-Federal	Total
Annual charges:			
Interest and amortization	$95,000	$13,000	$108,000
Maintenance and operation		19,500	19,500
Loss of land productivity		1,500	1,500
Total	95,000	34,000	129,000
Annual benefits:			
Damages prevented			222,000
Land enhancement			6,000
Total			228,000

Benefit-cost ratio.—1.8.

Local cooperation.—Provide all lands, easements, and rights-of-way needed for the project, including relocation and alteration of utilities; hold and save the United States free from damages due to the works; maintain and operate the completed works; and prevent encroachment on the flood channels and ponding area, or provide substitute storage capacity or equivalent pumping capacity. Local interets have indicated willingness to meet requirements of local cooperation.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.
Department of Agriculture: Favorable.
Department of Commerce: Favorable.
Department of Health, Education, and Welfare: Favorable.
State of California: Favorable.

Comments of the Bureau of the Budget.—No objection.

LOS ANGELES RIVER BASIN, CALIF.

The Los Angeles and San Gabriel Rivers and Ballona Creek drain an area of 1,717 square miles in southwestern California. The Los Angeles River is formed by the junction of Calabasas and Bell Creeks near the Los Angeles-Ventura County line, flows southeast 20 miles along the south side of the San Fernando Calley, then turns and flows south for 30 miles and discharges into the Pacific Ocean through a diversion channel in the city of Long Beach. It drains an area of 890 square miles including 137 square miles directly tributary to the Rio Grande, a cross channel which carires part of the flow of the San Gabriel River to the Los Angeles River. The river traverses the

agricultural and residential section of the San Fernando Valley and the highly developed industrial section of the city of Los Angeles. The San Gabriel River is formed by the junction of its East and West Forks in the San Gabriel Mountains. After leaving the mountains near the city of Azusa, the river divides into two branches, the branch to the west known as the Rio Hondo flowing southwest to its junction with the Los Angeles River, 12 miles from the ocean, and the branch to the east continuing south as the San Gabriel River to discharge into the Pacific Ocean 6 miles east of Los Angeles River. It drains an area of 698 miles, exclusive of the area tributary to the Rio Hondo. Below Azusa to Whittier Narrows the river flows through a highly developed agricultural community. Ballona Creek drains an area of 129 square miles adjoining the Los Angeles River Basin on the west.

In order to provide for the control of floods and to develop the water resources of the Los Angels River Basin, Congress in the Flood Control Act of 1936, as amended by subsequent acts, including the act of 1941, authorized a comprehensive plan of improvement for the basin as recommended by the Chief of Engineers in House Document No. 838, 76th Congress. The project provides flood control for a large part of Los Angeles County, including most of the city of Los Angeles and several adjacent metropolitan areas. The location of the work is along the Los Angeles and San Gabriel Rivers, Rio Hondo, Ballona Creeks, and their tributaries. The improvements may be divided into four general groups in accordance with their respective functions: (1) Debris basins, (2) tributary channels, (3) reservoirs, and (4) main channels.

The Congress, in approving the comprehensive plan for the Los Angeles River Basin, as in the case of many other basins throughout the Nation, authorized only enough money to initiate the more important projects. Subsequent acts of Congress included additional monetary authorizations for the continuation of the approved comprehensive plan. The present total estimated cost of the projects included within the authorized Los Angeles River Basin program of the Corps of Engineers, subject to a monetary limitation, is $350,265,000. Monetary authorization in the amount of $286,041,000 has been made available by the Congress to date. Funds totaling $272,474,000 have been appropriated through fiscal year 1962, leaving a balance of available authorization of $13,567,000. The approved budget estimate for fiscal year 1963 is $15 million, leaving a deficit balance of monetary authorization of $1,433,000.

The committee has been informed that if additional monetary authorization for the Los Angeles River Basin is not made available at this time, it will be necessary to curtail work on the project. Inasmuch as contracts are usually awarded in the spring of the year for accomplishment during the dry season, lack of monetary authority to permit award of such contracts in the spring of 1963 would result in delays in prosecuting the project of up to 1 year or longer.

The committee considers it desirable to authorize additional monetary authorizations for the Los Angeles River Basin comprehensive plan at this time in order that work on this major project, now approximately 80-percent complete, need not be curtailed. In view of

the anticipated deficit which will result with the appropriation of fiscal year 1963 funds, and in order to allow for transfers of appropriated funds from other projects within the authority available to the Chief of Engineers should such transfers be found necessary or advantageous to the prosecution of the work in fiscal year 1963, the committee considers that the monetary authorization should be increased by $3,700,000.

With respect to appropriations for the fiscal year 1963 which are contained in the pending public works appropriation bill, the committee was advised that the Los Angeles River Basin is the only project in which there is a deficit in monetary authorizations with respect to the appropriations contemplated in the approved budget estimate.

ROGUE RIVER BASIN, OREG. AND CALIF.

(H. Doc. 566, 87th Cong.)

Location.—Rogue River Basin is located in southwestern Oregon and northern California with Oregon containing about 97 percent of the basin area.

Authority.—Public Law 183 approved July 1, 1935, and Flood Control Acts of 1936 and 1958.

Existing project.—The Corps has provided seven minor local protection works under emergency and continuing authorities at total cost of $316,000. Navigation project now under construction at mouth of river will provide 13-foot project and cost $3.5 million. Bureau of Reclamation has constructed 16,000-kilowatt powerplant on tributary. Local interests have irrigation facilities for about 72,000 acres. Of nine organized districts serving 42,000 acres, three have storage facilities. There is a small reservoir for water supply and eight private hydroelectric plants with a total capacity of about 56,000 kilowatts.

Flood problem.—Flood damages occur in the Rogue River Basin in a number of discontinuous areas along the main stream and its principal tributaries. The most recent major flood occurred in 1955 and inundated more than 13,000 acres of land.

Recommended plan of improvement.—Three multiple-purpose reservoirs. A rock and gravel embankment dam at Lost Creek site, 360 feet high with usable storage capacity of 315,000 acre-feet. A rock and gravel embankment dam at Elk Creek site, 235 feet high with usable storage capacity of 95,000 acre-feet. An earth and gravel embankment dam at the Applegate River site, 230 feet high with usable storage capacity of 65,000 acre-feet.

Estimated cost (all Federal, July 1961 price level).—

Lost Creek Dam	$74,500,000
Elk Creek Dam	17,500,000
Applegate Dam	14,700,000
Total	[1] 106,700,000

[1] Of this amount, $5,977,000 and $16,592,000 will be repaid by local interests for water supply and irrigation, respectively.

Project economics.—

Annual charges:	
Interest and amortization	$3,191,000
Operation, maintenance, and replacement	802,400
Taxes foregone and economic costs	78,800
Total	4,072,200
Annual benefits:	
Flood control	1,360,000
Irrigation	925,000
Water supply	322,700
Fish and wildlife	1,130,200
Power	1,881,700
Recreation	528,000
Total	6,147,600

Benefit-cost ratio.—1.5.

Local cooperation.—Prior to construction, they will agree to reimburse the United States for first costs and annual operation, maintenance, and replacement costs allocated to municipal and industrial water supply storage, presently estimated at $5,977,000 and $24,900, respectively; the Secretary of the Interior make necessary arrangements for repayment of that part of the construction cost and annual operation, maintenance, and replacement costs allocated to irrigation, presently estimated at $13,007,000 and $66,500, respectively, for the Lost Creek-Elk Creek Reservoirs and $3,585,000 and $9,900, respectively, for the Applegate Reservoir; and the State of Oregon take necessary action to insure maintenance, in the streams, of flows to be released for benefit of the fishery. Local interests have indicated willingness to cooperate.

Comments of the State and Federal agencies.—

Department of the Interior: In commenting on the report the Secretary of the Interior indicated that the recommendations and authorizing legislation should include language indicating that no construction be undertaken until the Department of Interior has on hand signed contracts for repayment of the cost of irrigation. In reply, the Chief of Engineers indicated that the report has been revised to provide that prior to construction local interests give assurances satisfactory to the Secretary of the Army that they will make necessary arrangements with the Secretary of the Interior for repayment of irrigation costs under the provisions of reclamation law. In order that urgently needed flood control and other services may be provided under this arrangement without either undue delay should these projects be authorized, the Chief of Engineers will consult with and obtain the concurrence of the Department of Interior on a satisfactory basis for proceeding with project construction considering, among other factors, the acceptance of assurances of local cooperation.

Department of Commerce: Favorable.

Department of Agriculture: Favorable.

Federal Power Commission: Favorable.

Department of Health, Education, and Welfare: Favorable.

State of Oregon: Favorable.

State of California: Favorable.

Comments of the Bureau of the Budget.—The Bureau of the Budget comments that while there would be no objection to the submission of the proposed report to the Congress, the Bureau would recommend that if the project is authorized by Congress the terms of authorization permit later determination of the appropriate agency to assume operating responsibility for the recommended projects. After careful consideration of the matter of operational responsibility, the Secretary of the Army concurs in the recommendations of the Chief of Engineers and recommends authorization of the proposed reservoirs for construction, operation and maintenance by the Corps of Engineers.

BURNS CREEK DAM AND RESERVOIR, SNAKE RIVER, IDAHO

(S. Doc. 130, 87th Cong.)

Location.—The Snake River is the largest tributary of the Columbia River. The portion of the Snake River of interest in this report is the 5,750 square-mile drainage area above Heise, Idaho, in southeastern Idaho and western Wyoming.

Authority.—Senate Public Works Committee resolution adopted March 19, 1954.

Existing project.—The principal water-resource developments in this section of the basin are Jackson Lake in Wyoming, with 850,000 acre-feet of storage for irrigation, and Palisades Reservoir in Idaho, with 1,401,600 acre-feet for irrigation, power, and recreation. The partial flood protection provided by these storage reservoirs is augmented in the reach between Heise and Roberts by levees and channel improvements to provide a safe channel carrying capacity of about 20,000 cubic feet per second.

Flood problem.—Floods frequently experienced along the Snake River from Heise to American Falls affect about 300 acres of residential and commercial developments in Roberts and Idaho Falls and 90,000 acres of land devoted to irrigated row crops and hay. With control from existing storage reservoirs and levee protection, the remaining average annual damages under 1962 conditions are about $300,000.

Recommended plan of improvement.—Improvement of Snake River, Idaho, by the Bureau of Reclamation, as part of the Palisades project and in accordance with the provisions of Federal reclamation laws, by design, construction, and operation of a dam and reservoir for irrigation, power, flood control, recreation, and the preservation and propagation of fish and wildlife resources, at the Burns Creek site with a storage capacity of about 234,000 acre-feet, and a powerplant of about 90,000 kilowatts.

Estimated cost (price level of January 1962).—All Federal, $52 million.

Project economics.—

Annual charges (Federal):	
Interest and amortization	$1,553,000
Maintenance and operation	233,000
Total	1,786,000
Annual benefits:	
Damages prevented	120,000
Irrigation	48,000
Power	2,556,000
Recreation	231,000
Total	2,950,000

Benefit-cost ratio.—1.7.

Local cooperation.—None required.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.
Department of Agriculture: Favorable.
Department of Commerce: Favorable.
Department of Health, Education, and Welfare: Favorable.
Federal Power Commission: Favorable.
State of Idaho: Favorable.
State of Wyoming: Opposes the project.
State of Utah: Opposes the project.

Comments of the Bureau of the Budget.—The Bureau of the Budget notes the adverse comments of the Governors of Utah and Wyoming and suggests that they be brought to the attention of Congress and that the Congress be reminded that the President recommended authorization of the project in his conservation message, February 1962. The Bureau also advises there would be no objection to submission of the report to Congress and recommends authorization of the project.

RIRIE DAM AND RESERVOIR, WILLOW CREEK, IDAHO

(H. Doc. 562, 87th Cong.)

Location.—Willow Creek drains a 700-square-mile area tributary to Snake River in southeastern Idaho. Willow Creek enters Snake River at Idaho Falls. Snake River is the largest tributary of the Columbia River.

Authority.—Senate Public Works Committee resolutions adopted March 4, 1952, and March 19, 1954, and House Public Works Committee resolution adopted June 2, 1953.

Existing project.—There are no Federal flood control projects in the Willow Creek Basin. Local people have constructed various irrigation canals and diversions.

Flood problem.—As the stream enters the relatively flat Snake River plain, about 10 miles above Idaho Falls, the stream divides into numerous channels which have capacity to carry only minor flows. Flooding occurs principally from melting of the winter snowpack; however, rain floods can occur as evidenced by the February 1962 flood.

Recommended plan of improvement.—Construction by the Corps of Engineers of a dam and reservoir, with a storage capacity of about

135,000 acre-feet, on Willow Creek about 15 miles east of Idaho Falls, for flood control, irrigation, municipal water supply and recreation, and channel improvements along lower Willow Creek. Operation and maintenance by the Bureau of Reclamation.

Estimated cost (price level of March 1962).—All Federal, $7,027,000.[1]

Project economics.—

Annual charges (all Federal):	
Interest and amortization	$206,000
Maintenance and operation	41,000
Total	247,000
Annual benefits:	
Flood control	200,000
Irrigation	125,000
Water supply	90,000
Recreation	80,000
Total	495,000

Benefit-cost ratio.—2.0.

Local cooperation.—Prior to construction, agree to reimburse the United States for costs allocated to water supply in accordance with the Water Suppy Act of 1958, as amended, such costs presently estimated at $700,000 for construction and $4,000 annually for operation, maintenance, and replacements; obtain the water rights needed for storage and use of the water and hold and save the United States free from damages for water-rights claims resulting from construction and operation of the project; and make necessary arrangements with the Secretary of the Interior for repayment, under the provisions of reclamation law, of the construction cost and annual operation, maintenance, and replacement costs allocated to irrigation, presently estimated at $960,000 and $5,000, respectively.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.
Department of Agriculture: Favorable.
Department of Commerce: Favorable.
Department of Health, Education, and Welfare: Favorable.
Federal Power Commission: Favorable.
State of Idaho: Favorable.

Comments of the Bureau of the Budget.—No objection.

BLACKFOOT DAM AND RESERVOIR, BLACKFOOT RIVER, IDAHO

(H. Doc. 568, 87th Cong.)

Location.—Blackfoot River drains a 1,300-square-mile area tributary to Snake River in southeastern Idaho near Idaho Falls. Blackfoot River enters the Snake River just above American Falls Reservoir. Snake River is the largest tributary of the Columbia River.

Authority.—Senate Public Works Committee resolutions adopted March 4, 1952, and March 19, 1954, and House Public Works Committee resolution adopted June 2, 1953.

[1] Includes $960,000 allocated to irrigation, and $700,000 allocated to water supply to be repaid by local water users.

Existing project.—Improvement by the Corps of Engineers of the lower 18 miles of Blackfoot River for flood control is scheduled during 1962. The Bureau of Indian Affairs has constructed Blackfoot Dam and Reservoir (413,000 acre-feet usable capacity) on Blackfoot River and the Grays Lake Reservoir on Willow Creek which diverts water into the Blackfoot River Basin.

Flood problem.—Floods result primarily from snowmelt, but sometimes are augmented by storm runoff. Channel capacities are inadequate to contain the flood flows.

Recommended plan of improvement.—Modification of the existing Blackfoot Dam and Reservoir to provide for flood control by raising the maximum pool 2 feet, increases the spillway capacity, improving the outlook works, and appurtenant work. Operation and maintenance by the Bureau of Indian Affairs.

Estimated cost (price level of January 1962).—All Federal, $829,000.

Project economics.—

Annual charges (all Federal):	
Interest and amortization	$31,000
Maintenance and operation	5,000
Total	36,000
Annual benefits: Damages prevented	41,000

Benefit-cost ratio.—1.1.

Local cooperation.—None required.

Comments of the State and Federal agencies.—

Department of the Interior: No objection.
Department of Agriculture: Favorable.
Department of Commerce: Favorable.
Department of Health, Education, and Welfare: Favorable.
Federal Power Commission: Favorable.
State of Idaho: Favorable.

Comments of the Bureau of the Budget.—No objection.

ASOTIN DAM AND RESERVOIR, SNAKE RIVER, IDAHO AND WASH.

(H. Doc. 403, 87th Cong.)

Location.—The Snake River is a principal tributary of the Columbia River and drains 109,000 square miles in Idaho, Washington, and Oregon. The Asotin project site is located at mile 146.8 on Snake River at the upstream limits of the town of Asotin, Wash. The drainage area above the site is 93,100 square miles.

Authority.—Resolution, Senate Committee on Public Works, adopted July 28, 1955, and other resolutions.

Existing project.—A total of 10½ million acre-feet of storage, sufficient to control major Columbia River floods to 1,030,000 cubic feet per second at The Dalles is presently available at Federal and non-Federal projects existing or under construction in the Columbia River Basin. Existing, under construction and authorized Federal projects have an aggregate installed hydroelectric capacity of 400,000 kilowatts.

Flood problem.—The area of major flood damage in the Columbia Basin lies along the 140-mile reach of the Columbia River below

Bonneville Dam. Flood damages as modified by existing projects is about $24 million annually.

Recommended plan of improvement.—Construction by the Corps of Engineers of a relatively low-head dam and reservoir, with an initial installed capacity of 288,000 kilowatts, with provisions for adding a navigation lock in the future when economically justified, for the production of hydroelectric power and for recreation.

Estimated cost (price level of July 1961).—All Federal, $99,818,000.[1]

Project economics (based on 100-year life and 2⅝ percent interest).—

Annual charges (all Federal):	
Interest and amortization	$2,978,000
Operation, maintenance, and replacement	948,000
Subtotal	3,926,000
Taxes foregone	876,000
Total	4,802,000
Annual benefits (with Canadian storage):	
Power	10,017,000
Recreation	32,000
Total	10,049,000

Benefit-cost ratio.—2.1

Local cooperation.—None required.

Comments of the State and Federal agencies.—

Department of the Interior: Generally favorable.

Department of Agriculture: Favorable.

Department of Commerce: Generally favorable.

Department of Health, Education, and Welfare: Favorable.

Federal Power Commission: Favorable.

State of Idaho: Generally favorable. Expressed disappointment that full navigation facilities in the dam were not found justified.

State of Washington: Favorable.

Comments of the Bureau of the Budget.—No objection.

CHINA GARDENS DAM AND RESERVOIR, SNAKE RIVER, IDAHO, WASH., AND OREG.

(H. Doc. 403, 87th Cong.)

Location.—The Snake River is a principal tributary of the Columbia River and drains 109,000 square miles in Idaho, Washington, and Oregon. The China Gardens project site is located on Snake River, mile 172.5, about 3.5 miles above the mouth of Grande Ronde River and about the same distance below the Oregon-Washington State line. The drainage area above the site is 88,000 square miles.

Authority.—Resolution, Senate Committee on Public Works, adopted July 28, 1955, and other resolutions.

Existing project.—A total of 10½ million acre-feet of storage sufficient to control major Columbia River floods, to 1,080,000 cubic feet

[1] Initial construction cost. Project economics based on initial construction cost of $99,818,000 plus present worth of additional installation cost of $7,788,000 at 50th year.

per second at The Dalles is presently available at Federal and non-Federal projects existing or under construction in the Columbia River Basin. Existing, under construction and authorized Federal projects have an aggregate installed hydroelectric capacity of 9,400,000 kilowatts.

Flood problem.—The area of major flood damages in the Columbia River Basin lies along the 140-mile reach of the Columbia River below Bonneville Dam. Flood damages as modified by existing projects is about $24 million annually.

Recommended plan of improvement.—Construction by the Corps of Engineers of a relatively low-head dam and reservoir with an initial installed capacity of 180,000 kilowatts for the production of hydroelectric power and for recreation.

Estimated cost (price level of July 1961).—All Federal, $74,777,000.[1]

Project economics (based on 100-year life and 2⅝ percent interest).—

Annual charges (all Federal):	
Interest and amortization	$2,244,000
Operation, maintenance, and replacement	800,000
Subtotal	3,044,000
Taxes foregone	529,000
Total	3,573,000
Annual benefits (with Canadian storage):	
Power	6,055,000
Recreation	13,000
Total	6,068,000

Benefit-cost ratio.—1.7.

Local cooperation.—None required.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.
Department of Agriculture: Favorable.
Department of Commerce: Favorable.
Department of Health, Education, and Welfare: Favorable.
State of Idaho: Favorable.
State of Washington: No objection.
State of Oregon: No objection.

Comments of the Bureau of the Budget.—No objection.

BRADLEY LAKE, COOK INLET, ALASKA

(H. Doc. 455, 87th Cong.)

Location.—Bradley Lake is located on Kenai Peninsula about 100 miles south of Anchorage.

Authority.—Flood Control Acts of 1948 and 1950.

Existing project.—There is no existing Federal project at Bradley Lake; however, the existing power generating capacity in the Cook Inlet area, excluding military plant, totals about 57,000 kilowatts of which 30,000 kilowatts are provided by the Eklutna hydroelectric

[1] Initial construction cost. Project economics based on initial construction cost of $74,777,000 plus present worth of additional installation cost of $6,568,000 at 50th year.

development of the Bureau of Reclamation and about 14,500 kilowatts by the Anchorage thermal-electric plant of the Chugach Electric Association, Inc., a Rural Electrification Administration cooperative. Small load centers on the Kenai peninsula are supplied by internal combustion generation.

Power problem.—Based upon a Federal Power Commission estimate, a shortage of about 20,000 kilowatts of power will exist in the area by 1965, and 50,000 by 1970. The cost of alternative thermal-electric power is high.

Recommended plan of improvement.—A dam at the outlet of Bradley Lake, to raise its elevation about 100 feet, and a powerplant, with 64,000 kilowatts of installed capacity, on Kachemak Bay. Construction by the Department of the Army. Operation and maintenance by the Department of the Interior.

Estimated cost (June 1960 price level).—

Federal	$45,750,000
Non-Federal	None

Project economics.—

Annual charges (all Federal):	
Interest and amortization	$1,699,000
Maintenance and operation	258,000
Total	1,957,000
Annual benefits: Power	3,232,000

Benefit-cost ratio.—1.7.

Local cooperation.—None required.

Comments of the State and Federal agencies.—

Department of the Interior: Favorable.
Department of Agriculture: Favorable.
Federal Power Commission: Favorable.
State of Alaska: Favorable.

Comments of the Bureau of the Budget.—No objection.

SECTION 204

This section amends the existing authority of the Corps of Engineers to construct small flood control projects without specific congressional authorization by increasing the current Federal cost limitation from $400,000 per project to $2 million per project. Projects under this authority must be economically justified and complete within themselves, and are planned to provide the same scale, scope, and type of developments that would have been recommended for the localities concerned under normal project authorization procedures. Federal funds allotted under this legislation must be sufficient to complete Federal participation. Local cooperation is similar to that required for projects authorized under normal procedures. Control would be exercised by the requirement that construction shall not be undertaken on any project covered by this section with a Federal cost in excess of $1 million unless such project has been approved by resolutions adopted by the Public Works Committees of the Senate and House of Representatives.

The committee was advised that the existing small flood control project program has become an increasingly valuable vehicle for pro-

viding flood damage relief for localized damage areas—both urban and agricultural. Protection can be provided under this small project program in a significantly shorter time period than possible under regular authorization procedures. It is considered that the increase in individual project cost limitation will provide a desirable and reasonable extension of this useful program.

SECTION 205

This section would grant the consent of Congress for the construction of a dam across Savannah River between South Carolina and Georgia.

The Duke Power Co. plans a 2-million-kilowatt steam plant on the Savannah River about 8 miles below Hartwell Dam and immediately upstream of Sanders Ferry Bridge. A diversion dam across the Savannah River is needed and proposed to provide cooling water for the plant. This dam would provide intake water storage and/or act as a thermal barrier for the coolant if another dam is constructed downstream.

The Savannah River in this reach is a navigable water of the United States. Because of this, authorization by the Congress is necessary to build the dam. Section 205 would provide the consent of Congress. The section includes a provision for approval of plans of Duke Power Co. by the Chief of Engineers and the Secretary of the Army before commencement of work. The section further provides that the grantee or its successors shall hold and save the United States free from all claims by reason of the future construction and operation of the authorized Hartwell Reservoir or any other Federal project upstream or downstream from the dam herein authorized.

The committee believes that the consent of Congress is warranted to provide this dam.

SECTION 206

This section is similar to that in previous flood control acts providing for authorization of needed surveys at specifically named localities.

SECTION 207

This section identifies title II of the bill as the Flood Control Act of 1962.

EXPLANATION OF COMMITTEE AMENDMENTS

An explanation of the committee amendments follows. Where new sections have been added the succeeding sections in the bill have been renumbered accordingly.

Page 7, following line 11.

Big Sandy River, lock and dam No. 3, Kentucky: In 1952, by act of Congress, the maintenance and operation of the lock and dam No. 3 on the Big Sandy River was turned over to local interests. Early in July, an unusual flash flood washed around the old lock abutments causing extensive washing away of adjoining land supporting private homes and U.S. Highway No. 23, Lawrence County, Ky. Seventy

thousand square feet of park area and one building was washed into the Big Sandy River as a result of the faulty operation of the dam wickets. The amendment contains a limitation of $200,000, which amount the Corps of Engineers indicates will be sufficient to repair the damage. The committee urges approval of the amendment.

Page 12, following line 15, new section 102, each erosion.

This section would amend existing laws to permit increased Federal participation in shore protection projects and investigations, and provide for changes in procedures to expedite Federal action in planning and undertaking protection for the most endangered coastal areas, beyond the legislative authorities now available. It would provide for increased Federal participation in four important aspects of project development:

(1) Studies would be made entirely at Federal cost rather than on a 50–50 Federal–non-Federal cooperative basis as at present. This is desirable because it would enable the Corps of Engineers to study entire physiographic reaches of shores where the problems and their solution can be treated as an entity, rather than on the fragmented basis required by adoption to local governmental boundaries.

(2) The Federal share of the costs of protection of publicly owned or used non-Federal shore frontage would be increased from one-third of the costs to one-half.

(3) The Federal Government could assume up to 100 percent of the total costs of protecting the frontage of certain State, county, or municipal parks and conservation areas which meet defined criteria of public interest.

(4) Authority to undertake meritorious small shore protection and beach erosion control projects without specific authorization by Congress, and with appropriate limitations, would be granted to the Secretary of the Army and the Chief of Engineers, similar to that already provided for small flood control and navigation projects.

These changes in the Federal interest would place shore protection studies on a comparable basis for planning with other water resource investigations; encourage and assist local interests to cooperate more fully in projects by reducing the present financial burden of cooperation; and, perhaps most important of all, designate shoreline protection, conservation, and development as a recognized field for Federal participation.

In addition, this section would authorize reimbursement of local interests for work done by them on authorized projects which individually do not exceed $1 million in total cost after initiation of the survey studies which form the basis for the project.

The storms and high tides of March 6–8, 1962, caused unprecedented damage to the shores and to developments thereon from Florida to Long Island. Much of it occurred in the States of New York, New Jersey, Delaware, and Maryland. Available estimates indicates that total losses to public and private property approximated $200 million. Human suffering was extensive, and many persons lost their homes and investments on the shores. The prolonged duration of high water levels also eroded beaches and protective dunes extensively and barrier islands were overflowed so that many areas and properties were ex-

posed to wave and water damages not previously experienced even in hurricanes.

Most individuals and local communities have insufficient resources to meet such catastrophes. The Federal Office of Emergency Planning, assisted by other Federal agencies, with funds granted by the President under Public Law 875, 81st Congress, undertook emergency cleanup and repairs but work under this law cannot extend to the permanent works needed for protection against major storms.

In some areas, existing requirements for local cooperation have retarded full accomplishment of authorized work where local interests would be required to bear a large part of the total costs. This section would increase the Federal share of costs up to 50 percent of the total costs of protecting non-Federal publicly owned or used property, other than conservation areas, and would make the new provisions applicable to authorized projects which have not been completed prior to the date of approval of this act. Where conservation areas are involved the Federal share could be up to 100 percent. The increase would not be unduly burdensome to the Federal Government in view of the benefits all the public receives from the shores and beaches of our coasts.

The extension of the Federal interest in shore protection, conservation, and development, provided by this section is considered fully in the national interest and an important step forward in Federal-State cooperation in the national resources field. The committee would expect that the provisions of this section pertaining to new work costs would be applied to the beach erosion control projects and measures authorized by the bill.

Page 13, following line 11, new section 105, Redondo Beach King Harbor, Calif.

The committee added a new section 195, which changes the name of the Redondo Beach Harbor, Calif., to the Redondo Beach King Harbor, Calif. This change has already been made by the local authorities to honor Congressman Cecil R. King, who represents this area, which is a part of the 17th Congressional District of California. The purpose of this change is to allow this designation to be made on the various Federal maps and other Federal designations that will be used to locate this harbor. The harbor is not a Federal project. It is purely a municipally operated project. The committee recommends approval of this change to honor a distinguished colleague for his outstanding service in the Congress and to facilitate proper marking of any Federal map or designation in the future.

Page 35, line 4.

The figure "five" is changed to "eight." This was a typographical error in the bill as introduced. The capacity of the channel to be maintained by the Secretary of the Army should be 8,000 cubic feet per second.

Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is

enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman) :

ACT OF AUGUST 13, 1946, AS AMENDED

AN ACT Authorizing Federal participation in the cost of protecting the shores of publicly owned property

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) with the purpose of preventing damage to the shores of the United States, its Territories and possessions and promoting and encouraging the healthful recreation of the people, it is hereby declared to be the policy of the United States, subject to the following provisions of this Act to assist in the construction, but not the maintenance, of works for the restoration and protection against erosion, by waves and currents, of the shores of the United States, its Territories and possessions.

(b) The Federal contribution in the case of any project referred to in subsection (a) shall not exceed [one-third] *one-half* of the cost of the project, and the remainder shall be paid by the State, municipality, or other political subdivision in which the project is located, *except that the costs allocated to the restoration and protection of Federal property shall be borne fully by the Federal Government, and further, that Federal participation in the cost of a project for restoration and protection of State, county, and other publicly owned shore parks and conservation areas may be the total cost exclusive of land costs, when such areas: Include a zone which excludes permanent human habitation; include but are not limited to recreational beaches; satisfy adequate criteria for conservation and development of the natural resources of the environment; extend landward a sufficient distance to include, where appropriate, protective dunes, bluffs, or other natural features which serve to protect the uplands from damage; and provide essentially full park facilities for appropriate public use, all of which shall meet with the approval of the Chief of Engineers.*

(c) When in the opinion of the Chief of Engineers the most suitable and economical remedial measures would be provided by periodic beach nourishment, the term "construction" may be construed for the purposes of this Act to include the deposit of sand fill at suitable intervals of time to furnish sand supply to project shores for a length of time specified by the Chief of Engineers.

(d) Shores other than public will be eligible for Federal assistance if there is benefit such as that arising from public use or from the protection of nearby public property or if the benefits to those shores are incidental to the project, and the Federal contribution to the project shall be adjusted in accordance with the degree of such benefits.

(e) No Federal contribution shall be made with respect to a project under this Act unless the plan therefor shall have been specifically adopted and authorized by Congress after investigation and study by the Beach Erosion Board under the provisions of section 2 of the River and Harbor Act approved July 3, 1930, as amended and supple-

mented, *or, in the case of a small project under section 3 of this Act, unless the plan therefor has been approved by the Chief of Engineers.*

[SEC. 2. When the Chief of Engineers shall find that any such project has been constructed in accordance with the authorized plans and specifications he shall cause to be paid to the State, municipality, or other political subdivision involved the amount authorized by Congress.

[SEC. 3. The Chief of Engineers may, in his discretion, from time to time, make payments on such construction as the work progresses, but these payments, including previous payments, if any, shall not be more than the United States pro rata part of the value of the labor and materials which have been actually put into such construction in conformity to said plans and specifications: *Provided*, That the construction of restoration and protective works under this Act may be undertaken by the Chief of Engineers upon the request of, and contribution of required funds by, the interested State, municipality, or other political subdivision.]

SEC. 2. The Secretary of the Army is hereby authorized to reimburse local interests for work done by them on authorized projects which individually do not exceed $1,000,000 in total cost after initiation of the survey studies which form the basis for the project: Provided, That the work which may have been done on the projects is approved by the Chief of Engineers as being in accordance with the authorized projects: Provided further, That such reimbursement shall be subject to appropriations applicable thereto or funds available and shall not take precedence over other pending projects of higher priority for improvements.

SEC. 3. The Chief of Engineers is hereby authorized to undertake construction of small shore and beach restoration and protection projects not specifically authorized by Congress, which otherwise comply with section 1 of this Act, when he finds that such work is advisable, and he is further authorized to allot from any appropriations heretofore or hereinafter made for civil works, not to exceed $3,000,000 for any one fiscal year for the Federal share of the costs of construction of such projects: Provided, That not more than $400,000 shall be allotted for this purpose for any single project and the total amount allotted shall be sufficient to complete the Federal participation in the project under this section including periodic nourishment as provided for under section 1(d) of this Act: Provided further, That the provisions of local cooperation specified in section 1 of this Act shall apply: And provided further, That the work shall be complete in itself and shall not commit the United States to any additional improvement to insure its successful operation, except for participation in periodic beach nourishment in accordance with section 1(d) of this Act, and as may result from the normal procedure applying to projects authorized after submission of survey reports.

SEC. 4. As used in this Act, the word "shores" includes all the shorelines of the Atlantic and Pacific Oceans, the Gulf of Mexico, the Great Lakes, and lakes, estuaries, and bays directly connected therewith.

90048—62——16

SECTION 205 OF THE FLOOD CONTROL ACT OF 1948

SEC. 205. That the Secretary of the Army is hereby authorized to allot from any appropriations heretofore or hereafter made for flood control, not to exceed [$10,000,000] *$525,000,000* for any one fiscal year, for the construction of small [flood-control] projects *for flood control and related purposes* not specifically authorized by Congress, which come within the provisions of section 1 of the Flood Control Act of June 22, 1936, when in the opinion of the Chief of Engineers such work is advisable: [*Provided*, That not more than $400,000 shall be allotted for this purpose at any single locality from the appropriations for any one fiscal year:] *Provided*, *That not more than $2,000,000 shall be allotted under this section for a project at any single locality and the amount allotted shall be sufficient to complete Federal participation in the project: And provided further*, *That no construction shall be undertaken on any project under the provisions of this section with a Federal cost in excess of $1,000,000 unless such project has been approved by resolutions adopted by the Committee on Public Works of the Senate and the Committee on Public Works of the House of Representatives, respectively: Provided further*, That the provisions of local cooperation specified in section 3 of the Flood Control Act of June 22, 1936, as amended, shall apply: *And provided further*, That the work shall be complete in itself and not commit the United States to any additional improvements to insure its successful operation, except as may result from the normal procedure applying to projects authorized after submission of preliminary examination and survey reports.

SUPPLEMENTAL VIEWS

We are not opposed to the enactment of H.R. 13273, for we believe that the periodic enactment of river and harbor and flood control legislation is an essential part of a sound Federal program for the wise development of the Nation's water resources. We do, however, strongly oppose the inclusion in this bill of (1) projects on which final reports, complete with the comments of affected States and interested Federal agencies, have not been submitted to the Congress in accordance with the requirements of governing law, and (2) controversial projects which are opposed by responsible individuals and groups who have requested an opportunity to be heard by the House Committee on Public Works but have not been afforded such an opportunity.

PROJECTS ON WHICH FINAL REPORTS HAVE NOT BEEN SUBMITTED TO THE CONGRESS

Title I includes two projects on which final reports have not been submitted to the Congress. They are identified as Newark Bay, Hackensack and Passaic Rivers, N.J. (channels to Port Elizabeth), and Fire Island Inlet and Shore Westerly to Jones Inlet, N.Y.

Requirements of governing law and administrative procedures

Existing law requires that, before the Chief of Engineers, Department of the Army, shall submit a plan, proposal, or report for any navigation or flood control project to the Congress, investigations which form its basis shall be conducted in such a manner as to give to the affected States, during the course of the investigation, information developed by the investigation and an opportunity for consultation, and that the Chief of Engineers shall transmit a copy of his proposed report to each affected State for comment, and that the report together with the submitted views and recommendations of affected States shall be transmitted to the Congress. This is a wise requirement, for our vital water resources can best be conserved and utilized in the public interest if the Federal Government cooperates with State and local governments in the development of those resources by giving adequate consideration to the views of affected States in formulating proposals for projects. This has not been done with respect to these two projects.

In addition, procedures for review consistent with other statutory requirements have been established under Executive Order 9384, which provides for review of project reports within the executive branch before they are submitted to the Congress.

To carry out the requirements of existing law and Executive Order 8384, the Corps of Engineers has established a procedure for the construction, authorization, and ultimate construction of river and harbor and flood control projects. This established procedure, which is well known, has been published by the Corps of Engineers, and the parts

thereof pertinent to the preparation and submission of reports to the Congress are as follows:

Step No. 1. *Assignment of investigation by Chief of Engineers.*—Whether an investigation is requested of the Chief of Engineers by committee resolution or by authority of an act of Congress, the Chief of Engineers will assign the investigation to an appropriate reporting officer, usually the division engineer in whose territory the area is located. Division engineers further assign the investigation to the proper district engineer. Committee resolutions requesting reviews by the Board of Engineers for Rivers and Harbors are first referred to the Board before the investigation is assigned. However, before work can be undertaken on an investigation, funds for that purpose must be appropriated by the Congress.

Step No. 2. *Public hearings by district engineer.*—The district engineer, in order to ascertain the views and desires of local people, will hold public hearings as appropriate at localities accessible to all concerned. Local interests will be afforded full opportunity to express their views on the character and extent of the improvement desired and on the need and advisability of its execution. A hearing in connection with cooperative beach erosion studies will be optional with the reporting offices and the cooperating agency.

Step No. 3. *Investigation by district engineer.*—The district engineer after carefully analyzing the data obtained from local interests and developed through field and office studies, will devise a plan of improvement best suited for problems under consideration and the area in question. During development of the plan of improvement, consideration will be given to optimum use of all water resources of the area by providing allied improvements. A favorable recommendation by the district engineer will depend on whether the benefits to be derived through the plan of improvement exceed the costs to be incurred.

Step No. 4. *Review of division engineer and issuance of public notice.*—Upon completion of the report by the district engineer, the division engineer having jurisdiction will review the report and transmit it to the Chief of Engineers with a draft of the proposed public notice to be issued by him. After approval by the Chief of Engineers, the public notice will be mailed to all parties known to be interested in the investigation, setting forth the findings of the district and division engineers and there recommendations for improvement, and informing those concerned that they may appear before the Board of Engineers for Rivers and Harbors or the Beach Erosion Board to present their views on the matter. The Chief of Engineers will then refer the report to the Board of Engineers for Rivers and Harbors or to the Beach Erosion Board for review as required by law.

Step No. 5. *Review and hearings by Engineer Boards.*—The Chief of Engineers, after the public notice has been issued, refers the report to the Board of Engineers for review as

required by existing law. The Board of Engineers for Rivers and Harbors, an independent body with separate staff in Washington, D.C., is required by law to review all survey and review reports except beach erosion reports. The Beach Erosion Board, also an independent body and staff in Washington, D.C., is the review board for beach erosion studies. These Boards may hold public hearings before making recommendations to the Chief of Engineers.

Step No. 6. *Preparation of proposed report of the Chief of Engineers and review thereof by the affected States and Federal agencies.*—When the Board concerned completes its review of the report and transmits its recommendation to the Chief of Engineers, the latter will prepare his proposed report and will refer it, with the Board's report, to the Governors of the affected States and to other interested Federal agencies in order to obtain their views and recommendations on the improvements discussed in the report. The Federal agencies involved may include the Departments of Agriculture, Commerce, Interior, Labor, and Health, Education, and Welfare; the Federal Power Commission; and interested branches of the Department of Defense. The States and the other Federal agencies normally will be expected to forward their comments on the proposed report to the Chief of Engineers within 90 days.

Step No. 7. *Transmittal of report to Bureau of the Budget.*—After the Chief of Engineers receives the comments of the Governors of the affected States and those of other interested Federal agencies, the Secretary of the Army will submit a draft of his letter of transmission to Congress, with the report of the Chief of Engineers and all pertinent papers, to the Director of the Bureau of the Budget for a determination of the relationship of the report to the program of the President.

Step No. 8. *Transmittal of Report to Congress.*—Upon receipt of the comments of the Bureau of the Budget, the Chief of Engineers will submit his report, together with all allied papers and comments, to the Secretary of the Army, who will transmit it to Congress. This step will complete the action required of the Chief of Engineers and the Department of the Army insofar as compliance with the congressional resolution or act authorizing the investigation is concerned.

In section 202 of the River and Harbor and Flood Control Act of 1954, it is declared to be the policy of the Congress that:

> No project or any modification not authorized, of a project for flood control or rivers and harbors, shall be authorized by the Congress unless a report for such project or modification has been previously submitted by the Chief of Engineers, U.S. Army, in conformity with existing law.

The authorization of these two projects at this time would violate this declared policy of the Congress.

Newark Bay, Hackensack, and Passaic Rivers, N.J. (Channels to Port Elizabeth)

The Corps of Engineers was directed to make a review report on this project by resolutions of the Public Works Committees of the U.S. Senate and House of Representatives adopted June 14, 1960, and July 31, 1957, respectively. The incomplete report of the Corps of Engineers contemplates the modification of an existing project for Newark, Hackensack, and Passaic Rivers, N.J., to provide for Federal maintenance to a depth of 35 feet of the channels to Port Elizabeth which have been or are planned to be dredged by the Port of New York Authority or other responsible agency, at an estimated annual cost to the Federal Government of $230,500.

A report prepared by the District Engineer was submitted to the Board of Engineers for Rivers and Harbors. The report was not acceptable to the Board with respect to the measurement of benefits to be derived from the project and the determination of Federal interest in the project, and the report was sent back to the District Engineer, where it now lodges. Obviously, this report has not met the requirements of existing law and the administrative procedures established under such law and Executive Order 9384. The report has not been approved by the Board of Engineers for Rivers and Harbors; the Chief of Engineers has not prepared his proposed report and referred it, with the Board's report, to the Governors of affected States and other interested Federal agencies for comments and recommendations; the report, with all pertinent papers, has not been sent to the Bureau of the Budget for review; and the report has not been submitted to the Congress. In fact, the last action taken on this report was a determination by the Board that the report was unacceptable in two particulars. Nevertheless, over the objection of the undersigned, the majority of the Committee on Public Works included this report in H.R. 13273.

Fire Island Inlet and shore westerly to Jones Inlet, N.Y.

The review report on this project has not advanced even as far as the one for Newark Bay, Hackensack, and Passaic Rivers, N.J. A report prepared by the District Engineer has been submitted to the Office of the Chief of Engineers, but it has not yet been referred to the Beach Erosion Board, and, of course, none of the subsequent steps, outlined hereinbefore, have been accomplished, including the securing of comments and recommendations of the affected States and assurances of local cooperation, which are essential for this project.

The considered plan of improvement would provide for Federal participation in the construction of a long-term solution of the erosion problem from Fire Island Inlet westerly to Jones Inlet, N.Y., to consist generally of either an offshore breakwater or a jetty extension to trap littoral drift, placement of sand to restore the beach, provision of feeder beach areas to nourish downdrift shores, and periodic transfer of sand from lee of the breakwater or jetty to feeder beaches. At the present time the Chief of Engineers is unable to determine definitely either the costs or the economic justifications for the long-term plans. A witness, representing the Corps of Engineers, testified before the Subcommittee on Rivers and Harbors that preliminary cost estimates ranged between $11.4 and $17.9 million; however, there is no assurance

that the cost will fall within this wide range. Furthermore, the Department of the Army in its report, dated August 3, 1962, on H.R. 12049, a bill to authorize this same project, said, "The survey report on this proposal is being processed for transmission by the Secretary of the Army to the Congress. It is recommended that action on authorizing legislation be deferred pending submission to Congress of the completed report of the Chief of Engineers."

The inclusion of this project in the bill violates the declared policy of the Congress to only authorize projects for which a report has been previously submitted by the Chief of Engineers in conformity with existing law, and is a complete departure from the time-tested standards and procedures followed by the Corps of Engineers and the Congress with respect to the review and authorization of water resource projects.

There are reports on other projects in various stages of completion in which many Members of Congress are interested, and it would be unfair to such other Members to select these two projects for preferential treatment.

CONTROVERSIAL PROJECTS ON WHICH OPPONENTS WERE DENIED AN OPPORTUNITY TO BE HEARD

Burns Creek Dam and Reservoir, Snake River, Idaho

Authorization of the Burns Creek Dam and Reservoir on the upper Snake River in Idaho, as contained in title II of this bill, would provide for the construction and operation of a dam and reservoir by the Bureau of Reclamation, Department of the Interior, at a cost of $52 million to the Federal Government, for purposes of power, irrigation, flood control, recreation, and the preservation and propagation of fish and wildlife. This project was first recommended to the Congress as a Bureau of Reclamation project on April 4, 1957 (H. Doc. No. 147, 85th Cong.). Extensive hearings were held by the House Committee on Interior and Insular Affairs over a period from 1958 to 1961, and on February 7, 1962, the committee by rollcall vote rejected a motion to report the project to the House.

On September 17, 1962, the Secretary of the Army transmitted a report of the Chief of Engineers on this same project to the Congress, and it was referred to the Committee on Public Works. No hearings were held on this project by the Committee on Public Works until September 24, 1962, at which time a representative of the Corps of Engineers testified before the Subcommittee on Flood Control, and later the same day two Members of Congress also testified. One of the Members opposed the project and the other was in favor of it.

This is a highly controversial project that was thoroughly considered by the Committee on Interior and Insular Affairs over a period of 5 years and ultimately rejected by that committee. It is now reported favorably to the House by the Committee on Public Works after receiving testimony for a period not in excess of 1 hour and without affording an opportunity for persons who oppose the project to be heard.

The report of the Corps of Engineers discloses that this project is opposed by the States of Wyoming and Utah; however, no opportunity was given for the Governors or other officials of these States

to testify. A number of responsible persons have written to the committee chairman expressing their opposition to the project and have asked to be heard. However, all of these persons were denied the right to appear before the committee.

In spite of the fact that the House Committee on Interior and Insular Affairs rejected the project after long hearings and full consideration of the matter over a period of 5 years and with complete disregard for the requests of opponents to be heard, the majority of the committee has reported this project to the House over the objection of the undersigned.

China Gardens Dam and Reservoir, Snake River, Idaho, Oregon, and Washington

There is also included in title II of the bill authorization for the project for the China Gardens Dam and Reservoir, Snake River, Idaho, Oregon, and Washington, at an estimated cost of $74,777,000. No hearings were held on this project, for it is a part of the report of the Corps of Engineers on the Columbia River and tributaries. Because of inadequate time to hold hearings on this report, which consists of five large volumes and is quite complex and controversial, the chairman of the subcommittee on Flood Control announced during public hearings that the Columbia River report would not be considered for inclusion in this bill. However, near the conclusion of the subcommittee action on this bill in executive session, an amendment was offered to include the China Gardens Dam and Reservoir. The undersigned, with considerable misgiving, did not oppose this amendment in reliance upon the statement of a representative of the Corps of Engineers, who was present, that there was no opposition to the project.

Subsequently, it was learned that the representative of the Corps of Engineers was mistaken and that this project is controversial. There is a public versus private power issue involved, for a non-Federal entity has a pending license application with the Federal Power Commission for the High Mountain Sheep project upstream, which is also a part of the report of the Corps of Engineers on the Columbia River and tributaries and for which the China Gardens Dam and Reservoir is a reregulating project, and has committed itself to construct the China Gardens project if a license is issued for the High Mountain Sheep project. We are also advised that a serious question exists as to whether the dam will bar migration of fish upstream.

Committee acted without full knowledge of the facts

We are not now prepared to arrive at an intelligent decison on the merits of either of these projects and will not be until all the facts are known, and we doubt that a majority of the committee is any better informed. A committee of the Congress has an obligation to the people of the United States to provide a reasonable opportunity for all sides to be heard on controversial projects, so that the committee can judge the projects on their merits and not be stampeded into making decisions which may be inimical to the public interest.

Except for 2 days of hearings on 13 projects by the Subcommittee on Flood Control on May 8 and 9, 1962, no hearings were held by the

committee on rivers and harbors and flood-control projects during the entire two sessions of this Congress until September 6, 1962. Between September 6 and September 24, hearings were held on a total of 138 projects, involving approximately $2 billion, in an apparent rush to report out a bill during the waning days of this Congress. These hearings were held under directions to hear only witnesses from the Corps of Engineers. Even Members of Congress were generally refused time to be heard and asked to submit statements for the record, although limited exceptions were made to this procedure. Except for one project, no other witnesses were permitted to testify or submit statements for the record. It was originally understood that only noncontroversial projects would be heard because time would not permit hearing other witnesses; however, on the last day of the hearings the Burns Creek Dam and Reservoir project was added to the agenda, and the China Gardens project was first mentioned in executive session. The opponents of these projects have not been permitted to testify, and the committee acted without knowledge of the facts that these persons wish to present.

We feel very strongly that it is improper for a committee of the Congress, when considering a project known to be controversial, to deny persons who oppose the project a reasonable time in which to be heard. Regardless of any personal views that members of a committee may have with respect to a project, if it is controversial and there is an honest difference of opinion between sincere people on both sides of the issue who want to be heard, as Members of Congress, and collectively as a committee of the Congress, we have an obligation to the people of this country to allow time for both opponents and proponents to be heard. If we do not have time, then we should postpone making a decision until we do have time to conduct an adequate hearing and learn all the facts.

CONCLUSION

We urge the House to strike from H.R. 13273 all four of the projects heretofore described. No emergency exists, nor are there any other circumstances which warrant a departure from existing law, declared congressional policy, and established procedure for approval at this time of the Newark Bay, Hackensack, and Passaic Rivers project, and the Fire Island Inlet project. Likewise, there is no emergency or other circumstance existing that can justify the Congress approving the Burns Creek project and the China Gardens project at this time without first giving responsible persons, who are opposed to the project and have asked to be heard, a reasonable opportunity to testify.

This is an authorization bill, and none of the latter four projects can be constructed until funds are appropriated therefor. These projects can be considered by the next Congress without any delay in commencement of the projects ultimately approved, and action can then be based upon full knowledge of what is involved. The people of the United States are entitled to expect that before the Congress approves new water resources projects, involving large future financial commitments, that the projects will have been fully studied and reviewed and

that all of the facts are known to the Congress, which is not the case as to these four projects.

JAMES C. AUCHINCLOSS,
GORDON C. SCHERER,
WILLIAM C. CRAMER,
JOHN F. BALDWIN,
FRED SCHWENGEL,
EDWIN B. DOOLEY,
HOWARD W. ROBISON,
PERKINS BASS,
WALTER L. MCVEY,
CARLETON J. KING,
WILLIAM H. HARSHA, Jr.,
JAMES HARVEY,
JOHN C. KUNKEL,
LOUISE G. REECE.

HQ AR005804-HQ AR005804

(1) Lands lying above the storage pool.
(2) Lands in remote portions of the project area.
(3) Lands determined by the Fish and Wildlife Service or the National Park Service respectively to be of no substantial value for protection or enhancement of fish and wildlife resources, or for public outdoor recreation.
(4) It is to the financial advantage of the Government to take easements in lieu of fee title.

D. *Blocking out.* Blocking out will be accomplished in accordance with sound real estate practices, for example, on minor sectional subdivision lines; and normally, land will not be acquired to avoid severance damage if the owner will waive such damage.

E. *Mineral rights.* Mineral, oil and gas rights will not be acquired except where the development thereof would interfere with project purposes, but mineral rights not acquired will be subordinated to the Government's right to regulate their development in a manner that will not interfere with the primary purposes of the project, including public access.

F. *Buildings.* Buildings for human occupancy as well as other structures which would interfere with the operation of the project for any project purpose will be prohibited on reservoir project lands.

STEWART L. UDALL,
Secretary of the Interior.

FEBRUARY 16, 1962.

[F.R. Doc. 62-1906; Filed, Feb. 21, 1962; 10:48 a.m.]

JOINT POLICIES OF THE DEPARTMENTS OF THE INTERIOR AND OF THE ARMY RELATIVE TO RESERVOIR PROJECT LANDS

Acquisition of lands for reservoir projects. In so far as permitted by law, it is the policy of the Departments of the Interior and of the Army to acquire, as a part of reservoir project construction, adequate interest in lands necessary for the realization of optimum values for all purposes including additional land areas to assure full realization of optimum present and future outdoor recreational and fish and wildlife potentials of each reservoir.

1. *Lands for reservoir construction and operation.* The fee title will be acquired to the following:

a. Lands necessary for permanent structures.

b. Lands below the maximum flowage line of the reservoir including lands below a selected freeboard where necessary to safeguard against the effects of saturation, wave action, and bank erosion and to permit induced surcharge operation.

c. Lands needed to provide for public access to the maximum flowage line as described in paragraph 1b, or for operation and maintenance of the project.

2. *Additional lands for correlative purposes.* The fee title will be acquired for the following:

a. Such lands as are needed to meet present and future requirements for fish and wildlife as determined pursuant to the Fish and Wildlife Coordination Act.

b. Such lands as are needed to meet present and future public requirements for outdoor recreation, as may be authorized by Congress.

3. *Easements* in lieu of fee title may be taken only for lands that meet all of the following conditions:

a. Lands lying above the storage pool.

b. Lands in remote portions of the project area.

c. Lands determined to be of no substantial value for protection or enhancement of fish and wildlife resources, or for public outdoor recreation.

d. It is to the financial advantage of the Government to take easements in lieu of fee title.

4. *Blocking out.* Blocking out will be accomplished in accordance with sound real estate practices, for example, on minor sectional subdivision lines; and normally, land will not be acquired to avoid severance damage if the owner will waive such damage.

5. *Mineral rights.* Mineral, oil and gas rights will not be acquired except where the development thereof would interfere with project purposes, but mineral rights not acquired will be subordinated to the Government's right to regulate their development in a manner that will not interfere with the primary purposes of the project, including public access.

6. *Buildings.* Buildings for human occupancy as well as other structures which would interfere with the operation of the project for any project purpose will be prohibited on reservoir project lands.

This joint agreement will be published in the FEDERAL REGISTER.

Approved: February 16, 1962.

STEWART L. UDALL,
Secretary of the Interior.
STEPHEN AILES,
Acting Secretary of the Army.

FEBRUARY 19, 1962.

[F.R. Doc. 62-1907; Filed, Feb. 21, 1962; 10:48 a.m.]

DEPARTMENT OF AGRICULTURE

Office of the Secretary

MISSISSIPPI

Designation of Area for Emergency Loans

For the purpose of making emergency loans pursuant to section 321(a) of Public Law 87-128 (7 U.S.C. 1961) it has been determined that in Wayne County, Mississippi, natural disasters have caused a need for agricultural credit not readily available from commercial banks, cooperative lending agencies, or other responsible sources.

Pursuant to the authority set forth above, emergency loans will not be made in the above-named county after June 30, 1962, except to applicants who previously received emergency or special livestock loan assistance and who can qualify under established policies and procedures.

Done at Washington, D.C., this 16th day of February 1962.

ORVILLE L. FREEMAN,
Secretary.

[F.R. Doc. 62-1813; Filed, Feb. 21, 1962; 8:48 a.m.]

NORTH CAROLINA

Designation of Areas for Emergency Loans

For the purpose of making emergency loans pursuant to section 321(a) of Public Law 87-128 (7 U.S.C. 1961) it has been determined that in the hereinafter named counties in the State of North Carolina, natural disasters have caused a need for agricultural credit not readily available from commercial banks, cooperative lending agencies, or other responsible sources.

NORTH CAROLINA

Camden.	Pasquotank.
Chowan.	Perquimans.
Currituck.	Tyrrell.
Hyde.	Washington.

Pursuant to the authority set forth above, emergency loans will not be made in the above-named counties after June 30, 1962, except to applicants who previously received emergency or special livestock loan assistance and who can qualify under established policies and procedures.

Done at Washington, D.C., this 16th day of February 1962.

ORVILLE L. FREEMAN,
Secretary.

[F.R. Doc. 62-1814; Filed, Feb. 21, 1962; 8:48 a.m.]

Rural Electrification Administration

ORGANIZATION AND FUNCTIONS

The organization of the Rural Electrification Administration is as follows:

Central Organization. The principal office of the Rural Electrification Administration is at Washington, D.C. The function of the Agency is the carrying out of a program of rural electrification and rural telephony, as provided for by the Rural Electrification Act of 1936, as amended (7 U.S.C. 901-15, 921-924).

The Administrator. The Administrator is appointed by the President, with the advice and consent of the Senate, for a term of ten years. He functions as the chief administrative official of the Agency under the general supervision and direction of the Director, Agricultural Credit. He is aided directly by a Deputy Administrator, and Assistant Administrators for the Electric Program, for the Telephone Program, and for Operations. The work is carried on through the area offices and divisions, described in succeeding paragraphs.

Electric Area Offices. The rural electrification program for electric distribution borrowers is administered through five area offices designated as Northeast, Southeast, North Central, Southwest and Western. Each office within its assigned geographic area: Appraises loan applications and prepares loan recommendations; reviews the financial and operating performance of borrowers; analyzes engineering plans, specifications and construction contracts; reviews and approves completed construction; provides advice and assistance to borrowers concerning loans and the design, construction, management, operation and maintenance of systems.

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endar quarter of 1959 over unrated orders and other ACM orders.

Sec. 5. Applicability of other regulations and orders.

The provisions of the DMS regulations, BDSA Order M–1A, and of any other BDSA regulations and orders as heretofore issued, including the directions and amendments thereto, are superseded to the extent to which they are inconsistent with the provisions of this direction. In all other respects the provisions of such regulations, orders, directions and amendments shall remain in full force and effect.

This direction shall take effect October 16, 1959.

BUSINESS AND DEFENSE SERVICES ADMINISTRATION,
H. B. MCCOY,
Administrator.

[F.R. Doc. 59–8821; Filed, Oct. 20, 1959; 8:45 a.m.]

Title 36—PARKS, FORESTS, AND MEMORIALS

Chapter III—Corps of Engineers, Department of the Army

PART 311—PUBLIC USE OF CERTAIN RESERVOIR AREAS

Republication of Part

Part 311 of Title 36 is republished in its entirety. The provisions with respect to areas covered contained in § 311.1, and the provisions with respect to hunting in § 311.6(b) have been rearranged alphabetically by States. No substantive change is made by this republication.

Sec.
311.1 Areas covered.
311.2 Boats, commercial.
311.3 Boats and other vessels, private.
311.4 Mooring, care and sanitation of boats and floating facilities.
311.5 Swimming and bathing.
311.6 Hunting and fishing.
311.7 Camping.
311.8 Picnicking.
311.9 Access to water areas.
311.10 Destruction of public property.
311.11 Firearms and explosives.
311.12 Gasoline and oil storage.
311.13 Sanitation.
311.14 Advertisements.
311.15 Unauthorized solicitations and business activities.
311.16 Commercial operations.
311.17 Dogs.
311.18 Recreational activity programs.
311.19 Abandonment of personal property.

AUTHORITY: §§ 311.1 to 311.19 issued under sec. 4, 58 Stat. 889, as amended; 16 U. S. C. 460d.

§ 311.1 Areas covered.

The regulations contained in this part shall be applicable to:

Arkansas

Blakely Mountain Reservoir Area (Lake Ouachita), Ouachita River.
Blue Mountain Reservoir Area, Petit Jean River.
Bull Shoals Reservoir Area, White River.
Narrows Reservoir Area, Little Missouri River.
Nimrod Reservoir Area, Fourche La Fave River.
Norfolk Reservoir Area, North Fork River.
Table Rock Reservoir Area, White River.

California

Harry L. Englebright Reservoir Area, Yuba River.
Isabella Reservoir Area, Kern River.
North Fork Reservoir Area, North Fork American River.
Pine Flat Reservoir Area, Kings River.

Colorado

Cherry Creek Reservoir Area, Cherry Creek.
John Martin Reservoir Area, including Lake Hasty, Arkansas River.

Georgia

Allatoona Reservoir Area, Etowah River.
Buford Reservoir Area (Lake Sidney Lanier), Chattahoochee River.
Clark Hill Reservoir Area, Savannah River.

Idaho

Lucky Peak Reservoir Area, Boise River.

Iowa

Coralville Reservoir Area, Iowa River.

Kansas

Fall River Reservoir Area, Fall River.
Hulah Reservoir Area, Caney River.
Kanopolis Reservoir Area, Smoky Hill River.
Toronto Reservoir Area, Verdigris River.

Kentucky

Dale Hollow Reservoir Area, Obey River.
Dewey Reservoir Area, Johns Creek.
Wolf Creek Reservoir Area, Cumberland River.

Maryland

Youghiogheny River Reservoir Area, Youghiogheny River.

Mississippi

Arkabutla Reservoir Area, Coldwater River.
Enid Reservoir Area, Yocona River.
Grenada Reservoir Area, Yalobusha and Skuna Rivers.
Sardis Reservoir Area, Little Tallahatchie River.

Missouri

Bull Shoals Reservoir Area, White River.
Clearwater Reservoir Area, Black River.
Norfolk Reservoir Area, North Fork River.
Table Rock Reservoir Area, White River.
Wappapello Reservoir Area, St. Francis River.

Montana

Fort Peck Reservoir Area, Missouri River.

Nebraska

Gavins Point Reservoir Area (Lewis and Clark Lake), Missouri River.
Harlan County Reservoir Area, Republican River.

North Carolina

John H. Kerr Reservoir Area, Roanoke River.

North Dakota

Baldhill Dam and Lake Ashtabula, Sheyenne River.
Garrison Reservoir Area, Missouri River.
Homme Reservoir Area, Park River.

Ohio

Berlin Reservoir Area, Mahoning River.
Dillon Reservoir Area, Licking River.

Oklahoma

Canton Reservoir Area, North Canadian River.
Fort Gibson Reservoir Area, Grand (Neosho) River.
Fort Supply Reservoir Area, Wolf Creek.
Heyburn Reservoir Area, Polecat Creek.
Hulah Reservoir Area, Caney River.
Lake Texoma and the Denison Reservoir Area, Red River.
Tenkiller Ferry Reservoir Area, Illinois River.
Wister Reservoir Area, Poteau River.

Oregon

Cottage Grove Reservoir Area, Coast Fork of Willamette River.
Dexter Reservoir Area, Middle Fork Willamette River.
Dorena Reservoir Area, Row River.
Fern Ridge Reservoir Area, Long Tom River.
Lookout Point Reservoir Area, Middle Fork Willamette River.

Pennsylvania

Conemaugh River Reservoir Area, Conemaugh River.
Crooked Creek Reservoir Area, Crooked Creek.
Loyalhanna Reservoir Area, Loyalhanna Creek.
Mahoning Creek Reservoir Area, Mahoning Creek.
Tionesta Reservoir Area, Tionesta Creek.
Youghiogheny River Reservoir Area, Youghiogheny River.

South Carolina

Clark Hill Reservoir Area, Savannah River.

South Dakota

Fort Randall Reservoir Area, Missouri River.
Gavins Point Reservoir Area (Lewis and Clark Lake), Missouri River.

Tennessee

Center Hill Reservoir Area, Caney Fork River.
Dale Hollow Reservoir Area, Obey River.

Texas

Belton Reservoir Area, Leon River.
Benbrook Reservoir Area, Clear Fork of the Trinity River.
Dam B Reservoir Area, Neches River.
Ferrells Bridge Reservoir Area, Cypress Creek.
Garza-Little Elm (Lewisville) Reservoir Area, Elm Fork, Trinity River.
Grapevine Reservoir Area, Denton Creek.
Hords Creek Reservoir Area, Hords Creek.
Lake Texoma and the Denison Reservoir Area, Red River.
Lavon Reservoir Area, East Fork Trinity River.
San Angelo Reservoir Area, North Concho River.
Texarkana Reservoir Area, Sulphur River.
Whitney Reservoir Area, Brazos River.

Virginia

Bluestone Reservoir Area, New River.
John H. Kerr Reservoir Area, Roanoke River.
Philpott Reservoir Area, Smith River.

West Virginia

Bluestone Reservoir Area, New River.

§ 311.2 Boats, commercial.

No boat, barge or other vessel shall be placed upon or operated upon any water of the reservoir for a fee or profit, either as a direct charge to a second party or as an incident to other services provided to the second party, except as specifically authorized by lease, license, or concession contract with the Department of the Army.

§ 311.3 Boats and other vessels, private.

(a) The operation of boats, houseboats, cabin cruisers and other vessels on the reservoir for fishing and recreational use is permitted except in prohibited areas designated by the District Engineer in charge of the reservoir area

and subject to the regulations contained in this part.

(b) A permit shall be obtained from the District Engineer or his authorized representative for placing and operating a boat or other vessel on the reservoir for any one period longer than three days. No charge will be made for this permit. The permit shall be kept aboard the vessel at all times that the vessel is in operation on the reservoir. The District Engineer in charge of the area or his authorized representative shall have authority to revoke the permit and to require removal of the vessel upon failure of the permittee to comply with the terms and conditions of the permit or with the regulations in this part.

(c) Unsafe boats or other vessels will not be permitted on the reservoir. The District Engineer may require the applicant for a permit to furnish the construction plans and other information pertaining to the construction and equipment of the boat or other vessel prior to issuing a permit for its operation on the reservoir. All boats permitted on the reservoir shall be equipped for safe operation and operated in a safe manner in accordance with instructions issued by the District Engineer. These instructions may provide that the operation of speed boats and water skiing activities shall be confined to areas of water designated by the District Engineer for such activities.

(d) Boathouses, houseboats, cabin cruisers and other vessels may be placed and operated on the reservoirs, except that such facility shall not be utilized for human habitation at a fixed or permanent mooring point and if equipped with toilets and galleys shall not be placed on reservoirs with small permanent pools. Such vessels may be barred from other reservoirs by the District Engineer with the concurrence of the Chief of Engineers in those reservoirs in which the waters thereof are used for domestic water supply when the District Engineer determines that such use is contrary to the public health and safety.

§ 311.4 Mooring, care and sanitation of boats and floating facilities.

(a) All boats or other vessels when not in actual use must be either removed from the reservoir, securely moored at authorized docks or boathouses where supervision by the owner or his representative is provided on a 24-hour-day basis, or placed in the care of a marina concessionaire, State or local managing agency or other party authorized to care for floating equipment on a 24-hour-day basis.

(b) All boats, barges and other vessels or floating facilities will be moored only in locations designated by the District Engineer or his designated representative. All floating or stationary mooring facilities will be constructed in accordance with plans and a permit approved by the District Engineer or his designated representative. He shall have authority to revoke such permit and require removal of the facility for failure of the permittee to comply with the terms and conditions of the permit or with the regulations in this part.

(c) The discharge of sewage, garbage or other pollutant in the waters of the reservoir from any boat, barge or other vessel on the reservoir is prohibited except in accordance with regulations of the State and local health agencies permitting such discharge when underway in deep waters other than embayments. All such pollutants shall be deposited ashore at places designated for such deposit and disposal.

§ 311.5 Swimming and bathing.

Swimming and bathing are permitted except in prohibited areas designated by the District Engineer.

§ 311.6 Hunting and fishing.

(a) Hunting and fishing are permitted in accordance with all applicable Federal, State and local laws for the protection of fish and game except in prohibited areas including the following:

(1) Public access, park and recreation areas in which all hunting is prohibited.

(2) Prohibited areas designated by the District Engineer in which hunting or fishing or both are prohibited.

(3) Prohibited areas designated by Federal or State managing agencies under applicable laws administered by such agencies.

(b) Hunting is restricted to the use of bow and arrow or shotgun loaded with shot in any reservoir area listed in § 311.1 except in managed game areas where the special hunting regulations of the managing agency with the prior approval of the District Engineer will apply, and except for the following reservoir areas on which hunting of deer with rifles is also permitted when not contrary to State or local laws or regulations.

Arkansas

Bull Shoals Reservoir Area, White River.
Table Rock Reservoir Area, White River.

California

Harry L. Englebright Reservoir Area, Yuba River.
North Fork Reservoir Area, North Fork American River.
Pine Flat Reservoir Area, Kings River.

Missouri

Bull Shoals Reservoir Area, White River.
Clearwater Reservoir Area, Black River.
Table Rock Reservoir Area, White River.
Wappapello Reservoir Area, St. Francis River.

Montana

Fort Peck Reservoir Area, Missouri River.

Nebraska

Gavins Point Reservoir Area (Lewis and Clark Lake), Missouri River.

North Dakota

Garrison Reservoir Area, Missouri River.

Pennsylvania

Conemaugh River Reservoir Area, Conemaugh River.
Crooked Creek Reservoir Area, Crooked Creek.
Loyalhanna Reservoir Area, Loyalhanna Creek.
Mahoning Creek Reservoir Area, Mahoning Creek.
Tionesta Reservoir Area, Tionesta Creek.
Youghiogheny River Reservoir Area, Youghiogheny River.

South Dakota

Fort Randall Reservoir Area, Missouri River.
Gavins Point Reservoir Area (Lewis and Clark Lake), Missouri River.

(c) A permit shall be obtained from the District Engineer or his authorized representative to construct a duck blind on the water in any reservoir area listed in § 311.1 except for the Wappapello Reservoir Area, St. Francis River, Missouri, on which duck blinds may be permitted or prohibited in accordance with regulations of the Missouri Conservation Commission relative to duck hunting.

§ 311.7 Camping.

(a) Camping is permitted only at areas designated by the District Engineer in charge of the reservoir area or his authorized representative.

(b) Approval of the District Engineer, or his authorized representative, is required to camp in the reservoir area for any one period of two weeks or longer.

(c) Camping equipment shall not be abandoned or left unattended for 48 hours or more.

(d) The installation of any permanent facility at any public camp ground is permitted only on written authorization of the District Engineer or his authorized representative.

(e) Campers shall keep their camp grounds clean and dispose of combustibles and refuse in accordance with instructions posted by the District Engineer at each camp ground.

(f) Due diligence shall be exercised in building and putting out camp fires to prevent damages to trees and vegetation and to prevent forest and grass fires.

(g) Camps must be completely razed and the sites cleaned before the departure of the campers.

§ 311.8 Picnicking.

(a) Picnicking is permitted, except in prohibited areas designated by the District Engineer or his authorized representative, in any reservoir area listed in § 311.1 except for the following reservoir areas in which picnicking is prohibited in all areas not specifically designated by the District Engineer for picnicking:

(1) Fort Peck Reservoir Area, Missouri River, Montana.

§ 311.9 Access to water areas.

(a) Pedestrian access is permitted along the shores of the reservoir except in areas designated by the District Engineer or his authorized representative.

(b) Automobile access is permitted only over open public and reservoir roads.

(c) Access for the general public to launch boats is permitted only at the public launching sites designated by the District Engineer.

§ 311.10 Destruction of public property.

The destruction, injury, defacement, or removal of public property or of vegetation, rock, or minerals, except as authorized, is prohibited.

§ 311.11 Firearms and explosives.

Loaded rifles, loaded shotguns, loaded pistols and explosives of any kind are prohibited in the area, except when in the possession of a law enforcement of-

ficer or Government employee on official duty, when shotguns or rifles are being used for hunting during the hunting season as permitted under § 311.6 and when specifically authorized by the District Engineer.

§ 311.12 Gasoline and oil storage.

Gasoline and other inflammable or combustible liquids shall not be stored in, upon, or about the reservoir or shores thereof without the written permission of the District Engineer or his authorized representative.

§ 311.13 Sanitation.

Refuse, garbage, rubbish or waste of any kind shall not be thrown on or along roads, picnicking or camping areas, in the reservoir waters or on any of the lands around the reservoir, but shall be burned or buried, or disposed of at designated points or places designed for the sanitary disposal thereof.

§ 311.14 Advertisements.

Private notices and advertisements shall not be posted, distributed, or displayed in the reservoir area except such as the District Engineer or his authorized representative may deem necessary for the convenience and guidance of the public using the area for recreational purposes.

§ 311.15 Unauthorized solicitations and business activities.

No person, firm, or corporation, or their representatives shall engage in or solicit any business on the reservoir area without permission in writing from the District Engineer or in accordance with terms of a lease, license, or concession contract with the Department of the Army.

§ 311.16 Commercial operations.

All commercial operations or activities on the waters of the reservoir or on the lands under the control of the Department of the Army around the reservoir shall be in accordance with lease, license, or other agreements with the Department of the Army.

§ 311.17 Dogs.

(a) Dogs are not permitted in any of the following reservoir areas unless on a leash, in a pen, or under complete control of the owner or manager.

(1) Fort Peck Reservoir Area, Missouri River, Montana.

§ 311.18 Recreational activity programs.

(a) Special events such as water carnivals, boat regattas, music festivals, dramatic presentations, or other special recreational programs of interest to the general public are permitted in areas designated by the District Engineer or his authorized representative.

(b) A permit shall be obtained from the District Engineer or his authorized representative by the governmental or legally responsible private agency proposing to hold a special recreation program as indicated in this section. No charge will be made for this permit.

(c) The District Engineer in charge of the area shall have authority to revoke any permit granted under this section and to require the removal of any equipment upon failure of the permittee to comply with the terms and conditions of the permit or with the regulations in this part.

§ 311.19 Abandonment of personal property.

Abandonment of personal property on the land or waters of the reservoir area is prohibited. Personal property shall not be left unattended upon the lands and waters of the reservoir area except in accordance with the regulations prescribed in this part or under permits issued therefor. The Government assumes no responsibility for personal property and if such property is abandoned or left unattended in other than places designated in a permit issued therefor or under a regulation for a period in excess of 48 hours it will be impounded, and if not reclaimed by the owners thereof within ninety days will be sold, destroyed, converted to Government use, or otherwise disposed of as determined by the District Engineer or his designated representative.

R. V. LEE,
Major General, U.S. Army,
The Adjutant General.

[F.R. Doc. 59-8822, Filed; Oct. 20, 1959; 8:45 a.m.]

Title 43—PUBLIC LANDS: INTERIOR

Chapter I—Bureau of Land Management, Department of the Interior

APPENDIX—PUBLIC LAND ORDERS

[Public Land Order 2009]

[Los Angeles 0154865]

CALIFORNIA

Partly Vacating Reclamation Withdrawals (Imperial Division—All American Canal System)

By virtue of the authority vested in the Secretary of the Interior by sec. 3 of the act of June 17, 1902 (32 Stat. 388; 43 U.S.C. 416), it is ordered as follows:

The departmental orders of January 31, 1903, and April 9, 1909, so far as they reserved the following-described lands for reclamation purposes under the act of June 17, 1902, are hereby revoked:

SAN BERNARDINO MERIDIAN

T. 16 S., R. 16 E.,
Sec. 1, lots 4, 5, and 6.

Containing 74.47 acres.

Beginning at 10:00 a.m. on November 20, 1959, the lands will be subject to application, petition, location, offer or selection under the public land laws, including the mining laws. This revocation is made in furtherance of a proposed exchange under section 8 of the act of June 28, 1934 (48 Stat. 1272; 43 U.S.C. 315g), as amended, in aid of a Federal land program. This opening is not therefore, subject to the provisions of subsection (c) of section 2 of the act of August 27, 1958 (72 Stat. 928; 43 U.S.C. 851-2), affording to certain States a preferred right of application for selection upon the revocation of an order of withdrawal.

ROGER ERNST,
Assistant Secretary of the Interior.

OCTOBER 15, 1959.

[F.R. Doc. 59-8837; Filed, Oct. 20, 1959; 8:47 a.m.]

[Public Land Order 2010]

[1447566]

[1449402]

ALASKA

Revoking Executive Orders No. 5813 of February 29, 1932, and No. 5815 of March 9, 1932

By virtue of the authority vested in the President by section 1 of the act of June 25, 1910 (36 Stat. 847; 43 U.S.C. 141), and pursuant to Executive Order No. 10355 of May 26, 1952, it is ordered as follows:

1. Executive Orders No. 5813 of February 29, 1932, and No. 5815 of March 9, 1932, which withdrew the following-described lands in Alaska for examination and classification are hereby revoked:

SEWARD MERIDIAN

Executive Order No. 5813:
T. 18 N., R. 2 E.,
Secs. 5 and 6.
T. 19 N., R. 2 E.,
Secs. 31 and 32.
Executive Order No. 5815:
T. 18 N., R. 1 E.,
Secs. 1 and 12.
T. 18 N., R. 2 E.,
Secs. 3, 4, 7, 8, and 9.
T. 19 N., R. 1 E.,
Secs. 25 and 36.
T. 19 N., R. 2 E.,
Secs. 28, 29, 30, and 33.

The areas described aggregate 10,880 acres, of which about 2,640 acres are nonpublic lands.

2. Beginning at 10:00 a.m., on November 20, 1959, the public lands, excepting section 36, shall be open to application, petition, location and selection under applicable nonmineral public land laws, subject to valid existing rights, the requirements of applicable law, the provisions of existing withdrawals, the 91-day preferred right of selection granted to the State of Alaska by section 202(b) of the Act of July 28, 1956 (70 Stat. 709, 711; 48 U.S.C. 46-3(b)), in furtherance of its mental health program, and section 6(g) of the Alaska Statehood Act of July 7, 1958 (Public Law 85-508; 72 Stat. 341).

3. On January 3, 1959, when the State was admitted into the Union, the reservation of the Section 36 for the Territory of Alaska made by section 1 of the act of March 4, 1915 (38 Stat. 1214; 48 U.S.C. 353), was in effect. The reservation was not affected by the withdrawal for classification made by the Executive Order No. 5815 (see Ex parte E. P. Weaver, 52 L.D. 237; George G. Frandsen, 50 L.D. 516). Therefore, in the absence of any valid right to the section existing on January 3, 1959, title thereto vested in the State on that date under the grant made by

HQ AR005808-HQ AR005827

Interest on judgments.

SEC. 57. The last sentence of subsection (b) of section 2516 of Title 28, United States Code, is amended by inserting immediately after the word "allowed" where it appears in such sentence the words "for any period", so that such subsection will read as follows:

"(b) Interest on judgments against the United States affirmed by the Supreme Court after review on petition of the United States shall be paid at the rate of four percent per annum from the date of the filing of the transcript of the judgment in the Treasury Department to the date of the mandate of affirmance. Such interest shall not be allowed for any period after the term of the Supreme Court at which the judgment was affirmed.".

Fees.

SEC. 58. Subsection (a) of section 2520 of Title 28, United States Code, is amended by striking out where it appears in such subsection the words "and the hearing of any case before the court, a judge, or a commissioner", so that such subsection will read as follows:

"(a) The Court of Claims shall by rules impose a fee not exceeding $10, for the filing of any petition.".

SEC. 59. (a) Chapter 165 of Title 28, United States Code, is amended by adding at the end thereof a new section to be designated as section 2521 entitled "Subpoenas" and to read as follows:

"§ 2521. Subpoenas

"Subpoenas requiring the attendance of parties or witnesses and subpoenas requiring the production of books, papers, documents or tangible things by any party or witness having custody or control thereof, may be issued for purposes of discovery or for use of the things produced as evidence in accordance with the rules and orders of the court. Such subpoenas shall be issued and served and compliance therewith shall be compelled as provided in the rules and orders of the court.".

(b) The analysis to chapter 165 of Title 28, United States Code, immediately preceding section 2501 of such title, is amended by adding at the end thereof a new item 2521 to read as follows:

"2521. Subpoenas.".

Approved September 3, 1954.

Public Law 780 CHAPTER 1264

September 3, 1954
[H. R. 9859]

AN ACT

Authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

River and Harbor Act of 1954.

TITLE I—RIVERS AND HARBORS

SEC. 101. That the following works of improvement of rivers and harbors and other waterways for navigation, flood control, and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of the Army and supervision of the Chief of Engineers, in accordance with the plans and subject to the conditions recommended by the Chief of Engineers in the respective reports hereinafter designated: *Provided*, That the provisions of section 1 of the River and Harbor Act approved March 2, 1945 (Public, Numbered 14, Seventy-ninth Congress, first session), shall govern with respect to projects authorized in this title; and the procedures therein set forth with respect to plans, proposals, or reports for works of improvement for navigation or flood control and for irrigation and purposes incidental thereto, shall apply as if herein set forth in full:

59 Stat. 10.

Lubec Channel, Maine: Senate Document Numbered 243, Eighty-first Congress, at an estimated cost of $74,000; Maine.

Portsmouth Harbor and Piscataqua River, Maine and New Hampshire: House Document Numbered 556, Eighty-second Congress, at an estimated cost of $952,000;

Lynn Harbor, Massachusetts: House Document Numbered 568, Eighty-first Congress, at an estimated cost of $65,000: *Provided*, That local interests contribute in cash the cost of dredging the easterly three hundred feet of the Municipal Channel to a depth of twenty-two feet, presently estimated to cost $4,700, before the work is undertaken; Massachusetts.

Weymouth Fore River, Massachusetts: House Document Numbered 555, Eighty-second Congress, at an estimated cost of $4,400,000;

Town River, Quincy, Massachusetts: House Document Numbered 108, Eighty-third Congress, at an estimated cost of $525,000;

Scituate Harbor, Massachusetts: House Document Numbered 241, Eighty-third Congress, at an estimated cost of $375,000;

Fall River Harbor, Massachusetts: House Document Numbered 405, Eighty-third Congress, at an estimated cost of $694,000;

Bullocks Point Cove, Rhode Island: House Document Numbered 242, Eighty-third Congress, at an estimated cost of $166,400; Rhode Island.

Sakonnet Harbor, Rhode Island: House Document Numbered 436, Eighty-second Congress, at an estimated cost of $555,400: *Provided*, That local interests contribute in cash, 4 per centum of the cost of the project, presently estimated as $23,000;

Patchogue River, Connecticut: House Document Numbered 164, Eighty-third Congress, at an estimated cost of $135,000; Connecticut.

Westport Harbor and Saugatuck River, Connecticut; House Document Numbered 488, Eighty-first Congress, at an estimated cost of $112,500;

Westchester Creek, New York: House Document Numbered 92, Eighty-second Congress, at an estimated cost of $32,200; New York.

Hudson River, New York: House Document Numbered 228, Eighty-third Congress, at an estimated cost of $31,928,000;

Shoal Harbor and Compton Creek, New Jersey: House Document Numbered 89, Eighty-second Congress, at an estimated cost of $138,000; New Jersey.

Hackensack River, New Jersey: House Document Numbered 252, Eighty-second Congress, at an estimated cost of $1,973,900;

Delaware River, Pennsylvania, New Jersey, and Delaware: In accordance with the recommendations of the Board of Engineers for Rivers and Harbors in House Document Numbered 358, Eighty-third Congress, at an estimated cost of $91,389,000;

Mispillion River, Delaware: Senate Document Numbered 229, Eighty-first Congress, at an estimated cost of $469,400; Delaware.

Inland Waterway from Delaware River to Chesapeake Bay, Delaware and Maryland: Senate Document Numbered 123, Eighty-third Congress, at an estimated cost of $101,000,000: *Provided*, That the standard of local contribution for the construction of all bridges, including approaches thereto, required by the project shall be the same standard heretofore applied to the construction of St. Georges Bridge;

Queenstown Harbor, Maryland: House Document Numbered 718, Eighty-first Congress, at an estimated cost of $31,900; Maryland.

Little Creek, Kent Island, Queen Anne County, Maryland: House Document Numbered 715, Eighty-first Congress, at an estimated cost of $23,000;

Anchorage at Lowes Wharf, Talbot County, Maryland: House Document Numbered 90, Eighty-second Congress, at an estimated cost of $29,000;

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Nanticoke River, Bivalve, Wicomico County, Maryland: House Document Numbered 91, Eighty-second Congress, at an estimated cost of $192,600;

Webster Cove, Somerset County, Maryland: House Document Numbered 619, Eighty-first Congress, at an estimated cost of $20,300;

Crisfield Harbor, Maryland: House Document Numbered 435, Eighty-first Congress, at an estimated cost of $101,750: *Provided*, That the cash contribution required of local interests shall be the difference in Federal costs between plans 1 and 2 at the time the project is undertaken;

Rhodes Point to Tylerton, Somerset County, Maryland: House Document Numbered 51, Eighty-second Congress, at an estimated cost of $45,100;

Pocomoke River, Maryland: House Document Numbered 486, Eighty-first Congress, at an estimated cost of $678,300;

Ocean City Harbor and Inlet and Sinepuxent Bay, Maryland: House Document Numbered 444, Eighty-second Congress, at an estimated cost of $704,000;

Virginia.

Parrotts Creek, Virginia: House Document Numbered 46, Eighty-second Congress, at an estimated cost of $38,700;

Norfolk Harbor and Thimble Shoal Channel, Virginia: Senate Document Numbered 122, Eighty-third Congress, at an estimated cost of $6,138,700;

Deep Creek, Accomack County, Virginia: House Document Numbered 477, Eighty-first Congress, at an estimated cost of $95,000;

Oyster Channel, Virginia: Senate Document Numbered 49, Eighty-third Congress, at an estimated cost of $75,200;

North Carolina.

Wallace Channel, Pamlico Sound, North Carolina: House Document Numbered 453, Eighty-first Congress, at an estimated cost of $108,000;

Smiths Creek, North Carolina: House Document Numbered 170, Eighty-third Congress, at an estimated cost of $102,000;

Channel from Hatteras Inlet to Hatteras, and Rollinson Channel, North Carolina: House Document Numbered 411, Eighty-third Congress, at an estimated cost of $175,000;

Peltier Creek, North Carolina, to Intracoastal Waterway: House Document Numbered 379, Eighty-first Congress, at an estimated cost of $43,200;

The existing modified project for Wilmington Harbor, North Carolina, authorized by the River and Harbor Act approved May 17, 1950, in accordance with the recommendations of the Chief of Engineers in House Document Numbered 87, Eighty-first Congress, is hereby further modified to provide that the Secretary of the Army shall reimburse local interests for such work as they may have done upon widening of the transition channel at the lower end of the anchorage basin, subsequent to May 17, 1950, insofar as the same shall be approved by the Chief of Engineers and found to have been done in accordance with the project modification adopted in said Act, provided that such payment shall not exceed the sum of $65,000;

64 Stat. 165.

South Carolina.

Charleston Harbor, South Carolina: Senate Document Numbered 136, Eighty-third Congress, at an estimated cost of $200,000;

Channel Port Royal Sound to Beaufort, South Carolina: House Document Numbered 469, Eighty-first Congress, at an estimated cost of $765,000;

Georgia.

Savannah Harbor, Georgia: House Document Numbered 110, Eighty-third Congress, at an estimated cost of $414,900;

Florida.

Rice Creek, Putnam County, Florida: House Document Numbered 446, Eighty-second Congress, at an estimated cost of $82,200;

Hillsboro River, Florida: House Document Numbered 567, Eighty-first Congress, at an estimated cost of $16,600;

Carrabelle Harbor, Florida: House Document Numbered 451, Eighty-third Congress (maintenance of existing channel);

Apalachicola Bay, Florida: House Document Numbered 156, Eighty-second Congress, at an estimated cost of $98,000;

Apalachicola Bay, Florida, channel across St. George Island: House Document Numbered 557, Eighty-second Congress, at an estimated cost of $635,700;

St. Joseph Bay, Florida: House Document Numbered 595, Eighty-first Congress, at an estimated cost of $1,312,000;

Alabama. Mobile Harbor, Alabama: House Document Numbered 74, Eighty-third Congress, at an estimated cost of $5,778,000;

Dauphin Island Bay, Alabama: House Document Numbered 394, Eighty-second Congress, at an estimated cost of $70,000;

Mississippi. Pascagoula Harbor, Mississippi: Modification of existing project in accordance with plans on file in the Office of the Chief of Engineers, at an estimated cost of $877,000;

Louisiana. Bayou Segnette Waterway, Louisiana: House Document Numbered 413, Eighty-third Congress, at an estimated cost of $520,000;

Texas. Sabine-Neches Waterway, Texas: Senate Document Numbered 80, Eighty-third Congress, at an estimated cost of $6,875,000;

Guadalupe River at Seadrift, Texas: House Document Numbered 478, Eighty-first Congress, at an estimated cost of $74,300;

Aransas Pass, Texas, in connection with the Gulf Intracoastal Waterway: House Document Numbered 376, Eighty-third Congress, at an estimated cost of $30,700;

Turtle Cove, Texas: House Document Numbered 654, Eighty-first Congress, at an estimated cost of $40,000;

Port Aransas-Corpus Christi Waterway, Texas: House Document Numbered 89, Eighty-third Congress, at an estimated cost of $829,100: *Provided*, That work already performed by local interests on this project, in accordance with recommended plan, may be credited to the cash contribution required of local interests;

Port Aransas-Corpus Christi Waterway, Texas: House Document Numbered 487, Eighty-third Congress, at an estimated cost of $180,000;

Missouri. Mississippi River at Louisiana, Missouri: House Document Numbered 251, Eighty-second Congress, at an estimated cost of $82,600;

Illinois. Mississippi River at Chester, Illinois: House Document Numbered 230, Eighty-third Congress, at an estimated cost of $65,000;

Minnesota. Crooked Slough Harbor, Winona, Minnesota: House Document Numbered 347, Eighty-third Congress, at an estimated cost of $142,000;

Kentucky and Tennessee. Cumberland River, Kentucky and Tennessee: Senate Document Numbered 81, Eighty-third Congress; and a monetary authorization not to exceed the estimated cost of the Dover and Eureka dams as described in House Document Numbered 761, Seventy-ninth Congress, "Cumberland River and its tributaries, Tennessee and Kentucky", authorized by the River and Harbor Act of July 24, 1946, is hereby authorized to be expended for partial accomplishment of the project hereby approved: *Provided*, That such authorization shall include the acquisition of lands necessary for wildlife purposes as outlined in said Senate Document Numbered 81;

60 Stat. 636.

Kentucky. Green and Barren Rivers, Kentucky: Senate Document Numbered 82, Eighty-third Congress, at an estimated cost of $3,434,000 for channel dredging and fender system work;

Minnesota. Knife River Harbor, Minnesota: House Document Numbered 463, Eighty-third Congress, at an additional estimated cost of $219,900;

Wisconsin.

Cornucopia Harbor, Wisconsin: House Document Numbered 434, Eighty-third Congress, at an estimated cost of $220,000;

Sheboygan Harbor, Wisconsin: House Document Numbered 554, Eighty-second Congress, at an estimated cost of $217,200;

Michigan.

Holland Harbor, Michigan: House Document Numbered 282, Eighty-third Congress, at an estimated cost of $574,400: *Provided*, That local interests will contribute 25 per centum of the cost of dredging Section B, but not to exceed $45,500, in addition to the local cooperation required by the project document;

Crooked and Indian Rivers, Michigan: House Document Numbered 142, Eighty-second Congress, at an estimated cost of $225,000:

Saginaw River, Michigan: In accordance with the report of the Chief of Engineers, dated June 7, 1954, at an estimated cost of $4,496,800;

Ohio.

Toledo Harbor, Ohio: House Document Numbered 620, Eighty-first Congress, at an estimated cost of $512,000;

Ashtabula Harbor, Ohio: House Document Numbered 486, Eighty-third Congress, at an estimated cost of $4,900,000;

Pennsylvania.

Erie Harbor, Pennsylvania: House Document Numbered 345, Eighty-third Congress, at an estimated cost of $174,000;

New York.

Black Rock Channel and Tonawanda Harbor, New York: House Document Numbered 423, Eighty-third Congress, at an estimated cost of $270,000;

Little River at Cayuga Island, Niagara Falls, New York: House Document Numbered 246, Eighty-third Congress, at an estimated cost of $36,900;

Oswego Harbor, New York: House Document Numbered 487, Eighty-first Congress, at an estimated cost of $2,459,000;

California.

Los Angeles and Long Beach Harbors, California: House Document Numbered 161, Eighty-third Congress, at an estimated cost of $896,500: *Provided*, That the Secretary of the Army is hereby authorized to reimburse local interests for such work as they may have done upon this project prior to July 1, 1953, at actual cost to local interests insofar as the same shall be approved by the Chief of Engineers and found to have been done in accordance with the project hereby adopted: *Provided further*, That such reimbursement shall be subject to appropriations applicable thereto or funds available therefor and shall not take precedence over other pending projects of higher priority for harbor improvement: *And provided further*, That such payments shall not exceed the sum of $500,000;

Playa del Rey Inlet and Harbor, Venice, California: House Document Numbered 389, Eighty-third Congress: *Provided*, That Federal participation in the provision of entrance jetties, entrance channel, interior channel and central basin recommended in the project report and presently estimated to cost $7,738,000 shall not exceed 50 per centum of the cost thereof;

Port Hueneme, California: House Document Numbered 362, Eighty-third Congress, at an estimated cost of $5,437,000;

Richmond Harbor, California: House Document Numbered 395, Eighty-third Congress, at an estimated cost of $2,086,000;

Oregon.

Rogue River, Harbor at Gold Beach, Oregon: Senate Document Numbered 83, Eighty-third Congress, at an estimated cost of $3,758,700;

Umpqua Harbor and River, Scholfield River at Reedsport, Oregon: Senate Document Numbered 133, Eighty-first Congress, at an estimated cost of $41,000;

Tillamook Bay and Bar, Oregon: Senate Document Numbered 128, Eighty-third Congress, at an estimated cost of $1,500,000;

Columbia River at the mouth, Oregon and Washington: House Document Numbered 249, Eighty-third Congress, at an estimated cost of $8,555,000; Oregon and Washington.

Columbia River between Chinook, Washington, and the head of Sand Island: Senate Document Numbered 8, Eighty-third Congress, at an estimated cost of $227,100; Washington.

Willapa River and Harbor and Naselle River, Washington: House Document Numbered 425, Eighty-third Congress, at an estimated cost of $977,000;

Grays Harbor and Chehalis River, Washington: House Document Numbered 412, Eighty-third Congress, at an estimated cost of $421,800;

Grays Harbor and Chehalis River (Westhaven Breakwater), Washington: In accordance with the report of the Chief of Engineers, dated May 27, 1954, at an estimated cost of $323,700;

Anacortes Harbor, Washington: Senate Document Numbered 102, Eighty-third Congress, at an estimated cost of $179,300;

Neah Bay, Washington: House Document Numbered 404, Eighty-third Congress, at an estimated cost of $139,250;

Bellingham Harbor, Washington: House Document Numbered 558, Eighty-second Congress, at an estimated cost of $1,366,650;

Blaine Harbor, Washington: House Document Numbered 240, Eighty-third Congress, at an estimated cost of $436,000;

Shilshole Bay, Seattle, Washington: House Document Numbered 536, Eighty-first Congress, at an estimated cost of $3,397,300;

Tacoma Harbor, Washington: Modification of existing project to provide for thirty-foot channel in Port Industrial (Wapato) Waterway, in accordance with plans on file in the office of the Chief of Engineers, at an estimated cost of $534,200;

Port Angeles Harbor, Washington: House Document Numbered 155, Eighty-second Congress, at an estimated cost of $477,900;

Everett Harbor and Snohomish River, Washington: House Document Numbered 569, Eighty-first Congress, at an estimated cost of $395,500;

Quillayute River, Washington: House Document Numbered 579, Eighty-first Congress, at an estimated cost of $425,550;

Sitka Harbor, Alaska: House Document Numbered 414, Eighty-third Congress, at an estimated cost of $41,500; Alaska.

Dry Pass, Alaska: House Document Numbered 414, Eighty-third Congress, at an estimated cost of $1,419,800;

Neva Strait, Alaska: House Document Numbered 414, Eighty-third Congress, at an estimated cost of $224,400;

Petersburg Harbor, Alaska: In accordance with the report of the Chief of Engineers, dated April 8, 1954, at an estimated cost of $40,000;

Pelican Harbor, Alaska: In accordance with the report of the Chief of Engineers, dated April 8, 1954, at an estimated cost of $270,000;

Ketchikan Harbor, Alaska: In accordance with the report of the Chief of Engineers, dated April 8, 1954, at an estimated cost of $2,947,900;

Rocky Pass in Keku Strait, Alaska: In accordance with the report of the Chief of Engineers, dated April 8, 1954, at an estimated cost of $214,000;

Seward Harbor, Alaska: House Document Numbered 182, Eighty-third Congress, at an estimated cost of $81,200;

Valdez Harbor, Alaska: House Document Numbered 182, Eighty-third Congress, at an estimated cost of $116,600;

Kodiak Harbor, Alaska: House Document Numbered 465, Eighty-third Congress, at an estimated cost of $1,685,000;

Hawaii. Honolulu Harbor, Territory of Hawaii: House Document Numbered 717, Eighty-first Congress, at an estimated cost of $3,022,000;

Nawiliwili and Port Allen Harbors, Territory of Hawaii: House Document Numbered 453, Eighty-third Congress, at an estimated cost of $1,166,400;

BEACH EROSION

New Hampshire. Hampton Beach, New Hampshire: House Document Numbered 325, Eighty-third Congress, at an estimated cost of $140,000;

Massachusetts. Lynn-Nahant Beach, Massachusetts: House Document Numbered 134, Eighty-second Congress, at an estimated cost of $189,000;

Revere Beach, Massachusetts: House Document Numbered 146, Eighty-second Congress, at an estimated cost of $402,900;

Quincy Shore Beach, Massachusetts: House Document Numbered 145, Eighty-second Congress, at an estimated cost of $409,000;

Rhode Island. South Shore, State of Rhode Island: House Document Numbered 490, Eighty-first Congress, at an estimated cost of $166,550;

Connecticut. Hammonassett River to East River (Area 2), Connecticut: House Document Numbered 474, Eighty-first Congress, at an estimated cost of $166,600 for Hammonassett Beach; $20,400 for Middle Beach;

New Haven Harbor to Housatonic River (Area 3), Connecticut: House Document Numbered 203, Eighty-third Congress, at an estimated cost of $84,600 for Prospect Beach; $42,400 for Woodmont Shore; $13,100 for Gulf Beach; and $18,300 for Silver Beach to Cedar Beach;

Housatonic River to Ash Creek (Area 7), Connecticut: House Document Numbered 248, Eighty-third Congress, at an estimated cost of $26,500 for Short Beach; and $119,000 for Seaside Park;

New Jersey. Atlantic City, New Jersey: House Document Numbered 538, Eighty-first Congress, at an estimated cost of $2,044,000;

Ocean City, New Jersey: House Document Numbered 184, Eighty-third Congress, at an estimated cost of $105,000;

Cold Spring Inlet (Cape May Harbor), New Jersey: House Document Numbered 206, Eighty-third Congress, at an estimated cost of $260,000;

Virginia. Virginia Beach, Virginia: House Document Numbered 186, Eighty-third Congress, at an estimated cost of $525,514;

Florida. Pinellas County, Florida: House Document Numbered 380, Eighty-third Congress, at an estimated cost of $34,300;

Illinois. Illinois Shore of Lake Michigan: House Document Numbered 28, Eighty-third Congress, at an estimated cost of $1,180,400;

Ohio. Vermilion to Sheffield Lake Village, Ohio: House Document Numbered 229, Eighty-third Congress, at an estimated cost of $185,000;

Cleveland and Lakewood, Ohio: House Document Numbered 502, Eighty-first Congress, at an estimated cost of $1,275,000 for Edgewater Park; and $68,900 for White City Park;

Pennsylvania. Presque Isle Peninsula, Erie, Pennsylvania: House Document Numbered 231, Eighty-third Congress, at an estimated cost of $2,006,000;

New York. Selkirk Shores State Park, Lake Ontario, New York: House Document Numbered 343, Eighty-third Congress, at an estimated cost of $136,500;

California. Point Mugu to San Pedro Breakwater, California: House Document Numbered 277, Eighty-third Congress, at an estimated cost of $3,874,000;

Anaheim Bay Harbor, California: House Document Numbered 349, Eighty-third Congress, at an estimated cost of $65,700 for Seal Beach; and $91,600 for Surfside;

Carpenteria to Point Mugu, California: House Document Numbered 29, Eighty-third Congress, at an estimated cost of $73,700;

Hawaii.

Waikiki Beach, Territory of Hawaii: House Document Numbered 227, Eighty-third Congress, at an estimated cost of $283,700.

Reimbursement to local interests, authorization.

SEC. 102. The Secretary of the Army is hereby authorized to reimburse local interests for such work done by them on the beach erosion projects authorized in section 101, subsequent to the initiation of the cooperative studies which form the basis for the projects: *Provided*, That the work which may have been done on these projects was approved by the Chief of Engineers as being in accordance with the projects hereby adopted: *Provided further*, That such reimbursement shall be subject to appropriations applicable thereto for funds available therefor and shall not take precedence over other pending projects of higher priority for improvements.

Preliminary examinations and surveys, authorization. 64 Stat. 168.

SEC. 103. The Secretary of the Army is hereby authorized and directed to cause preliminary examinations and surveys to be made at the following-named localities, and subject to all applicable provisions of section 110 of the River and Harbor Act of 1950:

Maine.

Eastern River, at and in the vicinity of Orland, Maine;

Southwest Harbor, Maine;

Vicinity of Wells Beach and Drakes Island, Maine;

Florida.

Channel from the Gulf of Mexico into Choctawatchee Bay, Florida, in the vicinity of Point Washington;

Lake Tarpon (formerly Lake Butler), Florida, to determine the cause of salt water intrusion and corrective measures with respect thereto; and

Chipola River, Florida, for measures to maintain satisfactory water levels in the Dead Lakes;

Kentucky, West Virginia, and Virginia.

Big Sandy River and Tug and Levisa Forks in Kentucky, West Virginia, and Virginia.

Causeway. Alabama.

SEC. 104. The consent of Congress is hereby granted to the city of Mobile, Alabama, and the State of Alabama, their successors and assigns, for the closing of Garrows Bend Channel, in the county of Mobile, Alabama, by the construction and operation of an earth-filled causeway across said channel in the county of Mobile, in the State of Alabama: *Provided*, That the work on said causeway shall not be commenced until the plans and location therefor have been filed with and approved by the Chief of Engineers, United States Army, and by the Secretary of the Army. This provision shall be null and void unless the actual construction of the causeway hereby authorized is commenced within three years and completed within five years from the date of this Act and the right to alter, amend, or repeal this provision is hereby expressly reserved.

Intracoastal Waterway, Fla.

SEC. 105. The authorization of the improvement of the Intracoastal Waterway from the Caloosahatchee River to the Anclote River (House Document Numbered 371, Seventy-sixth Congress) authorized in the River and Harbor Act of 1945 and modified by the River and Harbor Act of 1948 and the River and Harbor Act of 1950 is further modified so as to authorize the use of alternate route C–1 in the Venice and Lemon Bay, Florida, area, as designated in plans of the Corps of Engineers.

59 Stat. 17; 62 Stat. 1173; 64 Stat. 168.

Report to Congress.

The Chief of Engineers is directed to report to the Congress prior to request for appropriation to construct this part of the project his recommendation as to the fair amount of local contribution in the light of the changed condition. Provisions as to local contribution based on these recommendations shall become effective when approved by the Public Works Committees of the Senate and the House of Representatives.

Mississippi.

SEC. 106. That the requirement, that local interests provide the ferries and bridges required for land traffic across the lateral and terminal canals, with respect to the river and harbor project authorized by the

Act of August 30, 1935 (49 Stat. 1028), on the Pearl River, Mississippi, below Jackson, shall hereafter be ineffective: *Provided*, That local interests furnish assurances satisfactory to the Secretary of the Army that they will hold and save the United States free from any claim for damage which might result from deprivation of access to the area.

Short title.

SEC. 107. Title I may be cited as the "River and Harbor Act of 1954".

Flood Control Act of 1954.

TITLE II—FLOOD CONTROL

49 Stat. 1571; 52 Stat. 1215.

SEC. 201. That section 3 of the Act approved June 22, 1936 (Public, Numbered 738, Seventy-fourth Congress), as amended by section 2 of the Act approved June 28, 1938 (Public, Numbered 761, Seventy-fifth Congress), shall apply to all works authorized in this title except that for any channel improvement or channel rectification project, provisions (a), (b), and (c) of section 3 of said Act of June 22, 1936, shall apply thereto, and except as otherwise provided by law: *Provided*, That the authorization for any flood-control project herein adopted requiring local cooperation shall expire five years from the date on which local interests are notified in writing by the Department of the Army of the requirements of local cooperation, unless said interests shall within said time furnish assurances satisfactory to the Secretary of the Army that the required cooperation will be furnished.

58 Stat. 887.

SEC. 202. The provisions of section 1 of the Act of December 22, 1944 (Public, Numbered 534, Seventy-eighth Congress, second session), shall govern with respect to projects authorized in this Act, and the procedures therein set forth with respect to plans, proposals, or reports for works of improvement for navigation or flood control and for irrigation and purposes incidental thereto shall apply as if herein set forth in full.

It is hereby declared to be the policy of the Congress that the following provisions shall be observed:

No project or any modification not authorized, of a project for flood control or rivers and harbors, shall be authorized by the Congress unless a report for such project or modification has been previously submitted by the Chief of Engineers, United States Army, in conformity with existing law.

SEC. 203. The following works of improvement for the benefit of navigation and the control of destructive floodwaters and other purposes are hereby adopted and authorized to be prosecuted under the direction of the Secretary of the Army and the supervision of the Chief of Engineers in accordance with the plans in the respective reports hereinafter designated and subject to the conditions set forth therein: *Provided*, That the necessary plans, specifications, and preliminary work may be prosecuted on any project authorized in this title with funds from appropriations heretofore or hereafter made for flood control so as to be ready for rapid inauguration of a construction program: *Provided further*, That the projects authorized herein shall be initiated as expeditiously and prosecuted as vigorously as may be consistent with budgetary requirements: *And provided further*, That penstocks and other similar facilities adapted to possible future use in the development of hydroelectric power shall be installed in any dam authorized in this Act for construction by the Department of the Army when approved by the Secretary of the Army on the recommendation of the Chief of Engineers and the Federal Power Commission.

CONNECTICUT RIVER BASIN

That the plan for the control of floods in the Connecticut River Basin, approved by the Act of June 22, 1936 (Public Law Numbered

738, Seventy-fourth Congress), as amended and supplemented, is hereby modified to provide for the construction, under the direction of the Secretary of the Army and the supervision of the Chief of Engineers, of a flood control reservoir on Otter Brook at South Keene, New Hampshire, in lieu of any reservoir or reservoirs heretofore authorized. 49 Stat. 1572.

That the plan for the West River Basin of the Connecticut River in Vermont is hereby modified to consist of three reservoirs at the Ball Mountain, The Island, and Townshend sites, in lieu of the plan of eight reservoirs authorized in section 10 of the Flood Control Act approved December 22, 1944, in general accordance with the plan agreed to by the Secretary of the Army, the Chief of Engineers, and the Vermont State Water Conservation Board in June 1950; and the conditions specified in the plan of the eight reservoirs authorized in section 10 of the Flood Control Act approved December 22, 1944, shall not apply. 58 Stat. 891.

SUSQUEHANNA RIVER BASIN

The project for the Susquehanna River in the vicinity of Endicott, Johnson City, and Vestal, New York, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 500, Eighty-first Congress, at an estimated cost of $4,469,000.

The plan for flood protection on the West Branch of the Susquehanna River, Pennsylvania and New York, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in his report dated June 25, 1954, and there is hereby authorized to be appropriated the sum of $25,000,000 for partial accomplishment of that plan. Appropriation.

CENTRAL AND SOUTHERN FLORIDA

The authorization for the comprehensive plan for flood control and other purposes in central and southern Florida given by the Flood Control Act of June 30, 1948, as amended, is hereby modified and expanded to include the entire comprehensive plan of improvement as recommended by the Chief of Engineers in House Document Numbered 643, Eightieth Congress, with such modifications thereof as the Congress may hereafter authorize, or as in the discretion of the Chief of Engineers may be advisable: *Provided*, That the conditions of local cooperation for the authorized first phase heretofore approved by said flood control Act shall apply to that authorized first phase, but for all work over and beyond that previous authorization such conditions shall apply on an interim basis only until they shall be modified as deemed appropriate by the Congress, based on recommendations to be submitted at the earliest practicable date by the Chief of Engineers, through the Bureau of the Budget to the Congress: *Provided further*, That whatever conditions of local cooperation are established by Congress as the result of such recommendations shall be retroactive to any units of the comprehensive plan authorized in this Act which may be started prior to establishment of the exact conditions of local cooperation: *And provided further*, That in addition to previous authorizations there is hereby authorized to be appropriated the sum of $7,000,000 for partial accomplishment of said plan. 62 Stat. 1175. Appropriation.

LOWER MISSISSIPPI RIVER

The project for flood control and improvement of the lower Mississippi River, adopted by the Act of May 15, 1928, as amended and modified, is hereby further modified and expanded to include the 45 Stat. 534.

following items of work and the authorization for said project is increased accordingly.

(a) Control of Old and Atchafalaya Rivers and a lock for navigation substantially as set forth in section XIII of the report of the Mississippi River Commission dated February 2, 1954, and the report of the Chief of Engineers in House Document Numbered 478, Eighty-third Congress, with such modifications as the Chief of Engineers in his discretion may find advisable at an estimated additional cost (exclusive of the navigation lock) of $32,000,000, in addition to the $15,000,000 increase in authorization made by subparagraph (a) under the title "Lower Mississippi River" in section 204 of the Flood Control Act, approved May 17, 1950, which $15,000,000 shall be applied to the item described in this paragraph: *Provided*, That the United States shall acquire such lands, rights-of-way and spoil-disposal areas as may be necessary for construction of the project except that local interests shall comply with the provisions of section 3 of the Flood Control Act approved May 15, 1928, as amended, with regard to the enlargement and extension of the main line Mississippi River levee below Shaw, Louisiana: *Provided further*, That no flowage rights are to be acquired by the United States in connection with this item: *And provided further*, That when the type and dimensions of the required navigation lock are approved by the Chief of Engineers, construction thereof may be initiated with funds herein authorized to be appropriated.

64 Stat. 170.

45 Stat. 535.

(b) The plan for an adequate channel from the Mississippi River via Old and Atchafalaya Rivers to Morgan City, Louisiana, substantially in accordance with the report of the Chief of Engineers in Senate Document Numbered 53, Eighty-second Congress, at an estimated additional cost of $440,000.

(c) Modification of the authorized project for the Vicksburg-Yazoo area substantially in accordance with the report of the Chief of Engineers in House Document Numbered 85, Eighty-third Congress.

(d) Modification of the authorized project for the New Madrid Floodway substantially in accordance with the recommendation of the Chief of Engineers in House Document Numbered 183, Eighty-third Congress, at an estimated cost of $1,743,000.

(e) The plan for flood control in the Reelfoot Lake Area, Tennessee and Kentucky, substantially in accordance with the recommendation of the Chief of Engineers in his report dated June 17, 1954, at an estimated cost of $748,100.

TRINITY RIVER BASIN, TEXAS

The project for the Navarro Mills Reservoir on Richland Creek, Texas, is hereby authorized substantially in accordance with recommendations of the Chief of Engineers in his report dated May 28, 1954, at an estimated cost of $4,969,000.

BUFFALO BAYOU BASIN, TEXAS

The project for Buffalo Bayou and tributaries, to provide flood protection for the city of Houston, Texas, as authorized by the Flood Control Act approved August 11, 1939, and previous Acts, is hereby modified substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 250, Eighty-third Congress, at an additional estimated cost of $16,191,600.

53 Stat. 1414.

BRAZOS RIVER BASIN, TEXAS

The plan for flood protection and other purposes on the Brazos River and tributaries, Oyster Creek and Jones Creek, Texas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 535, Eighty-first Congress, and there is hereby authorized to be appropriated the sum of $40,000,000 for partial accomplishment of that plan. Appropriation.

The project for the Belton Reservoir, Leon River, Texas, authorized by the Flood Control Act of 1946, is hereby modified to provide for the reservation, without reimbursement, of twelve thousand acre-feet of conservation storage to be used as a permanent source of water supply for Fort Hood and adjacent military installations. 60 Stat. 649.

GUADALUPE AND SAN ANTONIO RIVERS, TEXAS

The project for flood protection on the Guadalupe and San Antonio Rivers, Texas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 344, Eighty-third Congress, at an estimated cost of $30,254,000.

GUADALUPE RIVER, TEXAS

The works of improvement on Guadalupe River, Texas, authorized by section 2 of the Act entitled "An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes", approved March 2, 1945 (59 Stat. 17), insofar as such authorization provides for construction of the Canyon Dam and Reservoir, is hereby modified to provide for the construction, operation, and maintenance under the direction of the Secretary of the Army and supervision of the Chief of Engineers of the Canyon Dam and Reservoir in accordance with the provisions of this Act. The Canyon Dam and Reservoir shall be constructed with a gross reservoir capacity of approximately seven hundred and fifty thousand acre-feet (of which three hundred and eighty thousand acre-feet shall be for flood control and sedimentation) for purposes of flood control, conservation, stream-flow regulation, and provision for sedimentation, and, if practicable, for purposes of development of electric power, at an estimated total cost of $13,300,000. 59 Stat. 18.

The Chief of Engineers, in consultation with the Federal Power Commission, shall at appropriate times allocate to local interests such of the costs of construction, operation, and maintenance of the Canyon Dam and Reservoir as may appropriately be allocated to water conservation, stream-flow regulation, and development of electric power. Such allocation shall be made in accordance with the separable costs-remaining benefits method, taking into account the net increase in regulated flow which is practical with the storage capacity which will be provided by the Canyon Dam and Reservoir for water conservation and stream-flow regulation. No allocation of costs with respect to any installation for development of electric power shall be made under this section unless the Chief of Engineers determines that such installation will actually be constructed. Allocation of costs.

The costs allocated to local interests under this section shall be not less than $1,400,000, and shall be paid by them to the Chief of Engineers as provided in this Act. The portion of such costs determined by the Chief of Engineers to be allocable to operation and maintenance of Canyon Dam and Reservoir shall be deposited to the credit of the appropriation available for maintenance and operation of such dam and used by the Chief of Engineers for such operation and maintenance; the $1,400,000 to be contributed during the construction period

shall be deposited to the credit of the appropriation available for construction of the dam and used by the Chief of Engineers for that purpose; and the balance of such costs determined by the Chief of Engineers to be allocable to construction of Canyon Dam and Reservoir shall be deposited in the Treasury of the United States.

Facilities for the development of electric power at Canyon Dam and Reservoir may be constructed and operated by the Corps of Engineers, or by local interests in accordance with the provisions of the Federal Power Act and in accordance with this Act, with all expenses of construction, operation, and maintenance of such facilities to be paid by local interests and with such power to be made available to such local interests.

41 Stat. 1063; 49 Stat. 863. 16 USC 791a.

Of the contributions to be paid by local interests toward the cost of construction of Canyon Dam and Reservoir, $1,400,000 shall be paid in such manner, and at such time or times during the period of such construction, as the Chief of Engineers shall determine. The remainder of the contributions allocated to local interests, with interest thereon at the rate of 2½ per centum per annum, shall be paid as prescribed by the Chief of Engineers over a period not in excess of fifty years.

The Chief of Engineers shall enter into an agreement with local interests providing for the payments heretofore described and for all other matters relating to the operation and maintenance of the Canyon Dam and Reservoir which require the cooperation of local interests. Such agreement may provide for utilization of the water impounded for water conservation and stream-flow regulation for development of electric power; except that the agreement shall provide that the utilization of water for power development shall not be allowed to conflict with the flood-control and sedimentation purposes of the Canyon Dam and Reservoir.

PECOS RIVER BASIN

The project for flood protection on the Pecos River, Texas and New Mexico, is hereby authorized substantially in accordance with the recommendations of the Board of Engineers for Rivers and Harbors, dated March 26, 1954, at an estimated cost of $9,540,000: *Provided*, That no appropriations shall be made for construction of Los Esteros Reservoir until satisfactory arrangements have been made by the State of New Mexico for the transfer of irrigation storage from the Alamagordo Reservoir.

RIO GRANDE BASIN

The project for flood protection in the Rio Grande Basin at Albuquerque, New Mexico, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 464, Eighty-third Congress, at an estimated cost of $7,500,000.

The project for flood protection on the Rio Hondo River at Roswell, New Mexico, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 436, Eighty-third Congress, at an estimated cost of $5,658,000.

WHITE RIVER BASIN

The general comprehensive plan for flood control and other purposes for the White River Basin approved by the Flood Control Act of June 28, 1938, as amended, is hereby modified to provide for the generation of power in conjunction with flood control at the Greers

52 Stat. 1218.

Ferry Reservoir and the addition of Beaver Reservoir for flood control, power generation, and other purposes, substantially as recommended by the Chief of Engineers in his report dated February 19, 1954.

ARKANSAS RIVER BASIN

The project for flood protection on the Arkansas River and tributaries at Enid, Oklahoma, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 185, Eighty-third Congress, at an estimated cost of $965,000.

The project for flood protection on the Arkansas River, Conway County Drainage and Levee District Numbered 1, Arkansas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 167, Eighty-second Congress, at an estimated cost of $230,600.

The project for flood protection on the Arkansas River, Holla Bend Bottom, Arkansas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 157, Eighty-second Congress, at an estimated cost of $312,000.

UPPER MISSISSIPPI RIVER

The project for flood protection on the Mississippi River in urban areas at Alton, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 397, Eighty-third Congress, at an additional estimated cost of $2,500,000.

The project for flood protection on Bear Creek at Hannibal, Missouri, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 435, Eighty-third Congress, at an estimated cost of $3,326,000.

The project for flood protection on the Mississippi River, Guttenberg, Iowa, to Hamburg Bay, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 281, Eighty-third Congress, excepting only the improvements recommended for Credit Island and for Henderson County Drainage District No. 3, at an estimated cost for improvements authorized of $30,551,000.

The project for flood protection on the Mississippi River, Fish Lake Drainage and Levee District No. 8, Monroe County, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 396, Eighty-third Congress, at an additional estimated cost of $480,000.

The project on the Mississippi River for local flood protection in the Sny Island Levee Drainage District, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 247, Eighty-third Congress, at an estimated cost of $7,046,300.

The project for flood protection on the Upper Iowa River, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 375, Eighty-third Congress, at an estimated cost of $979,600.

MISSOURI RIVER BASIN

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $144,000,000 for the prosecution of the comprehensive plan for the Missouri River Basin to be undertaken by the Corps of Engineers, approved by the Act of June 28, 1938, as amended and supplemented by subsequent Acts of Congress.

Appropriation.

52 Stat. 1218.

The comprehensive plan for the Missouri River Basin, approved by the Act of June 28, 1938, and as amended and supplemented, is hereby further modified to include the project for flood protection on the Kansas River and tributaries, Colorado, Nebraska and Kansas substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 642, Eighty-first Congress, at an estimated additional cost of $73,710,000, and there is authorized to be appropriated such sum in addition to previous authorizations for the Missouri Basin plan.

Appropriation.

The comprehensive plan for the Missouri River Basin, approved by the Act of June 28, 1938, and as amended and supplemented, is hereby further modified to include the project for flood protection on the Osage River and tributaries, Missouri and Kansas, substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 549, Eighty-first Congress.

49 Stat. 1588.

The project adopted by the Flood Control Act of June 22, 1936, to provide flood protection for the Kansas Citys, Kansas and Missouri, as modified and extended by the Flood Control Act of December 22, 1944, is hereby further modified to provide that the Chief of Engineers may contribute not to exceed $2,750,000 to the cost of an alternate plan of flood protection to be constructed by local interests in the lower Armourdale area of the Kansas Citys project: *Provided*, That the actual amount so paid by the Federal Government shall not exceed the estimated Federal cost of the approved Government plan of protection in this area nor shall it exceed the total actual costs of the alternate project reduced by the estimated costs for lands, easements, rights-of-way, and public relocations which local interests would have been required to bear had the approved Government plan been constructed: *Provided further*, That the total amount shall be paid in installments during progress of the work to satisfactory completion of the alternate plan.

58 Stat. 897.

The project for flood protection on the Chariton River, Iowa and Missouri, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 561, Eighty-first Congress, at an estimated cost of $19,612,000.

The project for flood protection on the Big Sioux River and tributaries at Sioux Falls, South Dakota, is hereby authorized substantially in accordance with the recommendations of the Board of Engineers for Rivers and Harbors in its report dated March 15, 1954, at an estimated cost of $3,430,000.

The project for flood protection on the Little Sioux River, Iowa, authorized by the Act of August 4, 1947, is hereby modified and supplemented substantially in accordance with the recommendations of the Chief of Engineers, in Senate Document Numbered 127, Eighty-third Congress, at an additional estimated cost of $10,076,000.

61 Stat. 741.

The general comprehensive plans for flood control and other purposes in the Missouri River Basin set forth in House Document Numbered 475 and Senate Document Numbered 191, as revised and coordinated by Senate Document Numbered 247, Seventy-eighth Congress, second session, approved in the Flood Control Act of December 22, 1944, are hereby modified to include the payment by the Corps of Engineers for construction or provision of adequate water supply and sewage facilities in the new relocated municipality of Pollock, South Dakota, at a cost not to exceed $200,000, which is to compensate for the acquisition of and to replace facilities in the town which are located within areas which have been or will be acquired by the United States because of the construction of the Oahe Dam and Reservoir project in the basin.

58 Stat. 897.

The project for flood protection on the Little Missouri River and tributaries at Marmarth, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in Senate Document Numbered 134, Eighty-first Congress, at an estimated cost of $212,300.

The project for flood protection on the Lower Heart River in the vicinity of Mandan, North Dakota, authorized by the Flood Control Act of 1946, and modified by the Flood Control Act of 1950, is further modified substantially in accordance with the recommendations of the Chief of Engineers in his report dated July 27, 1954, at an estimated cost of $1,727,000. 60 Stat. 648; 64 Stat. 175.

COAL CREEK AND TRIBUTARIES, TENNESSEE

The project for flood protection on Coal Creek and tributaries, Tennessee, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 154, Eighty-second Congress, at an estimated cost of $745,200.

OHIO RIVER BASIN

The project for flood protection on Sandy Lick Creek at and in the vicinity of Reynoldsville, Pennsylvania, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 716, Eighty-first Congress, at an estimated cost of $570,000.

The project for flood control and related purposes on the Paint Rock River, Alabama, is hereby authorized substantially as recommended by the Chief of Engineers in his report dated June 23, 1954, at an estimated cost of $1,001,300: *Provided*, That in lieu of the local cooperation recommended in that document, local interests shall comply with the provisions of local cooperation contained in section 3 of the Flood Control Act approved June 22, 1936, as amended, and shall also construct and maintain local drainage works required to fully and effectively utilize the improved outlet system, generally as outlined in said document. 49 Stat. 1571.

KALAMAZOO RIVER, MICHIGAN

The project for flood protection on the Kalamazoo River at Battle Creek, Michigan, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in Senate Document Numbered 98, Eighty-third Congress, at an estimated cost of $4,201,550: *Provided*, That local contribution toward the project will be in accord with the recommendation of the Secretary of the Army contained in the aforesaid document.

LITTLE CALUMET RIVER, INDIANA

The project for flood protection on the Little Calumet River and tributaries, Indiana, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 153, Eighty-second Congress, at an estimated cost of $509,900.

LOS ANGELES RIVER BASIN

In addition to previous authorizations there is hereby authorized to be appropriated the sum of $12,500,000 for the prosecution of the comprehensive plan for the Los Angeles-San Gabriel River Basin, and Ballona Creek, California, approved in the Act of August 18, 1941, as amended and supplemented by subsequent Acts of Congress. Appropriation. 55 Stat. 647.

SANTA MARIA RIVER BASIN

The project for flood protection on Santa Maria River and tributaries, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 400, Eighty-third Congress, at an estimated cost of $10,182,000 for levees and channel improvements to be prosecuted under the direction of the Secretary of the Army and supervision of the Chief of Engineers.

SAN LORENZO RIVER BASIN

The project for flood protection on San Lorenzo River, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 447, Eighty-third Congress, at an estimated cost of $2,665,000.

SACRAMENTO RIVER BASIN

The project for flood protection on Middle Creek, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 367, Eighty-first Congress, at an estimated cost of $1,110,000.

The plan of improvement for flood control on the American River, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 367, Eighty-first Congress, at an estimated cost of $1,600,000 for levees.

LOWER SAN JOAQUIN RIVER BASIN

Appropriation.

58 Stat. 901.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $5,000,000 for the prosecution of the comprehensive plan for the Lower San Joaquin River Basin, California, approved in the Act of December 22, 1944, as amended and supplemented by subsequent Acts of Congress.

SAN LORENZO CREEK BASIN

The project for flood protection on San Lorenzo Creek, Alameda County, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 452, Eighty-third Congress, at an estimated cost of $3,790,000.

TRUCKEE RIVER BASIN

The project for flood protection on Truckee River and tributaries, California and Nevada, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in his report dated April 15, 1954, at an estimated cost of $791,000: *Provided*, That the authorization for improvement for flood control on Truckee River, California and Nevada, contained herein shall not become effective unless and until the "Washoe Reclamation Project" on the Truckee and Carson Rivers, California and Nevada, shall have been authorized pursuant to law.

COLUMBIA RIVER BASIN

Appropriation.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $180,000,000 for the prosecution of the projects and plans for the Columbia River Basin, for which the sum of $75,000,000 was authorized in the Flood Control Act approved

May 17, 1950, and these projects and plans are hereby modified to include power development in the following projects in tributary basins, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 531, Eighty-first Congress: Cougar Reservoir on South Fork of McKenzie River, Oregon, and Green Peter Reservoir on Middle Fork of Santiam River, Oregon, including White Bridge reregulating reservoir on Middle Fork of Santiam River, Oregon. 64 Stat. 178.

The project for flood protection on Amazon Creek at Eugene and vicinity, Oregon, authorized by the Flood Control Act of 1946, and modified by the Flood Control Act of 1950, is further modified substantially in accordance with the recommendations of the Chief of Engineers, in Senate Document Numbered 131, Eighty-third Congress, at an estimated cost of $893,600. 60 Stat. 650.

TERRITORY OF ALASKA

The project for flood protection on Gold Creek and tributaries, Alaska, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 54, Eighty-second Congress, at an estimated cost of $380,000.

TERRITORY OF HAWAII

The project for flood protection on the Wailoa Stream and its tributaries, Island of Hawaii, Territory of Hawaii, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers, in House Document Numbered 529, Eighty-first Congress, at an estimated cost of $347,000.

Preliminary examinations and surveys, authorization.

SEC. 204. The Secretary of the Army is hereby authorized and directed to cause preliminary examinations and surveys for flood control and allied purposes, including channel and major drainage improvements, and floods aggravated by or due to wind or tidal effects, to be made under the direction of the Chief of Engineers, in drainage areas of the United States and its Territorial possessions, which include the following-named localities: *Provided*, That after the regular or formal reports made on any examination, survey, project, or work underway or proposed are submitted to Congress, no supplemental or additional report or estimate shall be made unless authorized by law except that the Secretary of the Army may cause a review of any examination or survey to be made and a report thereon submitted to Congress if such review is required by the national defense or by changed physical or economic conditions: *Provided further*, That the Government shall not be deemed to have entered upon any project for the improvement of any waterway or stream mentioned in this section until the project for the proposed work shall have been adopted by law:

Ipswich River, Massachusetts.
Neponset River, Massachusetts.
Ash and Pine Creeks, Fairfield and vicinity, Connecticut.
Juniata River at Lewistown and other points in Pennsylvania in the interest of flood control.
Streams in the vicinity of Alice, Texas.
Devils River and tributaries, Texas.
Rio Hondo and tributaries, New Mexico.
Redwood Creek, Humboldt County, California.
Coos Bay, Oregon.

Appropriation.

SEC. 205. In addition to previous authorizations, the sum of $20,000,000 is hereby authorized to be appropriated for expenditure by the Department of Agriculture for the prosecution of the works of

58 Stat. 887.

improvement authorized to be carried out by that Department by the Flood Control Act of December 22, 1944, as amended.

55 Stat. 650; 60 Stat. 642. 67 Stat. 61. 33 USC 701c-3.

SEC. 206. That section 7 of the Act approved August 18, 1941 (Public, Numbered 228, Seventy-seventh Congress), as amended by section 5 of the Act approved July 24, 1946 (Public, Numbered 526, Seventy-ninth Congress), as further amended by the Act approved June 16, 1953 (Public, Numbered 60, Eighty-third Congress), is hereby still further amended to read as follows:

"That 75 per centum of all moneys received and deposited in the Treasury of the United States during any fiscal year on account of the leasing of lands acquired by the United States for flood control, navigation, and allied purposes, including the development of hydroelectric power, shall be paid at the end of such year by the Secretary of the Treasury to the State in which such property is situated, to be expended as the State legislature may prescribe for the benefit of public schools and public roads of the county, or counties, in which such property is situated, or for defraying any of the expenses of county government in such county or counties, including public obligations of levee and drainage districts for flood control and drainage improvements: *Provided*, That when such property is situated in more than one State or county, the distributive share to each from the proceeds of such property shall be proportional to its area therein."

52 Stat. 1226.

SEC. 207. That section 8 of the Flood Control Act approved June 28, 1938, is hereby amended to read as follows:

"That there is hereby authorized an expenditure as required, from any appropriations heretofore or hereafter made for flood control, rivers and harbors, and related purposes by the United States, for the establishment, operation, and maintenance by the Weather Bureau of a network of recording and nonrecording precipitation stations, known as the Hydroclimatic Network, whenever in the opinion of the Chief of Engineers and the Chief of the Weather Bureau such service is advisable in connection with either preliminary examinations and surveys or works of improvement authorized by the law for flood control, rivers and harbors, and related purposes, and the Secretary of the Army upon the recommendation of the Chief of Engineers is authorized to allot the Weather Bureau funds for said expenditure."

50 Stat. 877; 60 Stat. 652.

SEC. 208. That section 2 of the Flood Control Act of August 28, 1937, as amended by section 13 of the Flood Control Act of July 24, 1946, is hereby further amended to read as follows:

Removal of debris, etc.

"That the Secretary of the Army is hereby authorized to allot not to exceed $2,000,000 from any appropriations heretofore or hereafter made for any one fiscal year for flood control, for removing accumulated snags and other debris, and clearing and straightening the channel in navigable streams and tributaries thereof, when in the opinion of the Chief of Engineers such work is advisable in the interest of flood control: *Provided*, That not more than $100,000 shall be expended for this purpose for any single tributary from the appropriations for any one fiscal year."

60 Stat. 642.

SEC. 209. That section 4 of the Act approved July 24, 1946 (Public, Numbered 526, Seventy-ninth Congress), is amended to read as follows:

Recreational facilities in reservoir areas.

"The Chief of Engineers, under the supervision of the Secretary of the Army, is authorized to construct, maintain, and operate public park and recreational facilities in reservoir areas under the control of the Department of the Army, and to permit the construction, maintenance, and operation of such facilities. The Secretary of the Army is also authorized to grant leases of lands, including structures or facilities thereon, in reservoir areas for such periods, and upon such terms and for such purposes as he may deem reasonable in the public

interest: *Provided*, That leases to nonprofit organizations for park or recreational purposes may be granted at reduced or nominal considerations in recognition of the public service to be rendered in utilizing the leased premises: *Provided further*, That preference shall be given to Federal, State, or local governmental agencies, and licenses, or leases where appropriate, may be granted without monetary considerations, to such agencies for the use of all or any portion of a reservoir area for any public purpose, when the Secretary of the Army determines such action to be in the public interest, and for such periods of time and upon such conditions as he may find advisable: *And provided further*, That in any such lease or license to a Federal, State, or local governmental agency which involves lands to be utilized for the development and conservation of fish and wildlife, forests, or other natural resources, the licensee or lessee may be authorized to cut timber and harvest crops as may be necessary to further such beneficial uses and to collect and utilize the proceeds of any sales of timber and crops in the development, conservation, maintenance and utilization of such lands. Any balance of proceeds not so utilized shall be paid to the United States at such time or times as the Secretary of the Army may determine appropriate. The water areas of all such reservoirs shall be open to public use generally, without charge, for boating, swimming, bathing, fishing, and other recreational purposes, and ready access to and exit from such water areas along the shores of such reservoirs shall be maintained for general public use, when such use is determined by the Secretary of the Army not to be contrary to the public interest, all under such rules and regulations as the Secretary of the Army may deem necessary. No use of any area to which this section applies shall be permitted which is inconsistent with the laws for the protection of fish and game of the State in which such area is situated. All moneys received by the United States for leases or privileges shall be deposited in the Treasury of the United States as miscellaneous receipts."

Short title.

SEC. 210. Title II may be cited as the "Flood Control Act of 1954".

Approved September 3, 1954.

Public Law 781 CHAPTER 1265

AN ACT

September 3, 1954
[H. R. 9927]

To amend certain provisions of title XI of the Merchant Marine Act, 1936, as amended, to facilitate private financing of new ship construction, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 1101 of the Merchant Marine Act, 1936, as amended (U. S. C., title 46, sec. 1271), is hereby amended to read as follows:

52 Stat. 969.

"SEC. 1101. As used in this title—

"(a) The term 'mortgage' includes a preferred mortgage as defined in the Ship Mortgage Act, 1920, as amended, and a mortgage which will become a preferred mortgage when recorded and endorsed as required by the Ship Mortgage Act, 1920, as amended;

"Mortgage."
41 Stat. 1000.
46 USC 984.

"(b) The term 'loan' includes any loan or advance of credit other than a mortgage loan;

"Loan."

"(c) The term 'vessel' includes all types of passenger, cargo, and combination passenger-cargo carrying vessels, tankers, tugs, towboats, barges, and dredges documented under the laws of the United States, and fishing vessels owned by citizens of the United States;

"Vessel."

HQ AR005828-HQ AR005864

Calendar No. 2026

83D CONGRESS, 2d Session } SENATE { REPORT No. 2007

AUTHORIZING THE CONSTRUCTION, REPAIR, AND PRESERVATION OF CERTAIN PUBLIC WORKS ON RIVERS AND HARBORS FOR NAVIGATION, FLOOD CONTROL, AND FOR OTHER PURPOSES

JULY 29 (legislative day, JULY 2), 1954.—Ordered to be printed

Mr. MARTIN, from the Committee on Public Works, submitted the following

REPORT

[To accompany H. R. 9859]

The Committee on Public Works, to whom was referred the bill (H. R. 9859) authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes, having considered the same, report favorably thereon with amendments, and recommend that the bill, as amended, do pass.

The amendments are indicated in the bill as reported and are shown by linetype and italic.

GENERAL STATEMENT

This is a combined omnibus river and harbor and flood-control bill, title I dealing with river and harbor authorizations, and title II dealing with flood-control authorizations. It is the first general authorization bill since the act of May 17, 1950. The Committee on Public Works of the House of Representatives has held extensive hearings on a total of more than 85 river and harbor projects, 22 beach-erosion projects and 40 flood-control projects, including some multiple-purpose projects, modifications of projects, additional basin authorizations and a few preliminary examinations and surveys. The Corps of Engineers, Department of the Army, testified on all projects contained in the bill. Local interests were afforded full opportunity to present their views for or against the matters under consideraion.

The Committee on Public Works of the Senate has considered the bill as passed by the House and in addition, it has held hearings on other projects which were proposed for consideration subsequent to the close of the House hearings. The committee concurs in the action of the House with respect to the projects approved by that body and it recommends approval of those projects by the Senate. It has con-

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sidered the additional projects upon which it held hearings, and it believes that most of them are fully justified for authorization at this time. A few were passed over without prejudice for the reason that they had not been processed to a point where adequate data could be made available for the consideration of the committee. Amendments are recommended to authorize those projects for which sufficient data and justifications were available.

This report contains descriptions of all projects and modifications recommended by the committee. Similarly, the report of the House committee, House Report No. 2247, 83d Congress, contains descriptions of all projects and modifications which are in the bill as passed by the House. Tabulations are also included in this report listing under separate titles the projects as passed by the House and those recommended by the committee.

General discussions of the river and harbor and flood-control programs are printed in House Report No. 2247. The committee concurs generally in the material presented in those discussions and it has repeated portions of them in this report for the convenience of the Senate.

A period of 4 years has elapsed since the last omnibus bill, longer than any intervening time between any preceding omnbius bills. As a result, a great number of projects were eligible for consideration. To offset the large number of projects, the committee has attempted to hold down the total monetary authorizations by judicious use of balances of monetary authorizations available in certain river basins. With respect to existing basin authorizations, the committee has adopted the principle that in those basins where deficits in authorizations are imminent, increased amounts should be granted to permit orderly continuation of the work on the assumption that the next omnibus bill would be not later than the fiscal year 1956. In some cases the committee has approved the authorization of new basin plans of considerable scope but has limited the monetary authorization to amounts needed for the immediate future. However, the increased scope of work in these new basin plans which is not covered by monetary authorization in this bill is offset by increased monetary authorizations for work under existing basin plans where there is no increase in scope.

For comparative purposes, the size of the present bill is compared with the size of the omnibus bills during the last 10 years in the following table:

Act	River and harbor	Flood control	Total
1944 Flood Control Act and 1945 River and Harbor Act	$381, 968, 000	$950, 000, 000	$1, 331, 968, 000
1946 Flood Control and River and Harbor Acts	521, 295, 000	772, 000, 000	1, 293, 295, 000
1950 Flood Control and River and Harbor Acts	203, 723, 125	1, 250, 000, 000	1, 453, 723, 125

NOTE.—Table excludes 1948 act, which covered relatively few projects of an emergency nature and was not of the magnitude of the usual omnibus bill.

The committee points out that the total of the present bill, is approximately $1 billion, whereas all previous bills during the last 10 years with the exception of the small 1948 bill which was fundamentally of an emergency nature, were appreciably in excess of $1 billion. If increases in the general price level were taken into

account, the relative reduction in the size of this bill would be much more marked.

The estimated cost of the projects reported in this bill (titles I and II) are based on current prices, which in general are those prevailing during the past year. They differ in general from the estimated amounts in the project documents depending upon the date of the document.

The committee did not consider it advisable to fix the actual cost of the work at these figures since at the time the work is undertaken there will undoubtedly be changes in price levels and possibly modifications in the plans as a result of more detailed engineering studies. The committee, however, does not consider that any untoward increases in estimated costs are automatically authorized and expects the Corps of Engineers to appear before it in explanation of any such increases prior to construction.

TITLE I—RIVERS AND HARBORS

The waterway transportation system of the United States is a Federal responsibility stemming from the beginning of the Nation. The work of improvement has been efficiently and competently executed by the Corps of Engineers. The size of the completed program which Congress has authorized over many years is indicated by the fact that there are now a total of 1,769 authorizations or modifications of previous authorizations for river and harbor improvements. The total cost of the completed navigation program is $856 million. The total number of navigation projects or modifications now underway but not completed is 143 and the total cost is $1,409 million, of which $878 million has been appropriated through the fiscal year 1954. Navigation projects or modifications authorized but not yet started total 254 in number and have a total estimated cost of $911 million of which $5 million has been appropriated to date for planning purposes. The total active navigation program, therefore, amounts to 2,166 projects or modifications, having a total estimated cost of $3,176 million, of which $1,739 million is the cost to date. The foregoing figures exclude a few multiple-purpose projects which include other major functions in addition to navigation. Technically authorized but considered inactive or deferred for restudy are a number of navigation projects not included in the foregoing figure.

These projects lie in all parts of the United States and its possessions and include 28,000 miles of improved waterways, about 500 locks and dams, and almost 300 commercial harbors. Outstanding among them are the great coastal ports such as Boston, New York, Baltimore, Norfolk, Houston, Los Angeles, and San Francisco, the Great Lakes system and its many lake ports, and the inland and intracoastal waterways along the Atlantic and gulf coast and through the Mississippi-Ohio artery. The substantial and widespread benefits from the navigation program have demonstrated that the investment has been wisely made, both from the standpoint of economics and national welfare. The system has facilitated the growth of trade with other nations, developed commerce among the States, and contributed to the security and continued growth of the Nation. Commercial statistics for the latest calendar year (1952) show that the net waterborne commerce of the United States totaled about 890

million tons in that year, of which about 660 million were domestic and 230 million were foreign. This is 50 percent greater than the prewar peak of 1929. This committee pointed out in its report (Rept. No. 1143, 81st Cong.), in connection with the 1950 River and Harbor Act, that an alltime record total of 760 million tons had been reached in 1947. The figures given above show that that alltime total was exceeded by 11 percent in only 6 years.

With respect to the inland waterways system, a total of 168 billion ton-miles were carried in the calendar year 1952. Of this total 104 billion were on the Great Lakes and 37 billion on the Mississippi-Ohio system. This represents an increase of 42 percent in the total ton-mileage since 1940, when the total commerce was 118 billion ton-miles.

Development of these waterways during the years of peace has resulted in the acquisition of a valuable asset in time of war. For example, the inland waterways during the last war were used to float almost 4,000 war vessels and several hundred items of auxiliary equipment from inland shipyards to the ocean. America's rivers and canals thus served a twofold purpose during the war. They shared importantly in the transportation of strategic materials and they made possible a widespread geographical diffusion of manufacturing processes that otherwise would have been forced into congested coastal areas.

The committee during the testimony was impressed by the increasing use of larger and more economic vessels. These vessels, with deeper draft, greater lengths and beams have accelerated the need for progressive modification of the navigation program. The use of these larger and deeper draft carriers will result in eventual betterment of the economy and a lowering of prices to the consuming American public.

This the committee notes is one reason for the navigation survey program to be kept current in order that the improvements can be made sensitive to transportation trends. Since the survey program is the basic source of the entire navigation program, the committee feels that the backlog of preliminary examinations and surveys now assigned by the Congress to the Corps of Engineers should be more adequately financed. The future survey program should be reduced by a periodic pruning of authorized investigations so as to eliminate those which may no longer serve a useful or desired purpose.

The committee wishes to commend the Corps of Engineers for the work it has done in reviewing its outstanding investigations, with a view to classifying those obsolete as inactive.

PROJECTS IN TITLE I OF BILL AS PASSED BY HOUSE

SECTION 101

Projects	Document No.[1]	Federal cost of new work
Lubec Channel, Maine	S. 243, 81st Cong.	$74,000
Portsmouth Harbor and Piscataqua River, Maine and N. H.	H. 556, 82d Cong.	952,000
Lynn Harbor, Mass.	H. 568 81st Cong.	65,000
Weymouth Fore River, Mass.	H. 555, 82d Cong.	4,400,000
Town River, Quincy, Mass.	H. 108, 83d Cong.	525,000
Scituate Harbor, Mass.	H. 241, 83d Cong.	375,000
Fall River Harbor, Mass.	H. 405, 83d Cong.	694,000
Bullocks Point Cove, R. I.	H. 242, 83d Cong.	166,400
Sakonnet Harbor, R. I.	H. 436, 82d Cong.	555,400
Patchogue River, Conn.	H. 164, 83d Cong.	135,000
Westport Harbor and Saugatuck River, Conn.	H. 488, 81st Cong.	112,500
Westchester Creek, N. Y.	H. 92, 82d Cong.	32,200
Hudson River, N. Y.	H. 223, 83d Cong.	31,028,000
Shoal Harbor and Compton Creek, N. J.	H. 89, 82d Cong.	138,000
Hackensack River, N. J.	H. 252, 82d Cong.	1,973,900
Mispillion River, Del.	S. 229, 81st Cong.	469,400
Inland waterway from Delaware River to Chesapeake Bay, Del. and Md.	S. 123, 83d Cong.	101,000,000
Queenstown Harbor, Md.	H. 718, 81st Cong.	31,900
Little Creek, Kent Island, Queen Annes County, Md.	H. 715, 81st Cong.	23,000
Anchorage at Lowes Wharf, Talbot County, Md.	H. 90, 82d Cong.	29,000
Nanticoke River, Bivalve, Wicomico County, Md.	H. 91, 82d Cong.	192,600
Webster Cove, Somerset County, Md.	H. 619, 81st Cong.	20,300
Crisfield Harbor, Md.	H. 435, 81st Cong.	101,750
Rhodes Point to Tylerton, Somerset County Md.	H. 51, 82d Cong.	45,100
Pocomoke River, Md.	H. 486, 81st Cong.	678,300
Ocean City Harbor and Inlet, Sinepuxent Bay, Md.	H. 444, 82d Cong.	704,000
Parrotts Creek, Va.	H. 46, 82d Cong.	38,700
Norfolk Harbor and Thimble Shoal Channel, Va.	S. 122, 83d Cong.	6,138,700
Deep Creek, Accomack County, Va.	H. 477, 81st Cong.	95,000
Oyster Channel, Va.	S. 49, 83d Cong.	75,200
Wallace Channel, Pamlico Sound, N. C.	H. 453, 81st Cong.	108,000
Smiths Creek, N. C.	H. 170, 83d Cong.	102,000
Channel from Hatteras Inlet to Hatteras, and Rollinson Channel, N. C.	H. 411, 83d Cong.	175,000
Peltier Creek, N. C., to Intracoastal Waterway	H. 379, 81st Cong.	43,200
Channel Port Royal Sound to Beaufort, S. C.	H. 469, 81st Cong.	765,000
Savannah Harbor, Ga.	H. 110, 83d Cong.	414,900
Rice Creek, Putnam County, Fla.	H. 440, 82d Cong.	82,200
Hillsboro River, Fla.	H. 567, 81st Cong.	16,600
Apalachicola Bay, Fla.	H. 156, 82d Cong.	98,000
Apalachicola Bay, Fla., channel across St. George Island	H. 557, 82d Cong.	635,700
St. Joseph Bay, Fla.	H. 595, 81st Cong.	1,312,000
Mobile Harbor, Ala.	H. 74, 83d Cong.	5,778,000
Dauphin Island Bay, Ala.	H. 394, 82d Cong.	70,000
Bayou Segnette Waterway, La.	H. 413, 83d Cong.	520,000
Sabine-Neches Waterway, Tex.	S. 80, 83d Cong.	6,875,000
Guadalupe River at Seadrift, Tex.	H. 478, 81st Cong.	74,300
Aransas Pass, Tex., in connection with the Gulf Intracoastal Waterway.	H. 376, 83d Cong.	30,700
Turtle Cove, Tex.	H. 654, 81st Cong.	40,000
Port Aransas-Corpus Christi Waterway, Tex.	H. 89, 83d Cong.	829,100
Mississippi River at Louisiana, Mo.	H. 251, 82d Cong.	82,600
Mississippi River at Chester, Ill.	H. 230, 83d Cong.	65,000
Crooked Slough Harbor, Winona, Minn.	H. 347, 83d Cong.	142,000
Cumberland River, Ky. and Tenn.	S. 81, 83d Cong.	
Green and Barren, Ky.	S. 82, 83d Cong.	3,434,000
Knife River Harbor, Minn.	H. 463, 83d Cong.	219,000
Cornucopia Harbor, Wis.	H. 434, 83d Cong.	220,000
Sheboygan Harbor, Wis.	H. 554, 82d Cong.	217,200
Holland Harbor, Mich.	H. 282, 83d Cong.	574,400
Crooked and Indian Rivers, Mich.	H. 142, 82d Cong.	225,000
Toledo Harbor, Ohio	H. 620, 81st Cong.	512,000
Erie Harbor, Pa.	H. 345, 83d Cong.	174,000
Black Rock Channel and Tonawanda Harbor, N. Y.	H. 423, 83d Cong.	270,000
Little River at Cayuga Island, Niagara Falls, N. Y.	H. 246, 83d Cong.	36,900
Oswego Harbor, N. Y.	H. 487, 81st Cong.	2,459,000
Los Angeles and Long Beach Harbor, Calif.	H. 101, 83d Cong.	896,500
Playa del Rey Inlet and Harbor, Venice, Calif.	H. 389, 83d Cong.	3,869,000
Port Hueneme, Calif.	H. 362, 83d Cong.	5,437,000
Rogue River, harbor at Gold Beach, Oreg.	S. 83, 83d Cong.	3,758,700
Umpqua Harbor and River, Scholfield River at Reedsport, Oreg.	S. 133, 81st Cong.	41,000
Columbia River at the mouth, Oregon and Washington	H. 249, 83d Cong.	8,555,000
Columbia River between Chinook, Wash., and the head of Sand Island.	S. 8, 83d Cong.	227,100
Willapa River and Harbor and Naselle River, Wash.	H. 425, 83d Cong.	977,000
Grays Harbor and Chehalis River, Wash.	H. 412, 83d Cong.	421,800
Grays Harbor and Chehalis River (Westhaven breakwater), Wash.	H. —, 83d Cong.	323,700

[1] H indicates House document; S indicates Senate document.

SECTION 101—continued

Projects	Document No.[1]	Federal cost of new work
Anacortes Harbor, Wash	S. 102, 83d Cong	$179,300
Neah Bay, Wash	H. 404, 83d Cong	139,250
Bellingham Harbor, Wash	H. 558, 82d Cong	1,366,650
Blaine Harbor, Wash	H. 240, 83d Cong	436,000
Shilshole Bay, Seattle, Wash	H. 536, 81st Cong	3,307,300
Port Angeles Harbor, Wash	H. 155, 82d Cong	477,900
Everett Harbor and Snohomish River, Wash	H. 569, 81st Cong	395,500
Quillayute River, Wash	H. 579, 81st Cong	425,550
Seward Harbor, Alaska	H. 182, 83d Cong	81,200
Valdez Harbor, Alaska	do	116,600
Honolulu Harbor, T. H	H. 717, 81st Cong	3,022,000
Total		212,915,100

[1] H indicates House document; S indicates Senate document.

AMENDMENTS—PROJECTS RECOMMENDED BY SENATE COMMITTEE

ITEMS ADDED (SEC. 101)

Projects	Document No.[1]	Federal cost of new work
Delaware River, Pa., N. J., and Del	H. 358, 83d Cong	$91,389,000
Wilmington Harbor, N. C. (reimbursement)		0
Charleston Harbor, S. C	S. 136, 83d Cong	200,000
Carabelle Harbor, Fla. (maintenance only)	H. 451, 83d Cong	0
Pascagoula Harbor, Miss		877,000
Port Aransas-Corpus Christi Waterway, Tex		180,000
Ashtabula Harbor, Ohio		4,900,000
Richmond Harbor, Calif	H. 395, 83d Cong	2,086,000
Tillamook Bay and Bar, Oreg	S. 128, 83d Cong	1,500,000
Tacoma Harbor, Wash		634,200
Sitka Harbor, Alaska	H. 414, 83d Cong	41,500
Dry Pass, Alaska	do	1,419,800
Nova Strait, Alaska	do	224,400
Kodiak Harbor, Alaska	H. 465, 83d Cong	1,685,000
Nawiliwili and Port Allen Harbors, T. H	H. 453, 83d Cong	1,166,400
Total		106,303,300

[1] H denotes House document; S denotes Senate document.

RIVERS AND HARBORS

SUMMARIES OF PROJECTS RECOMMENDED BY SENATE COMMITTEE

DELAWARE RIVER, PA., N.J., AND DEL.

(H. Doc. 358, 83d Cong.)

The following description is from Senate Report No. 1817, on Senate bill 2317, reported by the Committee on Public Works on July 16, 1954:

The Delaware River rises in southeastern New York, flows southeasterly for 367 miles, and empties into Delaware Bay at Liston Point. The bay extends 47 miles to the ocean entrance between Cape May, N. J., and Cape Henlopen, Del. The river drains an area of 11,400 square miles, and in its lower reaches forms the boundary line between New Jersey on the east and Pennsylvania on the west. The stream is tidal below Trenton.

EXISTING PROJECT

The existing project for the Delaware River between Philadelphia and Trenton provides for a channel 28 feet deep and 300 feet wide from Allegheny Avenue in Philadelphia to the Pennsylvania Railroad bridge at Delair; thence a channel 25 feet deep and 300 feet wide to the upper end of the municipal marine terminal at Trenton; thence a channel 12 feet deep and 200 feet wide upstream to the Pennsylvania Railroad bridge at Trenton; with necessary widening at bends, turning basins, side channels, and anchorages. The total costs to June 30, 1952, were $5,189,817 for new work and $1,053,711 for maintenance. The estimate for annual cost of maintenance is $232,000. The limited expenditures for maintenance in recent years has permitted some shoaling to occur.

The existing project from Philadelphia to the sea provides for a channel 37 feet deep from Allegheny Avenue in Philadelphia to the Philadelphia Navy Yard, thence 40 feet deep to deep water in Delaware Bay, with widths of from 800 to 1,200 feet; construction and maintenance of additional dikes and training works; necessary anchorages; and maintenance of a channel enlargement opposite the Navy Yard. The total cost to June 30, 1952, was $28,460,608 for new work and $64,248,976 for maintenance. An expenditure of $6,440,000 will be required to complete the project. The approved estimate for annual maintenance cost is $6,165,000.

RECOMMENDED IMPROVEMENTS

The Chief of Engineers and the Board of Engineers for Rivers and Harbors, in House Document No. 358, recommend that the existing project for the Delaware River from Philadelphia to Trenton be modified to provide for enlarging the existing channel from Allegheny Avenue in Philadelphia to the upstream end of Newbold Island, a distance of 23.5 miles, to a depth of 42 feet in rock and 40 feet in other material and a width of 400 feet in the straight reaches with suitable widening at bends, including relocation of the channel at the Pennsylvania Railroad bridge at Delair and suitable reconstruction of the bridge; for deepening the existing channel from the upstream end of Newbold Island to the Trenton marine terminal a distance of 5.5 miles, to 35 feet and widening the turning basin to 800 feet; for constructing such bank protection works as may be necessary; and for eliminating the authorized anchorage near the mouth of Biles Creek, Pa.

That the existing project for the Delaware River from Philadelphia to the sea be modified to provide for deepening the channel from the Philadelphia Navy Yard to Allegheny Avenue in Philadelphia, a distance of 8.5 miles, to 42 feet in rock and 40 feet in other material, with a width of 500 feet through Horseshoe Bend and 400 feet through Philadelphia Harbor to Allegheny Avenue.

The modification is recommended provided that local interests agree to: (*a*) furnish, free of cost to the United States, all lands, easements, rights-of-way, and spoil-disposal areas necessary for construction of the project and for subsequent maintenance when and as required; (*b*) hold and save the United States free from damages due to the construction and maintenance of the improvements; (*c*) that the United States Steel Co. agree to provide at its expense suitable terminal and transfer facilities at its Fairless plant, including a turning basin if and when required.

ESTIMATED COST

The estimated Federal cost of the recommended improvements between Philadelphia, Pa., and Trenton, N. J., is $86,899,000 for construction and $759,600 annually for maintenance in addition to that now required.

The estimated Federal cost of the recommended improvements from Philadelphia to the sea is $4,490,000 for construction, with no increase in the annual cost of maintenance.

HEARINGS

The committee held extensive hearings on S. 2317 on May 13, 1954. Members of Congress and representatives of cities and States, chambers of commerce, Delaware River Port Authority, civic organizations, waterways associations, and others, testified recommending authorization of this project.

It was stated that in 1951 traffic on the Delaware River was 73 million tons, of which 8 million was between Philadelphia and Trenton. This was an increase of about 40 percent in total commerce handled between 1946 and 1951. The estimated requirements at the new Fairless steel mill at Morrisville, Pa., will be about 13 million tons in 1960, as stated by a port official.

The committee was favorably impressed with the information presented on the development of the Delaware River port area that has taken place, the

terminal facilities available, and the need for additional improvements needed to safely care for the new 45,000-ton ore vessels being planned to bring iron ore from Venezuela to the Fairless plant. The defense aspects of the proposed improvement were considered to be of vital importance.

BENEFITS

The large amount of commerce on the Delaware River is essential to the widespread business and industrial activities in the vicinity of Philadelphia, Camden, and Trenton. An area within 100-mile radius of these port facilities, includes the cities of New York and Baltimore, with a population of 21 million. The local area is almost entirely industrial, containing numerous manufacturing and processing plants of national importance in the character and volume of their products, as well as many smaller industries. It is well served by several important railroad systems and a network of State and national highways. There are about 300 wharves and piers in the harbor area, most of which are open to the public and equipped to handle general cargo. Commerce consists of sand and gravel, bituminous and lignite coal, crude petroleum and petroleum products, iron ore, sugar, grain, and many varied products from all over the world.

Enlargement of the project is now essential to accommodate traffic that has developed, and to relieve congestion in the harbor and enable full use of the terminals. Extension to Trenton is necessary due to the recent construction of a large modern steel plant by the United States Steel Co. below Morrisville, Pa. This plant will receive high iron content ores from Venezuela and other foreign sources directly by water and is vital to national defense and national welfare. The estimated average annual benefits, based on the savings in transportation cost on coal and iron ore principally, are $8,450,000. The benefit cost ratio is 1.93. These benefits do not include prospective commerce from additional industries that are expected to locate in the area, or others that might use the facility.

DISCUSSION

The committee believes that an increased navigable depth between Philadelphia and Trenton is necessary for the continued and unimpeded development of the industrial area in the Delaware River Basin, with large regional and national benefits. The industrial area is expanding and important defense industries requiring improved navigation facilities are now located in the area. New industries along the channel below Newbold Island will doubtless be established to make further use of the deeper channel.

The committee considered the recommendation of the Chief of Engineers that local interests contribute one-half the additional cost for construction of the 40-foot channel over a 35-foot channel. It believes that adoption of this recommendation would be inconsistent with the national policy followed for many years on navigation projects over the entire country.

The committee concluded that the 40-foot project should be authorized and constructed in a single operation to effect greater transportation and construction economies. It believes the project to be amply justified, and that the benefits from the deeper project will be widespread, as are other deep-draft navigation projects required for movement of vessels having drafts in excess of 35 feet, and that the Delaware River project should be treated the same as other projects.

WILMINGTON HARBOR, N. C.

Modification of the existing project for Wilmington Harbor, N. C., was authorized by the River and Harbor Act approved May 17, 1950. The authorized project provides for a channel 35 feet deep and 400 feet wide through the ocean bar from the Atlantic Ocean into Cape Fear River, and 34 feet deep and 400 feet wide up Cape Fear River to the upper end of the anchorage basin at Wilmington, including the anchorage basin and increased width at the bends. The total estimated cost is $2,093,700. No funds have been appropriated for this work.

During the fall of 1951, the North Carolina Ports Authority dredged an area in the transition channel and within the wider channel limits of the Federal project, to a depth of 32 feet, to facilitate operation of

the port and turning basin and increase the value of Wilmington Harbor to general commerce. The cost of the work was $65,000.

The work performed is a part of the Federal project and would have to be done as a part of that project when its construction is undertaken. The work was accomplished subsequent to the Federal authorization, and reimbursement to the State can be made when appropriations for the project become available, subject to a finding by the Chief of Engineers that the work has been done in accordance with the authorized project.

CHARLESTON HARBOR, CHARLESTON, S. C.

(S. Doc. 136, 83d Cong.)

Location: Charleston Harbor includes the lower portion of the tidal estuaries of the Cooper and Ashley Rivers, which unite and flow into the Atlantic about midway of the coast of South Carolina. Mean tide range is 5.2 feet.

Report authorized by: House Public Works Committee resolution, May 12, 1950.

Existing project: Federal navigation project provides for channel 35 feet by 1,000 feet from sea to the inner end of jetties, then 600 feet wide to Town Creek, then 500 feet wide through Town Creek, then 600 feet wide to navy yard, then 400 feet wide to Goose Creek with turning basin, 700 feet at port terminals, together with a 30-foot by 600-foot channel in Cooper River around the east and north side of Drum Island; an anchorage area, 30 feet deep between Castle Pinckney and Fort Moultrie; and shallow draft improvement in Shem Creek.

Recommended plan of improvement: Modification of existing project to provide for a channel 35 feet deep in Cooper River east and north of Drum Island.

Estimated cost:

	Federal	Non-Federal	Total
Survey report	$200,000		$200,000

Local cooperation: Local interests will provide all lands, easements, and rights-of-way for construction and maintenance and hold and save the United States free from damage.

Project economics:

Annual charges:	
Interest and amortization	$7,100
Increased maintenance	114,000
Total	121,100

Annual benefits: Unevaluated. Includes elimination of hazard, greater maneuverability, relief of traffic congestion, savings in time for vessels using Town Creek wharves, and more practical from a Navy standpoint.

Benefit-cost ratio: Not evaluated.

Remarks: The new east passage around Drum Island will reduce the collision hazard, particularly for large tankers.

CARRABELLE HARBOR, FLA.

(H. Doc. 451, 83d Cong.)

Location: Carrabelle Harbor, Fla., is on the east bank of Carrabelle River about 1.5 miles from its mouth. The river, a small tidal stream about 400 to 700 feet wide and up to 28 feet deep, enters St. George Sound on the gulf coast 22 miles east of the Apalachicola River. Upstream from the harbor, broad mud flats extend from the harbor bank to midstream. The mean range of tide is 1.9 feet.

Report authorized by: River and Harbor Act, May 17, 1950.

Existing project: The existing Federal project provides for an entrance channel 27 feet deep and 200 feet wide from the Gulf of Mexico through East Pass to a point west of Dog Island, thence 25 feet deep and 150 feet wide through St. George Sound and Carrabelle River to a turning basin 500 feet square and 25 feet deep at the town of Carrabelle, a total distance of about 8 miles. The present controlling depth is about 16 feet.

Plan of recommended improvement: Modification of the existing project to provide for maintenance of a channel dredged with emergency funds in 1951 at a cost of $3,800. The channel, 8 feet deep and 60 feet wide, extends along the waterfront of Carrabelle, Fla., 1,200 feet from the head of the existing project turning basin.

Estimated cost: No additional first cost because dredging has been accomplished.

Local cooperation: Local interests will provide suitable spoil disposal areas and hold and save the United States free from damage.

Project economics:

	Project document	Current
Annual charges	$1,630	$1,630
Annual benefits	$2,810	$2,810
Benefit-cost ratio	1.72	1.72

Remarks: The project is economically justified on benefits from reduced delays and damages to vessels, and from elimination of the rehandling of seafood.

PASCAGOULA HARBOR, MISS.

Location: Pascagoula Harbor is located along the lower 6.8 miles of Pascagoula River and the lower 4 miles of Dog River. It is in southeastern Mississippi, about 61 miles by water west of Mobile Harbor, Ala., and about 44 miles east of Gulfport Harbor, Miss.

Report authorized by: House Public Works Committee resolution adopted August 16, 1950.

Existing project: Provides for a through channel of the maximum dimensions that can be secured by the expenditure of $283,000, but not exceeding 25 feet deep and 300 feet wide across the outer bar at Horn Island Pass, thence 22 feet deep and 225 feet wide to the railroad bridge at Pascagoula, thence 22 feet deep and 150 feet wide, to a point on Dog River 4 miles above its mouth. The River and Harbor Act of 1950 modified the project to provide for a cutoff channel in Dog River. The total length of the existing project is 21.7 miles.

Plan of recommended improvement: Channel from the Gulf of Mexico to the L. & N. Railroad bridge in Pascagoula, having a depth of 30 feet and a width of 250 feet, with 35-foot depth over the bar.

Estimated cost:

From Gulf of Mexico to beacon A	$392,000
From beacon A to railroad bridge	485,000
Total	877,000

Remarks: Local interests have indicated that an oil company is planning to build a refinery at Pascagoula and there is a possibility that an aluminum company may build a plant in the area to take ore shipped from British Guiana.

This project represents an emergency need for channel improvement of an existing channel to meet the contemplated shipping needs from the planned installation of a refinery at Bayou Cassotte. The committee was told that as a part of the development plans the local authorities are going to spend $2 million for a channel leading from Bayou Cassotte to the public channel.

PORT ARANSAS-CORPUS CHRISTI WATERWAY

(Report of Chief of Engineers, May 24, 1954)

Location: In southern portion of coast of Texas, 180 miles southwest of Galveston and 132 miles north of the mouth of the Rio Grande.

Report authorized by: House Public Works Committee resolution adopted September 27, 1951.

Existing project: Provides jettied entrance from Gulf of Mexico, channels for deepwater navigation 38 and 36 feet deep. Affords deepwater navigation to Harbor Island and Corpus Christi with turning basins at Corpus Christi, Avery Point, and an inner basin at Harbor Island.

Plan of recommended improvement: Modification of existing project to provide for an entrance channel 36 feet deep and 400 feet wide on a tangent alinement from the 400-foot channel in Corpus Christi Bay near the Corpus Christi breakwater, to the flared approach channel to the Corpus Christi turning basin.

Estimated cost:

	Federal	Non-Federal	Total
Report (December 1953)	$180,000	$500,000	$680,000

Local cooperation: Furnish lands, easements, rights-of-way, spoil-disposal areas; accomplish relocation and alteration of pipeline and cable crossings on rights-of-way and removal of buildings, structures, and a portion of rubble-mound breakwater, hold and save the United States from damage.

Project economics:

	Current
Annual charges:	
Interest and amortization	$26,700
Maintenance	$5,300
Total	$32,000
Annual benefits:	
Savings on transportation	$37,400
Reduction in hazards to navigation	$35,000
Total	$72,400
Benefit-cost ratio	2.2

Remarks: The proposed modification of the Port Aransas-Corpus Christi Waterway will afford material benefits to established and prospective commerce by a reduction in hazards to navigation and a saving in transportation costs.

ASHTABULA HARBOR, OHIO

(Report of Chief of Engineers, June 29, 1954)

Location: On southerly shore of Lake Erie at mouth of Ashtabula River, 59 miles east of Cleveland.

Report authorized by: House Public Works Committee resolution adopted June 24, 1953.

Existing project: Provides in general for an outer harbor protected by two breakwaters; an entrance channel 28 feet deep between existing breakwaters 600 feet wide, a channel 25 feet deep and 1,100 feet maximum width through outer harbor to inner east breakwater; a channel 24 feet deep to mouth of Ashtabula River, channel 24 feet deep to a point 2,000 feet upstream, channel generally 18 feet deep and to the upper car-ferry slip, channel generally 16 feet deep to the southerly end of the turning basin, a channel 16 feet deep to a point 1,550 feet upstream of the turning basin, also an approach channel 24 feet deep, with a minimum width of 250 feet from the 24-foot section of the outer harbor eastward to the New York Central Railroad Co.'s slip.

Plan of recommended improvement: Provides for modification of the existing project for the outer harbor to provide for a 700-foot-wide access channel terminating in a basin having a width of 1,200 feet and about 1,500 feet long to a depth of 25 feet in earth and 26 feet in rock; elimination of portion of existing 21-foot depth area north of recommended approach channel.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$4,900,000		$4,900,000

Local cooperation: Provide all lands, easements and rights-of-way; hold and save the United States free from damages; construct and maintain dock facilities open to all on equal terms; and dredge the slips and access thereto from the basin to depths for full utilization of the Federal project.

Project economics:	*Project documen*
Annual charges	$186, 000
Annual benefits, transportation savings	562, 900
Benefit-cost ratio	3. 0

Remarks: Existing depths inadequate in approach to new dock facilities. Improvement will produce substantial savings to existing and prospective commerce, which has averaged about 14 million tons per year from 1944 to 1953. Principal items of present commerce are iron ore and coal; additional chemical movements are expected. Local interests are providing access roads, dockfill, and dredging, estimated to cost $3,710,000.

RICHMOND HARBOR, CALIF.

(H. Doc. 395, 83d Cong.)

Location: Richmond Harbor is on east side of San Francisco Bay. It extends principally from Point San Pablo southeast about 4.5 miles to Point Richmond.

Report authorized by: House Public Works Committee resolution, April 13, 1948.

Existing project: A channel 20 feet deep and 2,000 feet long on north side of Point San Pablo; approach areas 4,000 and 2,500 feet long and 32 feet deep between deep water in the bay and berthing areas provided by local interests; an inner harbor channel of various widths and 30 feet deep from deep water in the outer harbor to shore end of Santa Fe Channel together with turning basins; and a training wall on bay side of the channel between Points Richmond and Potrero. Project completed except for a strip along west side of channel just north of Point Potrero.

Plan of recommended improvement: A channel 35 feet deep and 600 feet wide adjacent to Southampton Shoal from deep water to the outer harbor, enlarging the approach area in vicinity of Richmond long wharf for 3,670 feet and deepening enlarged area to 35 feet, deepening to 35 feet and widening to 600 feet the inner harbor entrance channel from deep water to the turning basin at Point Richmond, deepening to 35 feet the turning basin at Point Richmond and thence the inner harbor project to a point in Santa Fe Channel 2,000 feet above its entrance, including dredging on the east side of the channel in vicinity of Point Potrero, and maintenance of a suitable approach area at the naval fuel annex wharf to a depth of 35 feet.

Estimated cost:

	Federal	Non-Federal	Total
OCE report (January 1952)	$1, 860, 000	----------	$1, 860, 000
Current (October 1953)	2, 080 000	----------	2, 080, 000

Local cooperation: Furnish necessary easements, hold and save United States free from damages, construct and maintain suitable wharves and shiploading and cargo-storage facilities.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$68,300	$76,500
Maintenance (in addition to existing project)	41,400	41,400
Total	109,700	117,900
Annual benefits	191,800	214,000
Benefit-cost ratio	1.7	1.8

Remarks: Maintenance of the approach area at the naval fuel annex wharf should be with military funds.

TILLAMOOK BAY AND BAR, OREG.

(S. Doc. 128, 83d Cong.)

Location: On Pacific coast of Oregon 47 miles south of Columbia River. Bay separated from ocean by Bayocean Peninsula.

Report authorized by: Senate Public Works Committee resolution, June 20, 1952.

Existing project: Provides for 5,700-foot jetty on north side of entrance; 18-foot bar channel of practicable width; 18 by 200-foot channel from bay to Miami Cove; initial dredging of 12-foot basin and approach channel at Garibaldi; 16 by 200-foot channel to 500-foot wide basin at Hobsonville; and regulating works as required.

Plan of recommended improvement: Close breach in Bayocean Peninsula by constructing sand dike 1.4 miles long on alinement extending between Pitcher Point and town of Bayocean.

Estimated cost:

	Federal	Non-Federal	Total
Report (December 1953)	$1,500,000	$275,000	$1,775,000

Local cooperation: Furnish lands, easements, and rights-of-way; hold and save United States free from damages including damages to oysterbeds and other shellfish grounds; contribute in cash 15 percent, but not to exceed $250,000, of the cost of construction.

Project economics:	*Report (December 1953)*
Annual charges:	
Interest and amortization	$62,600
Maintenance	25,000
Total	87,600
Annual benefits:	
Benefit on Federal channel	116,500
Saving on bay channel maintenance	67,500
Prevention of damage to oyster beds	22,450
Total	206,450
Benefit-cost ratio	2.36

Remarks: The committee notes that the closure of the breach in Bayocean Peninsula is warranted by prospective benefits to navigation and from protection of valuable oyster beds and other economic assets of the bay area. The adoption of this project is recommended.

TACOMA HARBOR WASH. (PORT INDUSTRIAL WATERWAY)

(Report of the division engineer, April 26, 1954)

Location: Tacoma Harbor is in northwestern Washington at the head of Commencement Bay, an arm of Puget Sound, 26 nautical miles south of Seattle.

Report authorized by: River and Harbor Committee, House of Representatives, resolution July 18, 1945.

Existing project: Provides for waterways and channels of varied depths and widths, including dredging to a depth of 30 feet of an area in the Wapato Waterway (renamed Port Industrial Waterway) not nearer than 50 feet from established pierhead lines or lateral limits of the waterway nor 100 feet from the northerly line of East 11th Street. Existing project is about 74 percent complete; dredging of Port Industrial Waterway to a depth of 30 feet would complete the existing project.

Plan of recommended improvement: Modification of the existing project to provide for dredging to a depth of 30 feet below mean lower low water the main channel in Port Industrial (Wapato) Waterway extending from deep water in Commencement Bay to not nearer than 100 feet from the northwest line of Lincoln Avenue, and over widths not nearer than 50 feet from established pierhead lines or lateral limits of the waterway, except through East 11th Street bridge where a channel width of 150 feet shall be provided.

Estimated cost: [1]

	Federal	Non-Federal	Total
March 1954 prices	$634,200	[2] $203,030	$837,230

[1] Includes cost of the authorized project not completed and the recommended extension.
[2] Includes cash contribution or equivalent work of $26,330.

Local cooperation: Furnish lands, easements, disposal areas, and rights-of-way; hold and save United States free from damages; accomplish alterations to utilities; provide and maintain suitable terminal and transfer facilities; bear the additional cost of disposing dredged material from the Federal project as fill on land, such additional cost amounting to about 4 percent of the total dredging cost, or $26,330 at present prices.

Project economics:

Annual charges:	
Federal:	
Interest and amortization	$22,360
Maintenance	14,000
Non-Federal	12,160
Total	48,520
Annual benefits:	
Transportation savings	64,500
Ship repair and construction savings	20,000
Land enhancement	26,400
Total	110,900
Benefit-cost ratio	2.29

Remarks: The extension is needed to provide for expansion of port facilities.

HARBORS AND RIVERS IN ALASKA

(H. Doc. 414, 83d Cong.)

Location: Area concerned is in the western portion of southeastern Alaska. This section is known as the Panhandle or Inside Passage area.

Report authorized by: House Rivers and Harbors Committee resolution, October 30, 1945; River and Harbor Act, March 2, 1945; and Flood Control Act, June 30, 1948.

Existing project: Sitka: Provides for an entrance channel 22 feet deep and 150 feet wide, and a small-boat harbor of about 13 acres and 10 feet deep in Crescent Bay. Small-boat harbor has not been started. Dry Pass: Provides for a channel 60 feet wide and 6 feet deep between El Capitan Passage and Shaken Strait. Completed in 1937. Neva Strait: No Federal project.

Plan of recommended improvement: Sitka: Modification of existing project to provide for dredging the United States Forest Service basin 10 feet deep, 130 feet wide, and 270 feet long, and its approach 10 feet deep. Dry Pass: Modification of existing project to provide for a channel 12 feet deep and 70 feet wide. Neva Strait: Provide a channel 24 feet deep and 200 feet wide through Whitestone Narrows.

Estimated cost (all Federal):

	OCE report (1949)	Current (September 1953)
Sitka	$32,500	$41,500
Dry Pass	1,113,600	1,419,800
Neva Strait	176,000	224,400

Local cooperation: Sitka: Hold and save United States free from damages. Dry Pass and Neva Strait: None required.

Project economics:

	Sitka		Dry Pass		Neva Strait	
	Report	Current	Report	Current	Report	Current
Annual charges:						
Interest and amortization	$1,790	$2,070	$52,120	$61,700	$7,200	$8,320
Maintenance	1,100	1,410	1,850	2,360	2,000	2,550
Total	2,890	3,480	53,970	64,060	9,200	10,870
Annual benefits:						
Prevention of damage or loss	3,000	3,800	17,700	22,550	----------	----------
Transportation savings	----------	----------	44,920	57,270	10,000	12,800
Increased fish catch	----------	----------	----------	----------	7,100	10,170
Total	3,000	3,800	62,620	79,820	17,100	22,970
Benefit-cost ratio	1.04	1.09	1.16	1.25	1.86	2.11

Comments of the Bureau of the Budget: No objection to the submission of the report to Congress.

Remarks: The committee notes that the general benefits from the proposed improvement are sufficient to warrant their provision at Federal expense, and accordingly has included an item in the bill authorizing construction.

KODIAK HARBOR, ALASKA

(H. Doc. 465, 83d Cong.)

(Report of Chief of Engineers, April 16, 1954)

Location: Kodiak Harbor is on the northeastern coast of Kodiak Island in the Gulf of Alaska at the town of Kodiak.

Report authorized by: River and Harbor Act, March 2, 1945 and Flood Control Act, June 30, 1948.

Existing project: Provides for a channel 22 feet deep and 200 feet wide in North Channel. Partial construction was accomplished under a United States Navy contract in 1942.

Plan of recommended improvement: Modification of existing project to provide a small-boat basin of about 12 acres in area dredged to depths of 12 and 8 feet and protected by 2 rock breakwaters about 1,250 and 780 feet long.

Estimated cost:

	Federal	Non-Federal	Total
September 1953 prices	$1,685,000	$198,600	$1,883,600

Local cooperation: Furnish lands, easements, and rights-of-way, including quarry rights; perform maintenance dredging; construct, maintain, and operate mooring facilities and public landing; and hold and save United States free from damages.

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Project economics:

Annual charges:	
Federal:	
Interests and amortization	$59,600
Maintenance	2,000
Non-Federal	17,700
Total	79,300
Annual benefits:	
Storm damage prevented	23,000
Savings in mooring and protecting boats	52,000
Increased net value of fish	33,350
Total	108,350
Benefit-cost ratio	1.37

Remarks: The project is needed to protect fishing craft and other vessels from damage, and it will also result in an increased value of the fish catch.

NAWILIWILI AND PORT ALLEN HARBORS, KAUAI, T. H.

(H. Doc. 453, 83d Cong.)

Location: Nawiliwili Harbor and Port Allen Harbor are about 21 miles apart and are on the southeasterly coast and south coast, respectively, of the Island of Kauai, T. H.

Report authorized by: House Committee on Public Works, June 17, 1948.

Existing project: Nawiliwili—Rubble-mound breakwater 2,150 feet long; entrance channel 35 feet deep, 600 feet wide, and about 2,400 feet long; and an inner basin 35 feet deep, 1,100 feet wide, and about 2,000 feet long. Completed in 1930. Costs to June 30, 1951, $1,197,178 for new work and $302,138 for maintenance. Port Allen—entrance channel 35 feet deep and 500 feet wide; basin 35 feet deep, 1,200 feet wide, and 1,500 feet long; and a breakwater 1,200 feet long. Completed in 1948. Costs to June 30, 1951, $752,645 for new work and $72,848 for maintenance.

Plan of recommended improvement: No improvement of Port Allen Harbor needed at this time. Nawiliwili—Deepen channel to 40 feet over existing project width and enlarge basin to include an additional area, 440 feet wide with an average length of 1,230 feet, deepened to 35 feet.

Estimated cost:

	Federal	Non-Federal	Total
OCE report (November 1952)	$1,121,600	[1] $38,500	$1,160,100
Current (October 1953)	1,166,400	[1] 39,500	1,205,900

[1] Cash contribution.

Local cooperation: Provide easements and rights-of-way, hold and save United States free from damage, contribute in cash cost of revetment of the fill area, $39,500, and maintain and operate terminal and transfer facilities and the improved harbor.

Project economics:

	OCE report	Current
Annual charges	$47,000	$48,600
Annual benefits:		
Direct benefits	58,030	60,400
Increased land value	2,700	2,700
Total	60,730	63,100
Benefit-cost ratio	1.29	1.3

Remarks: The committee notes that the project has a favorable benefit-cost ratio and accordingly recommends its authorization.

Beach Erosion Control

PROJECTS IN BILL AS PASSED BY HOUSE

Projects	Document No.[1]	Federal cost of new work
Hampton Beach, N. H	H. 325, 83d Cong	$140,000
Lynn-Nahant Beach, Mass	H. 134, 82d Cong	189,000
Revere Beach, Mass	H. 146, 82d Cong	402,900
Quincy Shore Beach, Mass	H. 145, 82d Cong	409,000
South Shore, State of Rhode Island	H. 490, 81st Cong	166,550
Hammonassett River to East River (area 2), Conn	H. 474, 81st Cong	
Hammonassett Beach		166,600
Middle Beach		20,400
New Haven Harbor to Housatonic River (area 3), Conn	H. 203, 83d Cong	
Prospect Beach		84,600
Woodmont Shore		42,400
Gulf Beach		13,100
Silver Beach to Cedar Beach		18,300
Housatonic River to Ash Creek (area 7), Conn	H. 248, 83d Cong	
Short Beach		26,500
Seaside Park		119,000
Atlantic City, N. J	H. 538, 81st Cong	2,044,000
Ocean City, N. J	H. 184, 83d Cong	105,000
Cold Spring Inlet (Cape May Harbor), N. J	H. 206, 83d Cong	260,000
Virginia Beach, Va	H. 186, 83d Cong	525,514
Pinellas County, Fla	H. 380, 83d Cong	34,300
Illinois Shore of Lake Michigan	H. 28, 83d Cong	1,170,400
Vermillion to Sheffield Lake Village, Ohio	H. 229, 83d Cong	185,000
Cleveland and Lakewood, Ohio	H. 502, 81st Cong	
Edgewater Park		1,275,000
White City Park		68,900
Presque Isle Peninsula, Erie, Pa	H. 231, 83d Cong	2,006,000
Selkirk Shores State Park, Lake Ontario, N. Y	H. 343, 83d Cong	136,500
Point Mugu to San Pedro Breakwater, Calif	H. 277, 83d Cong	3,874,000
Anaheim Bay Harbor, Calif	H. 349, 83d Cong	
Seal Beach		65,700
Surfside		91,600
Carpenteria to Point Mugu, Calif	H. 29, 83d Cong	73,700
Waikiki Beach, T. H	H. 227, 83d Cong	283,700
Total		14,003,664

[1] H. indicates House document.

There were no additional projects for beach erosion control proposed for consideration by the Senate Committee on Public Works.

Preliminary Examination and Survey Items Added

SECTION 103

Eastern River, at and in the vicinity of Orland, Maine.

Southwest Harbor, Maine.

Vicinity of Wells Beach and Drakes Island, Maine.

Lake Tarpon (formerly Lake Butler), Fla., to determine the cause of salt water intrusion and corrective measures with respect thereto.

Chipola River, Fla., for measures to maintain satisfactory water levels in the Dead Lakes.

Intracoastal Waterway From the Caloosahatchee River to Anclote River

SECTION 105

The original route contemplated was recommended when the proposed right-of-way was mostly wild land. Conditions have greatly changed and if this route were to be used now it would result in cutting off the town of Venice from the gulf and its beaches. Thirty-one homes and five apartment houses are in the first route.

Alternate route C–1 meets with the approval of the Corps of Engineers and the local authorities. Some question has arisen as to the language of the report on the 1950 River and Harbor Act as it applies to this project. The wording of this report was not intended to apply to "any other route as may be deemed feasible by the Chief of Engineers and approved by the Secretary of the Army" and hence the 1948 proviso does not apply to alternate route C–1. This approval of alternate route C–1 will enable the local authorities to proceed with the acquisition of right-of-way without waiting for full details of local contributions to be worked out, and before land values become prohibitive.

Pearl River, Miss.

SECTION 106

The River and Harbor Act approved August 30, 1935, authorized improvement of Pearl River, providing for a channel from the mouth of West Pearl River for 58 miles to the mouth of Bogalusa Creek at Bogalusa, La., by channel work, canals, and three locks. The project is essentially complete at a cost of about $8 million.

One of the requirements of local cooperation recommended in the project document House Document 108, 75th Congress, was that local interests provide ferries and bridges necessary for land traffic across the lateral and terminal canals. At that time the area between the canal and river was predominantly swampland with a few scattered tracts of cultivated land and about 11 homesites. Three or more ferries were to be provided for convenience of egress and ingress of the people living in this area.

There is at present only one family in the area, and because of the nature of the land, no other residents are expected to occupy any part of the area in the foreseeable future. Local interests have communicated with the family and an attempt is being made to arrive at a solution which will eliminate the necessity for the ferry service.

The committee believes that local interests should provide assurances that they will hold and save the United States free from any claim for damage which might result from deprivation of access to the area.

TITLE II—FLOOD CONTROL

Title II covers the flood-control projects, project modifications, basin authorization increases, and certain miscellaneous matters which have been considered and reported favorably. They represent an orderly continuation of the flood-control program throughout the United States and its possessions, which has evolved from the 1936 Flood Control Act and subsequent acts. Included also are project modifications in connection with the great project for the lower Mississippi Valley.

The Congress and the public are now well aware of the importance of flood control and related water-resources development in the growth of this Nation. Public consciousness has been increasingly educated to the need for the control of destructive floodwaters and the harnessing of their energy for beneficial use. Each passing year brings this problem more vividly to the American people. Since passage of the 1950 Flood Control Act, there have been terrible lessons taught in this field, the most notable being that of the disastrous Kansas River flood of 1951 which wrecked the fertile valley, wiped out a part of Kansas City, and caused loss and hardship for many miles downstream. This flood caused a damage of about $1 billion, which is many times more than the entire cost of the projects in this bill for the Kansas River Basin and approaches the total estimated cost for the overall flood-control plan for the Missouri River Basin.

Interest in a Federal flood-control program began during the middle of the last century and culminated in the formation of the Mississippi River Commission by Congress in 1879 and of the California Debris Commission in 1893. As the result of the studies made by these bodies, projects were established by law on the Sacramento River in 1917 and in the alluvial valley of the Mississippi River in 1928. It was recognized that the control of a major stream system like the lower Mississippi was far beyond the ability of local communities or even States.

Flood control as a national policy was firmly established by the National Flood Control Act of 1936 which stated as a declaration of policy that floods constituted a menace to national welfare and that it is the sense of Congress that flood control is a proper activity of the Federal Government in cooperation with States and local interests, where the benefits are in excess of the estimated costs and if the lives and social security of the people are otherwise adversely affected. From that beginning there has grown the important flood-control program undertaken by the United States.

The flood-control program includes 287 authorizations on which work has been fully completed at a total cost of $545 million. At the present time there are 100 projects underway at a total estimated cost of $1,652 million, of which $880 million has been appropriated through fiscal year 1954. This does not include the project for the lower Mississippi River, which has a total estimated cost of $1,293 million, of which $849 million has been appropriated through fiscal year 1954. In the category of flood-control projects not yet started there is a total of 196 with an estimated cost of $1,371 million, of which $12 million has been appropriated through fiscal year 1954 for planning purposes. The total number of projects or project modifications in the active flood-control program, including the Mississippi River as

1 project, is therefore, 584, at a total estimated cost of $4,861 million, of which $2,286 million has been appropriated through fiscal year 1954. In addition there are a number of projects in the authorized backlog which are considered inactive or deferred for restudy. The foregoing figures with respect to numbers of projects and estimated costs do not include a number of multiple-purpose projects which include other major functions as well as flood control.

The flood-control program undertaken by the Federal Government has already brought large returns. It is estimated that if no Federal flood-control measures had been undertaken the total average flood damages in the United States would be in excess of $800 million a year. The Federal flood-control works now in operation prevent flood losses estimated at more than $300 million a year, and a considerable amount of flood damage is prevented by works constructed by local interests. The remaining average annual flood damage actually experienced in this country totals, therefore, about $500 million a year under the present state of development.

Projects in Title II of Bill as Passed by House

SECTION 203

Project	Document No.[1]	New flood-control projects	Increases in authorizations for previously approved projects
Connecticut River Basin:			
Modification of project to provide for Otter Brook Reservoir, N. H.	----------	----------	----------
Modification of plan for West River Basin, Vt.	----------	----------	----------
Susquehanna River, vicinity of Endicott, Johnson City, and Vestal, N. Y.	H. 500, 81st Cong.	$4,469,000	----------
Central and Southern Florida (modification of project).	H. 643, 80th Cong.	----------	$7,000,000
Lower Mississippi River.			
Control of Old and Atchafalaya Rivers and lock for navigation.	(2)	32,000,000	----------
Channel in Old and Atchafalaya Rivers to Morgan City, La.	S. 53, 82d Cong.	440,000	----------
Modification of project for the Vicksburg-Yazoo area.	H. 85, 83d Cong.	----------	----------
Modification of project for New Madrid floodway.	H. 183, 83d Cong.	1,743,000	----------
Buffalo Bayou Basin, flood protection at Houston, Tex.	H. 250, 83d Cong.	16,191,600	----------
Brazos River and tributaries, Oyster Creek and Jones Creek, Tex.	H. 535, 81st Cong.	40,000,000	----------
Guadalupe and San Antonio Rivers, Tex.	H. 344, 83d Cong.	30,251,000	----------
Guadalupe River, Tex. (modification of project for Canyon Dam).	----------	----------	----------
Rio Grande Basin:			
At Albuquerque, N. Mex.	H. 464, 83d Cong.	7,500,000	----------
At Roswell, N. Mex., on Rio Hondo River	H. 436, 83d Cong.	5,058,000	----------
White River Basin: Modification of plan for Greers Ferry Reservoir, Ark., and authorization of Beaver Reservoir, Ark.	(3)	----------	----------
Arkansas River and tributaries, at Enid, Okla.	H. 185, 83d Cong.	965,000	----------
Upper Mississippi River:			
Urban areas at Alton, Ill.	H. 397, 83d Cong.	2,500,000	----------
Guttenberg, Iowa, to Hamburg Bay, Ill.	H. 281, 83d Cong.	30,551,000	----------
Fish Lake Drainage and Levee District, No. 8, Monroe County, Ill.	H. 396, 83d Cong.	480,000	----------
Sny Island levee, Levee Drainage District, Ill.	H. 247, 83d Cong.	7,046,300	----------
Upper Iowa River, Iowa	H. Doc. 375, 83d Cong.	979,600	----------
Missouri River Basin authorization	----------	----------	144,000,000
Kansas River and tributaries, Colorado, Nebraska and Kansas.	H. 642, 81st Cong.	73,710,000	----------
Osage River and tributaries, Missouri and Kansas, modification of project.	H. 549, 81st Cong.	----------	----------
Kansas City, Kans. and Mo., modification of project.			

See footnotes at end of table, p. 23.

SECTION 203—continued

Project	Document No.[1]	New flood-control projects	Increases in authorizations for previously approved projects
Missouri River Basin authorization—Continued			
Chariton River, Iowa and Mo	H. 561, 81st Cong	$19,612,000	
Little Sioux River, Iowa	S. 127, 83d Cong	10,076,005	
Little Missouri River and tributaries at Marmarth, N. Dak.	S. 134, 81st Cong	212,300	
Coal Creek and tributaries, Tenn	H. 154, 82d Cong	745,200	
Ohio River Basin: Sandy Lick Creek, vicinity of Reynoldsville, Pa.	H. 716, 81st Cong	570,000	
Paint Rock River, Ala	H. —, 83d Cong	1,001,300	
Kalamazoo River, Mich	S. 98, 83d Cong	4,201,550	
Little Calumet River, Ind	H. 153, 82d Cong	509,900	
Los Angeles-San Gabriel Basin and Ballona Creek, Calif.			$12,500,000
Sacramento River Basin:			
Middle Creek, Calif	H. 367, 81st Cong	1,110,000	
American River, Calif	H. 367, 81st Cong	1,600,000	
Lower San Joaquin River Basin			5,000,000
Columbia River Basin: Modification of project to include power development at Cougar Reservoir on South Fork of McKenzie River, Oreg., and Green Peter Reservoir on Middle Fork of Santiam River, Oreg., including White Bridge reregulating reservoir on Middle Fork of Santiam River, Oreg.	H. 531, 81st Cong		180,000,000
Gold Creek and tributaries, Alaska	H. 54, 82d Cong	380,000	
Wailoa Stream and its tributaries, island of Hawaii, T. H.	H. 529, 81st Cong	347,000	
Department of Agriculture, sec. 205, prosecution of works heretofore authorized.			20,000,000
Total		204,852,750	368,500,000

[1] H indicates House Document; S indicates Senate document.
[2] Report of the Chief of Engineers dated Apr. 8, 1954.
[3] Report of the Chief of Engineers dated Feb. 19, 1954.

AMENDMENTS—PROJECTS RECOMMENDED BY SENATE COMMITTEE

ITEMS ADDED (SEC. 203)

Projects	Document No.[1]	Estimated Federal cost
West Branch of Susquehanna River, Pa		$25,000,000
Reelfoot Lake area, Kentucky and Tennessee		748,100
Belton Reservoir, Tex. (reservation of water supply for Fort Hood)		0
Pecos River, N. Mex. and Tex		9,540,000
Conway County Drainage and Levee District, Arkansas	H. 167, 82d Cong	230,600
Holla Bend Bottom, Ark	H. 157, 82d Cong	312,000
Bear Creek, Mo	H. 435, 83d Cong	3,326,000
Big Sioux River and tributaries, Iowa and South Dakota		3,430,000
Cold Brook Dam, S. Dak		15,000
Oahe Reservoir, S. Dak., facilities at Pollock, S. Dak		200,000
Heart River at Mandan, S. Dak		1,727,000
Santa Maria River and tributaries, California	H. 400, 83d Cong	10,182,000
San Lorenzo River, Calif	H. 447, 83d Cong	2,665,000
San Lorenzo Creek, Calif	H. 452, 83d Cong	3,790,000
Truckee River and tributaries, California and Nevada		791,000
Amazon Creek, Oreg	S. 131, 83d Cong	893,600
Total		62,850,300

[1] H indicates House document; S indicates Senate document.

Flood Control

SUMMARIES OF PROJECTS RECOMMENDED BY SENATE COMMITTEE

WEST BRANCH, SUSQUEHANNA RIVER, PA., AND N. Y.

(Report of Chief of Engineers, June 25, 1954)

Location: West Branch of Susquehanna River rises in Cambria County, Pa., and flows 240 miles generally east in the north central portion of the State to its junction with the North Branch at Sunbury. Drainage area is 6,990 square miles, and had a population of 381,000 in 1950.

Report authorized by: House Flood Control Committee resolution, May 29, 1946.

Existing Federal project: Authorized local-protection project for Williamsport, providing 3 feet of freeboard above 1936 flood levels, is substantially complete. Project authorizations for Milton, Montgomery, Muncy, Jersey Shore, and Lock Haven, have expired due to lack of assurances of local cooperation.

Non-Federal projects: Pennsylvania has constructed a small reservoir for flood control and recreation on Little Pine Creek. It is now constructing First Fork Dam, estimated to cost $17,770,000, included in the original plan of the Corps of Engineers. State has also constructed some 60 small projects, mostly for clearing and snagging, in recent years.

Plan of recommended improvement: Flood-control reservoirs on West Branch at the Curwensville site on Kettle Creek above the mouth, and on Bald Eagle Creek at the Blanchard site.

Estimated cost (all Federal) (February 1954 prices):

(a) Curwensville Reservoir	$24, 230, 000
(b) Kettle Creek Reservoir	15, 400, 000
(c) Blanchard Reservoir	22, 890, 000
Total	62, 520, 000

Local cooperation: Pennsylvania to furnish assurances satisfactory to Secretary of the Army that it will coordinate operation of First Fork Reservoir with the three recommended reservoirs, when constructed, to receive optimum system flood-control benefits.

Project economics:

	Report (4 reservoirs)	Current (3 reservoirs)
Annual charges	$3, 023, 000	$2, 351, 000
Annual benefits:		
Flood control	4, 334, 000	3, 139, 000
Increase in land use	140, 000	91, 000
Total	4, 474, 000	3, 230, 000
Benefit-cost ratio	[1] 1. 44	[2] 1. 37

[1] Project ratios vary from 1.17 to 1.69.
[2] 1.17 to 1.68.

Remarks: The three additional reservoirs recommended by the Chief of Engineers, with the First Fork Reservoir under construction by the Commonwealth of Pennsylvania, constitute an integrated system for the partial control of floods in the West Branch of the basin. They are economically justified by probable benefits as workable and interrelated units in a reservoir system designed to provide for control of major tributaries. These projects can, in the future, be supplemented by additional storage in large or small dams, as found warranted after further study.

REELFOOT LAKE AREA, TENNESSEE AND KENTUCKY

(Report of Chief of Engineers, June 17, 1954)

Location: The Reelfoot Basin, situated on the east bank of the Mississippi River, extends 35 miles in a southerly direction between Hickman, Ky., and the Obion River, tributary of the Mississippi River, in Tennessee.

Report authorized by: Resolution of the Committee on Public Works of the United States Senate, adopted December 20, 1950.

Existing project: The project for Mississippi River and tributaries authorized by the act of May 15, 1928, as amended, provides for the extension of the Tiptonville-Obion River levee about 28 miles; channel improvement and diversion of Obion River; enlargement of lower 7.5 miles of Running Reelfoot Bayou; and excavation of Lake No. 9 and Harris Ditch diversion canals into Reelfoot Lake and Running Reelfoot Bayou, respectively. About 8 miles of levee have been constructed.

Plan of recommended improvement: Enlargement of Running Reelfoot Bayou and Bayou du Chien.

Estimated cost:

	Federal	Non-Federal	Total
March 1954 price level	$748,100	$407,200	$1,155,300

Local cooperation: Furnish lands, easements, and rights-of-way for construction; provide all State, county, and farm bridges included in plan of improvement; and maintain and operate the completed improvements.

Project economics:

	Current
Annual charges	$62,640
Annual benefits	$242,300
Benefit-cost ratio	3.87

Remarks: The proposed channel improvements on Running Reelfoot Bayou and Bayou du Chien are important remedial measures which will afford relief from flood damages and impaired drainage over a large area, including Reelfoot Lake.

BELTON RESERVOIR, TEX.

This amendment is explained by the following letter from the Department of the Army:

DEPARTMENT OF THE ARMY,
Washington 25, D. C., July 22, 1954.

Hon. EDWARD MARTIN,
Chairman, Committee on Public Works,
United States Senate.

DEAR MR. CHAIRMAN: There is enclosed herewith a draft of legislation to modify the Flood Control Act of 1946 to provide for the reservation of 12,000 acre-feet of conservation storage to be used as a permanent source of water supply for Fort Hood, Tex., and adjacent military installations. The submission of this legislation is in accordance with procedures approved by the Secretary of Defense.

The purpose of the proposed legislation is to provide the Secretary of the Army authority to make available to Fort Hood 12,000 acre-feet of storage space in the Belton Reservoir project on the Leon River, Tex., without the added expense of transferring funds. The project is being constructed with funds appropriated for civil works activities of the Army.

The Belton Dam and Reservoir project is nearing completion and is being built by the Corps of Engineers under authority contained in the Flood Control Act of 1946, which authorized the project for flood control and conservation purposes with a proviso reading as follows: "Of the conservation storage capacity provided by such reservoir, not to exceed forty-five thousand acre-feet of such capacity shall be available for irrigation purposes in the Leon, Lampasas, and Little River Valleys." The project, presently estimated to cost $14,300,000, will provide a controlled storage capacity of 1,097,600 acre-feet, including 887,000 for flood control, 125,700 for conservation and 84,900 for sedimentation storage. Of the 125,700 acre-feet of conservation storage space, 113,700 will be made available to the Brazos River Authority in accordance with authority contained in section 6 of the 1944 Flood Control Act, and the Secretary of the Army has tentatively reserved 12,000 acre-feet of storage space for Fort Hood and adjacent military installations.

After a thorough study of the water supply situation at Fort Hood by the district engineer, Fort Worth District, it was determined that to assure adequate amounts of water for present and future operations of Fort Hood it would be advisable to obtain 12,000 acre-feet of water supply storage space. It was found that Belton Reservoir would be the most dependable source of water supply both as to quantity and quality. In this connection, the Department of the Army is now in the process of constructing intake facilities, a treatment plant, and transmission line to treat and deliver water from the Belton Reservoir to the Fort Hood distribution system. In anticipation of the transfer of 12,000 acre-feet of storage space at Fort Hood, the district engineer, Fort Worth, is making application to the Board of Water Engineers of the State of Texas for the right to impound 12,000 acre-feet of water from the Leon River, Tex. Since the Chief of Engineers is without authority to transfer 12,000 acre-feet of storage space to the Fourth Army without reimbursement, it is recommended that the proposed legislation be enacted into law.

The Bureau of the Budget advises that there is no objection to the submission of the proposed legislation.

Sincerely yours,

JOHN SLEZAK,
Acting Secretary of the Army.

LEGISLATION PROPOSED FOR INCLUSION IN THE RIVER AND HARBOR AND FLOOD CONTROL OMNIBUS BILL

Brazos River Basin: The project for the Belton Reservoir, Leon River, Tex., authorized by the Flood Control Act of 1946, is hereby modified to provide for the reservation, without reimbursement, of 12,000 acre-feet of conservation storage to be used as a permanent source of water supply for Fort Hood and adjacent military installations.

PECOS RIVER AND TRIBUTARIES, TEXAS AND NEW MEXICO

(Report of Board of Engineers for Rivers and Harbors, March 26, 1954)

Location: Pecos River rises in central New Mexico and flows southeasterly for 525 miles in eastern New Mexico and 401 miles in western Texas to enter the Rio Grande on the Mexican border.

Report authorized by: Flood Control Acts of 1938, 1939, and 1950.
Existing project: None.
Plan of recommended improvement: Improvement of Pecos River, Tex. and N. Mex., by construction of Los Esteros Reservoir, modification of Alamogordo Dam and Reservoir, and integrated operation of the two reservoirs by the Chief of Engineers; construction of local flood-protection works at and in the vicinities of Pecos, Tex., and Artesia, N. Mex.
Estimated cost (June 1953 price levels):

	Federal	Non-Federal	Total
Los Esteros and Alamogordo Reservoir project	$7,000,000		$7,000,000
Flood protection:			
Pecos, Tex	2,000,000	$400,000	2,400,000
Artesia, N. Mex	540,000	160,000	700,000

Local cooperation: For Los Esteros and Alamogordo Reservoirs project: Consent of Carlsbad Irrigation District to the transfer of irrigation storage capacity from Alamogordo Reservoir to Los Esteros Reservoir, and to exclusive use of Alamogordo Reservoir for flood-control purposes unless detailed studies indicate that a limited storage allocation to irrigation may be feasible and would not adversely affect its operation for flood control; continue to fulfill its repayment obligations to the United States; participate in maintenance and operation costs in an amount equal to what it is now obligated to pay toward maintenance of Alamogordo Reservoir, estimated at $10,000 annually. For local protection works at Pecos and Artesia: Furnish all lands, easements, and rights-of-way, including alterations to existing improvements, other than railroads; hold and save the United States free from damage, including damage which may result from temporary ponding of interior drainage and effects on sewage systems; maintain and operate all works after completion.
Project economics:

	Current
Annual charges:	
Los Esteros and Alamogordo	$288,000
Pecos, Tex	91,000
Artesia, N. Mex	23,000
Annual benefits:	
Los Esteros and Alamogordo	397,000
Pecos, Tex	189,000
Artesia, N. Mex	79,000
Benefit-cost ratio:	
Los Esteros and Alamogordo	1.38
Pecos, Tex	2.08
Artesia, N. Mex	2.82

Remarks: Construction of Los Esteros Reservoir should not be started until a satisfactory agreement is reached by the State of New Mexico, the Carlsbad Irrigation District, and other interests involved, concerning the transfer of storage between Los Esteros and Alamogordo Reservoirs.

ARKANSAS RIVER, CONWAY COUNTY DRAINAGE AND LEVEE DISTRICT NO. 1, ARKANSAS

(H. Doc. 167, 82d Cong., 1st sess.)

Location: Conway County Drainage and Levee District No. 1 is located in central Arkansas about 6 miles southwest of Morrilton, Ark. It extends along the right bank of the Arkansas River between river miles 227.3 and 225.5.

Report authorized by: Resolution of the Committee on Public Works of the House of Representatives adopted April 20, 1948.

Existing project: There is no existing Federal project to provide local flood protection for this locality. However, reservoirs to be constructed under the multiple-purpose plan for the Arkansas Basin authorized by the Flood Control Act of 1938 and the River and Harbor Act of 1946, and other acts, will reduce flood flows in the area.

Plan of recommended improvement: Provides for construction of a levee along the right bank of the Arkansas River from mile 227.3 to mile 225.5, together with a drainage structure and a drainage ditch.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$166,600	$14,400	$181,000
Current	230,600	18,400	249,000

Local cooperation: Provide all lands, easements and rights-of-way; either contribute to the United States the cost of construction of the proposed drainage ditch or undertake its construction at their own expense in accordance with plans of the district engineer; hold and save the United States free from damages; maintain and operate all the works after completion; and make any alterations to existing improvements which may be required because of the construction works.

Project economics:

	Project document	Current
Annual charges	$12,600	$13,900
Annual benefits	$13,000	$14,000
Benefit-cost ratio	1.03	1.01

Remarks: The recommended plan of improvement will protect 1,490 acres of rural land, of which 850 are cultivated against design flood. The Corps of Engineers advises that if the project is authorized the economics will be carefully considered before construction funds are requested, in view of the relatively low benefit-cost ratio.

ARKANSAS RIVER, HOLLA BEND BOTTOM, ARK.

(H. Doc. 157, 82d Cong., 1st sess.)

Location: Holla Bend Bottom, which is known locally as Holly Bend Bottom, is located in Pope County, Ark., and extends along the left bank of the Arkansas River between river miles 255.3 and 241.9.

No towns are located in the area, in which agriculture is the only industry. Principal crops are cotton, soybeans, corn, and hay.

Report authorized by: Resolution of the Committee on Flood Control of the House of Representatives, adopted April 19, 1946.

Existing project: There is no existing Federal project to provide local flood protection for Holla Bend Bottom. However, reservoirs to be constructed under the multiple-purpose plan for the Arkansas Basin authorized by the Flood Control Act of 1938 and the River and Harbor Act of 1946, and other acts, will reduce peak flood flows in the area.

Plan of recommended improvement: Provides for construction of a levee, along the left bank of the Arkansas River from mile 250.5 to mile 255.3 with necessary structures for interior drainage.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$252,000	$23,000	$275,000
Current	312,000	23,000	335,000

Local cooperation: Provide all lands, easements, and rights-of-way; make any alterations to existing improvements that may be required; hold and save the United States free from damages; and maintain and operate all the works after completion.

Project economics:

	Project document	Current
Annual charges	$13,100	$12,900
Annual benefits	13,700	15,900
Benefit-cost ratio	1.05	1.23

Remarks: The recommended plan of improvement will protect about 1,990 acres in Holla Bend Drainage and Levee District No. 2, of which 1,570 acres are now in cultivation. The Corps of Engineers advises that if the project is authorized, the economics will be reexamined before construction is undertaken.

BEAR CREEK, MO.: LOCAL PROTECTION AT HANNIBAL, MO.

(H. Doc. 435, 83d Cong.)

Location: Hannibal is on the Mississippi River in northeastern Missouri. Bear Creek rises in Marion County, Mo., and flows easterly to its junction with the Mississippi River. The lower 3 miles are within the city of Hannibal.

Report authorized by: Senate Public Works Committee resolution adopted June 24, 1947, and House Flood Control Committee resolution adopted September 18, 1944.

Existing project: None in Bear Creek Basin. Lock and Dam No. 22 of the 9-foot Mississippi River navigation project is located 7 miles upstream of Hannibal.

Plan of recommended improvement: Construction of a dam and reservoir and appurtenant works on Bear Creek for reduction of flood damages in Hannibal, Mo.

Estimated cost:

	Federal	Non-Federal	Total
Project document (December 1951)	$2,822,200	$153,500	$2,975,700
Current (October 1953)	3,326,000	189,600	3,515,600

Local cooperation: Provide all lands, easements, and rights-of-way; hold and save the United States free from damages; pay the cost of all necessary relocations except railroad relocation; maintain and operate project; and prevent encroachment which would reduce flood carrying capacity of Bear Creek in Hannibal.

Project economics:

	Project documents	Current
Annual charges	$129,600	$135,100
Annual benefits	190,700	206,400
Benefit-cost ratio	1.47	1.53

Remarks: Flash floods occur frequently on Bear Creek and cause extensive damages to industrial and residential property in Hannibal. Since the benefits are entirely local, participation by local interests in the cost of the project has been recommended in the form of furnishing all lands and certain relocations.

BIG SIOUX RIVER AND ITS TRIBUTARIES, IOWA AND SOUTH DAKOTA

(Report of Board of Engineers for Rivers and Harbors, March 15, 1954)

Location: Rises in northeastern South Dakota, flows southward to its confluence with the Missouri River just above Sioux City, Iowa.

Report authorized by: Committee on Flood Control, House of Representatives, resolution adopted March 20, 1944.

Existing project: No existing Federal flood-control project. A harbor project of the Big Sioux River just above its mouth, authorized as part of the Missouri River navigation project, has not yet been constructed. Local interests at various places have constructed levees and channel improvements mostly of minor scope with negligible effect on flood flows.

Plan of recommended improvement: Flood protection for Sioux Falls, S. Dak., by means of channel improvement, levees, and a diversion of a major part of Big Sioux River flood flows to bypass most of the city.

Estimated cost:

	Federal	Non-Federal	Total
As of April 1953	$3,430,000	$514,000	$3,944,000

Local cooperation: Furnish lands, easements, and rights-of-way; hold United States free from damages; and maintain and operate the project.

Project economics:

	Report
Annual charges:	
Federal	$121,000
Non-Federal	31,100
Total	152,100
Annual benefits: Flood control	176,400
Benefit-cost ratio	1.16

Remarks: A serious flood menace exists at Sioux Falls and the project is urgently needed to protect lives and property.

COLD BROOK DAM, S. DAK.

The purpose of this amendment is to authorize and direct the Secretary of the Army through the Chief of Engineers, to compensate the owners of water wells in the vicinity of Cold Brook Dam, S. Dak., for losses sustained by reason of the lowering of the level of water in such wells as a result, wholly or partially, of the construction and operation of Cold Brook Dam.

During the construction of the Cold Brook Dam the waters of Cold Brook were diverted to bypass the construction areas, and returned to the stream bed below the dam. For most of the period of construction the supply of water to the wells below the dam was adequate; however, for a short time it was necessary to cut the flow of Cold Brook off altogether. The water level of the wells below the dam were not affected until completion of the cutoff trench and grout curtain in May 1951. Since that time the water supply in eight wells in the valley area below the Cold Brook Dam has been greatly reduced.

The construction of the dam appears to have had considerable effect on the availability of water in the alluvium below the dam from which the wells receive their supply. After a longer period of time elapses from the date of the water-supply shortage, it may be possible to determine whether the alluvium below the dam will return to its former capacity. However, some loss has been sustained, but it is difficult to ascertain such loss at this time. The estimated cost of permanent replacement of the 8 wells known to be affected or the extension of the city water system to the properties is about $15,000.

A bill, S. 546, was reported by the committee on February 19, 1954, and passed the Senate on March 2, 1954. (S. Rept. No. 988, 83d Cong.)

OAHE RESERVOIR, S. DAK.

(Facilities at Pollock, S. Dak.)

The Oahe Reservoir was authorized by the Flood Control Act of 1944, and is now under construction. The town of Pollock, with a population of about 400, is on the Missouri River within the Oahe Reservoir area, and will have to be relocated in connection with the construction of the reservoir. The water supply is obtained from individual wells, and tile drains and septic tanks are used for sewage disposal facilities.

In the acquisition of the townsite, the property owners will be compensated for the appraised valuation of their individual water and sewage facilities. The wells at the present time are only required to be about 25 feet deep. In the new location of the town it will be necessary for the wells to be approximately 200 feet deep. The

committee feels that the property owners should be compensated for the additional cost of providing similar facilities at the new location of the town. Payment for these facilities will be made from regular appropriations for construction of the Oahe Reservoir.

HEART RIVER AT MANDAN, N. DAK.

(Report of Chief of Engineers dated July 27, 1954)

Location: Rises in southwestern North Dakota, and flows easterly approximately 241 miles to its confluence with the Missouri River about 6 miles southeast of Mandan, N. Dak.

Report authorized by: Senate Public Works Committee resolution, June 1, 1948.

Existing project: Provides for construction of levees and appurtenant works along the left bank of the Heart River for the protection of municipal areas and along the right bank of the Heart River for the protection of the State training school.

Plan of recommended improvement: Additional flood protection for Mandan, N. Dak., including the reach, Sunny to Mandan, an area extending 3 miles upstream and the downstream reach, Mandan to mouth, a distance of about 3½ miles by means of channel improvement, levees, a highway bridge raise, a railroad bridge lifting device, highway embankment earth blanketing, and appurtenant structures.

Estimated cost:

	Federal	Non-Federal	Total
As of June 1953	$1,727,000	$463,830	$2,190,830

Local cooperation: Raise the existing United States Highway 10 bridge and approaches west of Mandan; cooperate in construction of the Mandan interior drainage works, in addition to the usual assurances required.

Project economics:

Annual charges:	
Federal	$60,524
Non-Federal	21,824
Total	82,348
Annual benefits: Flood control	153,300
Benefit-cost ratio	1.86

Remarks: The committee is informed that the proposed plan of improvement offers a practicable solution to the flood problem existing at this time and is economically justified. Accordingly, language has been included in the bill providing for construction of the project.

SANTA MARIA RIVER AND TRIBUTARIES, CALIFORNIA

(H. Doc. 400, 83d Cong.)

Location: The Santa Maria River is formed by the confluence of the Cuyama and Sisquoc Rivers at Fugler's Point in Santa Barbara County, Calif. It flows generally westward 25 miles to the Pacific Ocean draining an area of 1,845 square miles.

Report authorized by: An act approved May 14, 1937, and Flood Control Act, August 28, 1937.

Existing project: None.

Plan of recommended improvement: A multiple-purpose reservoir at the Vaquero site, mile 8 on the Cuyama River to be constructed by the Bureau of Reclamation, with levee and channel improvements along Santa Maria River and Bradley Canyon, to be constructed by the Corps of Engineers.

Estimated cost (October 1952 [1]*):*

	Federal	Non-Federal	Total
Reservoir	[2] $16,982,000		[2] $16,982,000
Levee and channel improvements	10,182,000	$1,216,000	11,398,000
Total	27,164,000	1,216,000	28,380,000

[1] Report and current costs are same.
[2] Includes $3,013,000 allocated to flood control.

Local cooperation: Reservoir: Agree to adjust water-rights claims resulting from operation of the reservoir. Levee and channel work: Provide lands, easements, and rights-of-way; hold and save United States free of damages; pay all necessary railroad, highway, and utility relocations except railroad bridges and approaches; maintain and operate completed project; agree to adjust all water-rights claims resulting from operation of channel improvements.

Project economies:

	Report (October 1952)	Current (October 1953)
Annual charges:		
Federal:		
Interest and amortization	$909,400	$909,400
Maintenance	25,400	35,200
Non-Federal	89,300	94,600
Total	1,024,100	1,039,200
Annual benefits:		
Flood control	600,000	720,000
Conservation	1,310,700	1,310,700
Total	1,910,700	2,030,700
Benefit-cost ratio	1.87	1.95

Remarks: The committee notes that the project has a favorable cost-to-benefit ratio and accordingly recommends the adoption of the levee and channel improvement to be constructed by the Corps of Engineers at a presently estimated cost of $10,182,000. This will form part of the overall plan if and when the reservoir is authorized for construction by the Bureau of Reclamation, Department of the Interior.

SAN LORENZO RIVER, CALIF.

(H. Doc. 447, 83d Cong.)

Location: San Lorenzo River rises in the Santa Cruz Mountains and flows southeasterly about 20 miles to Monterey Bay. The drainage basin of 137 square miles is mountainous, reaching an altitude of 3,000 feet.

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Report authorized by: Flood Control Act of 1938

Existing project: None. Some clearing and snagging has been performed under Flood Control Act of 1937.

Plan of recommended improvement: Levees and flood walls along San Lorenzo River, with minor channel improvement, and channel improvements and rectification for Branciforte Creek.

Estimated cost:

	Federal	Non-Federal	Total
Report (February 1953)	$2,565,000	$670,000	$3,235,000
Current (October 1953)	2,665,000	696,000	3,361,000

Local cooperation: Furnish all lands, easements, and rights-of-way; make necessary bridge and utility revisions and replacements or in lieu thereof contribute in cash the cost of that work; hold and save United States free of damage; maintain and operate completed work; prevent encroachment in project channels which would interfere with flood control.

Project economics:

	Report	Current
Annual charges:		
Federal: Interest and amortization	$90,400	$94,000
Non-Federal	36,400	37,900
Total	126,800	131,900
Annual benefits	143,000	161,000
Benefit-cost ratio	1.13	1.22

Remarks: A cash contribution, presently estimated at $227,500, should be made by local interests, in addition to the other requirements of local cooperation, in view of the local benefits from land enhancement. This amount should be recomputed prior to construction in accordance with the letter from the Bureau of the Budget in the project document.

SAN LORENZO CREEK, ALAMEDA COUNTY, CALIF.

(H. Doc. 452, 83d Cong.)

Location: A small watershed in foothills of Coast Range Mountains on east side of San Francisco Bay. The stream flows through the town of Hayward and enters the bay 10 miles southeast of Oakland. The basin above Hayward has a drainage area of 45 square miles.

Report authorized by: Resolution adopted by the House Committee on Flood Control, May 14, 1945.

Existing project: None.

Plan of recommended improvement: Channel improvements, levees, and appurtenant works on San Lorenzo Creek in Hayward.

Estimated cost:

	Federal	Non-Federal	Total
Report (December 1952)	$3,644,000	$631,000	$4,275,000
Current (October 1953)	3,790,000	656,000	4,446,000

Local cooperation: Furnish all lands, easements, and rights-of-way; make necessary bridge and utility alterations; hold and save United States free of damages; maintain and operate completed project, preventing encroachment on the channel; contribute in cash 2.6 percent of the cost of construction, presently estimated at $96,000.

Project economics:

	Report	Current
Annual charges:		
Federal: Interest and amortization	$129,000	$129,400
Non-Federal	36,700	44,400
Total	165,700	173,800
Annual benefits:		
Flood control	179,200	247,500
Land enhancement	11,000	15,200
Bridge replacement	3,000	3,000
Total	193,200	265,700
Benefit-cost ratio	1.17	1.52

Remarks: In view of the favorable costs to benefits ratio and the need for improvements to alleviate the serious flood problem in this area, the committee has seen fit to include language in the bill authorizing construction of this project.

In view of the land-enhancement benefit, the committee believes that local interests should contribute in cash an amount equal to 2.6 percent of the cost of construction, presently estimated at $96,000.

TRUCKEE RIVER AND TRIBUTARIES, CALIFORNIA AND NEVADA

(Report of Chief of Engineers, April 15, 1954)

Location: Truckee River begins at the outlet of Lake Tahoe near Truckee, Calif., and flows northerly and easterly through Reno, Nev., to Pyramid Lake.

Report authorized by: Flood Control Act, June 28, 1938.

Existing project: None. Clearing and snagging to extent of $70,000 accomplished after 1950 flood with emergency funds.

Plan of recommended improvement: Provides for channel improvement below control structure at Lake Tahoe and downstream from Reno through Truckee Meadows.

Estimated cost:

	Federal	Non-Federal	Total
October 1953 price level	$791,000	$169,000	$960,000

Local cooperation: Provide suitable debris-removal facilities at Derby Dam; furnish lands, easements, and rights-of-way necessary for construction and relocate all roads and utilities required; hold and save the United States free from damages; and maintain and operate all works after completion:

Project economics:

Annual charges:	
Federal	$28,000
Non-Federal	23,000
Total	51,000
Annual benefits: Prevention of flood damages	82,500
Benefit-cost ratio	1.62

Remarks: The improvement will provide needed flood control and will fit into a comprehensive plan now being developed for irrigation, power, and flood control. The committee feels, however, that the flood-control improvements should not proceed until the irrigation and power features, known as the Washoe reclamation project, are authorized.

AMAZON CREEK, OREG.

(S. Doc. 131, 83d Cong.)

Location: Amazon Creek rises in west central Oregon, 6 miles south of Eugene, and flows 24 miles generally north to a junction with Long Tom River at a point 15 miles above its confluence with Willamette River.

Report authorized by: Senate Committee on Public Works, October 14, 1949.

Existing project: Channel improvement through Eugene, downstream to a diversion structure above Clear Lake and a diversion canal from that point to Fern Ridge Reservoir. Improvement of the channel below the diversion structure to Long Tom River with major drainage ditches or laterals tributary thereto.

Plan of recommended improvement: Enlarge channel through Eugene with about 1 mile having concrete lining and guardrail. Improve channel from Eugene to a diversion structure about 3 miles upstream from Clear Lake, and a diversion structure and diversion canal therefrom to Fern Ridge Reservoir.

Estimated cost:

	Federal	Non-Federal	Total
July 1953 prices	$893,600	$339,090	$1,232,690

Local cooperation: Provide lands, easements, and rights-of-way, construct necessary bridges, and make relocations; hold and save United States free from damage; maintain and operate project; and contribute in cash 11.5 percent of the construction cost currently estimated at $56,400.

Project economics:

Annual charges:	
Federal	$31, 530
Non-Federal	18, 740
Total	50, 270
Annual benefits:	
Flood control	66, 500
Increased land use	30, 700
Advance bridge replacement	1, 300
Total	98, 500
Benefit-cost ratio	1. 96

Remarks: The remaining work to be done under the recommended modified project is the completion of the enlarged channel through Eugene at an estimated construction cost of $490,000 of which $350,000 would be a Federal cost. The benefit-to-cost ratio for the remaining work is 1.26.

PRELIMINARY EXAMINATIONS AND SURVEY ITEMS ADDED

SECTION 204

Ash and Pine Creeks, Fairfield and vicinity, Connecticut.
Devils River and tributaries, Texas.
Rio Hondo and tributaries, New Mexico.

HQ AR005865-HQ AR006032

83d Congress, 2d Session - - - - - - House Report No. 2247

RIVER AND HARBOR, BEACH EROSION, AND FLOOD CONTROL PROJECTS

REPORT

OF THE

COMMITTEE ON PUBLIC WORKS

ON

H. R. 9859

A BILL AUTHORIZING THE CONSTRUCTION, REPAIR, AND PRESERVATION OF CERTAIN PUBLIC WORKS ON RIVERS AND HARBORS FOR NAVIGATION, FLOOD CONTROL, AND FOR OTHER PURPOSES

JULY 15, 1954.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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83D CONGRESS 2d Session } HOUSE OF REPRESENTATIVES { REPORT No. 2247

AUTHORIZING THE CONSTRUCTION, REPAIR, AND PRESERVATION OF CERTAIN PUBLIC WORKS ON RIVERS AND HARBORS FOR NAVIGATION, FLOOD CONTROL, AND FOR OTHER PURPOSES

JULY 15 1954.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. DONDERO, from the Committee on Public Works, submitted the following

REPORT

[To accompany H. R. 9859]

GENERAL STATEMENT

The Committee on Public Works, to whom was referred the bill (H. R. 9859) authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes, having considered the same, report favorably thereon without amendment, and recommend that the bill do pass.

This omnibus river and harbor and flood control bill is the first since the act of May 17, 1950. The River and Harbor Subcommittee and the Flood Control Subcommittee of the Committee on Public Works have held hearings on all matters contained in the bill beginning February 2, 1954. Hearings on a total of more than 85 river and harbor projects, 22 beach-erosion projects and more than 40 flood-control projects have been held, including some multiple-purpose projects, modifications of projects, increased basin authorizations, and some preliminary examinations and surveys. The Corps of Engineers, Department of the Army, has testified on all projects and other matters contained in this bill. Local interests have been afforded full opportunity to present their views for and against the matters under consideration. The subcommittee concerned and the full committee have met in executive session on a number of occasions and discussed the projects and other items.

A period of 4 years has elapsed since the last omnibus bill, longer than any intervening time between any preceding omnibus bills. As a result, a great number of projects were eligible for consideration.

To offset the large number of projects, the committee has attempted to hold down the total monetary authorizations by judicious use of balances of monetary authorizations available in certain river basins. With respect to existing basin authorizations, the committee has adopted the principle that in those basins where deficits in authorizations are imminent, increased amounts should be granted to permit orderly continuation of the work on the assumption that the next omnibus bill would be not later than the fiscal year 1956. In some cases the committee has approved the authorization of new basin plans of considerable scope but has limited the monetary authorization to amounts needed for the immediate future. However, the increased scope of work in these new basin plans which is not covered by monetary authorization in this bill is offset by increased monetary authorizations for work under existing basin plans where there is no increase in scope.

The active construction program for river and harbor and flood control improvements has been carried on at a steady rate since passage of the last omnibus bill. The following tabulation shows the appropriations for construction by fiscal years from 1950 to 1955:

Construction appropriations for specifically authorized projects fiscal years 1950–55

Fiscal year	Flood control [1]	Navigation	Total
1950	$403,621,118	$114,145,690	$517,766,808
1951	391,222,903	114,620,500	505,843,403
1952	352,508,726	125,192,613	477,701,339
1953	288,017,348	158,440,800	446,458,148
1954	174,207,000	137,821,000	312,028,000
1955	169,685,000	157,629,600	327,314,600
Grand total	1,779,262,095	807,850,203	2,587,112,298

[1] Includes appropriations for construction on the Mississippi River and tributaries project, and appropriations for the Sacramento River project.

For comparative purposes, the size of the present bill is compared with the size of the omnibus bills during the last 10 years in the following table:

Act	River and harbor	Flood control	Total
1944 Flood Control Act and 1945 River and Harbor Act	$381,968,000	$950,000,000	$1,331,968,000
1946 Flood Control and River and Harbor Acts	521,295,000	772,000,000	1,293,295,000
1950 Flood Control and River and Harbor Acts	203,723,125	1,250,000,000	1,453,723,125

NOTE.—Table excludes 1948 act, which covered relatively few projects of an emergency nature and was not of the magnitude of the usual omnibus bill.

The committee points out that the total of the present bill is less than $1 billion, whereas all previous bills during the last 10 years, with the exception of the small 1948 bill which was fundamentally of an emergency nature, were appreciably in excess of $1 billion. If increases in the general price level were taken into account, the relative reduction in the size of this bill would be much more marked.

The estimated cost of the projects reported in this bill (titles I and II) are based on current prices, which in general are those prevailing during the past year. They differ in general from the estimated

amounts in the project documents depending upon the date of the document.

The committee did not consider it advisable to fix the actual cost of the work at these figures since at the time the work is undertaken there will undoubtedly be changes in price levels and possibly modifications in the plans as a result of more detailed engineering studies. The committee, however, does not consider that any untoward increases in estimated costs are automatically authorized and expects the Corps of Engineers to appear before it in explanation of any such increases prior to construction.

The hearings referred to on the projects in this bill are available to the Congress and the public.

This report contains a description of all the projects and modifications, separated into two general categories: "Title I: Rivers and Harbors"; "Title II: Flood control." The projects contained in this report, in each title, are preceded by a general description of the matters pertaining to that title.

TITLE I—RIVERS AND HARBORS

The waterway transportation system of the United States is a Federal responsibility stemming from the beginning of the Nation. The work of improvement has been efficiently and competently executed by the Corps of Engineers. The size of the completed program which Congress has authorized over many years is indicated by the fact that there are now a total of 1,769 authorizations or modifications of previous authorizations for river and harbor improvements. The total cost of the completed navigation program is $856 million. The total number of navigation projects or modifications now underway but not completed is 143 and the total cost is $1,409 million, of which $878 million has been appropriated through the fiscal year 1954. Navigation projects or modifications authorized but not yet started total 254 in number and have a total estimated cost of $911 million of which $5 million has been appropriated to date for planning purposes. The total active navigation program, therefore, amounts to 2,166 projects or modifications, having a total estimated cost of $3,176 million, of which $1,739 million is the cost to date. The foregoing figures exclude a few multiple-purpose projects which include other major functions in addition to navigation. Technically authorized but considered inactive or deferred for restudy are a number of navigation projects not included in the foregoing figure.

These projects lie in all parts of the United States and its possessions and include 28,000 miles of improved waterways, about 500 locks and dams, and almost 300 commercial harbors. Outstanding among them are the great coastal ports such as Boston, New York, Baltimore, Norfolk, Houston, Los Angeles, and San Francisco, the Great Lakes system and its many lake ports, and the inland and intracoastal waterways along the Atlantic and Gulf coast and through the Mississippi-Ohio artery. The substantial and widespread benefits from the navigation program have demonstrated that the investment has been wisely made, both from the standpoint of economics and national welfare. The system has facilitated the growth of trade with other nations, developed commerce among the States, and contributed to the security and continued growth of the Nation. Commercial

statistics for the latest calendar year (1952) show that the net waterborne commerce of the United States totaled about 890 million tons in that year, of which about 660 million were domestic and 230 million were foreign. This is 50 percent greater than the prewar peak of 1929. This committee pointed out in its report (Rept. No. 969, 81st Cong.), in connection with the 1950 River and Harbor Act, that an alltime record total of 760 million tons had been reached in 1947. The figures given above show that that alltime total was exceeded by 11 percent in only 6 years.

With respect to the inland waterways system, a total of 168 billion ton-miles were carried in the calendar year 1952. Of this total, 104 billion were on the Great Lakes and 37 billion on the Mississippi-Ohio system. This represents an increase of 42 percent in the total ton-mileage since 1940, when the total commerce was 118 billion ton-miles.

Development of these waterways during the years of peace has resulted in the acquisition of a valuable asset in time of war. For example, the inland waterways during the last war were used to float almost 4,000 war vessels and several hundred items of auxiliary equipment from inland shipyards to the ocean. America's rivers and canals thus served a twofold purpose during the war. They shared importantly in the transportation of strategic materials and they made possible a widespread geographical diffusion of manufacturing processes that otherwise would have been forced into congested coastal areas.

The committee during the testimony was impressed by the increasing use of larger and more economic vessels. These vessels, with deeper draft, greater lengths and beams have accelerated the need for progressive modification of the navigation program. The use of these larger and deeper-draft carriers will result in eventual betterment of the economy and a lowering of prices to the consuming American public.

This the committee notes is one reason for the navigation survey program to be kept current in order that the improvements can be made sensitive to transportation trends. Since the survey program is the basic source of the entire navigation program, the committee feels that the backlog of preliminary examinations and surveys now assigned by the Congress to the Corps of Engineers should be more adequately financed. The future survey program should be reduced by a periodic pruning of authorized investigations so as to eliminate those which may no longer serve a useful or desired purpose.

The committee wishes to commend the Corps of Engineers for the work it has done in reviewing its outstanding investigations, with a view to classifying those obsolete as inactive.

In the following section a tabulation of the river and harbor improvements contained in this bill are listed and briefly described. In certain cases the committee has taken cognizance of the "single-user" policy under which a larger contribution is required of local interests, when the benefits are entirely or partly local in nature rather than general.

The committee has also heard testimony from the Corps of Engineers on the so-called small-boat formula and believes that this method of allocating cost to local interests, where recreational craft are in-

volved in the use of harbors, is sound. It has generally recognized the application of this formula in connection with those projects in this bill where recreational craft are of significant proportion among the users of the improvement.

Following the listing and description of the navigation projects, there is information given for the beach-erosion projects upon which testimony has been heard and which have been reported favorably by the Corps of Engineers. In general, these beach-erosion reports are the result of cooperative studies, financed jointly and equally by the United States and the local public agency requesting the study. These beach-erosion projects are improvements for the protection of the shores of the United States and its Territories. In including these projects, the committee has followed existing law which limits Federal participation to a maximum of one-third of the cost of protecting publicly owned shores. It has also recognized the general principle that because of the emergency nature of shore protection, it is not always practicable for local interests to wait for authorization and appropriation. The committee believes it equitable, therefore, and has included in the bill, provision for reimbursement to local interests, where they have found it necessary to take immediate action in protecting shorelines and where this protection has been studied and approved by the Corps of Engineers and later authorized by Congress for Federal participation.

Analysis by Sections

SECTION 101

Section 101 of the bill authorizes new river and harbor projects and modifications of existing projects totaling in number 85, at an estimated additional Federal cost of $212,915,100. Section 101 also authorizes 22 beach-erosion projects with a total estimated cost of $14,003,664. They are shown in the following tabulation and described in the project descriptions following the tabulation.

Projects	Document No.[1]	Federal cost of new work
Lubec Channel, Maine	S. 243, 81st Cong	$74,000
Portsmouth Harbor and Piscataqua River, Maine and N. H	H. 556, 82d Cong	952,000
Lynn Harbor, Mass	H. 568, 81st Cong	65,000
Weymouth Fore River, Mass	H. 555, 82d Cong	4,400,000
Town River, Quincy, Mass	H. 108, 83d Cong	525,000
Scituate Harbor, Mass	H. 241, 83d Cong	375,000
Fall River Harbor, Mass	H. 405, 83d Cong	694,000
Bullocks Point Cove, R. I	H. 242, 83d Cong	166,400
Sakonnet Harbor, R. I	H. 436, 82d Cong	555,400
Patchogue River, Conn	H. 164, 83d Cong	135,000
Westport Harbor and Saugatuck River, Conn	H. 488, 81st Cong	112,500
Westchester Creek, N. Y	H. 92, 82d Cong	32,200
Hudson River, N. Y	H. 228, 83d Cong	31,928,000
Shoal Harbor and Compton Creek, N. J	H. 89, 82d Cong	138,000
Hackensack River, N. J	H. 252, 82d Cong	1,973,900
Mispillion River, Del	S. 229, 81st Cong	469,400
Inland waterway from Delaware River to Chesapeake Bay, Del. and Md.	S. 123, 83d Cong	101,000,000
Queenstown Harbor, Md	H. 718, 81st Cong	31,900
Little Creek, Kent Island, Queen Annes County, Md	H. 715, 81st Cong	23,000
Anchorage at Lowes Wharf, Talbot County, Md	H. 90, 82d Cong	29,000
Nanticoke River, Bivalve, Wicomico County, Md	H. 91, 82d Cong	192,600
Webster Cove, Somerset County, Md	H. 619, 81st Cong	20,300
Crisfield Harbor, Md	H. 435, 81st Cong	101,750
Rhodes Point to Tylerton, Somerset County, Md	H. 51, 82d Cong	45,100
Pocomoke River, Md	H. 486, 81st Cong	678,300

See footnotes at end of table, p. 6.

Projects	Document No.[1]	Federal cost of new work
Ocean City Harbor and Inlet, Sinepuxent Bay, Md	H. 444, 82d Cong	$704,000
Parrotts Creek, Va	H. 46, 82d Cong	38,700
Norfolk Harbor and Thimble Shoal Channel, Va	S. 122, 83d Cong	6,138,700
Deep Creek, Accomack County, Va	H. 477, 81st Cong	95,000
Oyster Channel, Va	S. 49, 83d Cong	75,200
Wallace Channel, Pamlico Sound, N. C	H. 453, 81st Cong	108,000
Smiths Creek, N. C	H. 170, 83d Cong	102,000
Channel from Hatteras Inlet to Hatteras, and Rollinson Channel, N. C.	H. 411, 83d Cong	175,000
Peltier Creek, N. C., to Intracoastal Waterway	H. 379, 81st Cong	43,200
Channel Port Royal Sound to Beaufort, S. C	H. 469, 81st Cong	765,000
Savannah Harbor, Ga	H. 110, 83d Cong	414,900
Rice Creek, Putnam County, Fla	H. 446, 82d Cong	82,200
Hillsboro River, Fla	H. 567, 81st Cong	16,600
Apalachicola Bay, Fla	H. 156, 82d Cong	98,000
Apalachicola Bay, Fla., channel across St. George Island	H. 557, 82d Cong	635,700
St. Joseph Bay, Fla	H. 595, 81st Cong	1,312,000
Mobile Harbor, Ala	H. 74, 83d Cong	5,778,000
Dauphin Island Bay, Ala	H. 394, 82d Cong	70,000
Bayou Segnette Waterway, La	H. 413, 83d Cong	520,000
Sabine-Neches Waterway, Tex	S. 80, 83d Cong	6,875,000
Guadalupe River at Seadrift, Tex	H. 478, 81st Cong	74,300
Aransas Pass, Tex., in connection with the Gulf Intracoastal Waterway.	H. 376, 83d Cong	30,700
Turtle Cove, Tex	H. 654, 81st Cong	40,000
Port Aransas-Corpus Christi Waterway, Tex	H. 89, 83d Cong	829,100
Mississippi River at Louisiana, Mo	H. 251, 82d Cong	82,600
Mississippi River at Chester, Ill	H. 230, 83d Cong	65,000
Crooked Slough Harbor, Winona, Minn	H. 347, 83d Cong	142,000
Cumberland River, Ky. and Tenn	S. 81, 83d Cong	----------
Green and Barren, Ky	S. 82, 83d Cong	3,434,000
Knife River Harbor, Minn	H. 463, 83d Cong	219,900
Cornucopia Harbor, Wis	H. 434, 83d Cong	220,000
Sheboygan Harbor, Wis	H. 554, 82d Cong	217,200
Holland Harbor, Mich	H. 282, 83d Cong	574,400
Crooked and Indian Rivers, Mich	H. 142, 82d Cong	225,000
Toledo Harbor, Ohio	H. 620, 81st Cong	512,000
Erie Harbor, Pa	H. 345, 83d Cong	174,000
Black Rock Channel and Tonawanda Harbor, N. Y	H. 423, 83d Cong	270,000
Little River at Cayuga Island, Niagara Falls, N. Y	H. 246, 83d Cong	36,900
Oswego Harbor, N. Y	H. 487, 81st Cong	2,459,000
Los Angeles and Long Beach Harbor, Calif	H. 161, 83d Cong	896,500
Playa del Rey Inlet and Harbor, Venice, Calif	H. 389, 83d Cong	3,869,000
Port Hueneme, Calif	H. 362, 83d Cong	5,437,000
Rogue River, harbor at Gold Beach, Oreg	S. 83, 83d Cong	3,758,700
Umpqua Harbor and River, Scholfield River at Reedsport Oreg	S. 133, 81st Cong	41,000
Columbia River at the mouth, Oregon and Washington	H. 249, 83d Cong	8,555,000
Columbia River between Chinook, Wash., and the head of Sand Island.	S. 8, 83d Cong	227,100
Willapa River and Harbor and Naselle River, Wash	H. 425, 83d Cong	977,000
Grays Harbor and Chehalis River, Wash	H. 412, 83d Cong	421,800
Grays Harbor and Chehalis River (Westhaven breakwater), Wash.	H. —, 83d Cong	323,700
Anacortes Harbor, Wash	S. 102, 83d Cong	179,300
Neah Bay, Wash	H. 404, 83d Cong	139,250
Bellingham Harbor, Wash	H. 558, 82d Cong	1,366,650
Blaine Harbor, Wash	H. 240, 83d Cong	436,000
Shilshole Bay, Seattle, Wash	H. 536, 81st Cong	3,397,300
Port Angeles Harbor, Wash	H. 155, 82d Cong	477,900
Everett Harbor and Snohomish River, Wash	H. 569, 81st Cong	395,500
Quillayute River, Wash	H. 579, 81st Cong	425,550
Seward Harbor, Alaska	H. 182, 83d Cong	81,200
Valdez Harbor, Alaska	do	116,600
Honolulu Harbor, T. H	H. 717, 81st Cong	3,022,000
Total		212,915,100

[1] H indicates House document; S indicates Senate document.

Rivers and Harbors

LUBEC CHANNEL, MAINE

(S. Doc. 243, 81st Cong., 2d sess.)

Location: 200 miles northeast of Portland, Maine, between Maine and Campobello Island, New Brunswick, Canada.

Report authorized by: Senate Committee on Commerce resolution, July 16, 1945.

Existing project: Channel from Johnson Bay to Quoddy Roads 12 by 500 feet with breakwater at northerly end of narrows. Completed 1905. Costs to June 30, 1951, $303,400 for new work and $7,000 for maintenance.

Plan of recommended improvement: Extension of existing breakwater for 90 feet and construction of a new breakwater 385 feet long at Short Point.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$50,700	$500	$51,200
Current	74,000	1,000	75,000

Local cooperation: Provide suitable public landing (cost estimated to be self-liquidating), easements, and hold and save United States free from damage.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$2,660	$3,135
Maintenance	400	600
Total	3,060	3,735
Annual benefits: Prevention boat damage	7,500	10,000
Benefit-cost ratio	2.4	2.7

Remarks: Improvement justified for removing hazards to navigation and so preventing damage to boats.

PORTSMOUTH HARBOR AND PISCATAQUA RIVER, MAINE AND N. H.

(H. Doc. 556, 82d Cong., 2d sess.)

Location: Piscataqua River, Maine and N. H., is formed by the confluence of Salmon Falls and Cocheco Rivers, and flows 13 miles generally southeast to the Atlantic Ocean. The lower portion of the river, known as Portsmouth Harbor, is 55 miles northeast of Boston.

Report authorized by: House Committee on Public Works resolution adopted February 17, 1949.

Existing project: Provides for a stone breakwater extending from Goat Island to Newcastle Island, removal of a portion of Gangway Rock, removal of a portion of ledge at Badgers Island, and the removal of Pier Rock, all to specified depths.

Plan of recommended improvement: Provides for the removal of ledge rock in the vicinity of Gangway Rock, the southwest point of Badgers Island, and Boiling Rock to 35 feet below mean low water.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$834,000		$834,000
Current	952,000		952,000

Local cooperation: Furnish lands, easements and rights-of-way; hold and save United States free from damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$33,600	$34,800
Maintenance	600	700
Total	34,200	35,500
Annual benefits:		
Elimination of damage	20,000	22,500
Operational savings	28,600	29,700
Total	48,600	52,200
Benefit-cost ratio	1.4	1.47

Remarks: Particularly hazardous navigational difficulties prevail at the three submerged ledges at which improvements are recommended. Their removal would permit safer navigation and maneuvering, particularly for deep-draft vessels of 10,000 tons or more.

LYNN HARBOR, MASS.

(H. Doc. 568, 81st Cong.)

Location: Lynn Harbor, a natural harbor at the head of Broad Sound, is about 14 miles by water northeasterly from Boston.

Report authorized by: River and Harbor Committee resolution March 19, 1946, and River and Harbor Act, 1946.

Existing project: Channel 22 feet deep by 300 feet wide from Bass Point, Nahant, to a turning basin 550 feet wide at the head of the harbor. Completed 1934. Federal costs to June 30, 1951, $755,000 new work and $102,500 maintenance. Depth of 25 feet authorized but not undertaken due to lack of local cooperation.

Plan of recommended improvement: Enlargement of turning basin by including in Federal project easterly 300 feet of municipal channel and dredging this area to a depth of 25 feet. Initial dredging to 22 feet. Additional dredging to 25 feet to be done when local interests comply with conditions of local cooperation required under existing project.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$48,500	[1] $3,500	$52,000
Current	65,000	[1] 4,700	69,700

[1] Cash contribution.

Local cooperation: Provide lands, etc.; hold and save United States from damages; contribute in cash the cost of dredging the easterly 300 feet of the channel to depth of 22 feet, presently estimated to cost $4,700.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$2,315	$2,510
Maintenance	560	740
Total	2,875	3,250

Annual benefits: Project modification is not based on monetary evaluation of benefits but on alleviating difficulty of navigating larger ships now in use in negotiating the turn from the Federal basin into the municipal channel.

Benefit-cost ratio: On above basis, benefit-cost ratio is considered to be at least 1 to 1.

Remarks: The improvement would provide a suitable channel for modern coal-carrying vessels and is considered justified in the interest of increased safety and convenience to general navigation.

WEYMOUTH FORE RIVER, MASS.

(H. Doc. 555, 82d Cong., 2d sess.)

Location: Rises in Braintree, Mass., and flows northward 7.5 miles into Hingham Bay on the south side of Boston Harbor.

Report authorized by: House Public Works Committee resolution, April 22, 1947.

Existing project: Provides for 27-foot channel from Nantasket Roads into Weymouth Fore River above Weymouth Fore Bridge, varying in width from 300 feet to 500 feet with turning basin at the head of navigation.

Plan of recommended improvement: Provides for channel 32 feet deep in rock, 30 feet in other material, from deep water in Boston Harbor to Weymouth Fore Bridge in Weymouth Fore River, varying in width from 300 feet to 500 feet, and a maneuvering basin above the bridge 30 feet deep.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$3,412,055	$50,680	$3,462,735
Current	4,400,000	64,400	4,464,400

Local cooperation: Hold and save United States free from damages due to construction and maintenance of the improvement, and make utility relocations.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$134,990	$158,280
Maintenance	500	700
Total	135,490	158,980
Annual benefits: Transportation savings	369,116	477,500
Benefit-cost ratio	2.72	3.0

Remarks: Project serves a highly industrialized area with a population of more than 126,000. Project justified on prospective commerce of more than 3 million tons. Commerce in 1952 amounted to more than 2 million tons.

TOWN RIVER, QUINCY, MASS.

(H. Doc. 108, 83d Cong., 1st sess.)

Location: Entirely within the city limits of Quincy, Mass., tributary to Weymouth Fore River, a part of Boston Harbor.

Report authorized by: House Rivers and Harbors Committee resolution, December 2, 1946.

Existing project: Provides for a channel 24 feet deep, 150 feet wide from Weymouth Fore River into Town River for a distance of 1.3 miles, a turning basin 18 feet deep and a channel 15 feet deep extending 0.25 miles further.

Plan of recommended improvement: Provides for deepening the existing 24-foot channel to a depth of 27 feet with a width of 250 feet and the basin to a depth of 24 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$450,000	$150,000	$600,000
Current	525,000	175,000	700,000

Local cooperation: Furnish spoil disposal areas, bulkhead, low-spoil areas, hold and save United States free of damages; contribute in cash 25 percent of the cost of construction presently estimated at $175,000.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$23,900	$24,700
Maintenance	4,000	4,600
Total	27,900	29,300
Annual benefits: Transportation savings	127,900	146,700
Benefit-cost ratio	4.6	5.0

Remarks: Quincy is in the Boston industrial area with a population of over 83,000. Waterborne commerce in 1951 was over 600,000 tons. Project is amply justified by savings in transportation costs.

SCITUATE HARBOR, MASS.

(H. Doc. 241, 83d Cong., 2d sess.)

Location: Indentation in the coastline of Massachusetts Bay about 13 miles southeast of Boston Harbor.

Report authorized by: House River and Harbor Committee Resolution, July 20, 1946.

Existing project: Entrance channel 12 feet by 200 feet from Massachusetts Bay to a point 70 feet west of the existing south jetty; thence a harbor channel 10 feet by 150 feet extending westward 1,500 feet; an anchorage 10 feet by 1,500 feet by 460 feet along the north side of harbor channel; extension of north jetty 300 feet easterly; and maintenance of extended north and south jetties. Existing project completed in 1940. Costs to June 30, 1952, $176,796 for new work and $7,431 for maintenance.

Plan of recommended improvement: To provide for: (1) a main harbor channel 10 feet by 200 feet, extending from the existing 12-foot entrance channel to about 50 feet south of the town wharf; (2) an inner harbor channel 10 feet by 150 feet, extending about 470 feet southerly from the main harbor channel; (3) an anchorage basin 8 feet by 400 feet by 1,500 feet in extension of northwesterly side of the existing Federal 10-foot anchorage; and (4) an inner anchorage basin 10 feet by 100 feet by 900 feet at the head of the inner harbor channel.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$334,000	$223,000	$557,000
Current	375,000	250,000	625,000

Local cooperation: Contribute in cash 40 percent of the construction cost, estimated at $223,000 in the project document and currently estimated at $250,000, and furnish all lands and suitable spoil-disposal areas; provide adequate berthing facilities at the lumber wharf; hold and save the United States free from damages; and also subject to the condition that no dredging shall be done by the Federal Government within 50 feet of any wharf or structure unless a waiver of damage is signed.

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Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$22,600	$22,130
Maintenance	3,700	4,150
Total (approximate)	26,300	26,300
Annual benefits:		
Land enhancement	300	300
Fish	18,200	20,500
Transportation	2,500	2,800
Recreational	53,600	60,200
Total	74,600	83,800
Benefit-cost ratio	2.8	3.2

Remarks: Major benefits will accrue to the owners of recreational craft from the enlarged facilities. A cash contribution of 40 percent of the actual construction cost is required.

FALL RIVER HARBOR, MASS. AND R. I.

(H. Doc. 405, 83d Cong., 2d sess.)

Location: Essentially within Mount Hope Bay, about 50 miles south of Boston, Mass.

Report authorized by: House Committee on Public Works resolution adopted July 6, 1949.

Existing project: Channel from deep water in bay, 35 feet deep and 400 feet wide, thence along waterfronts of Fall River and Tiverton with turning basin 35 feet deep at head of navigation.

Plan of recommended improvement: Provides for deepening the mid-bay channel to 35 feet for a width of 400 feet between deep water in Mount Hope Bay and Globe Wharf at Fall River; this improvement to be in lieu of the authorized waterfront channel.

Estimated cost:

	Federal	Non-Federal	Total
Current (report)	$694,000		$694,000

Local cooperation: Hold and save the United States free of damages.

Project economics:

	Current
Annual charges:	
Interest and amortization	$26,700
Maintenance	4,000
Total	30,700
Annual benefits: Transportation savings	34,000
Benefit-cost ratio	1.11

Remarks: The principal remaining need in Fall River Harbor is for a 35-foot-deep entrance channel to the Massachusetts section of the harbor. Waterborne commerce in 1951 amounted to more than 1,750,000 tons.

BULLOCKS POINT COVE, R. I.

(H. Doc. 242, 83d Cong.)

Location: East shore, Providence River, 4.5 miles south of Providence Harbor, R. I. Lower half-mile of the cove, covering approximately 100 acres, is separated from Providence River by a small peninsula.

Report authorized by: River and Harbor Act approved July 24, 1946.

Existing project: None.

Plan of recommended improvement: Entrance channel 8 feet x 75 feet from deep water in Providence River to the cove entrance, thence 6 feet x 75 feet to and including a turning basin 6 feet deep (2.9 acres) opposite Haines Park; a south mooring basin 6 feet deep (8.3 acres) opposite the boat club; and for reconstruction of Bullock Point with dredged sand fill and jetty to a height of 9 feet above mean low tide for about 450 feet easterly of the 1948 mean high-water line.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$145,000	$136,400	$281,400
Current	166,400	158,000	324,400

Local cooperation: Contribute in cash 42 percent of the construction cost estimated at $103,400 (December 1950) and currently at $120,000 (September 1953); plus lands, bulkheads, public landing; hold and save the United States free from damage; and establish a public body to regulate the waterway.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$11,535	$11,520
Maintenance	3,150	3,650
Total	14,685	15,170
Annual benefits:		
Recreational boats	22,100	25,500
Fishing fleet	2,000	2,300
Land enhancement	520	400
Total	24,620	28,200
Benefit-cost ratio	1.7	1.9

Remarks: Widespread recreational benefits; therefore, a local cash contribution of 42 percent of the actual construction cost is required.

SAKONNET HARBOR, R. I.

(H. Doc. 436, 82d Cong.)

Location: Cove, 900 by 1,200 feet, on the east side of entrance to Sakonnet River, 7 miles east of Newport Harbor.

Report authorized by: House Public Works Committee resolution, April 13, 1948.

Existing project: The authorized project, completed in 1908, provides for a breakwater 400 feet long and for the removal of rock nearest the breakwater to a depth of 8 feet. Costs to June 30, 1950: $72,498—$62,202 for new work and $10,296 for maintenance. Local interests have constructed four privately owned wharves.

Plan of recommended improvement: Provides for extending the breakwater northeasterly 400 feet, top width 15 feet at 8 feet above mean low water, and dredging the harbor to a depth of 8 feet below mean low water, including removal of rock pile in the center of the harbor.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$465,800	$18,700	$484,500
Current	555,400	23,000	578,400

Local cooperation: Project document recommends local interests contribute $18,700 in cash toward the cost of construction; furnish lands and rights-of-way, and hold and save the United States free from damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$19,335	$20,870
Maintenance	[1] 1,300	[1] 1,560
Total	20,635	22,430
Annual benefits:		
Elimination vessel damage	3,000	3,600
Fishing	37,400	44,800
Recreational boating	3,420	4,100
Total	43,820	52,500
Benefit-cost ratio	2.1	2.3

[1] Includes $1,000 additional Corps of Engineers cost.
[2] Includes $1,200 additional Corps of Engineers cost.

Remarks: Sakonnet Harbor is useful as a harbor of refuge; close to several fishing banks and waters used extensively for pleasure boating. Because of recreational benefits a local cash contribution of 4 percent of the project cost, presently estimated as $23,000, is required.

PATCHOGUE RIVER, CONN.

(H. Doc. 164, 83d Cong.)

Location: Patchogue River is situated in the town of Westbrook, Conn., on the north shore of Long Island Sound about 7 miles west of the Connecticut River.

Report authorized by: River and Harbor Act of 1946.

Existing project: None.

Plan of recommended improvement: Channel 8 feet deep, 75 feet wide, from Duck Island Roads to highway bridge on U. S. Route 1, a distance of 5,100 feet, together with an anchorage basin and jetty.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$120,000	[1] $80,000	$200,000
Current	135,000	[1] 91,000	226,000

[1] Cash contribution.

Local cooperation: Usual lands, easements, and rights-of-way; hold and save United States from damages, and contribute in cash 40 percent of the total cost of construction estimated at the time Federal funds are made available for the project.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$8,250	$8,190
Maintenance	5,250	5,980
Total	13,500	14,170
Annual benefits:		
General	25,325	28,705
Local	7,560	8,525
Total	32,885	37,230
Benefit-cost ratio	2.4	2.6

Remarks: Improvement is considered warranted to provide for navigation at all stages of the tide; to provide adequate anchorage area for fishing and recreational craft; and to provide refuge for small boats. A local cash contribution of 40 percent of the total cost of construction is required in view of the large local benefits.

WESTPORT HARBOR AND SAUGATUCK RIVER, CONN.

(H. Doc. 488, 81st Cong., 2d sess.)

Location: Saugatuck River empties into Long Island Sound 11 miles southwest of the entrance to Bridgeport Harbor. The navigable portion of the river is known as Westport Harbor.

Report authorized by: House Rivers and Harbors Committee resolution, February 1, 1946.

Existing project: Provides for channel 4 by 60 feet to Westport; repair of the Cedar Point breakwater, and removal of ledge rock and boulders from the channel. Project 70 percent complete. Costs to June 30, 1951, for new work were $32,100, and for maintenance $16,600, a total of $48,700. A yacht basin about 12 feet deep at Cedar Point with entrance channel about 1,600 feet long has been constructed by local interests at a cost of $175,000.

Plan of recommended improvement: To provide for a channel 9 by 125 feet across the outer bar, thence 100 feet wide to highway bridge at Saugatuck, with a turning and anchorage basin 6 feet deep (3.5 acres).

Estimated cost:

	Federal	Non-Federal	Total
Project document	$81,550	$27,000	$108,550
Current	112,500	37,500	150,000

Local cooperation: Project document recommends cash contribution from local interests equal to 25 percent of the initial cost but not to exceed $27,000; plus all lands, easements, rights-of-way and spoil areas; bulkheads; hold and save the United States free from damages; and provide and maintain a public landing. Chief of Engineers currently recommends waiving limitation on cash contribution.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$4,800	$5,200
Maintenance (Federal)	2,300	3,100
Total	7,100	8,400
Annual benefits	14,750	16,460
Benefit-cost ratio	2.1	2.0

Remarks: The project modification is essential to relieve congestion and permit safe navigation. Benefits would accrue to recreational craft that use the harbor. In view of local benefits, a cash contribution equal to 25 percent of the initial cost is required, and should be based on the actual cost of construction without a specific upper limit.

WESTCHESTER CREEK, N. Y.

(H. Doc. 92, 82d Cong., 1st sess.)

Location: In the Bronx, New York City, 14 miles northeast of the Battery.

Report authorized by: River and Harbor Act of March 2, 1945.

Existing project: Channel 12 by 100 feet wide for 2,000 feet through estuary; thence 8 feet wide for 3,000 feet; thence 60 feet wide for 8,800 feet with 2 turning basins.

Plan of recommended improvement: To provide a larger turning basin 12 by 250 by 250 feet about 500 feet downstream from head of navigation.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$27,000	$90,000	$117,000
Current	32,200	132,700	164,900

Local cooperation: Lands, rights-of-way, and disposal areas; hold and save United States free from damage; provide bulkheads; and provide a public wharf when needed.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$4,890	$5,830
Maintenance	1,400	1,700
Total	6,290	7,530
Annual benefits:		
Transportation savings	9,700	23,170
Benefit-cost ratio	1.5	3.1

Remarks: The proposed turning basin would permit use of larger tankers. The prospective savings are well in excess of the additional cost.

HUDSON RIVER, N. Y.

(H. Doc. 228, 83d Cong., 1st sess.)

Location: Hudson River rises in northeastern New York, flows south 299 miles to New York City and 16 miles within city limits to New York Bay. Section under consideration extends from New York City limits northward to Troy, N. Y.

Report authorized by: House Rivers and Harbors Committee resolution, March 21, 1945, and River and Harbor Act of March 2, 1945, with respect to North Germantown, N. Y.

Existing project: Provides for a channel 27 feet deep at mean low water from New York City to mile 144 at Albany, 300 feet wide with an additional 100 feet of width through rock cuts above Hudson; thence 14 feet deep at lowest low water and generally 400 feet wide from Albany to the Federal lock at Troy; and thence 14 feet deep and 200 feet wide to the State barge canal at Waterford.

Plan of recommended improvement: Modification of the existing project to provide for a channel 600 feet wide from New York City to Kingston, and thence 400 feet wide to Albany with widening at bends, a turning basin 700 feet wide and 1,200 feet long at Albany, and 2 anchorages, 1 near Hudson and 1 near Stuyvesant, 400 feet wide by 2,400 feet long, all with depths of 32 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$30,700,000	$1,120,000	$31,820,000
Current	31,928,000	1,166,000	33,094,000

Local cooperation: Furnish lands, easements, rights-of-way, and suitable spoil disposal areas for new work and maintenance; hold and save the United States free from damages; provide suitable depths in the approaches and berths at terminals; construct and maintain a suitable bulkhead on the east side of the proposed turning basin or permit dredging of a slope; provide and maintain at the port of Albany sufficient storage and handling facilities; continue to regulate the use of the harbor facilities at Albany.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,388,000	$1,281,500
Maintenance (additional)	170,000	183,400
Total	1,558,000	1,464,900
Annual benefits	2,411,190	2,767,000
Benefit-cost ratio	1.5	1.89

Remarks: A more commodious channel between New York City and Albany, a turning basin at Albany and anchorages are needed for deep-draft shipping. Freight in 1952 totaled over 6,300,000 tons at the port of Albany and over 18 million tons on the waterway from Waterford, N. Y., to the New York City limits.

SHOAL HARBOR AND COMPTON CREEK, N. J.

(H. Doc. 89, 82d Cong., 1st sess.)

Location: Shoal Harbor is on Sandy Hook Bay, 19 miles south of the Battery, New York City. Compton Creek empties into Shoal Harbor at Port Monmouth, N. J., and is navigable for about 1 mile to the fixed bridge at Church Street.

Report authorized by: River and Harbor Act approved July 24, 1946.

Existing project: Provides for a channel 8 feet deep from deep water in Sandy Hook Bay to a point 1,000 feet above the Main Street Bridge with widths of 150 feet in the bay and 75 feet in the creek. Project completed to the bridge in 1936; no work done above bridge. As of June 30, 1951, the total cost of new work was $30,282, and maintenance $152,810.

Plan of recommended improvement: To provide for deepening the existing channel to 12 feet to the first bend in the creek, including extension in Sandy Hook Bay.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$105,000	$112,500	$217,000
Current	138,000	147,800	285,800

Local cooperation: Contribute in cash 50 percent of the first cost presently estimated at $138,000, and in addition furnish all lands, easements, rights-of-way, and suitable spoil-disposal areas; hold and save the United States free from damages; and deepen to 14 feet the berths at the terminals; and provided further that no work shall be undertaken until local interests have complied with the outstanding conditions of local cooperation required under the existing project which pertains to the construction of a public wharf.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$8,890	$10,100
Maintenance	[1] 12,550	[2] 16,700
Total	21,440	26,800
Annual benefits:		
Reduction vessel damage	10,000	13,000
Reduction vessel delays	5,000	6,500
Additional fish catch	17,000	22,200
Total	32,000	41,700
Benefit-cost ratio	1.5	1.6

[1] Includes $12,050 Corps of Engineers maintenance.
[2] Includes $15,800 Corps of Engineers maintenance.

Remarks: The general benefits are considered sufficient to warrant Federal participation in the project if local interests agree to contribute 50 percent of the first cost in addition to other requirements of local cooperation. The local contribution should not be limited to a specific sum as stated in the report. The recommended improvement is economically justified and would provide sufficient depths in the entrance to eliminate damages and delays to the larger fish boats.

HACKENSACK RIVER, N. J.

(H. Doc. 252, 82d Cong., 1st sess.)

Location: Rises near Haverstraw, N. Y., and flows 45 miles through Hackensack (mile 16.5) to Newark Bay at Jersey City.

Report authorized by: River and Harbor Act of March 2, 1945.

Existing project: Provides a 35-foot channel in lower Newark Bay to junction of Hackensack and Passaic Rivers; a 30 by 400-foot channel in Hackensack River to mile 1.1; a 30 by 300-foot channel to mile 3.9; 12 by 200 feet to mile 14.0; and 12 by 150 feet to mile 16.5. Project completed in 1930.

Plan of recommended improvement: Deepen existing 30-foot channel to 32 feet (34 feet in rock) including approach channel in Newark Bay.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$1,463,000	$49,000	$1,512,000
Current	1,973,900	64,700	2,038,600

Local cooperation: Furnish lands, easements and spoil disposal areas; provide project depths in approaches and berths of terminal facilities; hold and save United States from damage.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$58,970	$72,000
Maintenance	10,100	13,060
Total	69,070	85,060
Annual benefits:		
Transportation savings	100,600	126,200
Benefit-cost ratio	1.5	1.5

Remarks: Project serves an area with tributary population of about 2 million. Waterborne commerce 4 million tons annually. Justified by reduction in lost time and accidents to vessels.

MISPILLION RIVER, DEL.

(S. Doc. 229, 81st Cong., 2d sess.)

Location: Rises in central Delaware, flows northeasterly 20 miles and enters Delaware Bay about 16 miles northwest of Cape Henlopen. The river is tidal to a dam at Milford at mile 12.

Report authorized by Senate Public Works Committee resolution, April 27, 1948.

Existing project: Provides for a channel 6 feet deep from Delaware Bay to Milford, including 4 cutoffs and 2 parallel stone-filled pile and timber jetties 210 feet apart at the entrance. Channel widths are 80 feet from the bay to the mouth of the river, thence 60 feet in the river and 50 feet in the cutoffs with additional widths at sharp bends. The south jetty is 5,850 feet long and the north jetty 6,496 feet. The project was completed in 1939.

Plan of recommended improvement: Provides for a channel 9 feet deep and 80 feet wide from like depth in Delaware Bay to the landward end of the jetties, thence 60 feet wide to the head of navigation at Milford, a turning basin 120 feet wide and 350 feet long located about 500 feet downstream from the Washington Street Bridge in Milford, and 3 cutoffs to eliminate the bends between Cains and Maloneys landings, in the vicinity of Lock Hall landing, and near Beswicks landing.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$414,000	$200	$414,200
Current	469,400	200	469,600

Local cooperation: Provide lands, easements, rights-of-way, and suitable spoil disposal areas; and hold and save the United States free from damage.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$16,100	$16,650
Maintenance	16,075	18,000
Total	32,175	34,650
Annual benefits: Transportation savings	55,000	63,300
Benefit-cost ratio	1.7	1.8

Remarks: Existing project depth in Mispillion River between Delaware Bay and the town of Milford is inadequate for existing and prospective commerce. The recommended improvement would permit use of more efficient vessels and more effective use of craft now operating on the river, as well as water movement of quantities of commerce now transported by more expensive means. The modification is economically justified.

INLAND WATERWAY FROM DELAWARE RIVER TO CHESAPEAKE BAY, DEL. AND MD.

(S. Doc. 123, 83d Cong., 2d sess.)

Location: This waterway, known as the Cheapeake and Delaware Canal, connects Delaware Bay and Chesapeake Bay by means of a land-cut canal at sea level.

Report authorized by Senate Commerce Committee resolution, March 28, 1939.

Existing project: The Chesapeake and Delaware ship canal, 46 miles long, connects with Delaware River at Reedy Point, Del., with entrance jetties, extends westerly by land-cut 14 miles to Back Creek, at Chesapeake City, Md.; then 5 miles in Back Creek to Elk River; then through Elk River and Chesapeake Bay, 27 miles to vicinity of Pooles Island. The United States maintains and operates high-level fixed bridges at St. Georges and Chesapeake City and vertical lift bridges at Summit and Reedy Point. The Pennsylvania Railroad owns and operates its lift bridge, two-thirds of the first cost of which was borne by the United States.

Plan of recommended improvement: Modification of the existing project for the Chesapeake and Delaware Canal to provide a depth of 35 feet over a bottom width of 450 feet in the main channel including a cut-off at the Pennsylvania Railroad bridge; high-level railroad bridge, to be owned and operated by Pennsylvania Railroad; high-level fixed highway bridges, with 4 lanes at Summit and 2 lanes at Reedy Point; anchorage in Elk River 35 feet by 1,200 feet by 3,700 feet; and revetment of banks as necessary.

Estimated cost (all Federal):

Report	$96,000,000
Current	101,000,000

Project economics:

	Report	Current
Annual charges	$4,250,000	$4,080,000
Annual benefits	5,160,000	5,415,000
Benefit-cost rate	1.21	1.33

Remarks: In construction of all highway bridges and approaches, the standards of local cooperation required by the project shall be the same as those applied to the construction of the St. Georges Bridge.

QUEENSTOWN HARBOR, MD.

(H. Doc. 718, 81st Cong., 2d sess.)

Location: Queenstown Creek is an estuary about 2 miles long on the easterly side of Chesapeake Bay about 35 miles southeast of Baltimore.

Report authorized by House Committee on Public Works; resolution adopted June 17, 1948.

Existing project: Provides for a channel 10 by 200 feet from Chester River to Queenstown Creek, a distance of about 4,000 feet.

Plan of recommended improvement: To provide for a channel 7 by 75 feet from Queenstown Creek to the vicinity of the town wharf in Little Queenstown Creek and for a mooring basin 7 by 300 by 300 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$26,300	----------	$26,300
Current	31,900	----------	31,900

Local cooperation: Furnish all lands, easements, rights-of-way, and suitable spoil disposal areas; hold and save the United States free from damages, including such damage as may occur to oyster beds.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,120	$1,195
Maintenance	1,000	1,000
Total	2,120	2,195
Annual benefits:		
Savings boat operation	455	500
Increased oyster production	4,600	5,520
Savings boat repair	750	860
Total	5,805	6,880
Benefit-cost ratio	2.7	3.1

Remarks: A number of small boats operating from Little Queenstown Creek are damaged and incur lost working time because of inadequate depths in Little Queenstown Creek and at its mouth. The proposed modification of the existing project would remedy these conditions and is economically justified.

LITTLE CREEK, KENT ISLAND, QUEEN ANNES COUNTY, MD.

(H. Doc. 715, 81st Cong., 2d sess.)

Location: A tidal estuary 2,600 feet long tributary to Crab Alley Bay, an arm of Eastern Bay, which in turn joins Chesapeake Bay south of Kent Island.

Report authorized by: River and Harbor Act approved July 24, 1946.

Existing project: None.

Plan of recommended improvement: To provide a channel 7 by 60 feet, about 1,850 feet long from Crab Alley Bay to and including a basin 150 by 250 feet opposite the existing boat yard in Little Creek.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$22,000	$1,000	$23,000
Current	23,000	1,100	24,100

Local cooperation: Provide all lands, easements, rights-of-way, and spoil disposal areas; hold and save the United States free from damages, including such damage as may occur to oysterbeds; and provide and maintain an adequate public wharf with suitable approach channel.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$985	$945
Maintenance	915	915
Total	1,900	1,860
Annual benefits:		
Prevention boat damage	800	900
Increased oyster catch	11,000	13,000
Total	11,800	13,900
Benefit-cost ratio	6.2	7.5

Remarks: Inadequate natural depths in Little Creek cause damages and appreciable loss of time to the considerable number of oyster boats now using Little Creek. The proposed project would eliminate some boat damage, and, by improving operational conditions, would increase working time and seafood production. The benefits are well in excess of the costs and the project is economically justified.

ANCHORAGE AT LOWES WHARF, TALBOT COUNTY, MD.

(H. Doc. 90, 82d Cong., 1st sess.)

Location: In Ferry Cove on the eastern shore of Chesapeake Bay, about 6 miles north of Choptank River and southeast of Annapolis.

Report authorized by: River and Harbor Act approved July 24, 1946.

Existing project: None.

Plan of recommended improvement: A channel 7 by 60 feet from the 7-foot depth in the cove to and including a basin 200 by 300 feet on the south side of Lowes Wharf.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$27,000	$6,000	$33,000
Current	29,000	6,400	35,400

Local cooperation: Furnish all rights-of-way and suitable spoil disposal areas; remove existing piling, etc., within the limits of the work; construct public landing; and hold and save the United States free from damages, including such damages as may occur to oysterbeds.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,410	$1,325
Maintenance	[1] 990	[1] 990
Total	2,400	2,315
Annual benefits:		
Increased oyster production	3,000	3,600
Prevention oyster boat damage	375	430
Reduction fuel costs	132	145
Total	3,507	4,175
Benefit-cost ratio	1.5	1.8

[1] Includes $500 Corps of Engineers maintenance.

Remarks: The present harbor lacks adequate depths and protection for fishing vessels. Storm and ice damages also cause lost fishing time. The larger bay-boats when in the vicinity must travel to other harbors for overnight stops. The proposed improvement would alleviate these conditions, is satisfactory to local interests, and is economically justified.

NANTICOKE RIVER, BIVALVE, WICOMICO COUNTY, MD.

(H. Doc. 91, 82d Cong., 1st sess.)

Location: Bivalve is 6 miles above the mouth of Nanticoke River, about 113 miles southeast of Baltimore.

Report authorized by: River and Harbor Act of March 2, 1945.

Existing project: None.

Plan of recommended improvement: Provision of a protected anchorage basin 7 by 150 by 350 feet initially with an ultimate length of 550 feet and an approach channel 60 by 1,400 feet protected by twin rock jetties 1,000 feet long.

Estimated cost:

	Federal	Non-Federal	Total
Project document:			
Initial development	$167,300	$10,000	$177,300
Ultimate development	180,000	10,000	190,000
Current:			
Initial development	179,000	10,700	189,700
Ultimate development	192,600	10,700	203,300

Local cooperation: Provide all lands, etc., spoil-disposal areas; hold and save United States free from damage including damage to oyster beds; public landing; and relocate powerline.

Project economics (initial development):

	Project document	Current
Annual charges:		
Interest and amortization	$7,100	$6,880
Maintenance	2,500	2,500
Total	9,600	9,380
Annual benefits:		
Increased oyster catch	12,000	14,400
Boat-damage reduction	600	690
Total	12,600	15,090
Benefit-cost ratio	1.3	1.6

Remarks: The ultimate basin is authorized but no construction beyond the initial stage is to be undertaken until the additional length is found justified.

WEBSTER COVE, SOMERSET COUNTY, MD.

(H. Doc. 619, 81st Cong., 2d sess.)

Location: Webster Cove is the site of an improved small-boat harbor located in the marsh on the southeasterly side of the Wicomico River about 3 miles above the mouth. Wicomico River enters Chesapeake Bay from the east 85 miles southeast of Baltimore.

Report authorized by: River and Harbor Act, March 2, 1945.

Existing project: The existing Federal navigation project for Wicomico River includes provision of a basin 6 feet deep, 100 feet wide, and 400 feet long in Webster Cove with an entrance channel 6 feet deep and 60 feet wide from deep water in the Wicomico River. This work was completed in 1940.

Plan of recommended improvement: Provides for enlargement of the existing basin at Webster Cove, Somerset County, Md., by dredging an extension 6 feet deep, 100 feet wide, and 200 feet long on each side of the existing basin to form a T-shaped harbor.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$19,000	$1,200	$20,200
Current	20,300	1,300	21,600

Local cooperation: Provide all lands, easements, and rights-of-way and spoil-disposal areas; acquire and reserve for public use a strip of land to guarantee free public access to basin; and hold and save the United States free from all damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$808	----------
Maintenance	900	----------
Total	1,708	$1,660
Annual benefits:		
Savings in boat damages	1,250	1,440
Increased production	1,000	1,200
Total	2,250	2,640
Benefit-cost ratio	1.31	1.59

Remarks: The existing harbor at Webster Cove is too small to accommodate all the boats in the area and is exposed to wind and wave action. The proposed improvement would provide a protected harbor of adequate size and is economically justified.

CRISFIELD HARBOR, MD.

(H. Doc. 435, 81st Cong., 2d sess.)

Location: On the left bank of Little Annemessex River, on the east side of Chesapeake Bay, 115 miles southeast of Baltimore, Md.

Report authorized by: River and Harbor Act approved March 2, 1945.

Existing project: Provides for a channel 12 by 425 feet from Tangier Sound to Somers Cove Light, thence 266 feet wide to the bend about 1,800 feet southwest of the railroad pier at Crisfield, and thence of irregular width to a point opposite the Consumers Ice Co.; a spur channel 10 by 100 feet from the ice plant to Hop Point; a channel 7 by 60 feet from the 7 foot depth in Little Annemessex River via Cedar Creek, a land cut, and Daugherty Creek to Big Annemessex River; and a mooring basin 7 by 160 by 875 feet generally parallel to Brick Kiln Road, with a channel 7 by 100 feet leading therefrom to the 7 feet project channel connecting Little Annemessex and Big Annemessex Rivers.

Plan of recommended improvement: Provides for construction of an anchorage basin in Somers Cove 10 by 600 by 1,000 feet with an approach channel 10 by 100 feet from the 10 foot depth in Little Annemessex River through a land cut in Jersey Island to the south side of the basin.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$78,750	$53,000	$131,750
Current	101,750	74,000	175,750

Local cooperation: Provide all lands, easements, rights-of-way, and spoil disposal areas; hold and save the United States free from damages, remove existing structures from the area to be dredged; construct a suitable road connecting the lower portion of Jersey Island with Crisfield; and make a cash contribution toward the cost of the improvement equivalent to the difference in Federal costs between plans 1 and 2 at the time the project is undertaken. The cash contribution based on current prices would be $43,200.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$5,320	$6,240
Maintenance (Corp of Engineers)	2,000	2,000
Total	7,320	8,240
Annual benefits: Prevention of boat damage	20,000	23,000
Benefit-cost ratio	2.7	2.8

Remarks: The present harbor is congested and some boats of necessity not only must tie up five abreast but must also stay at exposed locations, resulting in severe boat damage. The improvement is economically justified by the elimination of vessel damages that will result under improved conditions.

RHODES POINT TO TYLERTON, SOMERSET COUNTY, MD.

(H. Doc. 51, 82d Cong., 1st sess.)

Location: Rhodes Point and Tylerton are two settlements about 1.5 miles apart on Smith Island, which is located between Chesapeake Bay and Tangier Sound about 60 miles north of the Virginia Capes.

Report authorized by: River and Harbor Act, March 2, 1945.

Existing project: There is no existing project for improvements between Rhodes Point and Tylerton.

Plan of recommended improvement: Adoption of a project to provide for a channel 4 feet deep and 59 feet wide from Tylerton to Rhodes Point via Rhodes Point Gut.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$42,000		$42,000
Current	45,100		45,100

Local cooperation: Furnish all lands, easements, rights-of-way, and suitable spoil disposal areas, and hold and save the United States free from damages due to the construction and maintenance of the project.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,760	
Maintenance	500	
Total	2,260	$2,310
Annual benefits:		
Increased production	3,240	3,600
Transportation savings	600	750
Total	3,840	4,300
Benefit-cost ratio	1.60	1.86

Remarks: The residents of Smith Island are dependent on water transportation for their livelihood. At present, access to Rhodes Point and Tylerton, and between these communities, is restricted to periods of high tide. Local seafood industry has been handicapped by lack of an adequate channel. The proposed improvement is economically justified.

POCOMOKE RIVER, MD.

(H. Doc. 486, 81st Cong., 2d sess.)

Location: Rises in southern part of Delaware, flows southwest 54 miles to enter Pocomoke Sound on the east side of Chesapeake Bay, 40 miles north of Cape Charles, Va.

Report authorized by: River and Harbor Act, March 2, 1945.

Existing project: Provides for a channel 7 feet deep and 100 feet wide from like depth in Pocomoke Sound through "The Muds" to deep water in the river near Williams Point, a distance of 3.5 miles; and a channel 9 feet deep and 100 to 130 feet wide from Shad Landing to above the bridge at Snow Hill widened to 150 feet to form a turning basin at the upper end, a distance of 4.5 miles. The project has been completed to Snow Hill.

Plan of recommended improvement: Channel 11 feet deep and 150 feet wide from the 11-foot depth in Pocomoke Sound to Tulls Point, thence 100 feet wide to deep water in Pocomoke River above Williams Point, and construction of a dike along the offshore side of the channel between Tulls Point and the end of the existing dike.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$540,000	$1,000	$541,000
Current	678,300	1,100	679,400

Local cooperation: Provide all lands, easements, rights-of-way, and spoil disposal areas, and hold and save the United States free from damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$21,100	$24,100
Maintenance		
Total	21,100	24,100
Annual benefits:		
Savings in operating costs	3,900	5,070
Savings in cost of transportation of products	25,800	31,630
Total	29,700	36,700
Benefit-cost ratio	1.4	1.52

Remarks: Present project dimensions and conditions cause considerable delays to commercial craft visiting Pocomoke City and Snow Hill, and many of the craft can load to only partial capacity. The improvement would provide adequate depths and a more protected route for existing and prospective traffic, and is economically justified.

OCEAN CITY HARBOR AND INLET AND SINEPUXENT BAY, MD.

(H. Doc. 444, 82d Cong.)

Location: Ocean City is on a narrow barrier beach between Sinepuxent Bay and the Atlantic Ocean, 105 miles north of the Virginia Capes.

Report authorized by: River and Harbor Act approved March 2, 1945.

Existing project: Provides for a navigable inlet between the Atlantic Ocean and Sinepuxent Bay, 10 by 200 feet, protected by jetties; a channel 10 by 100 by 3,000 feet from the inlet channel into the marsh area to form a harbor south of the railroad on the west side of Sinepuxent Bay with two turning basins; a channel 6 by 150 feet in Sinepuxent Bay from the inlet to Green Point, thence 100 feet wide to Chincoteague Bay; and a channel 6 by 125 feet from the inlet channel to a point opposite North Eighth Street in Ocean City, thence 75 feet wide into Isle of Wight Bay.

Plan of recommended improvement: Modification of existing project by raising the north jetty to an elevation 9 feet above mean low water, and by providing a channel 16 by 300 feet from the ocean through the inlet to the Isle of Wight channel, thence 200 feet wide to the project harbor, and a depth of 14 feet in the project harbor.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$658,000		$658,000
Current	704,000		704,000

Local cooperation: Furnish all lands, easements, rights-of-way, and suitable spoil-disposal areas; hold and save the United States free from damages; and, prior to construction, furnish assurances that adequate tank storage facilities at Ocean City for the handling of petroleum products will be installed and maintained.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$25,600	$24,900
Maintenance	16,000	16,000
Total	41,600	40,900
Annual benefits:		
Increased fish catch	29,000	33,400
Transportation savings	21,600	24,940
Total	50,600	58,340
Benefit-cost ratio	1.2	1.4

Remarks: The proposed improvement would provide a harbor of refuge for small craft in a 170-mile reach between Delaware Bay and Norfolk and would provide considerable time savings for the fishing fleets during winter season. The fishing fleet will be able to use larger boats with the new channel. Delivery of petroleum products will be possible at substantial savings.

PARROTTS CREEK, VA.

(H. Doc. 46, 82d Cong., 1st sess.)

Location: Parrotts Creek, Va., is a small tidal estuary on the west bank of the Rappahannock River 23 miles upstream from Chesapeake Bay.

Report authorized by: River and Harbor Act, March 2, 1945.

Existing project: None.

Plan of recommended improvement: Provides for an entrance channel 60 feet wide, suitably widened at the bends and 6 feet deep extending from that depth in Rappahannock River 4,800 feet to and including a turning basin of the same depth and 120 feet square opposite the (public) wharf.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$29,600	$4,000	$33,600
Current	38,700	5,500	44,200

Local cooperation: Provide all lands, easements, and rights-of-way, and suitable spoil disposal areas; hold and save the United States free from damages; and construct and maintain a public wharf, open to all on equal terms.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,425	$1,655
Maintenance	2,525	3,035
Total	3,950	4,690
Annual benefits: Elimination of boat damages, lost working time, and increased production	6,550	7,000
Benefit-cost ratio	1.66	1.64

Remarks: The shallow available depths in Parrotts Creek and the entrance restrict the movements of the larger fishing vessels and reduce the production of seafood, and hence the income of the fishermen in the vicinity. The recommended improvement would permit the larger boats to enter and reach the local packing plants at all stages of the tide, thereby reducing boat damages and delays, and increasing useful fishing time. Local interests agree to meet the proposed requirements of cooperation in a Federal project, which is considered to be economically justified.

NORFOLK HARBOR AND THIMBLE SHOAL CHANNEL, VA.

Location: Lower end of Chesapeake Bay near Norfolk, Va. Thimble Shoal Channel, in Chesapeake Bay extends from Atlantic Ocean to Hampton Roads; Norfolk Harbor extends from 40-foot contour in Hampton Roads up Elizabeth River.

Report authorized by: Senate Public Works Resolution June 17, 1949, and October 14, 1949.

Existing project: Federal: Thimble Shoal Channel, 40 by 750 feet, 11 miles long. Norfolk Harbor Channel 40 by 750 feet from Hampton Roads to Southern Branch, then 40 by 450 feet up branch to Belt Line Railroad bridge, 13.2 miles; thence 35 feet deep, 375 feet to 250 feet wide for 4.1 miles; several turning basins, anchorages, side channels, and a disposal area at Craney Island. *Non-Federal:* Numerous terminals, approach channels and berths.

Plan of recommended improvement: Thimble Shoal Channel: 40 by 1,000 feet with flank channel each side 32 by 450 feet. Norfolk Harbor: 40 by 1,500 feet, Hampton Roads to embarkation piers; and anchorage areas, south of Craney Island: 38 by 1,500 by 1,500 feet; 35 by 1,500 by 1,500 feet; and 20 by 1,000 by 3,000 feet, provided no work is accomplished until Craney Island disposal area is available.

Estimated cost:

	Federal	Non-Federal	Total
Project report	$6,138,700		$6,138,700

Local cooperation: Virginia to extinguish at its expense all oyster rights.

Project economics:

Annual charges $683,819

Annual benefits and benefit-cost ratio not evaluated. River and Harbor Board notes that only 2 cents per ton of commerce required to justify work.

Remarks: The proposed improvements are warranted in order to provide for safe navigation by the increased number of larger commercial vessels and the many naval vessels using the projects. Although the benefits are not reducible to monetary terms, the costs are considered reasonable in view of the traffic involved.

DEEP CREEK, ACCOMACK COUNTY, VA.

(H. Doc. 477, 81st Cong.)

Location: A small stream about 7 miles long on the western side of the Delmarva Peninsula and about 50 miles north of Cape Charles, Va. The mean tidal range is 2.4 feet.

Report authorized by: River and Harbor Act, March 2, 1945.

Existing project: None.

Plan of recommended improvement: To provide a channel 7 by 75 feet and about 2.4 miles long from the 7-foot depth in Pocomoke Sound to and including a turning basin of like depth, 200 by 300 feet opposite the existing terminal facilities at the town of Deep Creek, Va.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$82,000	$7,000	$89,000
Current	95,000	8,600	103,600

Local cooperation: Provide all necessary land, easements, rights-of-way, and spoil-disposal areas; remove the existing county wharf and all other structures within the limits of the channel and its side slopes; construct an adequate public landing; and hold and save the United States free from damages, including such damage as may occur to oyster beds.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$3,700	$3,810
Maintenance	2,700	2,700
Total	6,400	6,510
Annual benefits:		
Transportation savings	6,200	7,425
Increased food production	3,000	3,600
Total	9,200	11,025
Benefit-cost ratio	1.4	1.7

Remarks: Lack of adequate depths in Deep Creek prevents free navigation therein. The proposed improvement would increase fishing time and increased catch, with the probable new benefits expected in excess of the costs. The project is economically justified.

CHANNEL FROM OYSTER, VA., TO ATLANTIC OCEAN

(S. Doc. 49, 83d Cong.)

Location: Oyster, Va., is on lower east side of Delmarva Peninsula separating Chesapeake Bay from Atlantic Ocean.

Report authorized by: Senate Public Works Committee resolution, November 8, 1948.

Existing project: Channel 6 feet deep, 60 feet wide from deep water in Liscombes Channel to Oyster, Va., together with a turning basin 200 feet long and 125 feet wide. Completed, 1948.

Plan of recommended improvement: Provides for a channel 6 feet deep and 80 feet wide from Liscombes Channel to Oyster and enlargement of turning basin to about 8 acres in area and 6 feet in depth.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$72,300	$23,600	$95,900
Current	75,200	25 600	100,800

Local cooperation: Furnish lands, easements, rights-of-way, and spoil disposal areas; provide land for public access to project; remove wrecks and other obstructions; hold and save United States free from damages; and establish a public body to regulate use of harbor facilities.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$3,815	$3,585
Maintenance	4,280	4,600
Total	8,095	8,185
Annual benefits	33,075	39,764
Benefit-cost ratio	4.10	4.86

Remarks: Project will provide substantial benefits to the seafood industry by eliminating the handicaps which reduce earning capacity, and by increasing the amount of seafood produced.

WALLACE CHANNEL, PAMLICO SOUND, N. C.

(H. Doc. 453, 81st Cong., 2d sess.)

Location: Wallace Channel extends generally north from Ocracoke Inlet through an inner bar to a 15-foot depth in Pamlico Sound about 7.4 miles from the inlet. Wallace Channel is near the barrier reef and about 40 miles south and west of Cape Hatteras.

Report authorized by: River and Harbor Act, July 24, 1946.

Existing project: None.

Plan of recommended improvement: Provides for a channel 12 feet deep and 200 feet wide in Wallace Channel from that depth in Ocracoke Inlet northwestward through the bar at the head of Wallace Channel to the 12-foot contour in Pamlico Sound.

Estimated cost:

	Federal	Non-Federal	Total
Project document:	$83,000	----------	$83,000
Current	108,000	----------	108,000

Local cooperation: Hold and save the United States free from claim for damage including such damage as may occur to public or leased oyster or clam beds.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$3,230	$2,810
Maintenance	15,000	15,000
Total	18,230	17,810
Annual benefits	61,300	30,450
Benefit-cost ratio	3.36	1.62

Remarks: Project serves a tributary area with a population of over 14,000. Project is justified by benefits to commercial fishing. Freight traffic through Wallace Channel totaled about 6,500 tons in 1952 as compared with almost 23,000 tons in 1948.

SMITHS CREEK, N. C.

(H. Doc. 170, 83d Cong., 1st sess.)

Location: Smiths Creek, a nontidal stream about 2.5 miles long, rises in southeast Pamlico County, N. C., and flows generally south to Oriental, N. C., to its confluence with the Neuse River, 12 miles above Pamlico Sound.

Report authorized by: House River and Harbor Committee resolution, April 1, 1946.

Existing project: Authorized in 1910. Provides for a basin at Oriental with entrance channel from Neuse River, both 10 feet deep at mean low water. Project has been maintained at 150-foot width but width is not defined in previous authority.

Plan of recommended improvement: Modification to provide a rubble-mound breakwater extending 800 feet southwesterly from Oriental, and a basin generally parallel to the breakwater, 10 feet deep, 300 feet wide, and 800 feet long.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$97,900	$625	$98,525
Current	102,000	700	102,700

Local cooperation: Provide lands, easements, and rights-of-way; and hold and save United States free from claim for damage.

Project economics:

	Project document	Current
Annual charges	$4,540	$4,370
Annual benefits	7,795	7,730
Benefit-cost ratio	1.73	1.77

Remarks: The benefits resulting from the elimination of damage to wharves are not included above.

HATTERAS INLET AND ROLLINSON CHANNELS, N. C.

(Chief of Engineers' report, November 2, 1953)

Location: Hatteras Inlet, a natural opening through the barrier island between Pamlico Sound and the Atlantic Ocean on the east coast of North Carolina, is about 13 miles southwest of Cape Hatteras. Town of Hatteras is on the sound shore of the island about 3.5 miles northeast of inlet. Englehard, N. C., the nearest town on the mainland, is at the head of Far Creek about 27 miles northwest across Pamlico Sound.

Report authorized by: House Rivers and Harbors Committee resolution, June 19, 1945, and House public works resolution May 13, 1947.

Existing project: Federal—Rollinson Channel, 6 feet deep by 100 feet wide from Pamlico Sound to turning basin at Hatteras. *Non-Federal*—Channel dredging to wharves in Hatteras Harbor and other points within the harbor.

Plan of recommended improvement: Modification of existing project for Rollinson Channel, N. C., to provide for a breakwater on each side of channel at entrance to basin.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$175,000	$2,000	$177,000
Current	175,000	2,000	177,000

Local cooperation: Furnish lands, easements, and rights-of-way; hold and save United States free from damages due to construction and maintenance.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$6,250	$6,250
Additional maintenance for breakwater	1,750	1,750
Total	8,000	8,000
Annual benefits:		
Prevention vessel damage	4,700	5,525
Increased fish catch	4,450	5,200
Total	9,150	10,725
Benefit-cost ratio	1.14	1.34

Remarks: Report also considered 12-foot deep channel paralleling shore of Hatteras Island southwest to the inlet and other breakwater alinements at town of Hatteras, which were found not justified economically.

PELTIER CREEK, N. C.

(H. Doc. 379, 81st Cong., 1st sess.)

Location: Tidal stream, about 5,000 feet long, tributary to Bogue Sound between Beaufort and Bogue Inlets and about 4 miles west of Morehead City, N. C.

Report authorized by: House River and Harbor Committee resolution, November 30, 1945.

Existing project: None for Peltier Creek; Intracoastal Waterway, passing through Bogue Sound, provides for 12-foot channel. Morehead City Harbor has a 30-foot channel, 400 feet wide across ocean bar and 300 feet wide inside.

Plan of recommended improvement: Provides for channel 1,850 feet long from Intracoastal Waterway, and 12 feet deep by 90 feet wide, with turning basin 200 feet by 600 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$32,000	$1,250	$33,250
Current	43,200	1,500	44,700

Local cooperation: Lands, easements, rights-of-way, spoil disposal areas for construction and maintenance; hold and save United States free from damage; provide suitable area accessible by road for public landing.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,300	$1,580
Maintenance	1,600	1,900
Total	2,900	3,480
Annual benefits: Elimination of boat damage (harbor of refuge)	3,600	4,500
Benefit-cost ratio	1.24	1.29

Remarks: The improvement would provide suitable depths for larger craft as well as a harbor of refuge and the proposed depth is consistent with project depth on the Intracoastal Waterway. Project is economically justified as presented.

CHANNEL, PORT ROYAL SOUND TO BEAUFORT, S. C.

(H. Doc. 469, 81st Cong., 2d sess.)

Location: Port Royal Sound, an arm of the Atlantic Ocean, in South Carolina, is 18 miles northwest of Savannah Harbor and 57 miles southwest of Charleston Harbor. Beaufort and Port Royal, S. C., are located near Beaufort River, a tributary of the sound.

Report authorized by River and Harbor Act of March 2, 1945.

Existing project: None for Port Royal Sound. The Intracoastal Waterway, which has a project depth of 12 feet at mean low water, traverses that part of Beaufort River in which 24-foot improvement is desired.

Plan of recommended improvement: Provision of a channel, 27 feet deep by 500 feet wide, from the ocean across the bar to Port Royal Sound; and in Port Royal Sound, for approximately 13.2 miles; then 24 feet deep and 300 feet wide in Beaufort River and Battle Creek for approximately 7.5 miles to a turning basin 27 feet deep and 600 feet wide opposite the wharf of the Charleston and Western Carolina Railway, at Port Royal.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$600,000		$600,000
Current	765,000		765,000

Local cooperation: Furnish all lands, easements, and rights-of-way and spoil disposal areas necessary for the construction and subsequent maintenance of the project, when and as required; hold and save the United States free from damages due to construction; and install and maintain without cost to the United States suitable additional terminal facilities as required.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$27,000	$27,000
Maintenance	104,000	136,000
Total	131,000	163,000
Annual benefits: Transportation savings:		
Blackstrap molasses		167,000
Fertilizers		4,200
Lumber		16,000
Total	[1] 156,600	187,200
Benefit-cost ratio	[1] 1.20	1.15

[1] Based on anticipated benefits to Plywood Plastic Corp., which no longer expects to use the waterway.

Remarks: Expansion of the Plywood Plastics Corp. did not occur. As noted in the hearing testimony on February 9, 1954, the South Carolina States Ports Authority presented new information on commodities that would move through the proposed channel. The major item of commerce would be blackstrap molasses, the use of which in animal feeds is steadily increasing according to the Department of Agriculture, particularly in corn-deficient areas. The Chief of Engineers in letter June 15, 1954, confirmed the recommendation in the project document and furnished the current economic data shown above.

SAVANNAH HARBOR, GA.

(H. Doc. 110, 83d Cong., 1st sess.)

Location: Savannah Harbor is lower 21 miles of Savannah River below United States Highway 17 crossing, at Savannah, Ga.

Report authorized by House Public Works Committee resolution, April 25, 1951.

Existing project: Provides for channels 36 feet deep and 500 feet wide across ocean bar, 9.7 miles; then 34 feet deep and generally 400 feet wide, increasing to 550 feet wide, 17.2 miles, with turning basin 34 feet deep; then 30 feet deep and 300 feet wide to foot of Kings Island, 0.6 mile; thence 30 feet deep and 200 feet wide to a point 1,500 feet below U. S. 17 bridge with a turning basin 30 feet deep at upper end, 1.4 miles; a total of 31 miles of channel.

Plan of recommended improvement: Modification to provide for a channel 34 feet deep and 400 feet wide from the upper end of the presently authorized 30-foot channel, a distance of 1.6 miles and for widening at the upper end to form a turning basin 34 feet deep, 600 feet wide, and 700 feet long.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$414,900		$414,900
Current	414,900		414,900

Local cooperation: Provide lands, easements, and rights-of-way and spoil disposal areas for the entire project for new work and maintenance; hold and save the United States free from claim for damage.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$16,100	$14,700
Maintenance	(1)	(1)
Total	16,100	14,700
Annual benefits	20,600	22,000
Benefit-cost ratio	1.28	1.50

[1] There is no increase in maintenance due to the self-sustaining nature of currents in the area of proposed improvement.

Remarks: The authorized 30-foot channel is inadequate for T–2 and other modern vessels expected to use the terminals of the Georgia Ports Authority. In 1952, commerce in the port area totaled over 3,500,000 tons. Port is served by 5 railroads and 51 steamship lines.

RICE CREEK, PUTNAM COUNTY, FLA.

(H. Doc. 446, 82d Cong., 2d sess.)

Location: Rises in northcentral Putnam County, Fla., flows easterly about 10 miles through generally low, swampy, and densely forested lands, and discharges into St. Johns River at a point 3.5 miles north of Palatka and 43 miles south of Jacksonville, Fla.

Report authorized by River and Harbor Act, July 24, 1946.

Existing project: None.

Plan of recommended improvement: Channel 12 feet deep and 100 feet wide from beacon No. 64 in St. Johns River to mouth of Rice Creek, and thence 75 feet wide to the access channel of the Hudson Pulp & Paper Corp., except through the railroad and highway bridges, including a cut-off and suitable straightening, widening, and snagging.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$68,150	$69,200	$137,350
Current	82,200	83,600	165,800

Local cooperation: Lands, easements, rights-of-way, and spoil disposal areas; hold and save United States free from damages; maintain access channel and turning basin at the paper mill to project depth; and contribute in cash 50 percent of the cost of construction.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$5,900	$5,668
Maintenance	1,090	850
Tax loss	10	12
Total	7,000	6,530
Annual benefits	23,400	[1] 71,300
Benefit-cost ratio	3.58	10.2

[1] Results primarily from commerce increasing 2.5 times since preparation of report.

Remarks: The benefits resulting from provision of the project are largely local in nature and would accrue principally to one company. However, in view of this situation, local interests are required to contribute in cash 50 percent of the cost of constructing the channel.

HILLSBORO RIVER, FLA.

(H. Doc. 567, 81st Cong., 2d sess.)

Location: Rises near Dade City, Pasco County, Fla., and flows about 51 miles southwesterly to Hillsboro Bay at Tampa, Fla.

Report authorized by: Review resolutions adopted March 18, and December 4, 1946, by the Committee on Commerce of the United States Senate, and by the Committee on Rivers and Harbors of the House of Representatives.

Existing project: There is no existing Federal project for improvement of Hillsboro River for flood control. The existing navigation project for Tampa Harbor provides, among other things, for a deep-water channel from the Gulf of Mexico to and including a turning basin at the mouth of Hillsboro River, thence a channel in Hillsboro River 12 feet deep and 200 feet wide to a point about 100 feet below the Lafayette Street Bridge, a distance of 2,400 feet, thence 9 feet deep and 100 feet wide for an additional 2.4 miles to a point 2,000 feet upstream from Columbus Drive, and for clearing the channel thence to the Florida Avenue Bridge at river mile 8.0.

Plan of recommended improvement: Modification of the existing project for Tampa Harbor, Fla., to provide for removal of snags, wrecks, piling, and similar obstructions from the channel of Hillsboro River between the upstream end of the existing project at the Florida Avenue Bridge and the city waterworks dam.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$14,400		$14,400
Current	16,560		16,560

Local cooperation: Provide without cost all lands, easements, and rights-of-way; make all necessary alterations to structures and utilities; hold and save the United States free from damages; and maintain the cleared channel after completion.

Project economics:

	Project document	Current
Annual charges	$1,060	$1,125
Annual benefits	$2,200	$2,730
Benefit-cost ratio	2.08	2.43

Remarks: Improvement of Hillsboro River for flood control only is not warranted. However, completion of the existing navigation project for Tampa Harbor, of which Hillsboro River is a part, will materially reduce flood damages in Tampa, and the proposed extension by snagging above the project limits would return additional flood-control benefits in excess of the costs.

APALACHICOLA BAY, FLA.

(H. Doc. 156, 82d Cong., 1st sess.)

Location: Apalachicola Bay, St. George and St. Vincent Sounds, form a continuous body of water about 54 miles long and 7 miles wide on the gulf coast of Florida about 190 miles northwest of Tampa, and is separated from the gulf by several low islands. The town of Apalachicola is on the west bank of the Apalachicola River which enters Apalachicola Bay at its junction with its branch, East Bay. The village of Eastpoint is on the north shore of St. George Sound at its junction with Apalachicola and East Bays.

Report authorized by: River and Harbor Act approved July 24, 1946.

Existing project: None for Eastpoint or Apalachicola. The existing project for Apalachicola Bay provides for 10-foot depths in West Pass, and in Link and Inner Bar Channels, and for a 9-foot depth in East Pass Channel (Bulkhead Shoals).

Plan of recommended improvement: At Eastpoint, Fla., a main channel 6 feet deep, 100 feet wide, and about 6,000 feet long, generally parallel to the shore, with a channel 6 feet deep and 100 feet wide connecting the center of the main channel with water of the same depth in St. George Sound. At Apalachicola, a small-boat basin 500 feet square and 9 feet deep with a connecting channel 9 feet deep and 80 feet wide through Scipio Creek to the Apalachicola River.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$88,800	$10,000	$98,800
Current	98,000	12,500	110,500

Local cooperation: Provide and maintain the necessary slips; hold and save the United States free from damages; provide all lands, easements, rights-of-way, and suitable spoil-disposal areas; provide and maintain adequate mooring facilities, a public landing, and other appurtenant works including necessary bulkheads and slips for local boats; and establish a competent and properly constituted public body empowered to regulate the use, growth, and free development of the harbor facilities.

Project economics:

	Project document	Current
Annual charges:		
Eastpoint	$6,600	$7,760
Apalachicola	4,900	4,940
Annual benefits:		
Eastpoint	17,900	13,600
Apalachicola	6,600	7,200
Benefit-cost ratio:		
Eastpoint	2.71	1.75
Apalachicola	1.34	1.46

Remarks: (*a*) Eastpoint: Improvement would permit the use of larger fishing vessels and would result in increased seafood production and greater economy of operation. Improved navigation conditions would decrease damage to boats. (*b*) Apalachicola: Improvement would relieve congested conditions on the waterfront and would provide a harbor of refuge during storms for the numerous fishing vessels operating in the vicinity.

APALACHICOLA BAY, FLA.—CHANNEL ACROSS ST. GEORGE ISLAND

(H. Doc. 557, 82d Cong., 2d sess.)

Location: Apalachicola Bay is on the gulf coast of Florida, 190 miles northwest of Tampa. The bay and connecting sounds, St. George Sound on the east and St. Vincent Sound on the west, form a continuous body of water separated from the Gulf of Mexico by St. Vincent, St. George, and Dog Islands.

Report authorized by: House Committee on Rivers and Harbors, April 29, 1937.

Existing project: Provides for channels 10 feet deep from the Gulf of Mexico through West Pass and in Link and Inner Bar Channels in Apalachicola Bay, with widths of 150 feet in West Pass and Link Channels and 100 feet in Inner Bar Channel. It also provides for a channel 9 feet deep and 100 feet wide through Bulkhead Shoal, which serves as another entrance to the bay through East Pass, the entrance to Carrabelle Harbor.

Plan of recommended improvement: Provides for modification of the existing 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 the shore and continuing with this width to the 10-foot depth in the Gulf of Mexico, and for 2 jetties extending from the dune line on St. George Island to the 10-foot depth in the Gulf of Mexico.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$428,700	$3,000	$431,700
Current	635,700	3,000	638,700

Local cooperation: Furnish all lands, easements, rights-of-way, and spoil-disposal areas, and hold and save the United States free from damages, including damages to oyster beds.

Project economics:

	Project document	Current
Annual charges	$32,600	$43,300
Annual benefits	40,070	47,300
Benefit-cost ratio	1.23	1.09

ST. JOSEPH BAY, FLA.

(H. Doc. 595, 81st Cong., 2d sess.)

Location: St. Joseph Bay is on northwest coast of Florida, 115 miles east of Pensacola Harbor. It is 13 miles long north to south and averages 4 miles wide, and is partially enclosed by a long, narrow peninsula connected to the mainland at the south. The bay is connected to the gulf by an opening 3 miles wide. Port St. Joe is on the mainland shore of the bay.

Report authorized by: River and Harbor Act, March 2, 1945.

Existing project: Provides for an entrance channel 32 feet deep, 300 feet wide, and about 6 miles long across the outer shoal; a north bay (inner) channel 32 feet deep, 200 feet wide, and about 2 miles long, leading to a turning basin 32 feet deep, about 1,000 feet wide, and 2,000 feet long at the Port St. Joe waterfront; and a south bay (inner) channel 27 feet deep and 200 feet wide. Completed February 1949.

Plan of recommended improvement: Provide for an entrance channel 37 feet deep, 500 feet wide at its outer end and diminishing progressively in width to 400 feet at the first bend, thence 400 feet wide to the entrance to St. Joseph Bay; a north channel in the bay 35 feet deep and 300 feet wide; and a harbor channel in the turning basin 35 feet deep and 250 feet wide, with its shoreward edge 100 feet from and parallel to the face of the existing wharf.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$1,125,000		$1,125,000
Current	1,312,000		1,312,000

Local cooperation: Furnish all spoil disposal areas; hold and save the United States free from damages; and provide and maintain adequate depths between the docks and the edge of the proposed channel as may be required by shipping.

Project economics:

	Project document	Current
Annual charges	$75,800	$99,400
Annual benefits, transportation savings	80,000	124,000
Benefit-cost ratio	1.05	1.25

Remarks: The existing project is inadequate for full capacity loading of T–2 tankers. Modification would permit the larger tankers to load to capacity and thereby effect substantial savings in transportation costs of petroleum products, the major item of commerce at Port St. Joe.

MOBILE HARBOR, ALA.

(H. Doc. 74, 83d Cong., 1st sess.)

Location: In city of Mobile, in southwestern Alabama, on the west bank of Mobile River at its mouth.

Reported authorized by: House Public Works Committee resolution, September 27, 1951.

Existing project: Provides for a channel 36 by 450 feet across Mobile Bar; a 32 by 300-foot channel from bay entrance to mouth of Mobile River; channel 32 by 500 feet to 775 feet to highway bridge at mile 4.6; 25-foot channel in Chickasaw Creek; 27-foot channel in vicinity of Garrows Bend; turning basin; and other appurtenant works.

Plan of recommended improvement: Enlarging bar channel to 42 by 600 feet; enlarging Mobile Bay channel to 40 by 400 feet; deepen Mobile River channel from mouth to highway bridge; deepen turning basin to 40 feet; widening river channel to 800 feet to provide turning basin 40 feet deep by 1,400 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$5,778,000	$143,000	$5,971,000
Current	5,778,000	143,000	5,971,000

Local cooperation: Furnish spoil-disposal areas; provide suitable depths in berthing areas at terminals; hold and save United States from damage.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$232,700	$210,500
Maintenance	302,000	302,000
Total	534,700	512,500
Annual benefits: Transportation; reduction in accidents	1,565,000	1,419,000
Benefit-cost ratio	2.93	2.77

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Remarks: Sixty ships were involved in collisions from 1946 to 1951. Ships drag bottom even at reasonable speeds.

DAUPHIN ISLAND BAY, ALA.

(H. Doc. 394, 82d Cong., 2d sess.)

Location: Dauphin Island Bay, Ala., a shallow inlet about three-fourths mile wide and 1.75 miles long, is on the mainland side of the eastern end of Dauphin Island which is one of the barrier islands along the gulf coast west of the entrance to Mobile Bay.

Report authorized by: Resolutions of the Public Works Committees of the United States Senate and House of Represenatives, adopted February 25, and June 2, 1949, respectively.

Existing project: Provides for a channel 7 feet deep and 150 feet wide from that depth in Mobile Bay to an anchorage basin of the same depth, 600 feet long and 500 feet wide, just north of Fort Gaines, and a channel 4 feet deep and 40 feet wide from the anchorage basin to the 3-foot contour in Dauphin Island Bay, together with a jetty to protect the entrance channel on the north. No work has been done on the existing project.

Plan of recommended improvement: Provides for 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 contour in Mississippi Sound.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$56,000		$56,000
Current	70,000		70,000

Local cooperation: Provide all lands, easements, rights-of-way, and suitable spoil-disposal areas; provide and maintain a suitable landing open to all on equal terms; and hold and save the United States free from damages.

Project economics:

	Project document	Current
Annual charges	$8,900	$10,800
Annual benefits	20,800	20,800
Benefit-cost ratio	2.34	1.93

Remarks: The benefits would accrue principally to owners and operators of small commercial fishing craft who earn a livelihood by fishing, shrimping, and oystering in the waters adjacent to Dauphin Island.

BAYOU SEGNETTE, LA.

(H. Doc. 413, 83d Cong., 2d sess.)

Location: In lowlands of Jefferson Parish just south of the Mississippi River opposite New Orleans.

Report authorized by: House Rivers and Harbors Committee resolution, March 12, 1946; River and Harbor Act of July 24, 1946; Flood

Control Act of December 22, 1944; River and Harbor Act of March 2, 1945.

Existing project: None.

Plan of recommended improvement: Provision of a channel with depth of 9 feet below mean low gulf level and bottom width of 60 feet, extending from Company Canal at Westwego, La., to the Gulf Intracoastal Waterway via Bayou Segnette, a land cut, and Bayou Villars.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$520,000	$64,000	$584,000

Local cooperation: Furnish lands, easements, rights-of-way, and spoil-disposal areas; accomplish and maintain necessary alterations in pipelines, drainage, and other facilities; hold and save the United States free from damages; maintain Company Canal free from vegetative growth obstructive to navigation and provide and maintain therein a minimum of 7 feet or depth equivalent to that maintained in Federal channel, for width of 30 feet; provide and maintain public wharf; cooperate in preventing vegetative growth from entering proposed improvement.

Project economics:

	Project document	Current
Annual charges	$33,970	$33,970
Annual benefits	46,400	46,400
Benefit-cost ratio	1.37	1.37

Remarks: It is recommended that channel be maintained to 6-foot depth at estimated cost of $8,000 annually until such time as greater depth up to 9 feet is economically advisable.

SABINE-NECHES WATERWAY, TEX.

(S. Doc. 80, 83d Cong., 2d sess.)

Location: Gulf of Mexico to cities of Port Arthur, Beaumont, and Orange in southeastern part of Texas.

Report authorized by: Senate Public Works Committee resolution adopted April 20, 1948.

Existing project: Provides channel from Gulf of Mexico, northward through Sabine Pass, past Port Arthur, to Beaumont, and a channel from the mouth of the Neches to Orange, Tex.; an anchorage basin and various turning basins. Depths vary from 30 feet to 37 feet, widths from 800 feet at the outer bar to 125 feet in Sabine River.

Plan of recommended improvement: Rectification and curve widening of channels, relocation and enlargement of anchorage basin; provision of maneuvering basin.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$6,875,000	$261,000	$7,136,000
Current	6,875,000	261,000	7,136,000

Local cooperation: Furnish lands, easements, and spoil-disposal areas; relocate and alter existing pipelines, utility crossings, piers and wharves; hold and save United States from damage.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$288,200	$261,000
Maintenance	121,000	121,000
Total	409,200	382,000
Annual benefits: Transportation	506,000	446,900
Benefit-cost ratio	1.2	1.2

Remarks: Major industry in tributary area is the petroleum industry. Principal items of prospective commerce at Orange will be from the chemical industry.

GUADALUPE RIVER AT SEADRIFT, TEX.

(H. Doc. 478, 81st Cong., 2d sess.)

Location: On northeastern shore of San Antonio Bay about 60 miles northeast of Corpus Christi, and 35 miles from the Gulf of Mexico.

Report authorized by: House Public Works Committee resolution adopted February 15, 1946.

Existing project: Provides channel 9 feet deep and 100 feet wide from the Gulf Intracoastal Waterway by way of Seadrift to Guadalupe River 3 miles above Victoria; side channel about 6 miles long to connect with turning basin to be constructed by local interests at Seadrift.

Plan of recommended improvement: Provide harbor of refuge for small craft at Seadrift 9 feet deep, 200 feet wide, and 1,000 feet long with entrance channel 9 feet deep and 100 feet wide.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$52,000	$21,000	$73,000
Current	74,300	28,500	102,800

Local cooperation: Furnish lands, easements and spoil-disposal areas; hold and save the United States from damage; provide and maintain mooring facilities and public landing open to all on equal terms.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$2,900	$3,620
Maintenance	2,100	2,500
Total	5,000	6,120
Annual benefits: Prevention of damages	10,000	9,760
Benefit-cost ratio	2.00	1.6

Remarks: Chief of Engineers recommends that construction of the proposed work not be undertaken until authorized Guadalupe River channel and side channel have been completed.

GULF INTRACOASTAL WATERWAY, ARANSAS PASS, TEX.

(H. Doc. 376, 83d Cong., 2d sess.)

Location: South Texas coast of Gulf of Mexico about 20 miles northeast of Corpus Christi.

Report authorized by: House Public Works Committee resolution, September 29, 1949.

Existing project: Tributary channel of Gulf Intracoastal Waterway project extending from Port Aransas to city of Aransas Pass. Provides for channel 12 feet deep and 100 feet wide with turning basin 12 feet deep, 300 feet wide, and 2,200 feet long.

Plan of recommended improvement: Widen tributary channel to 125 feet; straighten and widen connecting channel to Conn Brown Harbor and maintenance by the United States of Conn Brown Harbor.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$29,000		$29,000
Current	30,700		30,700

Local cooperation: Lands, easements, rights-of-way, and spoil-disposal areas; hold and save United States free from damages; maintain embankment at Conn Brown Harbor.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,300	$1,400
Maintenance	2,180	2,180
Total	3,480	3,580
Annual benefits	5,500	4,740
Benefit-cost ratio	1.6	1.3

TURTLE COVE, TEX.

(H. Doc. 654, 81st Cong., 2d sess.)

Location: On Texas coast about 180 miles southwest of Galveston, Tex.

Report authorized by: River and Harbor Act of July 24, 1946.

Existing project: Provides deep-water channel from Gulf of Mexico through Aransas Pass, Turtle Cove, and Corpus Christi Bay to city of Corpus Christi; channel to vicinity of Tule Lake; channel to town of Port Aransas; turning basins at Corpus Christi at Avery Point, and near Tule Lake; inner basin at Harbor Island.

Plan of recommended improvement: Provide anchorage basin 12 feet deep, from 300 to 500 feet wide, and 900 feet long in Turtle Cove adjacent to existing channel and turning basin at Port Aransas.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$30,000		$30,000
Current	40,000		40,000

Local cooperation: Furnish lands, easements, and spoil-disposal areas; hold and save United States from damage; provide and maintain mooring facilities and public landing open to all on equal terms.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$1,207	$1,430
Maintenance	1,000	1,020
Total	2,207	2,450
Annual benefits: Transportation savings; harbor of refuge	8,000	7,740
Benefit-cost ratio	3.6	3.2

Remarks: Use of proposed basin would save distance of 12 miles or approximately 2 hours of travel time, and would provide anchorage during storm periods.

PORT ARANSAS-CORPUS CHRISTI WATERWAY (VICINITY OF LA QUINTA)

(H. Doc. 89, 83d Cong., 1st sess.)

Location: Gulf of Mexico to ports of Harbor Island, and Corpus Christi. Gulf entrance is 170 miles southwest of Galveston, Tex., and 140 miles north of Brownsville, Tex.

Report authorized by: House Public Works Committee resolution, adopted February 20, 1951.

Existing project: Provides deep water channel from Gulf of Mexico through Aransas Pass, Turtle Cove, and Corpus Christi Bay to city of Corpus Christi; channel to vicinity of Tule Lake; channel to town of Port Aransas; turning basins at Corpus Christi, at Avery Point, and near Tule Lake; inner basin at Harbor Island.

Plan of recommended improvement: Provide for branch channel 32 feet deep and 150 feet wide extending northerly from the main channel near Port Ingleside, along north shore of Corpus Christi Bay to the Reynolds Metals Co. plant, and for turning basin 32 feet deep and 800 feet square near the plant.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$795,000	$825,000	$1,620,000
Current	829,100	859,100	1,688,200

Local cooperation: Furnish lands, easements and spoil-disposal areas; hold and save United States from damage; contribute in cash 50 percent of cost, presently estimated at $829,100.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$57,800	$60,200
Maintenance	40,000	42,500
Total	97,800	102,700
Annual benefits: Transportation	238,500	203,200
Benefit-cost ratio	2.38	2.0

Remarks: Channel to La Quinta has been dredged by Reynolds Metals Co. substantially according to plan recommended by Chief of Engineers. Work already done by local interests, in accordance with recommended plan, may be credited to cash contributions required of local interests.

MISSISSIPPI RIVER AT LOUISIANA, MO.

(H. Doc. 251, 82d Cong., 1st sess.)

Location: On the west bank of the Mississippi River about 64 miles above the mouth of the Illinois River.

Report authorized by: House Public Works Committee, April 13, 1948.

Existing project: Lock and dam No. 24 of the 9-foot Mississippi navigation project at Clarksville, Mo., is 10 miles downstream from Louisiana. The pool of this dam has raised the average elevation of the Mississippi River at Louisiana 7.5 feet.

Plan of recommended improvement: If reimbursement is to be made the amount shall be $57,829.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$57,829		$57,829
Current	82,600		82,600

Remarks: Local interests allege that since creation of pool No. 24 the main sanitary sewers of the city which discharge into the Mississippi are blocked to such a degree that basements are flooded and manholes are blown off, and they desired remedial measures. The amount of funds indicated above are as near as can be estimated the exact damages and payment is subject to releasing the United States from any further claims or duplication of claims resulting from operation of the navigation project.

MISSISSIPPI RIVER AT CHESTER, ILL.

(H. Doc. 230, 83d Cong., 1st sess.)

Location: On the left bank of the Mississippi River 110 miles above the mouth of the Ohio River.

Report authorized by: House Rivers and Harbors Committee, July 10, 1946.

Existing project: No Federal project for harbor at Chester.

Plan of recommended improvement: A small-boat harbor opposite Chester, consisting of a basin 6 feet deep with approach channel same depth, 50 feet wide, and 1,200 feet long.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$57,700	$58,700	$116,400
Current	65,000	65,500	130,500

Local cooperation: Furnish lands; non-self-liquidating items; make cash contribution one-third the cost presently estimated to be $32,600; hold and save United States free of damages; establish a body to control the project.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$5,099	$4,584
Maintenance	2,500	3,200
Total	7,599	7,784
Annual benefits: Recreational boating	8,540	9,664
Benefit-cost ratio	1.12	1.24

Remarks: Project will provide a safe adequate harbor for 150 recreational craft. Chester has a population of more than 5,000 and some manufacturing. Recreational benefits require cash contribution by local interests.

CROOKED SLOUGH HARBOR AT WINONA, MINN.

(H. Doc. 347, 83d Cong., 2d sess.)

Location: On the Mississippi River about 100 miles south of St. Paul, Minn.

Report authorized by: House Public Works Committee resolution, April 22, 1947.

Existing project: A combination commercial and small-boat harbor authorized by the 1945 River and Harbor Act which was modified to relocate the small-boat harbor. The Mississippi River navigation project provides 9-foot navigation by a system of locks and dams.

Plan of recommended improvement: Provides for 9-foot channel from Mississippi River into Crooked Slough 6,000 feet long and 200 feet wide in lieu of the project authorized in the 1945 River and Harbor Act.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$138,800	$83,500	$222,300
Current	142,000	86,500	228,500

Local cooperation: Provide lands, easements and rights-of-way; hold and save United States free of damages; provide adequate terminal and unloading facilities; make a cash contribution estimated at $3,300.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$7,830	$8,010
Maintenance	1,800	1,800
Total	9,630	9,810
Annual benefits: Transportation savings	39,300	40,500
Benefit-cost ratio	4.08	4.13

Remarks: Winona is a manufacturing center, chiefly agriculture products, with a population of more than 25,000; commerce in recent years has averaged 184,000 tons annually, consisting of coal, petroleum, grain, phosphates, and miscellaneous.

CUMBERLAND RIVER, KY. AND TENN.

(S. Doc. 81, 83d Cong., 2d sess.)

Location: Cumberland River is formed by the confluence of Poor and Clover Forks near Harlan, Ky. It flows in a generally westerly direction to its junction with the Ohio River in pool No. 52 near Smithland, Ky.

Report authorized by: Senate Public Works Committee resolution, July 31, 1951.

Existing project: Provides for a channel 9 feet deep from mouth of Cumberland River to Nashville by construction of 3 moderate-height dams to replace 7 low-head outmoded structures that provide a channel 6 feet deep.

Plan of recommended improvement: Modification of the existing project for navigation to provide, in lieu of the authorized moderate height dams at Eureka and Dover, for the construction of a multiple-purpose project for navigation, flood control, and hydroelectric power consisting of a high dam, lock, and powerplant near mile 30.5 on the lower Cumberland River, and a canal connecting the proposed reservoir with the reservoir at Kentucky Dam on the Tennessee River.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$145,000,000		$145,000,000
Current	161,340,000		161,340,000

Local cooperation: None required.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$6,144,000	$6,115,000
Maintenance	433,000	482,000
Total	6,577,000	6,597,000
Annual benefits:		
Navigation	2,911,000	3,239,000
Flood control	2,000,000	2,300,000
Power	4,183,000	3,909,000
Total	9,094,000	9,448,000
Benefit-cost ratio	1.38	1.43

Remarks: This multiple-purpose project in the interest of power, flood control, and navigation will replace two medium-size navigation dams now authorized for improvement of the same area in the lower Cumberland River. These two dams are currently estimated to cost $36 million. Originally the Corps of Engineers proposed a multiple-purpose dam substantially as now recommended, but the two navigation dams were adopted instead in 1946 as a result of opposition of the States of Kentucky and Tennessee. In the intervening period, the States have changed their position and now favor the maximum development of the resources of the river in order to provide additional navigation benefits through the linking of the Kentucky and Tennessee systems by a canal across the divide to the Kentucky Reservoir on the Tennessee, by provision of flood-control storage which will contribute to Mississippi and lower Ohio River flood control, and by the provision of hydroelectric power at lower cost than can be furnished from other developments, either steam or hydroelectric, in this area. The committee heard considerable testimony, favorable to the project. Although the cost of this individual project is high, the benefits are also very great and the committee considers that it would be shortsighted to build the lower-cost navigation structures and thereby permanently preclude taking advantage of the hydroelectric potential and the flood-control potentialities on this important waterway.

GREEN AND BARREN RIVERS, KY.

(S. Doc. 82, 83d Cong., 2d sess.)

Location: Green River rises in Lincoln County, Ky., and flows 370 miles westerly and northwesterly into Ohio River about 8 miles above Evansville, Ind. Barren River rises in Monroe County, Ky., and flows northwesterly to join Green River at mile 149.5.

Report authorized by: Senate Public Works Committee resolutions, April 15, 1949, and December 10, 1952.

Existing project: Provides for locks and dams Nos. 1 through 6 on Green River, lock and dam No. 1 on Barren River, and improvement of Nolin River and Bear Creek by removal of obstructions. Controlling depth is 5.5 feet from Ohio River to Bowling Green at mile 30.1 on Barren River. Channel is generally 200 feet wide on lower Green River and 100 feet wide on upper Green and Barren Rivers. Replacement of locks and dams Nos. 1 and 2 on Green River recently has been approved under authority of the River and Harbor Act of March 3, 1909.

Plan of recommended improvement: Deepen and widen Green River between mouth and mile 103 to 9 feet by 200 feet, suitable widening at bends, and construct guide fenders and cells at 4 bridges.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$3,310,000	.....	$3,310,000
Current	3,434,000	.....	3,434,000

Local cooperation: Furnish lands, easements and rights-of-way; hold and save United States free from damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$119,600	$124,000
Maintenance	25,000	25,000
Total	144,600	149,000
Annual benefits: Transportation	260,000	266,000
Benefit-cost ratio	1.8	1.8

Remarks: Transportation benefits are conservatively estimated from prospective movement of coal, most of which is already under contract for shipment by river after improvement. This coal is destined for a powerplant to serve the AEC as well as for a TVA plant.

KNIFE RIVER HARBOR, MINN.

(H. Doc. 463, 83d Cong., 2d sess.)

Location: North shore Lake Superior, 19 miles northeast of Duluth-Superior Harbor, Minn.-Wis.

Report authorized by: House Public Works Committee resolution adopted August 17, 1949.

Existing project: Provides for a flared approach channel 12 feet deep and 60 feet wide; and inner entrance channel 10 feet deep and 60 feet wide and 100 feet long; and 2 inner channels 8 feet deep and 60 feet wide with combined length of 850 feet. Project has not been constructed.

Plan of recommended improvement: Provides for a breakwater at entrance to harbor, spending beach, rearrangement of channels and reduction of depth and width to generally 8 feet deep and 50 feet wide.

Estimated cost:

	Federal	Non-Federal	Total
Current	$219,900	$17,700	$237,600

Local cooperation: Furnish all lands, easements and rights-of-way, spoil areas and hold and save the United States free of damages.

Project economics:

	Current
Annual charges:	
Interest and amortization	$10,000
Maintenance	2,500
Total	12,500
Annual benefits: Increased fish catch and recreational boating	22,600
Benefit-cost ratio	1.81

Remarks: Residents of the village of Knife River are largely dependent for livelihood on commercial fishing. Improvement would provide a protected harbor for craft based in the vicinity.

CORNUCOPIA HARBOR, WIS.

(H. Doc. 434, 83d Cong.; 2d sess.)

Location: South shore Lake Superior, 49 miles east of Duluth Harbor.

Report authorized by: House Committee on Public Works resolution adopted April 13, 1948.

Existing project: Provides for entrance channel in Siskiwit River 50 feet wide, 10 feet deep between piers from Siskiwit Bay to a turning basin; and 2 inner channels 50 feet wide, 8 feet deep extending to form a Y with length of 150 and 300 feet.

Plan of recommended improvement: Provides for reconstruction and Federal maintenance of entrance piers, including 25-foot extension of west pier and extension of westerly channel for a distance of 300 feet at a depth of 8 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$220,000	$7,000	$227,000

Local cooperation: Furnish all lands including necessary building removals; hold and save the United States free of damages; provide and maintain a public wharf; establish a public body to regulate the harbor.

Project economics:

	Project document
Annual charges:	
Interest and amortization	$8,000
Maintenance	400
Total	8,400
Annual benefits: Fish catch and recreational boating	$28,100
Benefit-cost ratio	3.35

Remarks: Commercial fishing is the main industry at Cornucopia. Fish catch amounted to 858 tons in 1952. The recommended work is necessary if the harbor is to reasonably serve the needs of commercial fishing and other boating activities of the area.

SHEBOYGAN HARBOR, WIS.

(H. Doc. 554, 82d Cong., 2d sess.)

Location: West shore of Lake Michigan, 55 miles north of Milwaukee.

Report authorized by: House Public Works Committee resolution, October 15, 1949.

Existing project: Provides for an outer harbor formed by breakwaters with basin project depth of 21 feet and a channel into Sheboygan River for about 500 feet, 200 feet wide, and 21 feet deep.

Plan of recommended improvement: Provides for 450-foot width at lakeward end of entrance channel, extension of the 25-foot and 21-foot channels, and a 15-foot channel with varying width from Maryland Avenue to Jefferson Avenue.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$199,100	$75,000	$274,100
Current	217,200	80,000	297,200

Local cooperation: Hold and save the United States from damage; make available area for unloading bulk petroleum carriers.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$10,940	
Maintenance	8,330	
Total	19,270	$20,080
Annual benefits: Transportation	37,500	49,000
Benefit-cost ratio	1.95	2.44

Remarks: Sheboygan is a manufacturing center; has a population of more than 42,000. Commerce has averaged more than 500,000 tons in the last 10 years. Project is amply justified by savings in transportation costs.

HOLLAND HARBOR AND BLACK LAKE, MICH.

(H. Doc. 282, 83d Cong., 2d sess.)

Location: In Black Lake on eastern shore of Lake Michigan about 95 miles northeast of Chicago, Ill.

Report authorized by: House Committee on Public Works Resolution, April 13, 1948.

Existing project: Provides for jettied channel in Lake Michigan into Black Lake to turning basin at Holland about 5.5 miles long, average width of 150 feet with depth from 21 to 22 feet.

Plan of recommended improvement: Widen the entrance channel from 130 to 235 feet; new revetment; channel extension and turning basin enlargement at head of navigation by deepening to 18 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$560,600	$37,400	$598,000
Current	574,400	37,400	611,800

Local cooperation: Lands, easements, rights-of-way, and disposal areas; remove buildings; hold and save the United States free of damages. Contribute in cash 25 percent of the cost of dredging section B, but not to exceed $45,500.

Project economics:

	Project document	Current
Annual charges:		
Part A	$5,270	$4,750
Part B	13,200	12,310
Total	18,470	17,060
Annual benefits:		
Part A	6,000	7,000
Part B	18,300	22,670
Total	24,300	29,670
Benefit-cost ratio:		
Part A	1.14	1.47
Part B	1.39	1.84

Remarks: Holland is an industrial center with a population of almost 18,000. Commerce in 1948 was 236,000 tons and in 1952 was 247,000 tons.

Local interests offered to contribute 25 percent of the cost, not to exceed $45,500, of dredging section B. This local cooperation is in addition to that required by the project document.

CROOKED AND INDIAN RIVERS, MICH.

(H. Doc. 142, 82d Cong., 1st sess.)

Location: Connecting channels known as inland route in the northern tip of the lower Peninsula of Michigan. Extends from Conway on Lake Michigan to Cheboygan on Lake Huron.

Report authorized by: House Rivers and Harbors Committee resolution, October 19, 1945.

Existing project: There is no existing Federal project for the waterway except at Cheboygan harbor. Emergency clearing of the project performed under the authority contained in section 3 of the River and Harbor Act, March 2, 1945.

Plan of recommended improvement: To provide a channel 5 feet deep and 30 feet wide in the waterway with jetties at head of Indian River and in Pickerel Channel.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$150,850	$85,000	$235,850
Current	225,000	85,000	310,000

Local cooperation: Lands, easements, and rights-of-way; hold and save the United States from damages; establish public body to control the project; provide and maintain certain navigation facilities; operate navigation lock in Cheboygan River; contribute in cash 36 percent of the cost of construction.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$12,465	$14,960
Maintenance	3,000	3,000
Total	15,465	17,960
Annual benefits: Recreational boating	22,555	28,200
Benefit-cost ratio	1.4	1.57

Remarks: The project will permit 165 craft to use the waterway from Conway to Lake Huron. Frequent damage to craft and other losses are caused by many obstructions in the waterway.

TOLEDO HARBOR, OHIO

(H. Doc. 620, 81st Cong., 2d sess.)

Location: Westerly end of Lake Erie.

Report authorized by: House Rivers and Harbors Committee resolution, July 23, 1945.

Existing project: Provides for a channel 25 feet deep about 16.5 miles long, generally 500 feet wide, from Lake Erie to Maumee River; for a dike in the channel for foundation for range lights; and a channel of varying depths and widths in Maumee River.

Plan of recommended improvement: Removal of the center dike on which range lights are located, to a depth of 25 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$420,000	----------	$420,000
Current	512,000	----------	512,000

Local cooperation: Hold and save the United States free from damage.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$29,050	$32,000
Maintenance	−2,750	−3,400
Total	26,300	28,600
Annual benefits: Savings due to prevention of accidents and time lost in navigating channel	46,000	58,400
Benefit-cost ratio	1.8	2.0

Remarks: Toledo has a population of more than 300,000; it is an important industrial center and point of transfer of freight between lake boats and railroad lines. Commerce has averaged more than 28 million tons annually. The dike is a hazard to the more than 15,000 vessels that use the harbor each year.

ERIE HARBOR, PA.

(H. Doc. 345, 83d Cong., 2d sess.)

Location: South shore of Lake Erie 78 miles west of Buffalo, N. Y.

Report authorized by: House Public Works Committee resolution, March 15, 1949.

Existing project: Provides for entrance piers and channel 300 feet to 500 feet wide, 25 feet deep; approach channel to ore docks same depth, 600 feet wide; harbor area 117 acres, 21 feet deep; approach channel 23 feet deep and 300 feet wide to westerly docks and turning basin.

Plan of recommended improvement: Widening the 25-foot approach channel to ore dock to 1,200 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$154,000		$154,000
Current	174,000		174,000

Local cooperation: Hold and save United States free from damages.

Project economics:

	Project document	Current
Annual charges	$5,400	$6,100
Annual benefits: Transportation	9,300	11,100
Benefit-cost ratio	1.7	1.82

Remarks: Project serves an important industrial center with a population of 131,000. Commerce in the harbor for the past 10 years has averaged more than 7,800,000 tons.

BLACK ROCK CHANNEL AND TONAWANDA HARBOR, N. Y.

(H. Doc. 423, 83d Cong., 2d sess.)

Location: In Niagara River, extending from Lake Erie at Buffalo Harbor downstream 13.5 miles to North Tonawanda.

Report authorized by: House Rivers and Harbors Committee resolution adopted November 29, 1946.

Existing project: Provides for a channel 21 feet deep from Buffalo Harbor north entrance channel to and including the turning basin of that depth, at North Tonawanda; the ship lock; a bascule highway bridge across Black Rock Canal at Ferry Street, Buffalo; repair and extension of Bird Island pier; removal of rock shoals depth of 22 feet; a channel 16 feet deep, 6,800 feet long, and generally 400 feet wide in Tonawanda Inner Harbor; and a channel 16 feet deep, 1,400 feet long, and generally 180 feet wide in Tonawanda Creek. The project width of Black Rock Channel is a maximum of 1,000 feet at the flared entrance from the lake, thence decreases irregularly to 200 feet in a distance of 4,700 feet, and continues at that general width to the lock. Between the lock and turning basin the project width is 400 feet except for widening to 500 feet at a bend.

Plan of recommended improvement: Modification of the existing project to provide for deepening of the lower 1,500 feet of Tonawanda inner harbor and minor enlargement of the turning basin, all to depth of 21 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$270,000	$265,500	$535,500

Local cooperation: Provide lands, easements, and rights-of-way; hold and save the United States free from damages; provide and maintain suitable depth between the Federal channel and adjacent terminals.

Project economics:

	Project document
Annual charges:	
Amortization and interest	$21,300
Maintenance	3,000
Total	24,300
Annual benefits: Savings in transportation costs	103,800
Benefit-cost ratio	4.27

Remarks: Prospective benefits economically justify the expenditures on the proposed work. The project will permit vessels loaded to deeper drafts to serve the terminals and will facilitate maneuvering of vessels at terminals adjacent to the turning basin.

LITTLE RIVER AT CAYUGA ISLAND, NIAGARA FALLS, N. Y.

(H. Doc. 246, 83d Cong., 2d sess.)

Location: Lies entirely within the city limits of Niagara Falls, about 1½ miles long and is a branch of the Niagara River.

Report authorized by: River and Harbor Act of March 2, 1945.

Existing project: None.

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Plan of recommended improvement: Provides for channel 8 feet deep; width from 50 to 200 feet, about 1,000 feet long from Niagara River into lower end of Little River.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$29,100	$57,000	$86,100
Current	36,900	70,100	107,000

Local cooperation: Contribute in cash 55 percent of the cost estimated at $45,100 (October 1953 prices); furnish lands, easements, rights-of-way, and spoil disposal areas; hold and save the United States free of damages; provide mooring facilities and public landing open to all on equal terms; establish a public body to regulate the harbor and prevent discharge of sewage into Cayuga Creek.

Project economics:

	Project document	Current
Annual charges	$5,400	$5,900
Annual benefits: Recreational boating	16,700	27,800
Benefit-cost ratio	3.09	4.71

Remarks: The project will provide access to and full utilization of the facilities in Little River and Cayuga Creek for recreational craft. Local interests' expenditures will be nearly twice the Federal.

OSWEGO HARBOR, N. Y.

(H. Doc. 487, 81st Cong., 2d sess.)

Location: At mouth of Oswego River on south shore of Lake Ontario, 59 miles east of Rochester, N. Y.

Report authorized by: River and Harbor Act, March 2, 1945.

Existing project: Provides, in part, for maintenance of 145 feet of the west inner breakwater; an outer west breakwater 4,478 feet long; an arrowhead rubble-mound breakwater system, and other appurtenant works including dredging to various depths and widths with deep draft channels at 21-foot depth.

Plan of recommended improvement: Detached breakwater 850 feet long at harbor entrance and removal of shoals to a depth of 25 feet in the approach to the entrance of the harbor.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$1,811,000		$1,811,000
Current	2,459,000		2,459,000

Local cooperation: Hold and save the United States free from damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$70,600	$87,200
Maintenance	5,000	6,300
Total	75,600	93,500
Annual benefits:		
Reduction in lost time	58,000	----------
Reduction in damages	24,800	----------
Total	82,800	119,000
Benefit-cost ratio	1.09	1.27

Remarks: Project serves the area of Oswego County with population of about 77,000. Waterborne commerce into the harbor has averaged more than 2 million tons during the past 10 years, and amounted to 3 million tons in 1951. Harbor is exposed to storms from west and north which has caused damage to docks, delays in unloading, loss of cargo, and difficulty of maneuvering into slips.

LOS ANGELES AND LONG BEACH HARBORS, CALIF.

(H. Doc. 161, 83d Cong., 1st sess.)

Location: Los Angeles and Long Beach Harbors are on San Pedro Bay on the coast of southern California. The business center of Los Angeles is about 23 miles north of the general harbor area.

Report authorized by: Resolutions of the House Committees on Rivers and Harbors and Public Works, adopted February 1, 1946 and February 17, 1950, respectively.

Existing project: Provides for San Pedro breakwater extending 11,152 feet from Point Fermin; a detached middle breakwater 18,500 feet long; a detached outer Long Beach breakwater 13,350 feet long; maintenance of original Long Beach inner breakwater; and Los Angeles outer harbor entrance channel 40 feet deep and 1,000 feet wide, together with a turning basin, anchorage areas, and other appropriate works of various widths and depths.

Plan of recommended improvement: Provides for a depth of 35 feet over an area of about 80 acres in East Basin.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$896,500	$306,000	$1,202,500
Current	896,500	306,000	1,202,500

Local cooperation: Furnish lands, easements, rights-of-way, and spoil disposal areas; hold and save the United States free from damages; provide terminal and transfer facilities; alter sewer, water supply, drainage, and other utility facilities; remove and relocate existing small-boat facilities in East Basin and disestablish special anchorage area A–4 prior to improvement of East Basin.

Project economics:

	Project document	Current
Annual charges	$46,400	$47,600
Annual benefits:		
Reduced vessel delays	48,400	48,400
Reduced piloting and towage charges	53,000	53,000
Total	101,400	101,400
Benefit-cost ratio	2.2	2.1

Remarks: In view of the urgency of this project, local interests undertook dredging of East Basin in April of 1953, and by July of that year had completed about 60 percent of the project. This work was sufficient for the immediate use of the new terminal which had previously been constructed by local interests. It is estimated that local interests have performed work in the amount of $500,000. This work was accomplished in accordance with the plans recommended in the report. This leaves an amount of $396,500 to be done by the Federal Government, in addition to maintaining the project.

PLAYA DEL REY INLET AND HARBOR, VENICE, CALIF.

(H. Doc. 389, 83d Cong., 2d sess.)

Location: Playa del Rey is on Santa Monica Bay on the coast of California, 20 miles northwest of Los Angeles Harbor.

Report authorized by: Senate Committee Resolution, June 2, 1936, and River and Harbor Act, August 26, 1937.

Existing project: None.

Plan of recommended improvement: Two entrance jetties each about 2,300 feet long; entrance channel 20 feet deep, 600 feet wide, and 1,925 feet long; interior channel 20 feet deep, 600 feet wide, and 5,600 feet long; a central basin 10 feet deep; and 2 side basins 20 feet deep and 10 side basins 10 feet deep separated by mole-type piers; the dredged material to be used for piers and deposition on lowlands and beaches.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$6,151,000	$19,427,000	$25,578,000
Current	7,738,000	25,364,000	33,102,000

Local cooperation: Provide lands, easements and rights-of-way; secure and hold in public interest lands bordering proposed development sufficient for functioning of harbor; relocate oil wells and utilities; construct bulkhead around basin "K"; extend north jetty at Ballona Creek; provide berthing and other facilities for small craft; provide parking areas and access roads, and landscaping; establish public body to regulate harbor facilities; dredge or bear the actual cost of dredging the 12 side basins; maintain and operate entire project except aids to navigation, entrance jetties, and project depths in the entrance channel, interior channel, and central basin; and hold and save United States from damage.

Project economics:

	Project document	Current
Annual charges:		
Federal:		
Interest and amortization	$251,555	$284,610
Maintenance	26,000	33,000
Subtotal	277,555	317,610
Non-Federal	655,470	653,480
Total	933,025	971,090
Annual benefits:		
Increased land value	215,000	270,000
Mosquito control savings	16,000	20,000
Recreation	900,000	1,120,000
Auto travel savings	35,000	38,000
Boat maintenance savings	8,000	12,000
Prevention of boat damage	75,000	94,000
Increased fish catch	47,000	47,000
Total	1,296,000	1,601,000
Benefit-cost ratio	1.4	1.6

Remarks: Federal participation should amount to $3,869,000 (May 1954 prices) or 50 percent of that recommended in the report. Half of the cost of constructing entrance jetties, entrance channel, interior channel and central basin is to be borne by the Federal Government.

PORT HUENEME, CALIF

(H. Doc. 362, 83d Cong., 2d sess.)

Location: Southeast end of Santa Barbara Channel on the coast of California about 65 miles northwest of Los Angeles Harbor.

Report authorized by: River and Harbor Act, July 24, 1946.

Existing project: None.

Plan of recommended improvement: (1) Small boat harbor, protected by 2 jetties; (2) beach restoration by means of depositing dredged material from small boat harbor on downcoast shoreline, construction of offshore breakwater to form sand trap, and periodic dredging of sand trap to nourish downcoast shoreline.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$4,061,000	$1,602,000	$5,663,000
Current	5,437,000	1,858,000	7,295,000

Local cooperation: Furnish lands, easements, rights-of-way; relocate utilities; maintain and operate harbor facilities, except those constructed by United States; prohibit pollution of beaches; hold and save United States free from damages; make sites available for fish canneries; agree that biennial dredging and bypassing of beach material be a Federal expense only so long as Federal ownership or use of the lands and improvements necessitates such protection.

Project economics:

	Project document	Current
Annual charges	$393,400	$505,600
Annual benefits	587,100	719,100
Benefit-cost ratio	1.5	1.4

Remarks: In view of the protection of military installation provided by certain features of the project, the use of an equitable share of military funds for construction and maintenance should be explored when project is initiated.

ROGUE RIVER, HARBOR AT GOLD BEACH, OREG.

(S. Doc. 83, 83d Cong., 2d sess.)

Location: Rogue River is located in the southwest corner of Oregon, draining 5,080 square miles. The river generally flows westward into the Pacific Ocean 264 miles south of the mouth of the Columbia River and 319 miles north of San Francisco.

Report authorized by: Senate Commerce Committee resolution, July 31, 1946.

Existing project: None.

Plan of recommended improvement: Provides for 2 jetties at entrance of Rogue River, a channel 13 feet deep and 300 feet wide from the ocean to a point immediately below the State highway bridge, and widening channel at a point 0.25 mile below highway bridge to form turning basin 13 feet deep, 500 feet wide, and 650 feet long.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$3,758,700	$163,800	$3,922,500
Current	3,758,700	163,800	3,922,500

Local cooperation: Furnish free of cost to United States, all lands, easements, rights-of-way, and spoil disposal areas; provide adequate public terminal and transfer facilities open to all on equal terms; dredge and maintain project depts within 50 feet of the terminal facilities; and hold and save United States free from damages.

Project economics:

	Project document	Current
Annual charges	$312,100	$297,400
Annual benefits	366,100	396,000
Benefit-cost ratio	1.17	1.33

Remarks: In addition to the direct benefits that would accrue if the improvement is constructed, business would be stimulated, property values increased, and utilization of the nation's timber resources would be increased. Trucking is at present the only form of transportation in the area.

UMPQUA HARBOR AND RIVER, SCHOLFIELD RIVER AT REEDSPORT, OREG.

(S. Doc. 133, 81st Cong., 2d sess.)

Location: Umpqua River, Oreg., empties into the Pacific Ocean 178 miles south of the mouth of the Columbia River. Scholfield River rises south of the Umpqua River and flows northwestward about 13 miles to its confluence with Umpqua River at Reedsport, Oreg.

Report authorized by: Senate Public Works Committee resolution, March 4, 1947.

Existing project: No existing project on Scholfield River. Project for Umpqua River provides for a jetty-protected entrance channel 26 feet deep and a river channel 22 feet deep, 200 feet wide, and about 11 miles long to Reedsport; together with turning and mooring basins and various widths and depths to Gardiner, Oreg.

Plan of recommended improvement: Provides for a channel in Scholfield River 12 feet deep, generally 100 feet wide, from its confluence with the Umpqua River to a point 0.5 mile below the first railroad bridge, a distance of 2 miles, the entrance to be widened to 300 feet in a distance of 500 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$41,000	$10,000	$51,000
Current	41,000	10,000	51,000

Local cooperation: Contribute in cash $10,000 toward the cost of the new work; agree to furnish, free of cost to United States, suitable spoil areas; hold and save United States free from damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$2,040	$1,800
Maintenance	7,000	7,000
Total	9,040	8,800
Annual benefits:		
Savings on movement of logs	7,000	9,625
Savings on handling of lumber	8,000	8,000
Total	15,000	17,625
Benefit-cost ratio	1.66	2.0

Remarks: Local interests have offered to provide additional terminal facilities on the Scholfield River as needed, and to contribute $10,000 toward the first cost of the improvement if the dredged material is deposited in a specified area. The Chief of Engineers recommends acceptance of this cash contribution.

COLUMBIA RIVER AT THE MOUTH, OREGON AND WASHINGTON

(H. Doc. 249, 83d Cong., 2d sess.)

Location: Columbia River at its mouth, the reach under consideration, forms the boundary of Washington and Oregon. It enters the Pacific Ocean between low sandspits.

Report authorized by: Senate Public Works Committee resolution, August 4, 1948; and House Public Works Committee resolutions, August 6, 1948, and June 7, 1954.

Existing project: Provides for a channel at mouth 40 feet deep, of suitable width, not less than one-half mile, to be secured by dredging and jetties, supplemented by groins if necessary.

Recommended plan of improvement: Modification of the existing project to provide for a channel of suitable alinement with depth of 48 feet for a width of one-half mile to be secured by dredging and construction of a spur jetty on the north shore.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$8,555,000		$8,555,000
Current	8,555,000		8,555,000

Local cooperation: None required.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$302,000	$302,000
Maintenance	195,000	195,000
Total	497,000	497,000
Annual benefits:		
Elimination of delays	105,975	105,975
Elimination of cargo shut out	178,200	178,200
Elimination of ship groundings	290,025	290,025
Total	574,200	574,200
Benefit-cost ratio	1.16	1.16

Remarks: The benefits to shipping and industry would be widespread owing to the nature and extent of commodities moving over the subject waterway.

COLUMBIA RIVER BETWEEN CHINOOK, WASH., AND THE HEAD OF SAND ISLAND

(S. Doc. 8, 83d Cong., 1st sess.)

Location: Chinook, Wash., is on the northerly shore of the Columbia River estuary at the east end of Baker Bay. Sand Island, 3 miles long, separates Baker Bay from the main channel of the estuary.

Report authorized by: Senate Public Works Committee resolution, June 1, 1948.

Existing project: Between Chinook and head of Sand Island provides for a channel 150 feet wide, 8 feet deep, and 4,000 feet long and

reinforcement and maintenance of breakwater constructed by local interests.

Plan of recommended improvement: Provides for a channel 10 feet deep and 150 feet wide extending from the head of Sand Island to Chinook; a turning and mooring basin at upper end of the channel 10 feet deep, 660 feet long, and ranging from 275 to 500 feet wide; reconstruction of 393 feet of existing breakwater; and extension of existing breakwater to connect with shore in vicinity of Portland Street.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$196,200	$12,000	$208,200
Current	227,100	12,000	239,100

Local cooperation: Furnish lands, easements, rights-of-way, and spoil-disposal areas; hold and save United States free from damages; maintain project depth of 10 feet in turning and mooring basin; dredge and maintain project depth in berthing areas within 50 feet of existing wharf, and provide and maintain terminal facilities.

Project economics:

	Project document	Current
Annual charges	$20,500	$28,420
Annual benefits:		
Eliminate damage and delays	27,150	26,340
Increased fish catch	8,625	8,360
Recreation	1,340	1,300
Total	37,115	36,000
Benefit-cost ratio	1.81	1.36

WILLAPA RIVER AND HARBOR AND NASELLE RIVER, WASH.

(H. Doc. 425, 83d Cong., 2d sess.)

Location: Willapa Bay is in southwestern Washington about 28 miles north of mouth of Columbia River. Willapa River enters the bay from the east and Naselle River enters from the south.

Report authorized by: Committee resolutions: Senate, Commerce, June 15, 1944; House, Rivers and Harbors, October 2, 1944; House Public Works, August 16, 1950; and House Public Works, February 20, 1951.

Existing project: Channel at mouth of Willapa Bay, 26 feet deep, with a minimum width of 500 feet; channel 24 feet deep and 200 wide from deep water in the bay up Willapa River to Raymond including a cutoff channel 3,100 feet long at Narrows; and various channels 24 feet and 10 feet deep. Total length of channels is 26 miles for main channels and about 2,800 feet for Palix River channel.

Plan of recommended improvement: Tokeland: Mooring basin 15 feet deep, 350 feet wide and 600 feet long adjacent to port wharf. *Nahcotta:* entrance channel 10 feet deep and 300 feet wide; mooring basin 10 feet deep, 500 feet wide, and 1,100 feet long; and a rubble-mound breakwater 1,600 feet long. *Willapa River:* Widening channel to

300 feet and 250 feet from South Bend to Raymoud. *Naselle River:* Removal of snags and obstructions from Naselle to the mouth.

Estimated cost:

	Project document		Current	
	Federal	Non-Federal	Federal	Non-Federal
Tokeland	$70,500	$38,700	$91,000	$46,350
Nahcotta	474,100	27,000	567,300	31,550
Willapa River	265,500		316,800	
Naselle River	1,610		1,900	
Total	817,710	65,700	977,000	77,900

Local cooperation: Furnish lands, easements, and rights-of-way; hold and save United States free from damages; construct and maintain mooring, landing, and service facilities; construct and maintain bulkheads at Tokeland; maintain moorage areas to project depth; and maintain access roads.

Project economics:

	Project document	Current
Annual charges:		
Tokeland	$6,960	$7,530
Nahcotta	36,730	34,300
Willapa River	16,870	18,840
Naselle River	315	352
Annual benefits:		
Tokeland	13,400	16,120
Nahcotta	36,150	42,300
Willapa River	19,010	21,820
Naselle River	910	1,040
Benefit-cost ratio:		
Tokeland	1.92	2.14
Nahcotta	1.18	1.23
Willapa River	1.13	1.16
Naselle River	2.89	2.95

GRAYS HARBOR AND CHEHALIS RIVER, WASH.

(H. Doc. 412, 83d Cong., 2d sess.)

Location: Grays Harbor is on coast of Washington 45 miles north of the mouth of Columbia River. Chehalis enters Grays Harbor from the east at a point 13 miles from the ocean.

Report authorized by: House Public Works Committee resolution, April 27, 1947.

Existing project: Entrance channel 600 feet wide and 30 feet deep with jetties 16,000 feet and 13,734 feet, respectively; maintenance of a channel 30 feet deep and 350 feet wide from deep water in Grays Harbor to port commission terminal, a distance of 13.25 miles, and a channel to Montesano, a distance of 16 miles, varying in depth from 26 feet to 16 feet and varying in width from 150 to 350 feet, with a turning basin at Montesano.

Plan of recommended improvement: Channel 30 feet deep and 350 feet wide from upstream end of the authorized 30-foot channel to Cow Point, a distance of 4,000 feet; thence 30 feet deep and 200 feet wide to a point 13,700 feet upstream from the Union Pacific Railroad bridge at Aberdeen, a distance of about 21,800 feet; and a turning

basin 550 feet wide, 1,000 feet long, and 30 feet deep near the upstream end of the channel; and Federal maintenance dredging of the 30-foot channel above the railroad bridge and the turning basin near Cosmopolis.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$403,400	$67,700	$471,100
Current	421,800	69,600	491,400

Local cooperation: Furnish lands, easements and rights-of-way; hold and save United States free from damages; lend the United States the port of Grays Harbor pipeline dredge; provide and maintain at proposed project depth access channels to active loading wharves, and areas along the channel, and the berthing areas within 50 feet of the wharves; and continue removal of snags from the entire main channel.

Project economics:

	Project document	Current
Annual charges:		
Federal:		
Interest and amortization	$14,224	$14,873
Maintenance	12,500	13,000
Non-Federal	3,741	3,854
Total	30,465	31,727
Annual benefits:		
Savings in ships' time	16,380	17,000
Savings in transshipment	4,500	4,680
Savings in rail haul	5,370	5,580
Savings in damage	7,000	7,300
Total	33,250	34,560
Benefit-cost ratio	1.1	1.09

GRAYS HARBOR AND CHEHALIS RIVER, WASH.

(Westhaven breakwater extension)

Location: Grays Harbor is on coast of Washington 45 miles north of the mouth of Columbia River. Westhaven is at entrance to Grays Harbor.

Report authorized by: House Public Works Committee resolution July 29, 1953.

Existing project: Insofar as Westhaven Cove is concerned, the project for Grays Harbor and Chehalis River provides for a breakwater 1,000 feet long, maintenance of the shallow-draft entrance channel to the cove, and a 7,500 feet revetment for protection of Point Chehalis. Completed except Point Chehalis revetment.

Plan of recommended improvement: Additional breakwater 1,400 feet long southeasterly of existing breakwater.

Estimated cost:

	Federal	Non-Federal	Total
Current	$323,700	$250,000	$573,700

Local cooperation: Furnish lands, easements, rights-of-way, and suitable disposal areas; hold and save the United States free of damages; dredge and maintain new basin; construct and maintain any additional bulkheads in the new basin area; construct, maintain, and operate adequate mooring facilities, utilities and a public landing.

Project economics:

	Current
Annual charges:	
Federal:	
Interest and amortization	$11,530
Maintenance, breakwater	11,500
Maintenance, navigation aids	300
Subtotal	23,330
Non-Federal	5,995
Total	29,325
Annual benefits:	
Prevention of damage to boats	12,500
Increase in commercial fish catch	13,650
Recreational craft	6,820
Miscellaneous	4,000
Total	36,970
Benefit-cost ratio	1.26

ANACORTES HARBOR, WASH.

(S. Doc. 102, 83d Cong., 2d sess.)

Location: Anacortes Harbor is along the northerly shores of Fidalgo Island at the easterly end of the Strait of Juan de Fuca, Wash.

Report authorized by: Senate Committee on Public Works resolution, June 17, 1947.

Existing project: Provides for improvement of Capsante Waterway, to secure a channel 12 feet deep and 250 to 150 feet wide extending eastward from the east side of Q Avenue to deep water, a distance of about 2,850 feet. Project was substantially completed in 1930.

Plan of recommended improvement: Provides for a mooring basin 12 feet deep, 570 feet wide, and 960 feet long, adjacent to the north side of Capsante Waterway, protected by a pile breakwater 380 feet long about 50 feet east of the mooring basin.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$172,400	$89,000	$261,400
Current	179,300	92,000	271,300

Local cooperation: Furnish lands, easements, rights-of-way, and spoil-disposal areas; hold and save the United States free from damages; provide mooring and landing facilities; maintain to project dimensions those portions of the basin where mooring facilities are provided; and contribute in cash or equivalent work 14.5 percent of the cost of dredging the mooring basin and constructing the breakwater, presently estimated at $26,000.

Project economics:

	Project document	Current
Annual charges	$13,250	$13,700
Annual benefits:		
Elimination of damages	11,260	11,900
Value of increased catch	2,540	2,980
Increased benefits pleasure craft	2,520	2,650
Increased land rental	690	730
Total	17,010	18,260
Benefit-cost ratio	1.28	1.33

NEAH BAY, WASH.

(H. Doc. 404, 83d Cong., 2d sess.)

Location: Neah Bay lies on the south side of the Strait of Juan de Fuca, about 8 miles east of Cape Flattery, at the northwest tip of Washington.

Report authorized by: House Committee on Rivers and Harbors resolution, June 7, 1945.

Existing project: Provides for breakwater 8,000 feet long between Waada Island and the westerly shore of the bay.

Plan of recommended improvement: Reinforcement of existing rock revetment extending 1,800 feet west from Baada Point and 200 feet extension of the revetment westward, then successive 200 feet extensions at intervals of 2 years, or as needed, for a total of 1,200 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$118,650		$118,650
Current	139,250		139,250

Local cooperation: Furnish lands, easements, and rights-of-way; and hold and save the United States from damages.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$4,120	$4,470
Maintenance	2,000	2,300
Total	6,120	6,770
Annual benefits: Prevention of damage and protection of property	12,390	14,175
Benefit-cost ratio	2.0	2.1

BELLINGHAM HARBOR, WASH.

(H. Doc. 558, 82d Cong., 2d sess.)

Location: Bellingham Harbor is in northwestern part of Washington, about 90 miles north of Seattle.

Report authorized by: House Rivers and Harbors Committee resolution, August 30, 1944.

Existing project: Completed in 1931; provides for depths of 26 feet in the outer 3,800 feet of Whatcom Creek Waterway and of 18 feet in the inner 1,300 feet; dredging an entrance channel 200 feet wide and 26 feet deep from deep water to the west end of Squalicum Creek Basin; maintenance of southerly half and westerly end of Squalicum Creek Basin to a depth of 26 feet; and maintenance of breakwater constructed by local interests in 1934.

Plan of recommended improvement: Provides for a small-boat basin adjacent to Squalicum Creek Waterway, consisting of two sections of rubble-mound breakwater with combined length of about 3,900 feet; removal of the existing rubble-mound breakwater now included for maintenance in the existing project, and use of the rock therefrom in construction of the new breakwater, and maintenance of minimum depth of 12 feet in the entrance to the basin.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$1,224,300	$454,080	$1,678,380
Current	1,366,650	502,500	1,869,150

Local cooperation: Furnish lands, rights-of-way, spoil disposal areas; hold and save the United States free from damages; remove timber-pile portions of existing breakwater and perform dredging to maintain basin to depth of 12 feet; construct dolphins at ends of breakwater; and provide and operate moorage facilities, etc.

Project economics:

	Project document	Current
Annual charges	$78,380	$82,505
Annual benefits:		
Fishing craft	83,600	94,010
Pleasure craft	44,880	48,180
Total	128,480	142,190
Benefit-cost ratio	1.64	1.72

Remarks: Improvement would result in benefits to fishing industry and recreational boating.

BLAINE HARBOR, WASH.

(H. Doc. 240, 83d Cong., 2d sess.)

Location: Blaine Harbor is in the northwestern part of Washington immediately south of the international boundary and about 100 miles north of Seattle.

Report authorized by: House Rivers and Harbors Committee resolution, June 23, 1943.

Existing project: None.

Plan of recommended improvement: Construction of rubble-mound breakwater about 1,500 feet long; dredging 14.7 acres to 12 feet shoreward extension of existing mooring basin, with an entrance channel of same depth and 100 feet to 150 feet wide; and maintenance of about 850 feet of existing breakwater.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$354,800	$197,350	$552,150
Current	436,000	244,800	680,800

Local cooperation: Furnish lands, easements, rights-of-way, and spoil disposal areas; hold and save the United States free from damages; accomplish and maintain alterations as required; maintain present mooring basin; maintain portions of existing breakwater not included in the Federal project, and maintain the basin extension; and construct, maintain, and operate adequate mooring facilities, utilities, and public landing with service and supply facilities open to all on equal terms.

Project economics:

	Project document	Current
Annual charges	$31,910	$35,040
Annual benefits:		
Fishing fleet	18,263	22,790
Increase in fish catch	14,260	20,650
Recreational boats	7,310	8,800
Savings in maintenance of present harbor	5,000	6,100
Total	44,833	58,340
Benefit-cost ratio	1.40	1.66

Remarks: Benefits would accrue largely to the fishing fleet in that damages and losses to boats would be eliminated and fish catch increased.

SHILSHOLE BAY, SEATTLE, WASH.

(H. Doc. 536, 81st Cong., 2d sess.)

Location: Shilshole Bay is an indentation on the east shore of Puget Sound at Seattle, Wash.

Report authorized by: House Rivers and Harbors Committee resolution, October 19, 1945.

Existing project: None for Shilshole Bay. Existing project for Lake Washington Ship Canal provides for a channel 34 feet deep and 300 feet wide from deep water in Shilshole Bay, a distance of 5,500 feet, together with various depths and widths to Lake Washington.

Plan of recommended improvement: Provides for a breakwater 4,200 feet in length, north of the entrance to the Lake Washington Ship Canal and dredging the entrance and southerly part of the basin to a depth of 15 feet and 1,100 feet square, and the northerly part of the basin to a depth of 10 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$3,041,980	$1,745,000	$4,787,230
Current	3,397,300	2,030,900	5,428,200

Local cooperation: Furnish lands, easements, rights-of-way, and spoil disposal areas; alter utilities; hold and save the United States free from damages; maintain project depths in areas occupied by boat slips; and provide mooring and landing facilities.

Project economics:

	Project document	Current
Annual charges	$196,180	$198,510
Annual benefits:		
Elimination of damages and losses	69,840	85,370
Net value of increased catch	57,490	80,000
Recreational benefits	186,070	212,900
Delays to land traffic	27,480	31,500
Total	340,880	409,770
Benefit-cost ratio	1.74	2.06

PORT ANGELES HARBOR, WASH.

(H. Doc. 155, 82d Cong., 1st sess.)

Location: Port Angeles Harbor is located on Olympic Peninsula in northwestern part of State of Washington across the Strait of Juan de Fuca from Victoria, British Columbia.

Report authorized by: House Rivers and Harbors Committee resolution, August 28, 1946.

Existing project: Provides for deepening to 30 feet the easterly 150 feet of the shoal between deepwater and the pier headline in the vicinity of the plant of Rayonier, Inc.

Plan of recommended improvement: Modification of existing project to provide a mooring basin 15 feet deep at mean lower low water, 1,060 feet long, and 385 feet wide; a breakwater about 1,000 feet long along the outer side of the basin, and a breakwater about 100 feet long outside the entrance.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$411,940	$175,000	$586,940
Current	477,900	218,950	696,850

Local cooperation: Furnish lands, easements, rights-of-way, and spoil areas; hold and save the United States free from damages; make alterations in sewer, water supply, drainage, and other utility facilities; provide bulkheads for dredged material; provide mooring and landing facilities; maintain mooring basin and breakwaters.

Project economics:

	Project document	Current
Annual charges	$24,610	$25,620
Annual benefits:		
Elimination of damages	7,000	8,620
Net value of increased fish catch	25,570	31,100
Increased benefits to pleasure craft	6,300	7,260
Total	38,870	46,930
Benefit-cost ratio	1.58	1.83

Remarks: Protection of Ediz Hook from wave action was found not economically feasible.

EVERETT HARBOR AND SNOHOMISH RIVER, WASH.

(H. Doc. 569, 81st Cong., 2d sess.)

Location: Everett Harbor is located on Port Gardner, at the mouth of Snohomish River in the northwestern part of the State of Washington.

Report authorized by: House Committee on Rivers and Harbors resolution, October 8, 1938.

Existing project: None for Snohomish River at Everett. The existing project for Everett Harbor provides for a training dike from Smith Island to a point opposite 23d Street with a gap at the natural outlet of Snohomish River and spur dikes at the gap; together with varying widths and depths.

Plan of recommended improvement: Provides for realining and enlarging to a depth of 15 feet and width of 150 feet to 425 feet that portion of the existing channel extending from deep water in Port Gardner to the settling basin opposite 14th Street; deepening the existing settling basin to 20 feet; construction of a spur dike extending westward from Preston Point a distance of 1,410 feet; and removing the existing training dike north of the gap.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$325,970	$5,000	$330,970
Current	395,500	6,500	402,000

Local cooperation: Furnish lands, easements, and rights-of-way and spoil disposal areas; hold and save United States from damage; maintain depths in access channels.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$13,290	$14,230
Maintenance	10,000	13,000
Total	23,290	27,230
Annual benefits:		
Savings in maintenance and repair costs	15,200	20,200
Increased fish catch	20,000	20,000
Total	35,200	40,200
Benefit-cost ratio	1.51	1.48

Remarks: The improved channel would encourage use of the small boat harbor and terminal facilities. Indirect benefits would accrue to the community through the increased fish supply and the ready access to the new industrial sites.

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QUILLAYUTE RIVER, WASH.

(H. Doc. 579, 81st Cong., 2d sess.)

Location: Quillayute River enters the Pacific Ocean at Quillayute Bay about 31 miles south of the entrance to the Strait of Juan de Fuca.

Report authorized by: House Rivers and Harbors Committe resolution, August 30, 1944.

Existing project: Provides for a closing dike with groins on westerly side of the river at the mouth, a jetty on the easterly side of the river, and maintenance dredging to afford a channel 6 feet deep from the ocean to within the river mouth.

Plan of recommended improvement: Provides for a channel 10 feet deep and 100 feet wide extending about 2,000 feet upstream from deep water; a basin 10 feet deep, 300 to 425 feet wide, and 2,400 feet long at the upper end of the channel, and raising the jetty on the east side of the entrance channel to a height of 15 feet above mean lower low water.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$375,000	$20,100	$395,100
Current	425,540	20,200	442,740

Local cooperation: Provide lands, easements, and rights-of-way, and spoil disposal areas; hold and save the United States free from damages; alter sewer, water supply, drainage, and other utility facilities; provide mooring and landing facilities, and contribute in cash $20,000.

Project economics:

	Project document	Current
Annual charges	$84,200	$92,625
Annual benefits:		
Elimination of damages	11,900	13,800
Savings in maintenance and transportation costs	80,500	81,850
Increased fish catch	9,280	9,740
Total	101,680	105,390
Benefit-cost ratio	1.21	1.14

COPPER RIVER AND GULF COAST, ALASKA (SEWARD AND VALDEZ HARBORS)

(H. Doc. 182, 83d Cong., 1st sess.)

Location: Copper River rises in the Wrangell Range in Alaska and flows generally southward into the Gulf of Alaska.

Report authorized by: Flood Control Act of June 30, 1948; River and Harbor Act of March 2, 1945; and resolution of Committee on Rivers and Harbors, House of Representatives, adopted February 28, 1941.

Existing project: Seward Harbor provides for a south breakwater 580 feet long and a north breakwater 950 feet long, and dredging a basin about 207,000 square feet in area between the breakwaters to a

depth of 12½ feet. Valdez Harbor provides for dredging a small-boat and seaplane basin of about 3 acres in area to a depth of 12 feet.

Recommended plan of improvement: Seward Harbor, modification of existing project to provide for construction of a 3-foot concrete wall on top of the south breakwater and construction of a single-row treated-pile, east breakwater to reduce harbor entrance width to 75 feet. Valdez Harbor, modification of existing project to provide for construction of a rock gravel breakwater along the southeast side of the basin; and a two-section single-row timber-pile breakwater on the seaward side of the basin.

Estimated cost:

	Federal	Non-Federal	Total
Project document:			
Seward Harbor	$68,200	$28,500	$96,700
Valdez Harbor	97,000	16,000	113,000
Current:			
Seward Harbor	81,200	33,900	115,100
Valdez Harbor	116,600	19,000	135,600

Local cooperation: Hold and save the United States free from damages; provide and maintain mooring and landing facilities (applies to both Seward and Valdez).

Project economics:

	Project document		Current	
	Seward	Valdez	Seward	Valdez
Annual charges	$5,900	$6,300	$6,430	$7,040
Annual benefits:				
Elimination of damages and losses	7,700	9,000	9,800	11,100
Value of increased catch	16,600	6,925	21,200	8,600
Total	24,300	15,925	31,000	19,700
Benefit-cost ratio	4.1	2.5	4.82	2.80

HONOLULU HARBOR, T. H.

(H. Doc. 717, 81st Cong., 2d sess.)

Location: Honolulu Harbor is on the south side of the island of Oahu, T. H., about 2,100 miles southwest of San Francisco, Calif.

Report authorized by: House Public Works Committee resolution, April 22, 1947.

Existing project: Provides for an entrance channel 40 feet deep, 500 feet wide and 4,000 feet long; a main harbor basin 35 feet deep, about 1,520 feet wide, and 3,300 feet long; an inner harbor basin 35 feet deep, about 1,000 feet wide, and about 3,400 feet long; a connecting channel 35 feet deep, 600 feet wide, and 3,400 feet long; and one slip 35 feet deep, 250 feet wide and 1,000 feet long.

Plan of recommended improvement: Provides for a second entrance channel 35 feet deep extending seaward from the west end of Kapalama Basin, having a width of 400 feet for 5,850 feet, thence increasing to a width of 1,000 feet in a distance of 4,150 feet; and installation of a pontoon drawbridge or other suitable movable type.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$2,380,000		$2,380,000
Current	3,022,000		3,022,000

Local cooperation: Furnish lands, easements, rights-of-way, and spoil disposal areas; hold and save the United States free from damage; relinquish to the United States without royalty charge, all salvable material removed from the channel; and the Territory of Hawaii take title to the proposed drawbridge, maintain, and operate it.

Project economics:

	Project document	Current
Annual charges	$147,500	$159,100
Annual benefits:		
Savings in time lost	69,660	97,400
Reduced cost of operation	60,950	85,300
Savings in transit time	32,420	45,300
Total	163,030	228,000
Benefit-cost ratio	1.11	1.4

Beach Erosion Control

Projects	Document No.[1]	Federal cost of new work
Hampton Beach, N. H	H. 325, 83d Cong	$140,000
Lynn-Nahant Beach, Mass	H. 134, 82d Cong	189,000
Revere Beach, Mass	H. 146, 82d Cong	402,900
Quincy Shore Beach, Mass	H. 145, 82d Cong	409,000
South Shore, State of Rhode Island	H. 490, 81st Cong	166,550
Hammonassett River to East River (area 2), Conn	H. 474, 81st Cong	
Hammonassett Beach		166,600
Middle Beach		20,400
New Haven Harbor to Housatonic River (area 3), Conn	H. 203, 83d Cong	
Prospect Beach		84,600
Woodmont Shore		42,400
Gulf Beach		13,100
Silver Beach to Cedar Beach		18,300
Housatonic River to Ash Creek (area 7), Conn	H. 248, 83d Cong	
Short Beach		26,500
Seaside Park		119,600
Atlantic City, N. J	H. 538, 81st Cong	2,044,000
Ocean City, N. J	H. 184, 83d Cong	105,000
Cold Spring Inlet (Cape May Harbor), N. J	H. 206, 83d Cong	260,000
Virginia Beach, Va	H. 186, 83d Cong	525,514
Pinellas County, Fla	H. 380, 83d Cong	34,300
Illinois Shore of Lake Michigan	H. 28, 83d Cong	1,176,400
Vermilion to Sheffield Lake Village, Ohio	H. 229, 83d Cong	185,000
Cleveland and Lakewood, Ohio	H. 502, 81st Cong	
Edgewater Park		1,275,000
White City Park		68,900
Presque Isle Peninsula, Erie, Pa	H. 231, 83d Cong	2,006,000
Selkirk Shores State Park, Lake Ontario, N. Y	H. 343, 83d Cong	136,500
Point Mugu to San Pedro Breakwater, Calif	H. 277, 83d Cong	3,874,000
Anaheim Bay Harbor, Calif	H. 349, 83d Cong	
Seal Beach		65,700
Surfside		91,600
Carpenteria to Point Mugu, Calif	H. 29, 83d Cong	73,700
Waikiki Beach, T. H	H. 227, 83d Cong	283,700
Total		14,003,664

[1] H. indicates House document.

Beach Erosion Control

HAMPTON BEACH, N. H.

(H. Doc. 325, 83d Cong. 2d sess.)

Location: On the Atlantic Ocean, in the town of Hampton, 2 to 3 miles north of the Massachusetts-New Hampshire boundary.

Report authorized by: Cooperative study provisions of section 2 of the River and Harbor Act approved July 3, 1930, as amended and supplemented.

Existing project: There is no existing Federal project for beach-erosion control.

Recommended plan of improvement: Provides for direct placement of about 340,000 cubic yards of sand fill on about 5,200 feet of shore to widen the beach to a general width of 150 feet, with an added 25-foot widening along the northern 1,250 feet of the fill area.

Estimated costs:

	Federal	Non-Federal	Total
Project document	$140,000	$280,000	$420,000

Local cooperation: Federal participation in the project is recommended provided that local authorities (*a*) adopt the recommended plan and pay two-thirds of the first cost of its construction; (*b*) submit to the Chief of Engineers for approval detailed plans and specifications for the work prior to its commencement; (*c*) provide all necessary lands, easements, and rights-of-way; and (*d*) give assurances that they will maintain the project during its useful life, hold and save the United States free from all claims for damages, prevent water pollution from sources within their jurisdiction, and continue public ownership of the shore and its administration for public use only.

Project economics:

	Project document
Annual charges:	
Interest and amortization	$14,810
Maintenance (local)	22,700
Total	37,510
Annual benefits:	
Protective	5,830
Increased earning power	36,060
Recreational	22,030
Total	63,920
Benefit-cost ratio	1.7

LYNN-NAHANT BEACH, MASSACHUSETTS

(H. Doc. 134, 82d Cong., 1st sess.)

Location: On Atlantic Ocean about 9 miles northeast of Boston. Includes about 2¾ miles of shore in the city of Lynn and towns of Swampscott and Nahant.

Report authorized by: Cooperative study provisions of section 2 of the River and Harbor Act approved July 3, 1930, as amended and supplemented.

Existing project: There is no existing Corps of Engineers' beach erosion project for the area.

Recommended plan of improvement: Placement of sand to provide a backshore elevation of 18 feet for 2,600 feet south of Woodbury's Point, thence construction of a stone mound southward for 6,250 feet.

Estimated cost:

	Federal	Non-Federal	Total
Project document	$154,670	$309,330	$464,000
Current	189,000	379,000	568,000

Local cooperation: Federal participation is subject to the conditions that the Commonwealth of Massachusetts will (1) adopt the aforementioned plan of protection and improvement and pay two-thirds of the first cost of construction; (2) submit for approval by the Chief of Engineers detailed plans and specifications and arrangements for prosecuting the entire work prior to the commencement of such work; (3) provide all necessary lands, easements and rights-of-way for accomplishment of the work; and provided further that the Commonwealth of Massachusetts will give satisfactory assurances that it will (*a*) maintain the protective and improvement works during the useful life thereof as may be required to serve their intended purpose, (*b*) hold and save the United States free from all claims for damages that may arise either before, during or after prosecution of the work, (*c*) assure that water pollution that would endanger the health of bathers will not be permitted, and (*d*) assure continued public ownership of the beaches and their administration for public use only.

Project economics:

	Project document	Current
Annual charges:		
Interest and amortization	$21,180	$22,620
Maintenance (local)	6,840	8,750
Total	28,020	31,370
Annual benefits:		
Direct damages prevented	14,050	----------
Recreational	27,720	----------
Total	41,770	53,420
Benefit-cost ratio	1.5	1.7

REVERE BEACH, MASS.

(H. Doc. 146, 82d Cong., 1st sess.)

Location: On Atlantic Ocean about 5½ miles northeast of Boston. Study includes 3 miles of shore in city of Revere.

Report authorized by: Cooperative study provision of section 2 of the River and Harbor Act approved July 3, 1930, as amended and supplemented.

Existing project: No improvement of Revere Beach has been authorized by Congress.

Recommended plan of improvement: Provides for placement of 522,000 cubic yards of sand fill on 13,700 feet of shore south from Northern Circle, to provide a general backshore elevation of 18 feet.