Report authorized by.—Rivers and Harbors Committee resolution of June 27, 1941.

Plan of recommended modification of existing project.—Modification of the existing project for Chicago River, Ill., to provide for a channel 9 feet deep between North Avenue and Addison Street, the channel between North and Belmont Avenues to extend to within 30 feet of existing bulkheads and river banks and thence to Addison Street to have a bottom width of 50 feet.

Estimated first cost to United States.—$28,000.

Local cooperation.—The improvement is recommended subject to the conditions that local interests furnish assurances satisfactory to the Secretary of War that they will hold and save the United States free from damages which may result from construction and maintenance of the improvement.

Annual maintenance charges to United States.—$15,000.

Benefits.—The small expenditure required for new work is fully justified by resulting increased safety and convenience to established and prospective navigation.

Remarks.—Receipts by water north of North Avenue have increased from 397,000 tons in 1938 to nearly 892,000 tons in 1941. About 52 percent of the 1941 traffic was moved in barges and the remainder by lake vessels.

GREAT LAKES CONNECTING CHANNELS, MICH.

(H. Doc. —, 79th Cong.)

Location.—The five Great Lakes with their connecting channels form a chain of waters for deep-draft navigation extending from Minnesota, Wisconsin, and Illinois eastward to the State of New York.

Report authorized by.—Rivers and Harbors Committee resolution of February 11, 1941. The present report is the final report under the resolution and is concerned with the connecting channels between Lakes Superior and Huron, Michigan and Huron, and Huron and Erie.

Plan of recommended modification of existing project.—The plan of improvement recommended provides for widening the anchorage area at Point Iroquois Shoals, head of St. Marys River, for a distance of 16,000 feet to provide a depth of 27 feet over maximum widths of 1,500 to 5,300 feet; widening the channel in Lake Nicolet, St. Marys River, below the falls, by 1,000 feet for a distance of 5,500 feet with tapered approaches and to a depth of 26.5 feet to serve as an achorage area; widening of Southeast Bend Channel, St. Clair River, to 800 feet from Harsens Island Light No. 12 to Light No. 5 thence tapering to 700 feet at Light No. 1 and continuing at that width to the head of St. Clair Flats Canal and deepening to 26 feet; deepening the westerly 300 feet of Amherstburg Channel and of Ballards Reef Channel below Livingstone Channel, Detroit River, to 27 feet; and constructing compensating works in Detroit River below and to the west of Grosse Ile to limit the discharge, which would otherwise increase as a result of the channel enlargement, and control lake stages; improving the North Channel outlet of St. Clair River by dredging a channel for small craft into Lake St. Clair with a depth of 10 feet, width of 100 feet and about 8,000 feet long; and replacing Poe Lock at St. Marys Falls Canal with a new lock on the same site 800 feet long, 100 feet wide, and 32 feet deep with necessary reconstruction of nose and center piers.

Estimated first cost to United States.—$28,063,000.

Annual maintenance and operation charges to United States.—$70,000.

Benefits.—A tremendous volume of commerce passes through the Great Lakes connecting channels. In the prewar year, 1939, the locks at Sault Ste. Marie handled more commodity commerce than the Panama and Suez Canals combined. During the combined navigation seasons of 1942 and 1943, commerce through the canals at Sault Ste. Marie totaled about 235,700,000 tons; for St. Clair River, 245,200,000 tons, and for Detroit River 265,500,000 tons, as compared with 213,700,000 tons for the port of New York. Taking into account the comparative lengths of navigation seasons, the locks at Sault Ste. Marie handled 57 percent more average tonnage per day than the average daily tonnage for the port of New York. The improved lockage facilities proposed will eliminate vessel delays during periods of heavy traffic and afford more dependable and safer service. Improvement of the channels as found advisable will similarly contribute to assurance against traffic interruptions, afford additional safety to commerce and permit certain vessels to carry increased loads with resulting transportation economies. The proposed work as a whole will improve vessel operations sufficiently to warrant the expenditures required.

Remarks.—The construction of deeper draft vessels, with greater length and beam, engaged in the lake-carrier service during the war period and the immediate planning for the expansion of the fleet of these larger vessels, necessitates prompt provision of the improvements recommended to provide for the safety and conveniences of the Great Lakes fleet. Monetary benefits have not been evaluated. The progressive improvement of the Great Lakes connecting channels has resulted in the very low transportation costs on iron ore, coal, grain, stone, and other commodities with benefits national in scope.

CLEVELAND HARBOR, OHIO

(H. Doc. 629, 79th Cong.)

Location.—Cleveland Harbor is on Lake Erie in northeastern Ohio. It consists of a breakwater protected area in the lake at the mouth of Cuyahoga River the lower 5.8 miles of the river and 1 mile of Old River.

Report authorized by.—Rivers and Harbors Committee resolution of September 28, 1943, and a Senate Commerce Committee resolution adopted November 12, 1943.

Existing project.—The existing Federal project provides for, in part, the construction of a turning basin in the Cuyahoga River at an estimated cost of $191,000. No work has been done on the turning basin. It also provides for channel improvements subject to, among other conditions, that local interests bear the expense of railroad bridge modifications. The survey reports with these recommendations were made prior to the passage of the Truman-Hobbs Act (Public Law No. 647, 76th Cong.).

Plan of recommended modification of existing project.—Modification of the existing project for Cleveland Harbor, Ohio, to provide for (*a*) Elimination of the turning basin authorized on Cuyahoga River near mile 5.5; (*b*) elimination of the proviso in the existing project requiring modification of obstructive railroad bridges at non-Federal

expense; (c) improvement of the channel in Cuyahoga River to the vicinity of mile 5.8 and in Old River to the head of the Sand Products Corp. dock to a project depth of 23 feet; and (d) replacement or pier reconstruction of railroad bridges Nos. 25, 8, 9, 15, 3, 1, and 19.

The War Department and railroad representatives have reached agreements deemed equitable by them for apportionment of the construction cost, involved in the railroad bridge modifications, between the United States and the bridge owners in substantial accordance with provisions set forth in Public Law No. 647, Seventy-sixth Congress.

Estimated first cost to United States.—$11,677,000.

Local cooperation.—The improvement is recommended subject to the condition that responsible local agencies furnish assurances satisfactory to the Secretary of War that, without cost to the United States, they will (a) make all necessary changes to buildings and highway bridge structures, (b) construct all necessary bulkheads, (c) furnish all necessary lands, easements, and rights-of-way for the channel except such land needed for the waterway as is now occupied by railroad structures, and (d) hold and save the United States free from damages due to the construction work.

Cost to local interests for work to be done in compliance with the terms of local cooperation is estimated at $11,132,000.

Annual maintenance charges to United States.—$35,000.

Annual benefits.—The savings in the costs of transporting the estimated commerce which would result from the plan of improvement recommended are estimated to total $730,000 annually. These savings are attributable to making it possible to transport the freight in fewer ships, to operate with less expense for tugs, and to save time in navigating the river channel.

The ratio of cost to benefits on expenditures by the War Department is 1.0 to 1.06.

Intangible general and local benefits are considered as equal to the annual costs to other Federal departments and local interests. These benefits include increased safety for land and water traffic, more expeditious movement of land traffic, increase in potential carrying capacity of the lake fleet, increased value of riparian lands, increased design load capacities for certain bridges, and similar items.

Remarks.—Cleveland is an important commercial, industrial, and distribution center. Commerce of the harbor from 1934 to 1943 averaged 15,600,000 tons annually, and in 1943 totaled 20,670,000 tons.

Average annual future commerce for the inner harbor, exclusive of possible diversions from adjacent lake ports, is estimated at 9,430,000 tons, which includes 6,000,000 tons of iron ore, 940,000 tons of limestone, 170,000 tons of molding sand, 210,000 tons of coal, and 2,110,000 tons of miscellaneous freight.

FAIRPORT HARBOR, OHIO

(H. Doc.—, 79th Cong.)

Location.—Fairport Harbor is on the south shore of Lake Erie at the mouth of Grand River, 33 miles east of Cleveland. The harbor comprises the lower 1½ miles of Grand River.

Report authorized by.—Rivers and Harbors Committee resolutions of May 29, 1940, and April 5, 1946.

Plan of recommended modification of the existing project.—That the existing project for Fairport Harbor, Ohio, be modified to provide for deepening to 8 feet of the westerly part of the channel of Grand River at the upper end of and adjacent to the 21-foot depth existing project channel, to a line 20 feet from the westerly dock lines.

Estimated first cost to United States.—$14,500.

Local cooperation.—The improvement is recommended provided that local interests agree to hold and save the United States free from damages resulting from the further improvement.

Annual cost of maintenance to United States.—$1,900.

Benefits.—The War Department finds it impracticable to present an estimate of the monetary benefits of this work; it is of the opinion that, unless the improvement is undertaken, continued shoaling will make use of the docks unprofitable and force their abandonment, that the proposed channel would protect the fishing and boat-repair industry which has a business estimated at $200,000 annually and that the general benefits that will accrue in connection therewith will justify the expenditures required. The War Department notes that the following enlargement of the river channel by the project work, flow velocities have decreased and shoaling adjacent to the fishing and boat-works docks has increased and regards restoration of the channel depths for small craft as a proper charge against the project deep-draft channel.

SAN DIEGO AND MISSION BAY, CALIF.

(H. Doc. —, 79th Cong.)

Location.—San Diego River enters the Pacific Ocean through Mission Bay.

Report authorized by.—The River and Harbor Act of 1945, an act approved May 6, 1936, and the Flood Control Acts approved June 22, 1936, and August 18, 1936.

Plan of recommended modifications of existing projects.—Modification of the existing flood-control project for San Diego River Calif., to, include a multiple-purpose project for flood control on San Diego River and small-boat navigation on Mission Bay, generally as follows: Construction of a leveed channel 800 feet wide with a capacity of 87,400 cubic feet per second from 0.4 mile above Morena Boulevard 3.3 miles directly to the ocean; dredging of an entrance channel 20 feet deep in Mission Bay and in the bay, a main channel and turning basin about 3,500 feet long and the other about 1,600 feet long and 800 feet wide, all to a depth of 20 feet; construction of 3 jetties at the entrance, and stone revetment for the banks of the entrance and main channels and turning basin.

Estimated first cost to United States.—

Flood control	$2, 778, 000
Navigation	3, 080, 000
Total Federal cost	5, 858, 000

Local cooperation.—The improvement is recommended subject to the provision that local interests provide the necessary bulkheading and give assurances satisfactory to the Secretary of War that they will (a) provide without cost to the United States all lands and rights-of-way including spoil-disposal areas necessary for construction of the

improvements; (b) make all necessary alterations to highway bridges, utilities, and side-drainage structures; (c) purchase and hold in the public interest the lands between the flood-control channel and Mission Bay west of Highway U. S. 101; (d) prepare definite plans and construction schedules for the improvements of the bay area for park purposes which shall be subject to approval by the Secretary of War; (e) complete the improvements of the 8-foot dredging and park development within 5 years after completion of the project; (f) provide adequate facilities for storage, maintenance, and supply of small craft; (g) maintain and operate the entire project, except maintenance of the jetties, stone revetment constructed by the United States and project depths in areas dredged by the United States; (h) protect the carrying capacity of the flood-control channel from future encroachments or obstructions; and (i) hold and save the United States free from damages due to the construction works. The estimated first cost to local interests for compliance with these provisions is $853,000 for flood control and $7,969,000 for navigation and park development, a total of $8,822,000.

Annual cost of maintenance to United States.—$13,000 for the navigation improvement. Annual cost to local interests for maintenance of flood-control improvement is $16,500.

Annual benefits.—The annual tangible benefits are estimated at $1,233,150, of which $52,000 is prevention of flood damage, $420,000 is from improved land use, $170,000 is from fish catch, $132,000 is revenue from an increased tax base, $257,000 is creation of new business, $135,000 is silt diversion, $15,000 is from mosquito control, $19,450 is savings in travel, and $32,700 is prevention of beach erosion and creation of new beach land. The ratio of cost to benefits is 1.0 to 1.78.

Remarks.—The San Diego River Basin is subject to frequent floods. For a maximum probable flood of 87,400 second-feet, occurring after the authorized levee is constructed, the district engineer finds that the total damage below river mile 3.3 would reach $1,944,000, of which $561,700 would be direct and $1,382,300 indirect. The navigation improvement will provide a safe and convenient channel and harbor for the numerous recreational and fishing craft in the area. The benefits are sufficient to justify the construction of the improvements.

NAPA RIVER, CALIF.

(H. Doc. 397, 79th Cong.)

Location.—Napa River, Calif., is 50 miles long. It flows generally south and empties into Mare Island Strait, through which it connects with the various waterways of the San Francisco Bay system.

Report authorized by.—Rivers and Harbors Committee resolution of December 2, 1944, and an item in the River and Harbor Act approved March 2, 1945.

Plan of recommended modification of existing project.—Modification of the existing navigation project for Napa River, Calif., to provide for a channel 15 feet deep and 100 feet wide between the mouth at Mare Island Strait and Asylum slough and 10 feet deep and 75 feet wide thence to Third Street in Napa with a cut-off at Horseshoe Bend, a turning basin 300 feet wide at Jacks Bend, and additional widenings, realinements, and related works in other difficult sections.

Estimated first cost to United States.—$865,000.

Local cooperation.—The improvement is recommended subject to the condition that local interests agree to (a) furnish free of cost to the United States all necessary lands, easements, rights-of-way, and spoil-disposal areas for the new work and subsequent channel maintenance when and as required; (b) provide all necessary spoil-impounding and drainage works; (c) assume responsibility for maintenance of such bank revetments and levees as may be constructed or reconstructed in connection with the works; and (d) hold and save the United States free from damages due to construction and subsequent maintenance of the Federal improvements. First costs to local interests are estimated at $86,400.

Annual maintenance charges to United States.—$7,500.

Annual benefits.—Average annual benefits are estimated at $53,240 for savings in the cost of transporting 120,000 tons of riprap stone, 140,000 tons of sand, gravel, and road materials, and 50,000 tons of petroleum products. These estimates, which do not include benefits to recreational commerce and benefits which may arise in connection with movements of lumber and package freight, indicate a ratio of costs to benefits of 1.0 to 1.14.

Remarks.—The waterway has demonstrated its usefulness by carrying a substantial and growing commerce in spite of navigation difficulties. Prospective general benefits clearly justify the Federal expenditures required for the proposed additional work.

SACRAMENTO RIVER, CALIF., DEEP-WATER CHANNEL

(S. Doc. 142, 79th Cong.)

Location.—Sacramento River rises in northern California, flows south about 375 miles, and empties into Suisun Bay, an arm of San Francisco Bay, at Collinsville, Calif.

Report authorized by.—Senate Commerce Committee resolution adopted October 26, 1933.

Plan of recommended modification of existing project.—Modification of the existing navigation project for Sacramento River, Calif., to provide for construction of a ship channel 30 feet deep and 200 to 300 feet wide from deep water in Suisun Bay to Washington Lake, including such works as may be necessary to compensate for or to alleviate any detrimental salinity conditions resulting from the ship channel; a basin of equal depth 1,000 feet wide and 1,200 feet long at Washington Lake; and a connecting channel 11 feet deep and 120 feet wide, with lock and drawbridge, thence to Sacramento River.

Estimated first cost to United States for navigation features, $10,742,000, plus an additional amount for salinity-control works when found necessary at an estimated maximum cost of $2,000,000.

Local cooperation.—The improvement is recommended, provided that no work shall be undertaken until responsible local agencies agree to furnish without cost to the United States all necessary lands, easements, rights-of-way, and spoil-disposal areas for the initial work and subsequent maintenance when and as required and to make all necessary utility changes, and until they give assurances satisfactory to the Secretary of War that they will (*a*) construct, operate, and maintain at the Washington Lake Basin an adequate public terminal with necessary utilities and rail and highway connections open to all on

equal terms, (*b*) hold and save the United States free from any damages which may arise from construction, operation, and maintenance of the improvement.

Annual cost of maintenance and operation to United States.—$66,000.

Annual benefits.—Estimated evaluated annual benefits resulting from the navigation features of the improvement total $795,000 compared to annual cost of $706,000 for these features. This indicates economic justification for the work by a favorable ratio of costs to tangible benefits of 1.0 to 1.13.

Remarks.—If salt-water intrusion require the construction of control methods up to the maximum estimate, $2,000,000, the benefits will still exceed the annual carrying charges.

COOS BAY, OREG.

(S. Doc. —, 79th Cong.)

Location.—Coos Bay is a tidal U-shaped estuary on the Oregon coast 200 miles south of the mouth of Columbia River and 445 miles north of San Francisco.

Report authorized by.—Senate Commerce Committee resolution adopted January 26, 1945, and an item in 1945 River and Harbor Act.

Plan of recommended modification of existing project.—Modification of the existing project for Coos Bay, Oreg., to provide for: A channel across the outer bar 40 feet deep at mean lower low water, and of suitable width with dimensions reduced gradually to Guano Rock; a channel 30 feet deep at mean lower low water and generally 300 feet wide thence to the mouth of Isthmus slough; turning basins of the same depth and 1,000 feet long and 600 feet wide opposite Coalbank slough and at the city of North Bend; anchorage basins 600 feet wide by 2,000 feet long at mile 3.5 and near mile 7.

Estimated first cost to United States.—$5,689,000.

Local cooperation.—The improvement is recommended subject to the provision that local interests give assurances satisfactory to the Secretary of War that they will: (a) Furnish free of cost to the United States necessary spoil-disposal areas for new work and subsequent maintenance as and when required; and (b) construct and maintain any additional terminal facilities necessary to the full use of the port, such facilities to be open to all on equal terms.

Annual maintenance charges to United States.—$235,000.

Annual benefits.—The improvement would permit the deeper-draft vessels to load to full capacity, and produce annual benefits estimated at approximately $900,000 of which $701,200 is savings in transportation costs of lumber and logs, $75,000 on pulp, $10,800 on sulfur, $60,000 on petroleum and its products, and $42,000 on general merchandise. The ratio of costs to evaluated benefits is 1.0 to 1.9.

Remarks.—Processing of forest products is the principal industry in the area where the standing timber is estimated at 47½ billion feet, board measure. There are 72 sawmills operating with an annual cutting capacity of 800,000,000 feet. Other industries include the production of plywood, blind slats, battery separators, and various other wood products and the processing of agricultural products. The annual catch of fish is estimated at 4,000 tons.

YAQUINA BAY AND HARBOR, OREG.—SMALL-BOAT HARBOR

(S. Doc. No. —, 79th Cong.)

Location.—Yaquina Bay is an estuary at the mouth of Yaquina River on the Oregon coast, 113 miles south of the mouth of Columbia River. The bay extends to Yaquina about 4½ miles above the ocean entrance.

Report authorized by.—Senate Commerce Committee resolution adopted June 27, 1945.

Plan of recommended improvement.—Modification of the existing project for Yaquina Bay and Harbor, Oreg., to provide for a small-boat mooring basin at Newport, Oreg., by construction of a breakwater about 2,650 feet long and a shore wing about 400 feet long, and initial dredging in the mooring basin to a depth of 10 feet.

Estimated cost to United States.—$225,000.

Local cooperation.—The improvement is recommended provided that local interests furnish free of cost to the United States all lands, easements, rights-of-way, and spoil-disposal areas required for the construction of the project and furnish assurances satisfactory to the Secretary of War that they will maintain necessary depth in the basin; construct, maintain, and operate necessary mooring facilities and utilities within the basin, including a public landing with suitable supply facilities open to all on equal terms; and hold and save the United States free from damages due to the improvement.

Annual maintenance cost to United States.—$5,000.

Annual benefits.—Annual direct benefits from elimination of damage to boats and cost of moving to safe moorages during storm periods, from increased catch of fish, and annual indirect benefits are estimated to total $50,000. The ratio of estimated annual benefits to estimated annual charges is 2.0 to 1. Benefits to the fishing industry reasonably to be expected from the provision of the mooring basin are well in excess of the costs and the project is economically justified.

COLUMBIA AND LOWER WILLAMETTE RIVERS BETWEEN PORTLAND, OREG., AND THE SEA—SMALL-BOAT MOORING BASIN AT ASTORIA, OREG.

(H. Doc. —, 79th Cong.)

Location.—Astoria, Oreg., county seat of Clatsop County, is located on a peninsula on the south side of Columbia River, approximately 10 miles from the ocean.

Report authorized by.—Rivers and Harbors Committee resolution of April 27, 1944, and an item in the 1945 River and Harbor Act.

Existing project.—There is no existing Federal project for improvement of Astoria Harbor.

Federal improvement of the Columbia River has been completed to provide a navigable channel for oceangoing vessels to Vancouver, Wash., 105 miles above its mouth.

Plan of recommended modification of existing project.—Modification of the project for improvement of Columbia and Lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg., to include provision of a small-boat mooring basin at Astoria, Oreg., and that the Federal Government participate to the extent of constructing a steel-pile, sand-filled breakwater about 2,400 feet long with a 20-foot

roadway along its full length for maintenance of the breakwater and steel-pile shore wings totaling about 1,460 feet in length.

Estimated cost to United States.—$1,044,000.

Local cooperation.—The improvement is recommended subject to the condition that responsible local interests furnish assurances satisfactory to the Secretary of War that they will: Furnish free of cost to the United States all necessary lands, easements, and rights-of-way for the new work and subsequent maintenance when and as required; provide all necessary dredging in the basin; and construct, maintain, and operate mooring facilities within the basin, sewers, water and electric supply lines, and a public landing with suitable supply facilities open to all on equal terms. The estimated expenditures by local interests in compliance with these conditions will total $705,000.

Annual maintenance charges to United States.—$10,000.

Annual benefits.—The annual benefits from the proposed mooring basin are estimated at $155,000 consisting of $40,000 from elimination of damage to boats, $3,000 from elimination of lost time and expense, $100,000 for increased catch of fish, and $12,000 from certain intangible benefits such as increased property values, increase in the size of the fishing fleet, and increase in business activity therefrom, better police and fire protection, and easier servicing.

The ratio of estimated benefits to Federal annual charges is 2.22 to 1.0.

Remarks.—Construction of a mooring basin at Astoria, Oreg., would be of great benefit to the fishing industry and to small craft basing or calling at Astoria. Prospective general benefits to the fishing industry and to other craft are sufficient to warrant Federal participation in the cost of the project.

COLUMBIA RIVER, VANCOUVER, WASH., TO THE DALLES, OREG.

(H. Doc. —, 79th Cong.)

Location.—The section of Columbia River under consideration extends from Vancouver, Wash., river mile 106, easterly along the Oregon-Washington boundary to The Dalles, Oreg., river mile 189.

Report authorized by.—Senate Commerce Committee resolutions adopted December 3, 1935, April 11, 1939, and July 10, 1945, and Rivers and Harbors Committee resolutions adopted April 13, 1939, and December 1, 1944.

Plan of recommended modification of existing project.—Modification of the existing projects for Columbia River between Vancouver, Wash., and The Dalles, Oreg., to provide the following:

(*a*) For a channel 27 feet deep at adopted low water and 300 feet wide between Vancouver, Wash., and The Dalles, Oreg. (This item provides for channel excavation above Bonneville);

(*b*) For a channel 10 feet deep at low water and 300 feet wide at the upstream entrance to Oregon slough, Oregon;

(*c*) For a boat basin at Hood River, Oreg., 500 feet by 1,300 feet and 10 feet deep at normal Bonneville pool level, with a connecting channel of the same depth to deep water, and a protecting breakwater on the easterly side.

(*d*) For a barge channel to the water front at Bingen, Wash., 10 feet deep at normal Bonneville pool level, 200 feet wide and approximately 1 mile long; and for an access channel 7 feet deep at normal

Bonneville pool level, 100 feet wide and approximately 1,000 feet long, to a natural mooring basin for small boats near the east end of the channel.

Estimated cost to United States.—

For	First cost	Annual maintenance
(a)	$1,176,000	$5,000
(b)	6,000	1,500
(c)	98,000	2,000
(d)	101,500	5,000
Total	1,381,500	13,500

Local cooperation.—The improvements at Hood River and at Bingen are recommended provided that local interests, at each locality, furnish free of cost to the United States all necessary rights-of-way, agree to maintain depths in the basins, and to construct, operate, and maintain necessary mooring facilities and a public wharf available to all on equal terms. Estimated cost to local interests at Hood River is $35,000, and at Bingen is $125,000.

Annual benefits.—27-foot channel to The Dalles; these improvements are considered essential to full and complete use of the Vancouver-Bonneville ship channel and Bonneville ship lock, which have involved Federal expenditures of about $9,500,000. Without these improvements, the use of the channel by deep-draft vessels would be severely restricted, if not completely discouraged. While evaluation of benefits that would result from the proposed channel improvements is impracticable, it appears that the proposed improvements are the minimum that will be required to make ship navigation practical, and therefore to make effectual the improvements at and below Bonneville.

Oregon slough; benefits not evaluated. The improvement at a small cost will provide free access to the main Columbia River at all times of the year for commercial fishing, log towing, and recreational craft.

Boat basin at Hood River; the evaluated benefits are estimated at $39,670, of which $29,670 will accrue from lowering cost of transfer of commodities between river craft and shore. The ratio of costs to benefits is 1.0 to 6.4.

Channel at Bingen; annual savings attributable to the establishment of barge transportation and to the owners of small fishing and recreational craft is estimated at $43,971. The ratio of costs to benefits is 1.0 to 4.7.

COLUMBIA RIVER, IN THE VICINITY OF THE DALLES, OREG.

(S. Doc. 89, 79th Cong.)

Location.—The Dalles, Oreg., is a city on the south bank of the Columbia River 188 miles above its mouth and 44 miles above Bonneville hydroelectric power and navigation dam.

Report authorized by.—Senate Commerce Committee resolution of November 8, 1943.

Plan of recommended modification of existing project.—Further improvement of the Columbia River by construction of The Dalles

Harbor, Oreg., to provide a breakwater and shear boom protected basin approximately 400 by 800 feet in size with depth of 8 feet below a pool elevation of 72.5 feet mean sea level.

Estimated first cost to United States.—$76,500.

Local cooperation.—The improvement is recommended subject to the conditions that local interests (a) furnish free of cost to the United States all lands, easements, and rights-of-way required for new work, and suitable spoil-disposal areas for the new work, and for subsequent maintenance when and as required, (b) provide necessary bulkheads, and (c) agree to construct, maintain, and operate within the basin suitable moorages and a public landing with adequate supply facilities, open to all on equal terms.

Annual maintenance cost to United States.—$2,000.

Annual benefits.—The evaluated benefits are estimated at $9,450, indicating a ratio of costs to benefits of 1.0 to 1.5. The estimated benefits include $1,750 for prevention of damages to existing recreational boats and boathouses regularly moored at The Dalles, $6,200 for its value to commercial fishing operations and $1,500 for making increased catches of salmon possible, stimulating various boating activities, facilitating United States Coast Guard operations, and increasing business activity in the vicinity.

Remarks.—During the salmon fishing season from May to October about 20 commercial fishing boats operate regularly in the vicinity, and during the salmon runs of about 30 days annually approximately 50 transient fishing craft operate in the section. Salmon cannery tenders drawing 6 to 8 feet operate between The Dalles and the mouth of the river. The Dalles is also headquarters for the activities of the United States Coast Guard on the upper Columbia River.

HONOLULU HARBOR, HAWAII

In accordance with the report of the Board of Engineers for Rivers and Harbors dated April 30, 1946, on file in the Office of the Chief of Engineers.

Location.—Honolulu Harbor is located on the south coast of the island of Oahu, about 7 miles east of the entrance to Pearl Harbor.

Report authorized.—Rivers and Harbors Committee resolution of October 19, 1945.

Description.—In the interest of the war effort, extensions were made to the authorized existing navigation project in Honolulu Harbor. Military funds were used to defray the cost of construction.

Recommendation.—In order to protect the interests of the United States it is desirable to provide for adequate maintenance of the areas in the reserve channel and Kapalama Basin dredged with military funds since 1940 by including those areas in the existing project for improvement of Honolulu Harbor. It is recommended that the existing project for improvement of Honolulu Harbor be modified to provide a depth of 35 feet over the full width of 600 feet throughout the reserve channel; a turning basin in Kapalama Basin 35 deep by 1,000 feet long on the easterly side of pier 39, at no additional cost for initial construction and with $10,000 annually for maintenance in addition to the amount presently authorized for maintenance of Honolulu Harbor, Hawaii.

HQ AR006119-HQ AR006176

79TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
2d Session } { No. 2009

RIVER AND HARBOR BILL

MAY 13, 1946.—Committed to the Committee of the Whole House on the State of the Union and Ordered to be printed

Mr. MANSFIELD of Texas, from the Committee on Rivers and Harbors, submitted the following

REPORT

[To accompany H. R. 6407]

The Committee on Rivers and Harbors, to whom was referred the bill (H. R. 6407) authorizing the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes, having considered the same, report favorably thereon without amendment and recommend that the bill do pass.

GENERAL STATEMENT

The Committee on Rivers and Harbors being impressed with the phenomenal growth of traffic on the waterways of the United States, both before and during the war, has held hearings to determine whether further improvements should be authorized at this time. During these hearings it was repeatedly brought out that the advantages afforded by low-cost transportation have redounded not only to the benefit of the individual areas directly served by our great waterway and harbor system, but to the welfare of the country as a whole.

The growth of water-borne commerce is illuminated sharply by the graph which is reproduced on page 2 of this report and which depicts for the entire waterway system, excluding the Great Lakes and ocean transportation, a steady increase from a low of 7,826,000,000 ton-miles in 1931 to a high of 31,343,000,000 ton-miles in 1944. Although this growth is obviously due to the basic fact that water transportation, when reduced to the common denominator of cost, is the best adapted and most economical among the several agencies of transport for the movement of our essential bulk commodities, it could not have been achieved but for the clear perception and provident foresight of previous Congresses.

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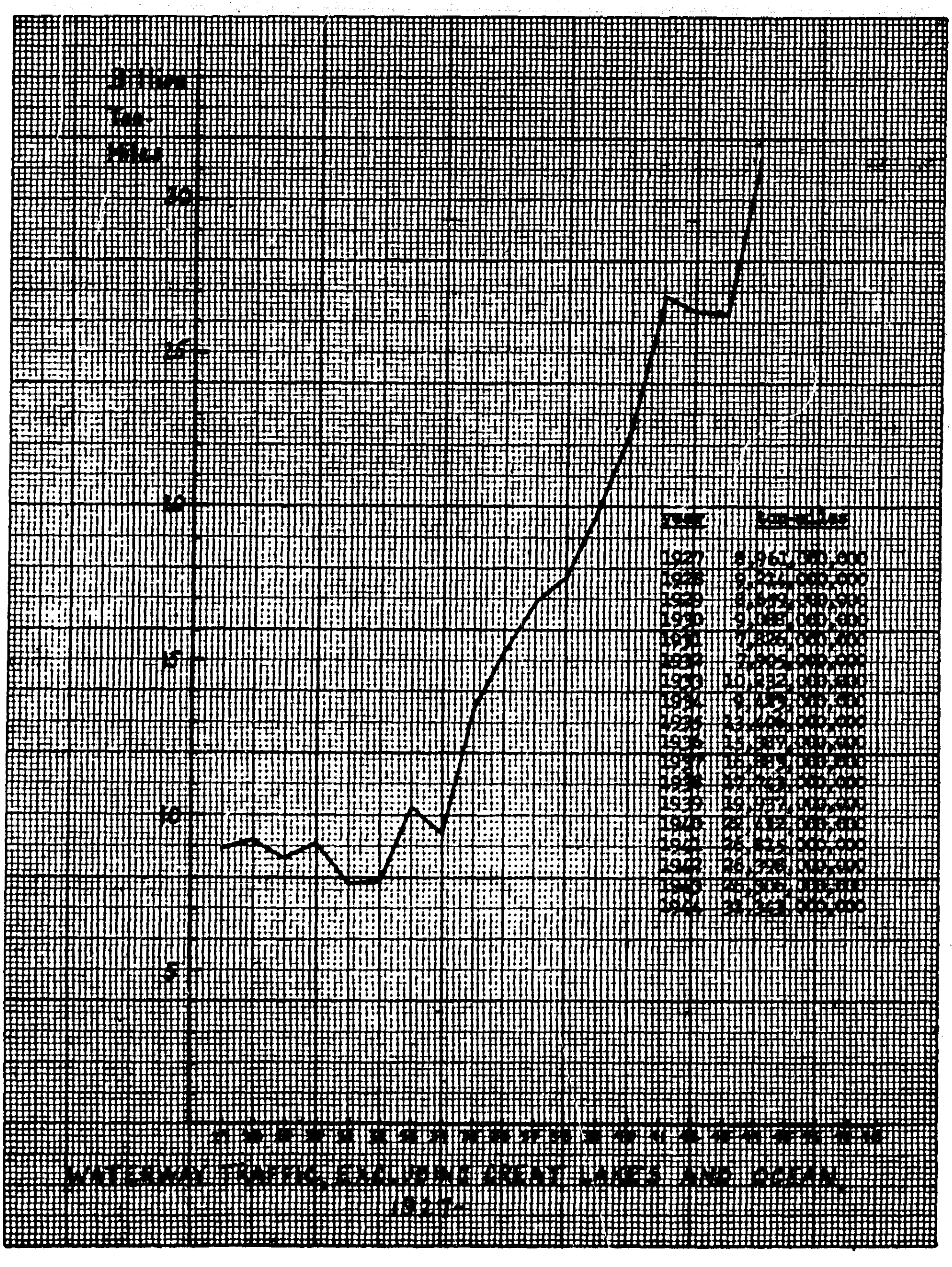
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WATERWAY TRAFFIC, EXCLUDING GREAT LAKES AND OCEAN,
1927-

Had not the requirements of a First World War indicated to a discerning Congress the need for transportation media in addition to those afforded by railroads and the necessity for enacting authorizing legislation, the country, during the past bitter years would have been denied in greater or less degree, in fighting its two-ocean war, 31,000,000,000 ton-miles of inland waterway traffic, 118,000,000,000 ton-miles of Great Lakes traffic, as well as the concomitant traffic made possible by the great ports of the Atlantic and Pacific Oceans and the Gulf of Mexico.

Congressional foresight also has required the United States Engineer Department to maintain complete records of trade movement on the waterways making up the inland system and in our ports. Hence, we know whereof we speak. The figures that have been presented to this committee are not the result of wishful thinking but statements of indisputable fact. To accent the wartime use of the inland waterways, figures have been produced to show that 3,943 seagoing military and naval craft, plus 146 drydocks, were constructed at widely scattered shipyards on the lakes and inland waterways during the critical months and propelled or towed down the rivers to deep water to play their indispensable part in the major invasions of enemy-held territory.

We should prepare now for the probable trend of the postwar era to decentralize major national activities by making available innumerable sites for the disposal of industrial expansion along the banks of our important waterways and ship channels.

Since passage of the last River and Harbor Act, 58 project reports have been reviewed and approved by the Board of Engineers for Rivers and Harbors and have now been considered favorably by this committee. These proposed improvements have been reported favorably only after their economic worth has been established under the revealing light of critical analysis. All of them are responsive to the needs of local interests and the Nation at large as freely voiced in public hearings and urged before this committee. In nearly every instance, the congressional representatives of the areas in question have expressed before this committee the need for the projects and their urgent desire that no delay be incurred in authorization. The proposed improvements range in size and importance from small-boat harbors of refuge to deep-draft ship channels and major expansion of the inland and intracoastal waterway systems. Each recommended project has been examined and weighed for justification in the public interest and found individually worthy of improvement. The progressive addition of each new link in a chain of coastal ports and in the interconnecting waterway systems, extends the routes, expands volume of traffic, places new sources of materials and new markets within the economic reach of each other and thus benefits both the newly opened areas and the regions already served by existing facilities.

Congress has heretofore provided that projects must first be authorized before becoming available for appropriation, a wise practice endorsed by this committee. The most advantageous choice of projects for appropriation within the Nation's ability, as measured by the Congress, can best be made if many economically sound projects are available for selection.

Since a period of 2 years has now elapsed since the consideration of the last river and harbor bill and since a number of economically approved projects are now available, and finally, since these projects

have been carefully and exhaustively examined by this committee, it seems proper that they be added to the number of authorized projects from which future selection may be made for appropriation. Furthermore, as the reports are received by Congress from the Board of Engineers for Rivers and Harbors and the Chief of Engineers, prompt authorization would seem to be the course of wisdom to insure that the engineering, the cost and the benefit data are fresh and responsive to general conditions obtaining at the time.

A complete list and brief description including the cost of each project contained within the bill follows. The committee repeats its serious conviction, that the authorization of additional river and harbor projects at this time is sound and in accordance with the procedure previously followed and as a result of which the country now enjoys the benefits of low-cost water transportation.

Estimated cost of projects in the bill

Name of project	Document No.[1]	First cost [2]	Maintenance [2]
Portland Harbor, Maine	H. 510, 79th	$1,271,750	(4)
Fall River Harbor, Mass	H. —, 79th	1,500,000	$8,000
Wickford Harbor, R. I	S. 141, 79th	95,000	500
New Haven Harbor, Conn	H. 517, 79th	[5] 3,460,000	12,000
Bridgeport Harbor, Conn	H. —, 79th	[6] 955,000	9,000
Stamford Harbor, Conn	H. —, 79th	45,000	1,000
Barnegat Inlet, N. J	H. 358, 79th	None	4,500
Absecon Inlet, N. J	H. 504, 79th	16,000	1,000
Delaware River, Biles Creek, Pa	H. —, 79th	54,000	11,000
Schuylkill River, Philadelphia, Pa	H. —, 79th	988,000	[7] 330,000
Schuylkill River, Pa. (culm removal)	H. 529, 79th	12,895,000	None
New Jersey Intracoastal Waterway, Cape May Canal			[8] 92,000
Middle Creek and Dark Head Creek, Md	H. —, 79th		[9] 1,500
Mattaponi River, Va	H. 766, 78th	60,000	2,500
Newport News Creek, Va	H. 559, 79th	109,000	7,000
Norfolk Harbor, Va	H. 563, 79th	5,100,000	609,000
Savannah Harbor, Ga	H. —, 79th	809,100	37,000
St. Johns River, Jacksonville to Lake Harney, Fla	H. —, 79th	463,000	(4)
Hollywood Harbor (Port Everglades), Fla	H. 768, 78th	786,000	5,000
Withlacoochee River, Fla	H. 293, 79th		[9] 1,000
Apalachicola, Chattahoochee, and Flint Rivers, Fla. and Ga	H. —, 79th	73,361,000	115,000
Tombigbee and Tennessee Rivers, waterway Alabama and Tennessee	H. 486, 79th	116,941,000	811,000
Mississippi River, Baton Rouge to the Gulf of Mexico, Devils Swamp	H. —, 79th	2,000,000	25,000
Plaquemine-Morgan City route (Louisiana-Texas Intracoastal Waterway)	S. —, 79th	8,000,000	100,000
Franklin Canal, St. Marys County, La	S. —, 79th	43,300	500
Mermentau River and tributaries, Louisiana	S. —, 79th	7,500,000	140,000
Lake Charles Deepwater Channel, Louisiana (Calcasieu River and Pass)	S. —, 79th	2,000,000	85,000
Red River and tributaries, Louisiana	H. —, 79th	42,000,000	600,000
Arkansas River, and tributaries, Arkansas and Oklahoma	H. —, 79th	55,000,000	50,000
Sabine River and tributaries, Texas (Adams Bayou)	H. —, 79th	73,000	3,000
Sabine-Neches waterway, Texas	H. 571, 79th	3,160,000	60,000
Trinity River, from Houston ship channel to Liberty, Tex	H. —, 79th	429,000	[10] 71,000
Mill Creek, tributary of Brazos River, Tex	H. —, 79th	250,000	None
Gulf Intracoastal Waterway, Tex	H. —, 79th	1,095,000	16,000
Brazos Island Harbor, Tex., vicinity of Port Isabel	H. —, 79th	170,000	5,000
Mississippi River between Missouri River and Minneapolis (seepage damages)	H. 515, 79th	93,880	None
Mississippi River at Lansing, Iowa	S. —, 79th	39,700	100
Mississippi River at Wabasha, Minn	H. 514, 79th	22,750	100
Mississippi River in Lake Pepin	H. 511, 79th	79,300	500
Mississippi River at Hastings, Minn	H. —, 79th	34,270	200
Big Sioux, S. Dak	H. 561, 79th	325,420	23,500
Cumberland River and tributaries, Kentucky and Tennessee	H. —, 79th	[11] 20,730,000	[11] 150,000
Big Sandy River and Tug and Levisa Forks, Ky., W. Va., and Va.	H. —, 79th	82,300,000	600,000
Illinois River, at Peoria, Ill	H. —, 79th	32,100	1,000
Illinois waterway and Grand Calumet River, Ill. and Ind	H. —, 79th	21,000,000	118,000
Chicago River, North Branch of, Ill	H. 767, 78th	28,000	15,000
Great Lakes Connecting Channels, Mich	H. —, 79th	28,063,000	70,000
Cleveland Harbor, Ohio	H. —, 79th	11,677,000	35,000
Fairport Harbor, Ohio	H. —, 79th	14,500	1,900

See footnotes at end of table, p. 5.

Estimated cost of projects in the bill—Continued

Name of project	Document No.[1]	First cost [2]	Maintenance [3]
San Diego River and Mission Bay, Calif	H. —, 79th	$5,858,000	$13,000
Napa River, Calif	H. 397, 79th	865,000	7,500
Sacramento River, Calif., Deepwater Channel	S. 142, 79th	[12] 10,742,000	[12] 66,000
Coos Bay, Oreg	S. —, 79th	5,089,000	235,000
Columbia and Lower Willamette Rivers, at Astoria, Oreg	H. —, 79th	1,044,000	10,000
Columbia River, Vancouver, Wash., to The Dalles, Oreg	H. —, 79th	1,381,500	13,500
Columbia River at The Dalles, Oreg	S. 89, 79th	76,500	2,000
Columbia River, Foster Creek, Wash	H. —, 79th	[13] 71,000,000	[13] 650,000
Honolulu Harbor, Hawaii	H. —, 79th	(4)	10,000
Total		601,725,070	
Less included authority		2,280,000	
Total first cost		599,445,070	

[1] Document number and Congress; "H" indicates House, "S" indicates Senate.
[2] Estimated first cost to the United States.
[3] Additional annual maintenance and operation costs.
[4] None in addition to that now authorized.
[5] Inclusive of $1,673,000 previously authorized.
[6] Inclusive of $607,000 previously authorized.
[7] Does not include $1,036,000 for deferred maintenance and restoration of project channel dimensions.
[8] For annual maintenance (not to exceed 5 years) of improvement constructed in the war effort with Navy funds.
[9] For maintenance not previously authorized.
[10] Reduction of $22,000 presently authorized.
[11] For navigation works.
[12] Exclusive of $2,000,000 maximum cost of salinity-control works.
[13] For initial installation of first 3 units.

PORTLAND HARBOR, MAINE

(H. Doc. 510, 79th Cong.)

Location.—The harbor is on the southwest end of Casco Bay, 100 miles northeast of Boston, Mass.

Report authorized by.—Rivers and Harbors Committee resolution adopted June 6, 1939.

Plan of recommended modification of existing project.—Modification of the existing project for Portland Harbor, Maine, to provide for deepening to 35 feet for the full width of the present 30-foot inner harbor channel from the Maine State Pier to Portland Bridge, deepening to 35 feet and widening to 400 feet of the Fore River channel between Portland Bridge and Vaughan Bridge, deepening to 35 feet of the present Fore River channel between Vaughan Bridge and the Boston and Maine Railroad bridge, widening the channel easterly of Vaughan Bridge to a maximum of about 700 feet to form a turning basin 35 feet deep, constructing a stone breakwater from Spring Point to Spring Point Light.

Estimated first cost.—$1,271,750.

Local cooperation.—Local interests to agree to hold and save the United States free from damages due to construction and maintenance of the work.

Annual cost of maintenance to United States.—None in addition to that now authorized.

Benefits.—The improvement will provide for the safety and convenience of existing and prospective future commerce. The deepening will provide adequate draft for the larger new type tankers now becoming more general in use. Savings in the shipments of petroleum products through the prevention of delay by unfavorable tides

amounts to $74,000. This item, which in itself provides a ratio of costs to benefits of 1 to 1.34, together with unevaluated savings in the shipment of other commodities and the general benefits to navigation clearly indicate economic justification for the improvement.

FALL RIVER HARBOR, MASS.

(H. Doc. —, 79th Cong.)

Location.—Fall River Harbor is in southeastern Massachusetts 20 miles southeast of Providence Harbor and 13 miles northwest of New Bedford Harbor.

Report authorized.—Rivers and Harbors Committee resolution adopted October 19, 1943. It is also in response to an item in the River and Harbor Act approved March 2, 1945.

Plan of recommended modification of existing project.—Modification of the existing project for Fall River Harbor, Mass., is recommended to provide for: (1) for abandonment of the existing 30-foot channel extending from deep water in Mount Hope Bay to the bend opposite Globe Wharf, a distance of approximately 15,000 feet; (2) a main channel 35 feet deep at mean low water, 400 feet wide adjacent to the water front from deep water west of Common Fence Point through Mount Hope Bay and Fall River Harbor to the wharves above the bridges, with increased width at the bend on the approach below Slades Ferry Bridge, and a turning basin 35 feet deep, about 1,100 feet wide and 850 feet long, above the bridge between the Shell and Montaup wharves.

Estimated first cost to United States.—$1,500,000.

Local cooperation.—The improvement is recommended subject to the provision that local interests give assurances satisfactory to the Secretary of War that they will furnish free of cost to the United States, all lands, easements, and rights-of-way necessary for construction of the project, and suitable spoil disposal areas for the initial work and subsequent maintenance as and when required.

Annual cost of maintenance to United States.—$8,000.

Annual benefits.—The annual benefits are estimated at $142,700 of which $52,500 is the savings due to elimination of underloadings, $40,200 is elimination of delays due to tides, and $50,000 is the savings effected by the use of larger vessels.

The ratio of costs to benefits is 1.0 to 2.1.

Remarks.—A 35-foot channel along the route recommended would provide convenient access to the oil wharves in Tiverton and to the wharves in the lower harbor, and with the turning basin above the bridges, would provide the improvement necessary for the safe, efficient, and economical operation of postwar deeper draft vessels. Provision of the 35-foot channel would obviate the necessity for further Federal maintenance of the existing 30-foot project channel extending from deep water in Mount Hope Bay 15,000 feet to the bend opposite Globe Wharf.

WICKFORD HARBOR, R. I.

(S. Doc. No. 141, 79th Cong.)

Location.—Wickford Harbor is located at Wickford Village, on the west shore of Narragansett Bay, 9 miles north of the bay entrance.

Report authorized by.—Resolution adopted on April 14, 1944, by the Committee on Commerce, United States Senate.

Plan of recommended modification of existing project.—A modification of the project, authorized by the River and Harbor Act approved March 2, 1945, provides for postwar construction of a channel 10 feet deep and 100 feet wide from the outer harbor to the highway bridge across Wickford Cove; an anchorage basin of 6 acres, 6 feet deep, in Wickford Cove; and an entrance channel 10 feet deep and 100 feet wide from the outer harbor into deep water in Mill Cove, at an estimated first cost of $44,000 with $1,000 annually for maintenance and with 50 percent of the initial cost to be contributed by local interests.

No work has been performed under this authorization.

This report recommends modification of the existing project for Wickford Harbor to omit construction of the anchorage basin and channel improvements in Wickford Cove and channel improvement in Mill Cove, and in substitution thereof, to provide breakwaters for protection of the outer harbor.

Estimated first cost to United States.—$95,000.

Local cooperation.—As a measure of cooperation local interests are to contribute $25,000 toward the first cost of construction, and in addition establish and maintain a suitable public wharf. The cost of the real estate and improvement necessary to provide the wharf is estimated at about $25,000.

Local interests are also required to save the United States free from damages resulting from the improvement.

Annual maintenance charges to United States.—$500.

Annual benefits.—The annual tangible benefits from the improvement are estimated at $8,500, which provides a ratio of cost to benefits of 1.0 to 1.1.

Remarks.—In addition to the tangible benefits the breakwater will provide a safe protected anchorage area for the local and visiting fishing fleet and for recreational craft.

NEW HAVEN HARBOR, CONN.

(H. Doc. 517, 79th Cong.)

Location.—New Haven Harbor is on the north shore of Long Island Sound about 70 miles east of New York City.

Report authorized by.—Rivers and Harbors Committee resolution of August 28, 1944.

Plan of recommended modification of existing project.—Deepening of the present 25-foot main channel and the 16-foot anchorage basin to 30 feet and dredging a new 16-foot anchorage basin at an estimated cost of $1,673,000 with additional annual maintenance of $12,250, was authorized by the River and Harbor Act approved March 2, 1945, but no work has been done under this authorization.

The report now under consideration recommends modification of the existing project for New Haven Harbor, Conn., to provide for construction of a main channel 35 feet deep at mean low water, 400 to 800 feet wide from Long Island Sound to Tomlinson Bridge, and change in the location and extent of the 16-foot anchorage basin, at an estimated cost to the United States of $3,200,000 for construction; in lieu of unconstructed modifications previously authorized with estimated costs of $1,673,000; also for construction of a channel in Quinnipiac River from the head of the main harbor 22 feet deep at mean low water and 250 to 400 feet wide to a point about 1,000 feet above Ferry Street, with a turning basin 22 feet deep, 200 to 800 feet wide and 700 feet long at the mouth of Mill River, at an estimated cost of $260,000.

Estimated first cost to United States.—$3,460,000.

Local cooperation.—The improvement is subject to the conditions that local interests furnish free of cost to the United States all lands, easements, and rights-of-way and suitably bulkheaded spoil disposal areas for the initial work and for subsequent maintenance when and as required, and hold and save the United States free from damages resulting from the improvement.

Annual cost of maintenance to United States.—$12,000.

Annual benefits.—Annual savings would result from economies in the use of the larger vessels fully loaded, and from avoidance of delays awaiting favorable tides, also from the additional postwar commerce that is expected to seek the port upon assurance of adequate depth. Additional annual savings would result from reduction of approach channel maintenance by shifting the main channel toward the deep-water terminals. These savings are estimated to total $726,000 for the main harbor and $40,000 for the Quinnipiac.

The ratio of estimated annual costs to annual savings is 1 to 5.3 for the main harbor improvements and 1 to 3.3 for the Quinnipiac River improvements.

BRIDGEPORT HARBOR, CONN.

(H. Doc. —, 79th Cong.)

Location.—Bridgeport Harbor is on the north shore of Long Island Sound 57 miles east of New York City and 20 miles west of New Haven.

Report authorized by.—Rivers and Harbors Committee resolution of August 30, 1944.

Plan of recommended modification of existing project.—The River and Harbor Act approved March 2, 1945, which provides for dredging the main channel from its present depth of 25 feet and general width of 300 feet, to 30 feet deep and generally 400 feet wide. No work has been done on this modification. Deepening Johnsons River channel to 18 feet from its present general depth of 9 feet to a point 600 feet below Hollisters Dam as provided for in the River and Harbor Act of 1930 has not been accomplished.

The modification now recommended provides for.—Construction of a channel 30 feet deep and generally 400 feet wide fron Long Island Sound to 720 feet below Stratford Avenue Bridge across Poquonock River; a turning basin 30 feet deep at the entrance to Johnsons River channel; for deepening Johnsons River channel from present depths to 15 feet deep and generally 200 feet wide to a point 1,700 feet below Hollisters Dam, thence 9 feet deep and 100 feet wide to 600 feet below

Hollisters Dam, in lieu of the presently authorized 18-foot depth and attendant requirements for local cooperation.

Estimated first cost to United States.—$955,000, of which $607,000 would be the estimated cost of unconstructed modifications previously authorized.

Local cooperation.—Subject to the conditions that local interests make necessary changes in the Pleasure Island Bridge, at an estimated cost of $45,000, give assurances satisfactory to the Secretary of War that they will provide suitable berthing and unloading facilities for large tankers on the main harbor turning basin, furnish free of cost to the United States all lands, easements, and rights-of-way, and suitably bulkheaded spoil disposal areas for the initial work and for subsequent maintenance when and as required, and hold and save the United States free from damages resulting from the improvement.

Annual maintenance charges to United States.—$9,000, which includes $8,000 for maintenance of the unconstructed modification.

Annual benefits.—The main channel improvements would permit savings of $90,000 annually in the movement of coal, lumber, and miscellaneous cargo previously estimated as creditable to the presently authorized 30-foot channel and which are reasonably assured upon the return of normal shipping conditions. Savings of $34,500 in the movement of oil is estimated as creditable to the turning basin and Johnsons River channel improvement. The estimated annual charge is $49,200, and as the prospective annual benefits total $124,500, the ratio of costs to benefits is 1 to 2.5.

STAMFORD HARBOR, CONN.

(H. Doc. —, 79th Cong.)

Location.—Stamford Harbor lies on the north shore of Long Island Sound about 32 miles east of New York City.

Report authorized by.—Rivers and Harbors Committee resolution of April 24, 1945.

Existing project.—The existing project provides for in part the provision of an anchorage basin 8 feet deep on the east side of the entrance channel. No work has been done on this anchorage basin.

Plan of recommended modification of existing project.—The modification of the existing project for Stamford Harbor to the extent of eliminating the 8-foot anchorage, authorized but not constructed, in the outer harbor, and substituting therefor the dredging of an anchorage basin adjacent to the East Branch channel, 8 feet deep at mean low water and about 4.2 acres in area.

Estimated first cost to United States.—$45,000.

Local cooperation.—The improvement is recommended subject to the condition that responsible local agencies furnish assurances satisfactory to the Secretary of War that they will provide free of cost to the United States all necessary lands, easements, rights-of-way and spoil-disposal areas for new work and subsequent maintenance when and as required; construct concurrently the necessary bulkheads, piers, landing platforms and service facilities which shall be open to all on equal terms; and hold and save the United States free from damages resulting from the improvement. The estimated cost to local interests for work to be done by them is $200,000.

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Annual maintenance charges to United States.—$1,000.

Benefits.—The present harbor facilities are greatly overcrowded. The smaller craft, recreational and fishing, such as will use the proposed anchorage are in need of a safe anchorage and of service facilities. The need of a public-owned marina is well established and although the general and local benefits cannot be evaluated they are sufficient to support cost of the recommended improvements.

BARNEGAT INLET, N. J.

(H. Doc. 358, 79th Cong.)

Location.—Barnegat Inlet is located on the coast of New Jersey 50 miles south of Sandy Hook and 32 miles north of Atlantic City.

Report authorized by.—Rivers and Harbors Committee resolution of August 10, 1944. This is an interim report.

Plan of recommended modification of existing project.—Modification of the existing project for Barnegat Inlet, N. J., to provide for maintenance dredging by the United States to dimensions of 200 feet wide by 8 feet deep near the Barnegat Lighthouse of a channel to connect Barnegat City Harbor with the main inlet channel.

Estimated first cost to United States.—None.

Local cooperation.—The improvement is recommended subject to the condition that local interests agree to hold and save the United States free from claims due to the work.

Annual maintenance charges to United States.—$4,500.

Benefits.—While the benefits are not susceptible of a monetary evaluation, they are nevertheless positive and include the enhancement of safety and necessary access for established commerce and the United States Coast Guard Service.

ABSECON INLET, N. J.

(H. Doc. 504, 79th Cong.)

Location.—Absecon Inlet is the entrance channel to the harbor of Atlantic City, N. J., 80 miles southwest of Sandy Hook, at the entrance to New York Harbor.

Report authorized by.—Rivers and Harbors Committee resolutions adopted April 16, 1935, February 27, 1936, and February 28, 1941. It is also in response to a resolution adopted by the Senate Commerce Committee on May 12, 1941.

Plan of recommended modification.—Modification of the existing project for Absecon Inlet, N. J., to provide for an entrance channel 15 feet deep and 200 feet wide from Absecon Inlet Channel into Clam Creek and for a turning basin 15 feet deep within Clam Creek.

Estimated first cost to United States.—$16,000.

Local cooperation.—The improvement is recommended subject to the condition that responsible local agencies give assurances satisfactory to the Secretary of War that they (*a*) will provide without cost to the United States suitable spoil-disposal areas for the new work and subsequent maintenance when and as required, and (*b*) will hold and save the United States free from damages due to construction and maintenance of the Clam Creek entrance channel and basin.

Annual maintenance charges to United States.—$1,000.

Annual benefits.—Benefits of the improvement are estimated at $59,600 annually. These include $4,600 for savings in the cost of transporting petroleum products, $9,000 for an increase in the catch of commercial fish, $16,000 for increased net returns to operators catering to sports fishermen, $10,000 for recreational boating benefits, and $20,000 for increase in boat-yard business.

These estimates indicate a ratio of costs to benefits for the improvement of 1.0 to 37.2.

DELAWARE RIVER IN THE VICINITY OF BILES CREEK, PA.

(H. Doc. —, 79th Cong.)

Location.—Biles Creek is a tidal waterway separating Biles Island on the west bank of Delaware River from the Pennsylvania mainland. It leaves the river opposite the Trenton Marine Terminal at the head of the 25-foot channel and rejoins it 1.7 miles downstream. The shore base of the Pennsylvania Maritime Academy operated by the Commonwealth of Pennsylvania occupies the point of land on the south side of the mouth or downstream end of Biles Creek.

Report authorized by.—Rivers and Harbors Committee resolution adopted April 24, 1945.

Plan of recommended modification of existing project.—Modification of the existing project for Delaware River between Philadelphia, Pa., and Trenton, N. J., to provide in the west margin of the ship channel opposite the shore base of the Pennsylvania Maritime Academy near the mouth of Biles Creek, Pa., an anchorage 22 feet deep with a bottom width of 100 feet and a length of 400 feet along the west or landward side, and 800 feet along the ship channel.

Estimated first cost to United States.—$54,000.

Local cooperation.—The improvement is recommended subject to the provision that appropriate authorities of the Commonwealth of Pennsylvania give assurances satisfactory to the Secretary of War that they will furnish free of cost to the United States suitable spoil-disposal areas for the initial dredging and subsequent maintenance as and when required.

Annual cost of maintenance to United States.—$11,000.

Benefits.—The interest of the general public in the service rendered by the academy warrants the provision at public expense of an anchorage adjacent to the academy's shore base.

SCHUYLKILL RIVER, PA.

(H. Doc. No. 529, 79th Cong.)

Location.—Schuylkill River has its source in Schuylkill County, Pa., and flows southeasterly 130 miles to the Delaware River at Philadelphia.

Report authorized by.—Senate Commerce Committee resolution adopted May 20, 1944, Rivers and Harbors Committee resolution adopted March 8, 1945, and an item in the River and Harbor Act approved March 2, 1945.

Plan of recommended modification of existing project.—Improvement of the Schuylkill River above Fairmount Dam in the interest of navigation and other purposes by removal of culm deposits in Plymouth, Flat Rock, and Fairmount pools.

Estimated first cost to United States.—$12,895,000.

Local cooperation.—The improvement is recommended provided that local interests have stopped the discharge of mine and industrial wastes into the streams of the Schuylkill watershed; constructed works to intercept accumulated wastes which enter the headwaters by erosion, or are now present therein from going downstream; removed 50 percent of the culm deposits in the river between Auburn and Norristown Dam; and given assurances satisfactory to the Secretary of War that they will remove the remaining 50 percent of the culm deposits in the river between Auburn and Norristown Dam (at an estimated cost of $22,688,000); furnish 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, and maintain and operate all works after completion in accordance with regulations prescribed by the Secretary of War.

Annual benefits.—Annual evaluated general benefits are savings in elimination of that part of the shoaling in the navigation channels in the Schuylkill and Delaware Rivers:

Due to culm	$289,000
Flood control	192,000
Total	481,000

The evaluated benefits exceed the Federal annual carrying charges.

Remarks.—Annual evaluated benefits to local interests will total $125,000 from reduction in costs in purification of water for domestic and commercial use.

The benefits that would be secured through recreational use of the river, if restored to an attractive and usable condition for the benefit of millions of citizens annually have not been monetarily computed except for an annual savings of $20,000 to the city of Philadelphia that would accrue through eliminating the necessity of dredging to maintain a rowing course in Fairmount pool. However, the recreational benefits in prospect are certainly considerable and weigh heavily in favor of the river's restoration.

SCHUYLKILL RIVER AT PHILADELPHIA, PA.

(H. Doc. —, 79th Cong.)

Location.—Schuylkill River, Pa., flows south 108.4 miles to Fairmount Dam at the head of tidewater in the city of Philadelphia and thence continues south for 8.6 miles within the city and empties into Delaware River just below the Philadelphia Navy Yard.

Report authorized by.—Rivers and Harbors Committee resolution adopted March 8, 1945, and an item in the River and Harbor Act approved March 2, 1945.

Plan of recommended modification of existing project.—That the existing project for Schuylkill River, Pa., be modified to provide for a channel 33 feet deep and 400 feet wide from the channel in Delaware River to the mouth of Schuylkill River and in Schuylkill River to Twenty-ninth Street and thence 33 feet deep and 300 feet wide to Passyunk Avenue Bridge, for restoration of the project channel dimensions between Passyunk Avenue Bridge and University Avenue Bridge, and for full maintenance of the project channels from the

channel in Delaware River to the University Avenue Bridge, and that the maintenance dredging required to be done by the city of Philadelphia be reduced to 60,000 cubic yards annually.

Estimated first cost to United States.—$988,000 for additional new work, and $1,036,000 for restoration of project channel dimensions above Passyunk Avenue Bridge.

Local cooperation.—The improvement is recommended provided (*a*) that the city of Philadelphia agrees to remove 60,000 cubic yards (place measurement) of material annually from that portion or those portions of the project which the district engineer may designate until such time as adequate municipal sewage-treatment works are constructed and placed in effective operation and (*b*) that local interests agree to hold and save the United States free from all damages which may result from the recommended work.

Annual maintenance charges to United States.—No additional maintenance cost for section of river to be deepened, $330,000 annually for maintenance of project depths above Passyunk Avenue.

Annual benefits.—The annual commerce that will be benefited by the recommended deepening is estimated at 5,430,000 tons of petroleum and its products and the evaluated annual benefits are estimated at $106,900 for elimination of time lost by large tankers awaiting favorable tides. The ratio of estimated annual costs to benefits for this work is 1.0 to 2.74.

Due to war conditions maintenance of the project-channel depths above Passyunk Avenue was deferred. Full maintenance is required to meet the needs of existing and prospective commerce and to keep faith with the industries located thereon which have used them extensively to the maximum depths maintained.

Remarks.—Commerce on Schuylkill River, which is an important arm of Philadelphia Harbor, averaged 10,385,000 tons annually during the past 10 years and reached a peak of 14,577,000 tons in 1941. Principal commodities were petroleum products, coal, sand and gravel, grain, gypsum rock, ores, metals, chemical, sand lumber. This commerce was handled by 13,444 vessel trips of which 3,825 were made by vessels drawing 10 feet or more and 229 by ships with drafts of 30 to 34 feet.

CAPE MAY CANAL (NEW JERSEY INTRACOASTAL WATERWAY)

(In accordance with the report on file in the Office, Chief of Engineers)

Location.—The Cape May Canal extends from Delaware Bay, above Cape May Point, to Cape May Harbor, which is connected with the Atlantic Ocean via Cold Spring Inlet.

Description.—The Cape May Canal consists of a canal 12 feet deep and 100 feet wide across Cape May County a distance of 3.7 miles; two parallel stone jetties in the Delaware Bay entrance; two temporary highway drawbridges and a temporary railroad bridge. The improvement was provided as a war measure in 1942 by the Corps of Engineers at the request of the Navy Department. Construction funds were made available by the Navy Department and to date maintenance of the canal has been carried forward by the Corps of Engineers at the request of the Navy on a reimbursable basis. Since the Navy Department's Cape May base has been disestablished the Navy

Department desires to be relieved of the responsibility of the continued maintenance of the Cape May Canal.

This canal is a segment of the New Jersey Intracoastal Waterway which was authorized by the River and Harbor Act approved March 2, 1945, subject to certain conditions of local cooperation. While the project was provided as a war measure it remains actively in use by commercial vessels, recreational and fishing craft, and numerous Government vessels. In order to provide for the maintenance and preservation of the existing works authority is required to maintain the project. Pending fulfillment of the conditions of local cooperation as authorized by the River and Harbor Act of March 2, 1945, appropriations heretofore or hereafter made for maintenance and improvement of rivers and harbors may be used for a period of not to exceed 5 years for maintenance of the canal from Cape May Harbor to Delaware Bay constructed as an emergency wartime project with Navy Department funds, including the cost of maintaining the temporary railroad and seashore highway bridges over said canal.

Annual cost of maintenance to United States.—$92,000.

MIDDLE RIVER AND DARK HEAD CREEK, MD.

Location.—Middle River and Dark Head Creek which joins it at a point 3 miles above the mouth is an estuary on the west side of Chesapeake Bay 8 miles above the mouth of the Patapsco River in the Baltimore area.

Existing project.—An existing project authorized by the National Defense River and Harbor Act approved October 17, 1940, provides for a channel 10 feet deep and 150 feet wide from that depth in Chesapeake Bay through Middle River to the head of Dark Head Creek. It subsequently developed that an enlarged project consisting of a channel 10 feet by 200 feet together with an anchorage basin about 400 feet by 2,000 feet and 10 feet deep located at the head of the improvement (Glenn L. Martin plant) was necessary to meet national defense needs.

Estimated first cost to United States.—None.

Annual maintenance charges to United States.—Authority is presently lacking to permit maintenance of the enlarged channel together with the anchorage basin as a regular river-and-harbor function of the Corps of Engineers. The annual maintenance cost of the enlarged project is $3,500 or $1,500 annually in addition to that now authorized.

MATTAPONI RIVER, VA.

(H. Doc. 766, 78th Cong.)

Location.—Mattaponi River rises in eastern Virginia and flows about 120 miles southeasterly to join the Pamunkey River at West Point and form the York River.

Report authorized by.—Rivers and Harbors Committee resolution of July 18, 1941.

Plan of recommended modification of existing project.—Modification of the existing project for Mattaponi River, Va., to provide for an entrance channel 16 feet deep at mean low water, 5,600 feet long, and 200 feet wide across the shoal separating the deep waters of the Mattaponi and York Rivers below the town of West Point and the enlargement to an equal depth of the natural channel in Mattaponi

River opposite the existing terminals at and in the vicinity of Sixth and Seventh Streets of that town over an area having a maximum length and width of 1,000 feet and 100 feet.

Estimated first cost to United States.—$60,000.

Local cooperation.—Subject to the conditions that local interests give assurances satisfactory to the Secretary of War that they will (*a*) provide suitable areas for the disposal of dredged material when and as required for the initial work and subsequent maintenance; (*b*) hold and save the United States free from damages arising from the improvement; and (*c*) dredge to an equal depth adequate approach and berthing areas adjacent to the terminals at Sixth and Seventh Streets of the town of West Point.

Annual maintenance and charges to United States.—$2,500.

Annual benefits.—The improvement will permit the loading of barges to their maximum drafts and thereby effect annual savings in transportation and operating costs estimated at $10,590. It will also effect additional annual savings of $2,325 in loading costs to operators using the Sixth and Seventh Streets terminals, and will benefit general navigation by affording safety and convenience to present traffic. The ratio of cost to benefits is estimated at 1.0 to 2.5.

NEWPORT NEWS CREEK, NEWPORT NEWS, VA.

(H. Doc. 559, 79th Cong.)

Location.—Newport News Creek, Va., is located on the southern end of the peninsula between the James and York Rivers and within the corporate limits of the city of Newport News.

Report authorized by.—Rivers and Harbors Committee resolution of August 13, 1942.

Existing project.—No improvement of Newport News Creek, Va., has been authorized by Congress.

Recommended plan of improvement.—Adoption of a project for Newport News Creek (municipal boat harbor), Va., to provide for a channel 12 feet deep at mean low water with widths varying from 200 to 60 feet from deep water in Hampton Roads to and through the municipal boat harbor entrance thence 12 feet deep at mean low water and 150 feet wide to and including a turning basin and anchorage of the same depth and 220 feet wide and 400 feet long in the upper end of the harbor.

Estimated first Federal cost.—$109,000.

Local cooperation.—The improvement is recommended subject to the provisions that local interests give assurances satisfactory to the Secretary of War that they will (*a*) reserve at least 400 linear feet of harbor frontage suitably bulkheaded for public use without assessment of the usual rental charge; (*b*) promulgate, adopt, and enforce such regulations as may be necessary for the safe and easy movement and anchorage of vessels within the harbor; (*c*) maintain such portions of the bulkhead and wharf terminals on the harbor as may be necessary to provide adequate facilities for the handling of commerce; (*d*) simultaneously dredge and maintain within the harbor, the side areas between the terminals and the recommended harbor channel; (*e*) simultaneously dredge and maintain, during the operational life of the existing storm sewers at the upper end of the recommended improvement, a catch basin opposite the discharge of these sewers.

Annual cost of maintenance to United States.—$7,000.

Annual benefits.—The annual benefits are estimated at $30,460 of which $21,850 is the savings in transportation cost on petroleum products, $4,560 is savings in transportation cost on sand and gravel, $2,000 is elimination of annual damage to boats and equipment, and $2,050 is the estimated net annual return on property enhancement. The ratio of annual costs to annual benefits is 1.0 to 1.22.

NORFOLK HARBOR, VA.

(H. Doc. 563, 79th Cong.)

Location.—Norfolk Harbor is 180 miles south of Baltimore. It includes a portion of Hampton Roads; Elizabeth River and its Western, Eastern, and Southern Branches; and Scotts Creek.

Report authorized by.—Rivers and Harbors Committee resolution adopted June 16, 1944.

Plan of recommended modification of existing project.—Modification of the existing project for Norfolk Harbor, Va., to provide for the construction of a trapezoidal-shaped disposal area of about 2,500 acres of flats adjacent to and north of Craney Island, for two rehandling basins and an approach and exit area to connect the rehandling basins with that channel. The disposal area would be enclosed by stone-faced levees of sand pumped from existing deposits adjacent to and within the disposal area. Three sluiceways would be provided in the westerly levee. The rehandling basins would each be 200 by 800 feet dredged to a depth of 40 feet, and spaced 500 feet apart. The approach and exit area would be 3,800 feet long and 600 feet wide dredged to a depth of 28 feet.

Estimated first cost.—$5,100,000.

Local cooperation.—(*a*) Users of the disposal facilities, other than the Engineer Department, shall pay to the district engineer a fixed unit toll for such use, including the cost of rehandling dredged material into the disposal area, the amount of such toll to be determined by the Chief of Engineers and to include interest on and amortization of the net investment and operation and maintenance costs.

(*b*) The Commonwealth of Virginia will—

(1) Convey to the United States, by appropriate legislation or otherwise, title to the submerged lands permanently occupied by the disposal area and terminate all existing oyster leases in effect within the limits of the disposal area; it being understood that the United States will compensate private oyster growers for crops in production on the submerged lands at the time of occupancy by the United States.

(2) Terminate, prior to the initiation of the construction and for the useful life of the disposal area, the leases of private oyster growers for leaseholds in areas on the south side of Hampton Roads which may be necessary for the construction, maintenance, and operation of the disposal area, including dredging for fill material adjacent to the disposal area; it being understood that at the time of the termination the United States will compensate these oyster growers for crops in production.

(3) Except as provided in (1) and (2) above, release the United States from all claims for such damages as may occur to public or leased oyster bottoms from the construction, maintenance, and operation of the project.

Annual maintenance and operation costs to United States.—$609,000.

Annual benefits.—The tangible benefits would accrue to all users of the project including the United States Engineer Department, the Navy Department, the United States Maritime Commission, eight railroads, commercial steamship interests, shipbuilding and repair companies, and the municipalities of Norfolk, Portsmouth, Newport News, and Hampton.

Intangible benefits would include the convenience of utilizing a fairly protected site of disposal, elimination of delays in hauling dredged material to sea and assurance of a definite place of disposal.

Under provision (*a*) afore-mentioned which provides that users of the disposal facilities shall pay the United States a fixed unit toll for such use the cost of the project will be self-liquidating.

SAVANNAH HARBOR, GA.

(H. Doc. —, 79th Cong.)

Location.—Savannah Harbor is on the Atlantic coast, 75 miles south of Charleston Harbor and 120 miles north of the mouth of St. Johns River. It comprises the lower 22.2 miles of Savannah River.

Report authorized by.—Rivers and Harbors Committee resolution of October 19, 1945.

Plan of recommended modification of existing project.—The existing Federal project for Savannah Harbor, Ga., be modified to provide for a channel 30 feet deep and generally 200 feet wide, upstream from the upper end of the present authorized channel in the vicinity of the Atlantic Creosoting Co. wharf, a distance of 1.45 miles, with a cut-off, and widening to 600 feet at the upper end to form a turning basin, and the construction of dikes, and necessary bank revetments.

Estimated first cost to United States.—$809,100.

Local cooperation.—The improvement is recommended subject to the conditions that local interests provide free of cost to the United States, all lands, including removal of existing structures, necessary for initial construction and subsequent maintenance of the project when and as required, and agree to hold and save the United States free from damages due to the construction works, at an estimated cost of $55,780.

Annual cost of maintenance to United States.—$37,000.

Annual benefits.—The annual tangible benefits from transportation savings on products of the proposed paper mill are estimated at $169,485 on the basis of capacity production. This estimate is reduced to $100,000 to allow for a period of development and the probability that capacity production will not be maintained. Other benefits, both tangible and intangible, would result from the improvement, such as increased land values, increased employment and business stimulation, and general community benefits. The ratio of evaluated annual benefits alone to annual costs of the improvement is 1.36 to 1, and large additional benefits would accrue.

ST. JOHNS RIVER, JACKSONVILLE TO LAKE HARNEY, FLA.

(H. Doc. --, 79th Cong.)

Location.—The St. Johns River, Fla., rises in the marshes of Brevard County, in east-central Florida, flows northerly 257 miles to Jacksonville, thence easterly 28 miles to the Atlantic Ocean.

Report authorized by.—Rivers and Harbors Committee resolution adopted August 25, 1944, and an item in the River and Harbor Act adopted March 2, 1945.

Existing project.—In the portion of the St. Johns River covered by the present report the existing project provides for, from Palatka, mile 83, a channel 10 feet deep and 100 feet wide to Sanford, mile 173, on Lake Monroe, and in the side channel to Enterprise, and a channel 5 feet deep from Lake Monroe to Lake Harney, mile 198, by way of the Woodruff Creek cut-off, having a width of 75 feet in the cut-off and 100 feet in the remaining reaches.

Construction of the 10-foot channel from Palatka to Sanford and Enterprise, authorized by the River and Harbor Act of March 2, 1945, has not been undertaken. The estimated cost of work is $290,000.

Plan of recommended modification of the existing project.—Recommends modification of the existing project for St. Johns River, Fla., Jacksonville to Lake Harney, to provide for a channel 12 feet deep at local mean low water and 100 feet wide from Palatka to Sanford, and in the branch to Enterprise.

Estimated first cost to United States.—$463,000, in addition to amount now authorized.

Local cooperation.—The improvement is recommended provided that responsible local interests give assurances satisfactory to the Secretary of War that they will (*a*) provide without cost to the United States, all lands, easements, and rights-of-way necessary for the construction of the project and its subsequent maintenance, when and as required; and (*b*) provide and maintain, without cost to the United States, adequate terminal facilities when and as required, which shall be open to all on equal terms.

Annual maintenance charges.—None in addition to that now authorized.

Annual benefits.—With a depth of 12 feet evaluated additional annual benefits are estimated at $128,300. Ratio of costs to benefits 1 to 7.1.

HOLLYWOOD HARBOR (PORT EVERGLADES), FLA.

(H. Doc. 768, 78th Cong.)

Location.—Hollywood Harbor, also known as Port Everglades, is on the east coast of Florida, at the adjoining cities of Fort Lauderdale and Hollywood, 23 miles north of Miami Harbor and 48 miles south of the port of Palm Beach.

Report authorized by.—Rivers and Harbors Committee resolution of January 13, 1944.

Plan of recommended modification of existing project.—Modification of the existing project for Hollywood Harbor (Port Everglades), Fla., to provide for general widening of the turning basin by 200 feet on the north and 500 feet on the south and for enlarging the flare of the entrance channel at the basin, all to a depth of 35 feet.

Estimated first cost to United States.—$786,000.

Local cooperation.—Subject to the condition that responsible local agencies agree to (*a*) provide free of cost to the United States all necessary lands and rights-of-way and suitable spoil-disposal areas, diked as necessary, for new work and for subsequent maintenance, when and as required, (*b*) promptly dredge and bulkhead slip 3 and the berth at the east end of pier 3 on completion of the Government's improvement of the southern part of the turning basin, and (*c*) hold and save the United States free from damages resulting from the work. Cost to local interests, $1,357,000.

Annual maintenance charges to United States.—$5,000.

Benefits.—Enlargement of the harbor basin is required to afford access to additional terminal facilities which local interests offer to provide and which are considered necessary to serve a growing peacetime commerce. The existing basin is clearly inadequate to suitably accommodate the maneuvering of the large ships and seatrain vessels which even now use the harbor. The Federal expenditures required are justified in the interest of safety and convenience to existing and prospective commerce provided local interests expand the berthing and terminal facilities to permit full use of the enlarged basin.

WITHLACOOCHEE RIVER, FLA.

(H. Doc. 293, 79th Cong.)

Location.—Withlacoochee River rises in Polk County, Fla., flows generally northwesterly, and empties into the Gulf of Mexico at Port Inglis, Fla., about 95 miles north of Tampa.

Report authorized by.—This is an interim report in response to a Rivers and Harbors Committee resolution of May 20, 1942. The report is relative to the maintenance of a channel in the lower part of the river. A report covering a full review of the existing project will be submitted later.

Existing project.—Improvement from the mouth to Inglis, a small town 6.4 miles above the mouth, was authorized in the Second Deficiency Appropriation Act of June 28, 1944, in the interest of national defense. The plan of improvement provides for initial dredging of a channel 10 feet deep and 70 feet wide. Maintenance of the project is recommended.

Estimated first cost to the United States.—None.

Local cooperation.—Subject to the condition that local interests agree to furnish free of cost to the United States all rights-of-way and spoil-disposal areas necessary for the maintenance work when and as required, and to hold and save the United States free from damages due to the maintenance work.

Annual maintenance charges to United States.—$1,000.

APALACHICOLA, CHATTAHOOCHEE, AND FLINT RIVERS, GA., AND FLA.

(H. Doc. —, 79th Cong.)

Location.—Apalachicola River is formed by the junction of Chattahoochee and Flint Rivers at the southwest corner of Georgia and flows south 112.8 miles through Florida to the Gulf of Mexico.

Report authorized by.—An item in the River and Harbor Act approved March 3, 1945.

Existing project.—By the River and Harbor Act of March 2, 1945, Congress approved a general plan for development of the Apalachicola, Chattahoochee, and Flint Rivers. It provides for ultimately securing by means of these improvements, with dredging, cut-offs, and contraction works, channels 9 feet deep and 100 feet wide from the mouth of Apalachicola River to Columbus, 7 feet deep and 100 feet wide in Flint River from its mouth to Bainbridge and 5 feet deep and 100 feet wide thence to Albany. For initiation and partial accomplishment of the plan, Congress also by the act of March 2, 1945, provided for construction of the Fort Benning and junction locks and dams of the general plan, supplemented by dredging and contraction works to provide a navigable depth of 6 feet to Columbus and to Bainbridge at an estimated cost for new work of $6,500,000. Work on the improvements authorized by the act of 1945 has not yet been started.

Recommended plan for further improvement.—That the approved general plan for the Apalachicola, Chattahoochee, and Flint Rivers system be modified to include improvements now proposed in lieu of corresponding works in the presently approved plan. That for the initiation and accomplishment of the plan now recommended, the existing project be modified to provide for in lieu of the initial improvement authorized by the River and Harbor Act approved March 3, 1945:

(*a*) Construction of a lock and dam at the junction site with upper pool at elevation 77 and a hydro-electric power plant with 27,000 kilowatts of installed capacity.

(*b*) Construction of a lock and dam at the Upper Columbia site with upper pool at elevation 165 and a hydroelectric power plant with installed capacity of 88,800 kilowatts.

(*c*) Construction of a lock and dam at the Fort Benning site with upper pool at elevation 190 and without a plant for the generation of hydroelectric power.

(*d*) Construction of Buford Reservoir on Chattahoochee River, at mile 348.5, with a hydroelectric power plant having an installed capacity of 28,900 kilowatts. This reservoir will also provide flood control, assure an adequate supply of water for municipal and industrial purposes in the Atlanta metropolitan area, and supply water for navigation.

(*e*) Dredging and channel work on Apalachicola and Chattahoochee Rivers in conjunction with the above improvements.

Estimated increased first cost to United States.—$73,361,000.

Local cooperation.—The improvement is recommended subject to the conditions that local interests agree to furnish free of cost to the United States all lands, easements, rights-of-way and spoil disposal areas, as and when required, for provision and maintenance of the channel in Apalachicola River below Junction Dam and agree to provide suitable public terminal and transfer facilities open to all on equal terms.

Annual maintenance charges to United States.—$115,000.

Annual benefits.—The estimated annual benefits that would accrue from the improvement are as follows:

Power	$3, 377, 000
Navigation	933, 000
Flood control	100, 000
Increased land values and other collateral benefits	50, 000
Total benefits	4, 460, 000

The evaluated benefits when compared to the annual cost indicates a favorable ratio of 1.0 to 1.08.

In addition the improvements would afford recreational opportunities, benefit fish and wildlife conservation, and make available an adequate water supply for the Atlanta area. The works now proposed will conform with an effective plan for further development of the water resources of the basin.

WATERWAY CONNECTING THE TOMBIGBEE AND TENNESSEE RIVERS

(H. Doc. 486, 79th Cong.)

Location.—The Tombigbee River rises in northeastern Mississippi about 20 miles from the Tennessee River and flows southwardly approximately 500 miles to join the Alabama River and form the Mobile River 45 miles above Mobile Bay at the city of Mobile, 144 miles by water from the mouth of the Mississippi River. The Tennessee River is formed near Knoxville, Tenn., and flows 650 miles to enter the Ohio River at Paducah, 46 miles above the Mississippi River.

Report authorized by.—Rivers and Harbors Committee resolution adopted January 2, 1945.

Existing projects.—Warrior-Tombigbee Waterway: The existing project provides for a channel 9 feet deep and 200 feet wide, where practicable, from the mouth of the Tombigbee River 45 miles above Mobile to mile 420.6 on Locust Fork, mile 444.6 on Mulberry Fork, and mile 447.6 on Sipsey Fork, a tributary of Mulberry Fork. The total distance under improvement is about 427 miles. To obtain this channel, the project provides for the construction of 15 dams and 16 locks, the extra lock being at dam No. 17.

Tombigbee River above Demopolis: The existing project on the Tombigbee River from Demopolis to Columbus, a distance of 146 river miles, provides for securing a channel 6 feet deep at low water by snagging, tree cutting, bank revetment, and bar improvement.

Tennessee River is under improvement by the Tennessee Valley Authority for multiple purposes. A 9-foot channel is provided from Knoxville, Tenn., to the mouth.

Plan of recommended modification of existing project.—The plan of improvement for connecting the Tombigbee and Tennessee Rivers may be divided into three sections, viz; river section, 180 miles in length, canal section 41 miles in length, and the divide section 39 miles. There would be 18 locks, 110 by 600 feet, with a depth of 13 feet over the lower miter sills on the connecting waterway. The minimum channel depths and widths which would be provided are as follows:

Section	Dimensions		
	Length (miles)	Depth (feet)	Width (feet)
River	180	9	170
Canal	41	12	170
Divide	39	12	[1] 150

[1] Passing places 200 feet wide and 1,000 feet long with transitions 500 feet long at each end would be provided at intervals of approximately 4 miles.

Estimated first cost to United States.—$116,941,000.

Local cooperation.—Subject to the condition that local interests give assurances satisfactory to the Secretary of War that they will—

(*a*) Make and maintain at their expense alterations as required in highways and highway bridges and in sewer, water supply, and drainage facilities.

(*b*) Provide and maintain at their expense and as required suitable and adequate river and canal terminals in accordance with plans approved by the Secretary of War and the Chief of Engineers.

Estimated cost to local interests for the required cooperation is $3,341,000.

Annual cost of maintenance and operation to United States.—$811,000.

Annual benefits.—A comprehensive study was made of the commerce in the area that would be served by the recommended improvement. Only such tonnage was finally accepted as prospective to the waterway on which substantial savings would be effected. The traffic accepted as prospective, after elimination of all doubtful traffic and on which savings would be minor, totaled 5,764,000 tons. The savings on this tonnage is estimated at $6,251,000.

The ratio of cost to benefits is 1.0 to 1.05.

Remarks.—The introduction of a shorter and more direct low-cost water transportation route is expected to reduce the combined cost of production and distribution in the areas thus connected. This will enable producing centers in the general tributary area to compete in distant as well as nearby markets, just as similar improvements have done for their respective tributary areas in the past. The benefits which will accrue will be national in scope and character and of sufficient magnitude to warrant the undertaking of the project by the United States.

MISSISSIPPI RIVER, BATON ROUGE TO THE GULF OF MEXICO, BARGE CHANNEL THROUGH DEVILS SWAMP

(H. Doc.—79th Cong.)

Location.—Devils Swamp comprises about 5 square miles. Its southern edge is about 1 mile upstream from the Baton Rouge Bridge across the Mississippi River.

Report authorized by.—The River and Harbor Act approved March 2, 1945.

Existing project.—There is no existing project for the improvement of Devils Swamp for navigation.

Plan of recommended modification of existing project.—That the existing project for Mississippi River, Baton Rouge to the Gulf of Mexico, be modified to provide for a channel 12 feet deep and 300 feet wide extending in a northerly direction from the left or east bank of the Mississippi River at or near mile 234.5, a distance of 5 miles, through Devils Swamp near its eastern edge; provided that the Chief of Engineers be authorized to construct 2½ miles of the proposed channel initially with provisions for extending to 5 miles when and as needed.

Estimated first cost to United States.—$2,000,000.

Local cooperation.—The improvement is recommended provided that responsible local agencies give assurances satisfactory to the

Secretary of War that they will: (*a*) provide, without cost to the United States, all land, easements, rights-of-way, and spoil-disposal areas necessary for the construction and subsequent maintenance of the project; (*b*) hold and save the United States free from damage due to the construction and subsequent maintenance of the project; and (*c*) provide, maintain, and operate adequate terminal facilities which shall be open to all on equal terms.

Annual cost of maintenance to United States.—$25,000.

Annual benefits.—Estimated annual savings of $115,000 in transportation costs on anticipated additional commerce gives a cost-to-benefits ratio of 1.00 to 1.03. Additional benefits to the large volume of water-borne commerce would make the economic ratio much more favorable.

Remarks.—Barge traffic of the port of Baton Rouge during 1944 consisted of 1,872,000 tons of receipts and 4,010,000 tons of shipments. The proposed Devils Swamp Channel would provide a desirable off-river barge harbor for the port of Baton Rouge, which is urgently needed for the accommodation, convenience and safety of existing and proposed commerce. It would also provide additional industrial sites with water frontage which are now needed to permit the normal development and expansion of the industrial and commercial activities of the locality.

LOUISIANA-TEXAS INTRACOASTAL WATERWAY—PLAQUEMINE-MORGAN CITY ALTERNATE ROUTE

(S. Doc. —, 79th Cong.)

Location.—The Intracoastal Waterway is an artificial sea-level canal with project dimensions generally of 12 feet deep by 125 feet wide extending along the Gulf coast from Apalachee Bay, Fla., to Brownsville, Tex. West from the Mississippi River, two routes are available as far as Morgan City on the Lower Atchafalaya River. The direct route is through Harvey Lock, (425 by 75 by 12 feet) about 98 miles above the Head of Passes, thence through natural streams and land-cuts for 96 miles south and west to Morgan City. The alternate route termed the Plaquemine waterway leaves the Mississippi River at Plaquemine, 208 miles above the Head of Passes.

Report authorized by.—Senate Commerce Committee resolution of May 18, 1943.

Plan of recommended modification of the existing project.—To provide for a channel 12 feet deep and 125 feet wide for the Plaquemine-Morgan City Route from the Mississippi-Atchafalaya section of the waterway, in the vicinity of Morgan City, through Lower Atchafalaya River (Berwick Bay) and the borrow pit of the East Atchafalaya protection levee to and through Bayou Sorrel Lock (to be constructed under the existing project "Flood Control, Mississippi River and Tributaries"), thence via the present waterway through lower Grand River to Indian Village, and thence by way of Bayou Grossetete and a new land cut to and through a new terminal lock and entrance channel to the Mississippi River in the vicinity of Port Allen opposite the lower limit of the port of Baton Rouge.

Estimated first cost to United States.—$8,000,000.

Local cooperation.—The improvement is recommended subject to the provision that local interests give assurances satisfactory to the Secretary of War that they will: (*a*) furnish without cost to the United States all lands, easements, and rights-of-way, and spoil disposal areas that may be required for initial construction and subsequent maintenance as and when required; (*b*) bear the cost of alteration or replacement of existing highway bridges and utility crossings; (*c*) maintain and operate all bridges and utility crossings; (*d*) provide adequate terminal and transfer facilities, open to all on equal terms; and (*e*) hold and save the United States free from damage due to the construction, maintenance, and operation of the improvement.

First cost to local interests estimated at $450,000.

Annual maintenance and operation charges to United States.—$100,000.

Annual benefits.—Prospective commerce may be expected to exceed 2,500,000 tons, with resulting savings in transportation costs due to the distance (65 miles by the proposed route as compared to 225 via New Orleans) differential of 32 cents per ton. These savings are now available for "small" barge equipment adapted for negotiating Plaquemine facilities but not for equipment normally used on the New Orleans-Corpus Christi route. The estimated savings in transportation costs on prospective commerce are substantially greater than the estimated annual charges.

In addition, on the basis of 1945 conditions and prices, the drainage benefits are estimated at $370,000 for West Baton Rouge and $100,000 for Iberville Parish. Provision of effective drainage would also permit development of wet woodlands and swamps for pasture or crops with a corresponding increase in agricultural production.

FRANKLIN CANAL, ST. MARY PARISH, LA.

(S. Doc. —, 79th Cong.)

Location.—Franklin Canal is a small tidal channel serving drainage and navigation in southern Louisiana. It extends from the Gulf Intracoastal Waterway at a point 121 miles west of the Mississippi River at New Orleans.

Report authorized by.—Senate Commerce Committee resolution of February 26, 1945.

Existing project.—None.

Recommended plan of improvement.—Local interests constructed Franklin Canal. It connects with the Gulf Intracoastal Waterway, but has inadequate dimensions. This report recommends modification of the existing project for the Gulf Intracoastal Waterway between Apalachee Bay, Fla., and the Mexican border, to provide for improvement of Franklin Canal as a connecting channel therefrom to Franklin, La., to afford a channel 8 feet deep and generally 60 feet wide with a width of 100 feet in its upper 300 feet.

Estimated first cost to United States.—$43,300.

Local cooperation.—The improvement is recommended provided that local interests (*a*) make a cash contribution equal to one-third of the cost of construction but not to exceed $22,000; (*b*) furnish free of cost to the United States a suitable right-of-way not less than 300 feet wide including cession of the existing canal, together with suitable spoil-disposal areas for the new work and subsequent maintenance

when and as required; (*c*) remove or alter existing bridges and modify land transportation facilities along the canal as required to implement the improvement; (*d*) agree to provide adequate terminal facilities open to all on equal terms; and (*e*) furnish satisfactory assurances that they will hold and save the United States free from damages resulting from construction and maintenance of the improvement.

Cost to local interests for road and bridge modifications.—$6,000.

Annual maintenance charges to United States.—$500.

Annual benefits.—Prospective annual commerce for the canal totals 67,000 tons. Considering only the savings in terminal transfer charges the annual benefits are estimated at $3,500, which equals the estimated annual cost. In addition, drainage benefits not evaluated in monetary terms will result, and the enlarged canal will provide ample frontage for safe mooring of local and transient boats.

MERMENTAU RIVER AND TRIBUTARIES, LOUISIANA

(S. Doc. ——, 79th Cong.)

Location.—Mermentau River is formed by the junction of Bayous Nezpique and des Cannes near the town of Mermentau and flows southerly 71.5 miles through lakes and marshes to empty into the Gulf of Mexico about 15 miles east of Calcasieu Pass.

Report authorized by.—Senate Commerce Committee resolutions of December 19, 1940, March 5, 1943, and January 11, 1945; also by an item in the River and Harbor Act approved March 2, 1945.

Plan of recommended modification of existing project.—There is a harmful inflow of salt water from the Gulf through the Calcasieu River by way of the Intracoastal Canal. The proposed improvements would prevent uncontrolled salt-water intrusion during periods of low run-off from the basin as well as facilitate the outflow of fresh waters during floods. The over-all benefits are considered sufficient to justify construction of the improvements.

Accordingly, modification is recommended:

(*a*) Of the Gulf Intracoastal Waterway to provide for a salt-water guard lock in the waterway at or near mile 231 west of Harvey lock.

(*b*) Of the existing flood-control project for Mermentau River, La., to provide for channel enlargement of lower Mermentau River below Grand Lake, mile 25, and for construction of a gated control structure at or near Grand Cheniere, mile 7.

(*c*) Of the existing project for inland waterway from Franklin, La., to Mermentau River, La., to provide for channel enlargement and realinement from Vermilion Bay to White Lake and from White Lake to Grand Lake, and for channel enlargement of North Prong of Schooner Bayou, and for construction of a gated control structure in the new channel near Schooner Bayou lock.

It is further recommended that the section of the project "inland waterway from Franklin, La., to the Mermentau River" west of Vermilion Bay, and the project "waterway from White Lake to Pecan Island, La.," be incorporated in the modified project "Mermentau River, La."

Estimated first cost to United States.—$7,500,000.

Local cooperation.—The improvement is recommended subject to the provision that local interests give assurances satisfactory to the

Secretary of War that they will: (I) Furnish, free of cost to the United States, all lands, easements, rights-of-way, and spoil-disposal areas required for the initial construction and subsequent maintenance as required; (II) and hold and save the United States free from damages due to the construction works.

Annual maintenance charges.—$60,000, $40,000, and $40,000, respectively, for (*a*), (*b*), and (*c*) above.

Annual benefits.—Operation of the improvements to maintain normal stages in coastal lakes and connected waterways at or below ordinary high-tide level would lower normal water levels and flood heights on contiguous lowlands and thereby reduce the duration of flooding. Such operation would also permit pumping withdrawals from lakes and waterways during seasons of subnormal rainfall and thereby alleviate the greater losses to rice growers due to drought and salt-water intrusion. The annual benefits are estimated at $580,000, of which $100,000 is flood control, $500,000 is water supply, and $20,000 is the loss to navigation and commerce due to delays caused by the installation of an additional guard lock in the Intracoastal Waterway.

The ratio of costs to benefits is 1.0 to 1.20.

LAKE CHARLES DEEPWATER CHANNEL, LA. (CALCASIEU RIVER AND PASS, LA.)

(S. Doc. —, 79th Cong.)

Location.—Calcasieu River flows south in western Louisiana and empties into the Gulf of Mexico through Calcasieu Lake and Pass about 30 miles east of Sabine Pass. Between 36 and 38 miles above the Gulf, the river flows through Lake Charles on the east bank of which is the city of Lake Charles.

Report authorized by.—Senate Commerce Committee resolution of April 17, 1944.

Plan of recommended modification of existing project.—Recommends that the existing project for Calcasieu River and Pass, La., be modified to provide for a channel depth of 35 feet from the wharves of the Lake Charles Harbor and Terminal District, including Clooney Island Loop, to the jetty channel, for a uniformly increasing depth of 35 to 37 feet in the jetty channel and for a depth of 37 feet in the approach channel in the Gulf of Mexico.

Estimated first cost to United States.—$2,000,000.

Local cooperation.—The improvement is recommended provided that responsible local agencies give assurances satisfactory to the Secretary of War that they will (*a*) furnish free of cost to the United States all lands, easements, rights-of-way, and spoil-disposal areas necessary for the new work and for the subsequent maintenance when and as required; (*b*) hold and save the United States free from damages due to construction and maintenance of the work; and (*c*) modify terminal facilities as necessary for full utilization of the improvement.

Annual cost of maintenance to United States.—$85,000.

Benefits.—Deepening the channel will permit use of deeper draft tankers for oil shipments with resulting savings in transportation costs. With present channel limitations, tanker cargoes are restricted to about 11,000 tons whereas tankers of the 15,000- to 19,000-ton class may utilize a 35-foot channel with obvious saving in shipping

costs. Oil companies indicated that resulting savings would range between 6 and 7½ cents per barrel for shipments between Gulf and north Atlantic ports with greater savings for overseas traffic.

For postwar oil shipments from the port averaging 6,000,000 tons annually, it is estimated that savings resulting from use of tankers with 17,000 rather than 11,000 tons capacity will amount to about $2,700,000 annually, of which at least a third may be credited to deepening the project channel of Calcasieu River and Pass.

This indicates a favorable ratio of estimated annual costs to benefits of about 1.0 to 5.5.

RED RIVER AND TRIBUTARIES, LOUISIANA, ARKANSAS, OKLAHOMA, AND TEXAS

(Interim report on the improvement for navigation)

(H. Doc. —, 79th Cong.)

Location.—Red River, about 1,200 miles long, has its source near Canyon, Tex., flows in a generally eastward direction across the Texas Panhandle, then forms part of the Texas-Oklahoma and Texas-Arkansas State lines, continues eastward into Arkansas as far as Fulton, then turns south and southeast through Arkansas and Louisiana to Barbre Landing, from which the Old River extends eastward 7 miles to the Mississippi River.

Report authorized by.—Rivers and Harbors Committee resolutions of February 25, 1938, January 24, 1939, and April 27, 1944, and a Senate Commerce Committee resolution of February 8, 1939. It is also authorized by River and Harbor Acts approved August 30, 1935, August 26, 1937, and June 20, 1938. This interim report is confined to the consideration of the provision of navigable waterway from the Mississippi River to Shreveport, La.

Plan of recommended modification of existing project.—The plan for improvement recommended as most feasible is a lateral canal across the backwater area and along the south flood plain, through natural channels and connecting land cuts. It provides for an open-river channel, 9 feet deep and 100 feet wide, extending from the Mississippi River through Old River and Red River to mile 31, from which a dredged lateral canal would leave the river through its south bank and extend by way of Little River, to Coulie des Grues in the upland, south of Marksville, thence follow natural and artificial channels (Choctaw Bayou, Chatlin Lake Canal, Cane River, and Bayou Pierre) and connecting cuts through bottoms and uplands of the Red River flood plain to a terminal basin in the southern environs of Shreveport. The proposed plan contemplates 9 locks with chambers 55 feet wide by 650 feet long and 12-foot depth over the sills. A pumping plant on Red River near Shreveport would supply water adequate for maintenance of pool level in the terminal basin and uppermost pool and for lockage during low flow periods in Bayou Pierre.

Estimated first cost to United States.—$42,000,000.

Local cooperation.—The improvement is recommended subject to the conditions that local interests furnish without cost to the United States all necessary lands, easements, rights-of-way, and spoil-disposal areas for new work and subsequent maintenance when and as required; make all necessary changes in existing highways and highway

bridges and approaches thereto, and all necessary changes in public utilities except railroad facilities; maintain parts of all railroads, highways, bridges, and utilities affected by the improvement; establish, maintain, and operate adequate terminal and transfer facilities; and hold and save the United States free from damages incident to construction, maintenance, and operation of the improvement. First cost to local interests for required cooperation is estimated at $2,000,000.

Annual maintenance and operation charges to United States.—$600,000.

Annual benefits.—A comprehensive traffic survey developed that 1,100,000 tons of commerce would use the waterway at an estimated annual saving of $3,200,000 in transportation costs.

In addition to the transportation savings it is estimated that incidental drainage benefits of some $300,000 annually would result from the construction of the lateral canal improvement.

The ratio of Federal cost to benefits is 1.0 to 1.33.

Remarks.—The Red River Basin is surprisingly highly industrialized. Mining of iron ore deposits in east Texas has been initiated. From a monetary standpoint the petroleum industry is dominant. Fields in the Texas Panhandle, north and east Texas, Oklahoma, south Arkansas, and north Louisiana yield oil and gas. Principal industries are refining and marketing of petroleum products, manufacturing or processing of cements, ceramics, salt, sulfur, and fertilizer, and the fabrication of steel and aluminum products. Grain elevators and flour mills, cotton gins and compresses, cotton and oil mills, foundries and machine shops, steam and hydroelectric plants, transmission lines, and other industrial developments meet economic requirements throughout the basin.

ARKANSAS RIVER AND TRIBUTARIES, ARKANSAS AND OKLAHOMA

(H. Doc. —, 79th Cong.)

Location.—Arkansas River rises in the Rocky Mountains in central Colorado, flows 1,450 miles southeasterly through Colorado, Kansas, Oklahoma, and Arkansas, and empties into the Mississippi River 575 miles above the Head of Passes, La. Its watershed, comprising an area of 160,500 square miles, is about 870 miles long and has an average width of 185 miles.

Report authorized by.—House Flood Control Committee resolution of February 10, 1938, Senate Commerce Committee resolution of October 12, 1938, and Rivers and Harbors Committee resolution of January 24, 1939. It is also in review of reports authorized by the River and Harbor Act approved August 30, 1935, and by the Flood Control Act approved June 22, 1936.

Plan of recommended modification of existing projects.—Congress has approved the construction of projects in the interest of flood control at an estimated cost of $76,560,000. The report now submitted is comprehensive in scope. The plan of improvement is a multiple-purpose plan consisting of coordinated developments to serve navigation, produce hydroelectric power, afford additional flood control, and provide related benefits in connection with other activities such as recreation and wildlife propagation. The plan provides for a navigation channel with project depth of 9 feet following generally the

Verdigris River from Catoosa, Okla., 52 miles downstream to the Arkansas River; thence downstream in the channel of the latter to mile 53.8; thence by a lateral canal designated as the Pendleton Canal to mile 25.3; thence down the Arkansas River to mile 21.8; thence via a land cut to White River 12.4 miles above its mouth; thence along the channel of White River for 4.9 miles; and thence via land cut to the Mississippi River at a point about 15.5 miles above the mouth of the Arkansas River. A minimum channel width of 150 feet is proposed for the Verdigris River section and of 250 feet for the remaining 428.6 miles of the route. The waterway would be canalized throughout its length by three navigation locks and dams on Verdigris River and 24 locks and dams thence to the Mississippi River. Included in the 24 are the Webbers Falls, Short Mountain, Ozark and Dardanelle locks and dams on Arkansas River which are planned to be used for power development as well as to create navigation pools. Lock chambers are 110 by 600 feet on the Arkansas River and 74 by 600 feet on the Verdigris River.

Estimated first cost to United States.—$435,000,000, exclusive of cost of projects previously approved.

Annual maintenance and operation charges to United States.—$3,200,000.

The $55,000,000 authorized for appropriation will enable the construction of the Eufaula Reservoir and would be a substantial first step in the accomplishment of the over-all improvement of the Arkansas River Basin.

Annual benefits.—The prospective commerce for the waterway is estimated at 9,015,000 tons annually and the average savings in shipping charges through use of barge transportation as compared with the lowest rates for the use of any transportation facility or combination of facilities now available will average about $2.17 per ton. Estimated annual savings in transportation charges total $19,606,000.

The multiple-purpose plan would provide average annual direct and indirect flood-control benefits in the Arkansas River Basin and along the Mississippi River totaling $912,800 in excess of the benefits to be obtained from previously authorized, approved, and recommended works including those which are incorporated in the plan.

The excess total annual energy output to accrue to the unapproved features of the multiple-purpose plan is estimated at 1,520,400,000 kilowatt-hours. The unit capacity value is estimated as $13.30 per kilowatt and the unit energy value at 1.33 mills per kilowatt-hour, for the power available at the plants. Applying these values the power benefits are estimated as $5,586,500.

The multiple-purpose improvement will return an annual revenue of $260,900 from rental of a part of the lands to be acquired for the unapproved Blackburn, Taft, Webbers Falls, Eufaula, Short Mountain, Ozark, and Dardanelle Reservoirs.

Summary of evaluated benefits:

Navigation	$19, 606, 000
Flood control	912, 800
Power	5, 586, 500
Land rentals	260, 900
Total benefits	26, 366, 200

These estimates indicate a ratio of costs to benefits for the unapproved features of 1.0 to 1.08.

In addition to the tangible benefits enumerated, the multiple-purpose plan of improvement would also produce intangible benefits of importance such as protection of agricultural lands and levee improvements from caving banks, enhancement in property values, impetus to the development of natural resources, increased activity in industry and trade, protected inland route for relief of other transportation systems during emergencies, conservation of natural resources, increased low-water flows, reduced sediment flows, and recreation and wildlife. It would also reduce intangible losses such as loss of life, impairment of health, and physical suffering.

Remarks.—The Arkansas River watershed contains a population of about 3,748,000. The basin is primarily agricultural, the principal crops being cotton, corn, rice, and hay. Industries include the processing of agricultural products and the manufacture of brick, tile, cement, furniture, and lumber products. The principal mineral resources are petroleum in the Mid-Continent oil field of Kansas and Oklahoma; lead and zinc in southeastern Kansas, northeastern Oklahoma and southwestern Missouri; bauxite in central Arkansas; and coal in Colorado, southeastern Kansas, eastern Oklahoma, and western Arkansas.

The natural resources are to a large extent undeveloped due to the lack of cheap transportation and to the need for abundant and low-cost power. The improvements recommended will open up a vast empire for the exploitation of natural resources, farming, and industrial expansion.

SABINE RIVER AND TRIBUTARIES, TEXAS—ADAMS BAYOU

(Interim report)

(H. Doc. —, 79th Cong.)

Location.—Adams Bayou is a small coastal stream that empties into Sabine River, 3.5 miles below the city of Orange, Tex.

Report authorized by.—The River and Harbor Act approved March 2, 1945.

Existing project.—None.

Recommended plan of improvement.—The most suitable plan of improvement provides for a channel 12 feet deep at mean low tide and 100 feet wide from the 12-foot depth in Sabine River up the drainage channel to the first county highway bridge, a distance of about 8,600 feet.

Estimated first cost to United States.—$73,000.

Local cooperation.—The improvement is recommended subject to the provisions that no dredging be performed by the United States within 50 feet of any existing pierheads or established pierhead lines, or any wharf or structure; and that local interests give assurances satisfactory to the Secretary of War that they will: (*a*) Furnish free of cost to the United States all necessary rights-of-way and spoil-disposal areas for the initial construction and subsequent maintenance as and when required; and (*b*) hold and save the United States free from damages due to the construction works.

Annual maintenance charges to United States.—$3,000.

Annual benefits.—The improvement would provide free and unrestricted navigation for the large volume of commerce reasonably assured from the existing plants and from the nylon salt plant now under construction.

The annual benefits that will result from the use of fully loaded large barges and elimination of loss of time due to the present restricted channel are estimated at $26,500.

The ratio of costs to benefits is 1.0 to 4.4.

SABINE-NECHES WATERWAY, TEXAS, FROM ORANGE, BEAUMONT, AND PORT ARTHUR, TEX.

(H. Doc. 571, 79th Cong.)

Location.—The Sabine-Neches Waterway extends from the Gulf of Mexico northward through Sabine Pass on the Louisiana-Texas boundary, thence through the Port Arthur and the Sabine-Neches Canals along the west shore of Sabine Lake to the mouth of Neches River, whence the Neches River arm extends up that river to Beaumont, Tex., and the Sabine River arm extends across the northern end of Sabine Lake and up the Sabine River to Orange Tex.

Report authorized by.—Rivers and Harbors Committee resolution of October 15, 1943.

Plan of recommended modificaion of existing project.—To provide for deepening the Sabine Pass outer bar channel to 37 feet and the Sabine Pass jetty channel to 37 feet at the outer end decreasing to 36 feet at the inner end; deepening to 36 feet Sabine Pass channel, Port Arthur Canal, Port Arthur east and west turning basins, Taylors Bayou turning basin and the channel from Port Arthur west turning basin to Taylors Bayou turning basin; deepening to 36 feet and widening to 400 feet the Sabine-Neches Canal from Port Arthur Canal to the mouth of Neches River except through Port Arthur bridge; deepening the Neches River channel from the mouth to the Beaumont turning basin to 36 feet with widening to 350 feet from Smiths Bluff to the Beaumont turning basin; deepening the junction area of Neches River at the Beaumont turning basin to 36 feet; and widening the Sabine-Neches Canal between the Neches and Sabine Rivers to 150 feet.

Estimated first cost to United States.—$3,160,000.

Local cooperation.—The improvement is recommended subject to the condition that local interests agree to (*a*) provide without cost to the United States all necessary lands, easements, rights-of-way and spoil disposal areas for the new work and subsequent maintenance when and as required, and (*b*) hold and save the United States free from damages due to construction and subsequent maintenance of the improvements.

Annual maintenance charges to United States.—$60,000.

Annual benefits.—The widening of the channel and easing of the bends are justified in the interest of safety and convenience to navigation. Benefits of the deepening are estimated at $60,000 annually for permitting large tankers, exceeding the type T–2 tankers in draft, to carry increased loads. Increased depths would also permit economies in the operation of T–2 tankers and smaller vessels by permitting them to operate at greater speed and with less tug service. Taking into account these additional benefits deepening to the extent described

would return benefits substantially in excess of the estimated costs for the work.

TRINITY RIVER FROM HOUSTON SHIP CHANNEL TO LIBERTY, TEX.

(H. Doc. —, 79th Cong.)

Location.—The channel under consideration extends from the Houston Ship Channel in Galveston Bay, Tex., northeasterly about 20.3 miles across the central part of Trinity Bay to Anahuac, Tex., and thence up Trinity River along a straightened alinement about 25 miles to a turning basin at Liberty, Tex.

Report authorized by.—Rivers and Harbors Committee resolution of February 16, 1944.

Plan of recommended modification of existing project.—The existing project authorized by the 1945 River and Harbor Act provides for, in this section of Trinity River, a channel depth of 9 feet and 200 feet wide across the bay and 150 feet wide in the river section, at an estimated cost of $512,000, with cost of annual maintenance of $93,000. No work has been done under this authorization. The bay has an average width of about 8 miles and is subject to sudden storms. Navigation through the open channel would be very hazardous. Modification of the existing project is recommended so as to locate the section of navigation channel below Anahuac nearer to the eastern shore of Trinity Bay, the relocated channel to have a depth of 9 feet, a width of 150 feet, and a protective embankment on the bay side.

Estimated additional first cost to United States for the shore route.—$423,000.

Local cooperation.—The improvement is recommended provided that local interests (1) furnish free of cost to the United States all necessary rights-of-way and spoil-disposal areas for the initial construction and subsequent maintenance as and when required; and (2) hold and save the United States free from damages due to construction and maintenance of the improvements.

Annual maintenance charges.—$71,000, which is $22,000 less than the authorized route.

Benefits.—The proposed relocation of the channel in Trinity Bay is practicable and would provide safer navigation for barge traffic than the approved bay route. The changed location would afford water transportation to a large undeveloped area on the eastern shore of Trinity Bay. Although the initial cost of the channel would be greater, the net annual cost would be less.

MILL CREEK, A TRIBUTARY OF THE BRAZOS RIVER IN AUSTIN COUNTY, TEX.

(H. Doc. —, 79th Cong.)

Location.—Mill Creek is a minor tributary of Brazos River draining an area of about 398 square miles in eastern Texas. It enters the right bank at about mile 152.

Report authorized by.—Rivers and Harbors Committee resolution of August 16, 1944, and an item in the River and Harbor Act approved August 26, 1937.

Existing project.—There is no existing Federal project for navigation or flood control on Mill Creek.

Recommended plan of improvement.—The adoption of a project for the control of floods on Mill Creek, Tex., by channel rectification, clearing, and enlargement, subject to certain conditions of local cooperation.

Estimated first cost to United States.—$250,000.

Local cooperation.—The improvement is recommended subject to the condition that local interests furnish assurances satisfactory to the Secretary of War that they will (*a*) provide, without cost to the United States, all lands, easements, and rights-of-way necessary for the construction of the project; (*b*) hold and save the United States free from damages due to the construction works; and (*c*) maintain and operate all of the works after completion in accordance with regulations prescribed by the Secretary of War. First costs to local interests estimated at $28,270, with annual cost of maintenance estimated at $500.

Annual benefits.—Benefits are estimated as $11,406 for restoration of crop yield to land now abandoned to grazing use and $2,423 benefits to other cultivated lands, a total of $13,829. The ratio of costs to evaluated benefits is 1 to 1.20.

GULF INTRACOASTAL WATERWAY, VICINITY OF ARANSAS PASS, TEX.

(H. Doc. —, 79th Cong.)

Location.—The section of waterway under consideration is located in the vicinity of the city of Aransas Pass in southern Texas on the mainland shore of a shallow coastal sound known as Redfish Bay, an arm of Corpus Christi Bay. The city is 18 miles northeast of Corpus Christi and 6½ miles northwest of Aransas Pass Inlet.

Report authorized by.—Rivers and Harbors Committee resolution, adopted May 5, 1944, and February 28, 1945.

Plan of recommended modification of existing project.—Modification of the existing project for the Intracoastal Waterway to provide: (1) relocation of the main channel along the northwest shore of Redfish Bay between Aransas Bay and Corpus Christi Bay, with a depth of 12 feet, width of 125 feet, and length of about 17.2 miles, with such modifications as in the opinion of the Secretary of War and the Chief of Engineers may be deemed advisable; (2) for no further maintenance of the present route between mile 525.9 and its junction with the deep-water channel at mile 537.7 after completion of the new route; and (3) a depth of 12 feet in the tributary channel from Port Aransas to and including the turning basin at the city of Aransas Pass, and extension of the turning basin to a length of 2,200 feet at the same depth.

Estimated first cost to United States.—Relocation of main channel, $976,000; tributary channel, $119,000.

Local cooperation.—The improvement is recommended subject to the provisions that local interests give assurances satisfactory to the Secretary of War that they will (*a*) furnish free of cost to the United States all lands, easements, and rights-of-way necessary for construction of the project and for subsequent maintenance as and when required; (*b*) hold and save the United States free from damages

due to the construction works; and (c) operate and maintain the railroad drawbridge across the proposed channel, in lieu of the existing drawbridge across the Morris and Cummings Cut, in accordance with regulations prescribed by the Secretary of War.

Annual maintenance charges to United States.—$15,000 for the main channel and $1,000 for the tributary channel.

Annual benefits.—The annual evaluated benefits to accrue from the relocation of the main channel due to shortening of distance and saving of time is estimated at $79,230, of which $44,550 would accrue to barge traffic, $930 to other commercial traffic, and $33,750 to fishing boats. The ratio of costs to benefits is 1.0 to 1.27.

The improvement for the tributary channel is recommended for the safety and convenience of the fishing fleet. The anticipated benefits are not susceptible of a monetary evaluation but they are nevertheless substantial.

Remarks.—Commerce on the Gulf Intracoastal Waterway from the Mississippi River to Corpus Christi has had a phenomenal growth.

Section	Commerce in tons (2,000 pounds)		
	1937	1940	1944
Mississippi River to Sabine River	4,057,745	8,073,461	17,797,857
Sabine River to Galveston	1,021,450	6,925,091	15,268,289
Galveston to Corpus Christi	0	362,205	3,114,848
Total	5,079,195	15,360,757	36,180,994

On a percentage base it will be noted that the total commerce for the year 1940 was 300 percent as great as that of 1937, and that the 1944 commerce doubled that of 1940 and was five times as great as that for the year of 1937.

It is reported that more than 300 fishing vessels with drafts up to 10 feet operate out of the city of Aransas Pass for fishing, shrimping, and the gathering of oysters.

BRAZOS ISLAND HARBOR, TEX., AND GULF INTRACOASTAL WATERWAY IN THE VICINITY OF PORT ISABEL, TEX.

(H. Doc. —, 79th Cong.)

Location.—Brazos Island Harbor includes all of the navigation improvements at and extending westward of Brazos Santiago Pass, a natural opening in the Texas coastal sand barrier separating Laguna Madre from the Gulf of Mexico, 9 miles north of the mouth of the Rio Grande.

Report authorized by.—Rivers and Harbors Committee resolution of February 28, 1945.

Plan of recommended modification of the existing project.—Modification of the existing project for Brazos Island Harbor, Tex., to provide (I) for an additional connecting channel 150 feet wide and 32 feet deep between the Port Isabel Channel and the Brownsville Channel, and (II) for filling a portion of the shallow-draft channel adjacent to the Port Isabel turning basin, construction of a channel to connect the shallow-draft channel with the authorized Intracoastal Waterway,

and enlargement of the shallow-draft channel west of this connection, all to a depth of 12 feet and width of 125 feet on bottom.

Estimated first cost to United States.—$170,000.

Local cooperation.—The improvement is recommended subject to the condition that local interests give assurances satisfactory to the Secretary of War that they will (*a*) furnish free of cost to the United States all necessary rights-of-way and spoil-disposal areas that may be required for the initial construction and subsequent maintenance of the modified project, as and when required; and (*b*) hold and save the United States free from damages due to the construction and maintenance of the modified project.

Annual maintenance charges to United States.—$5,000.

Benefits.—Construction of the proposed connecting channel is considered necessary for the safety and convenience of established and prospective navigation.

Enlargement of the shallow-draft channel would be very beneficial to the seafood industry at Port Isabel and it is considered that the improvements would result in a general betterment of navigation conditions sufficient to justify enlargement of the channels by the United States.

Remarks.—The additional deep water connecting channel between the Port Isabel and Brownsville channels would provide a needed safe and convenient route for vessel traffic between the two channels, and modification of the shallow-draft channel at Port Isabel would permit full development of the turning basin and accommodate the requirements of the fleet of small craft.

MISSISSIPPI RIVER BETWEEN MISSOURI RIVER AND MINNEAPOLIS, CONCERNING DAMAGES RESULTING FROM POOLS NOS. 3 TO 11, INCLUSIVE

(H. Doc. 515, 79th Cong.)

Location.—The area under consideration lies along the banks of the Mississippi River and certain tributaries within the States of Minnesota, Iowa, and Wisconsin.

Report authorized.—The Rivers and Harbors Committee by resolutions adopted March 1, March 10, March 16, April 4, and June 6, 1939, requested that the Board of Engineers for Rivers and Harbors ascertain as nearly as can be estimated, the exact damages that may be caused to farms, pasture lands, buildings, and commercial fishing by seepage and backwater resulting from the creation of pools Nos. 3 to 11, inclusive.

Investigation.—Local interests filed written statements covering estimated damages of $1,116,780. The Corps of Engineers carefully examined each claim. Some of the damages claimed do not come within the scope of the present report. Others apply to properties which have been, or in the near future will be, acquired by the United States. Acquisition of some of these properties has been delayed awaiting observation of actual pool operations to avoid securing lands not actually necessary for the improvement. The owners will be properly compensated for these properties under the provisions of existing law. Certain other claims apply to lands riverward of the ordinary high-water line. Local interests have never acquired any rights in these properties adverse to the right of the United States to use them for navigation purposes and therefore insofar as these properties are con-

cerned local interests have not been damaged by establishment of the pools.

Report.—The navigation project has been constructed and is being carefully operated so as to have the minimum practicable adverse effect on riparian properties and activities. Even so, the creation of pools Nos. 3 to 11, inclusive, has resulted in damages to farm and pasture lands and buildings for which reimbursement may not be made under existing law. These damages have been thoroughly investigated in accordance with the resolutions authorizing this report, and are reasonable estimates of their amounts. Accordingly, the Board of Engineers for Rivers and Harbors reports, the Chief of Engineers concurring, that as nearly as can be estimated the exact damages caused to farm and pasture lands and buildings in the States of Minnesota, Iowa, and Wisconsin, by backwater and seepage resulting from the creation of pools Nos. 3 to 11, inclusive, on the Mississippi River, exclusive of damages in the vicinity of Cochrane, Wis., previously reported upon, are the amounts set forth in the following table:

Pool No.	Minnesota	Iowa	Wisconsin	Total
3	$19,765	(1)	$1,000	$20,765
4	13,300	(1)	4,925	18,225
5	9,050	(1)	None	9,050
5A	None	(1)	7,730	7,730
6	4,300	(1)	2,500	6,800
7	200	(1)	525	725
8	5,875	(1)	3,425	9,300
9	1,180	$1,245	1,475	3,900
10	(1)	[2] 6,355	11,030	[2] 17,385
11	(1)		None	
Grand total	53,670	7,600	32,610	93,880

[1] No part of the pool indicated is within the State at the head of this column.
[2] Also includes damages to areas affected by pool No. 11.

MISSISSIPPI RIVER AT LANSING, IOWA

(S. Doc. —, 79th Cong.)

Location.—Lansing, Iowa, is on the west bank of the Mississippi River 190 miles downstream from Minneapolis and on the pool of lock and dam No. 9.

Report authorized by.—Senate Commerce Committee resolution of August 30, 1938.

Existing project.—No project for improvement of the immediate locality has been authorized by Congress.

Plan of improvement.—The provision of a small-boat harbor by construction of a rock-filled L-shaped breakwater to protect an area 170 feet by 500 feet along the shore at Lansing and excavation within the enclosed area to assure depths of at least 5 feet below minimum pool level of lock and dam No. 9.

Estimated first cost to United States.—$39,700.

Local cooperation.—The improvement is recommended provided local interests furnish assurances satisfactory to the Secretary of War that they will provide, without cost to the United States, all necessary lands, easements, and rights-of-way and disposal areas for new work and subsequent maintenance when and as required; provide the neces-

sary floating booms, slips, and servicing facilities open to all on equal terms.

Annual maintenance charges to United States.—$100.

Benefits.—The present and prospective increase in commercial traffic on the upper Mississippi River justifies the provision of a small-boat harbor at Lansing to afford a safe and adequate harbor for the boats locally owned and for the increasing number of transient craft. The work undertaken by the Federal Government in connection with the canalization of the upper Mississippi River has undoubtedly created an adverse condition affecting about 90 small boats docked at Lansing. The construction of the small-boat harbor will restore protection that was formerly available and is justified and equitable at Federal expense.

MISSISSIPPI RIVER BETWEEN THE MISSOURI RIVER AND MINNEAPOLIS, HARBOR IMPROVEMENT AT WABASHA, MINN.

(H. Doc. 514, 79th Cong.)

Location.—Wabasha is on the Mississippi River 93 miles below Minneapolis and on the Federal project providing for 9-foot navigation in the Mississippi River between Minneapolis and the mouth of Missouri River through canalization by means of locks and dams.

Report authorized by.—Rivers and Harbors Committee resolution of April 30, 1940.

Existing project.—There is no Federal project for harbor improvement at Wabasha. Landing and mooring facilities for small craft consist of a few small docks located near the main navigation channel and exposed to damaging wave action from passing commercial tows.

Plan of recommended improvement.—Provision by the United States, of a small-boat harbor at Wabasha, Minn., by dredging an area in the Old Channel of Zumbro River, 800 feet long and 175 to 400 feet wide and an entrance channel from Mississippi River 75 feet wide, to a project depth of 5 feet below pool elevation 667 maintained by lock and dam No. 4, and constructing a protection and mooring embankment extending along the upstream side of the entrance channel and harbor to high ground.

Estimated first cost to United States.—$22,750.

Local cooperation.—The improvement is recommended subject to the condition that responsible local interests furnish assurances satisfactory to the Secretary of War that they will: provide free of cost to the United States all necessary lands, easements, rights-of-way and spoil-disposal areas for new work and subsequent maintenance when and as required, and provide the necessary slips or stalls and servicing facilities open to the public on equal terms.

Annual cost of maintenance to United States.—$100.

Benefits.—The War Department considers that the proposed small-boat harbor at Wabasha is desirable to provide sufficient accommodations for transient boats in conjunction with similar harbors on the upper Mississippi River both authorized and under consideration, and is needed for local craft now compelled to moor in an area made hazardous by commercial navigation. The benefits are difficult to evaluate but the Department is of the opinion that the benefits to small-boat owners would more than justify the project which would

also provide for the personal safety of boatmen and remove a source of damage suits and delay to commercial vessels.

MISSISSIPPI RIVER BETWEEN THE MISSOURI RIVER AND MINNEAPOLIS—HARBOR IMPROVEMENTS IN LAKE PEPIN

(H. Doc. 511, 79th Cong.)

Location.—Lake Pepin is a natural enlargement of Mississippi River, 20.8 miles long, 1 to 2½ miles in width, heading about 68 miles below Minneapolis, Minn. The channel of the Federal navigation project providing for a 9-foot depth in Mississippi River between Minneapolis and the mouth of Missouri River passes through the lake.

Report authorized by.—Rivers and Harbors Committee resolutions of December 19, 1938, and July 18, 1939.

Plan of recommended modification of existing project.—The further improvement of the harbor at Lake City, Minn., by deepening to 10 feet below lowest controlled pool elevation of an area about 1,000 feet long and 150 feet wide between deep water and the shore in the commercial harbor; enlarging the existing small-boat basin to about 6 acres with depth of 5 feet below lowest controlled pool; closing the present entrance to the basin and providing a new flared entrance from the commercial harbor to the basin 5 feet deep and generally 80 feet wide.

Estimated first cost to United States.—$79,300.

Local cooperation.—The improvement is recommended subject to the condition that responsible local agencies furnish assurances satisfactory to the Secretary of War that they will provide free of cost to the United States all necessary lands, easements, rights-of-way, and spoil-disposal areas for new work and subsequent maintenance when and as required; construct and maintain adequate terminal facilities on the commercial harbor and necessary floating booms, wharves, and servicing facilities in the small-boat basin, available in both cases to all on equal terms; and hold and save the United States free from damages resulting from the improvements.

Annual maintenance charges to United States.—$500.

Annual benefits.—On the 1942 coal traffic alone the War Department has estimated that the improvement would provide an annual saving of $3,600. The local flour mill has estimated an annual saving of $9,720 on water transportation to southern ports, based on its present market.

Remarks.—The improvement will also provide a harbor of refuge for commercial vessels, the fishing fleet, and for recreational craft.

MISSISSIPPI RIVER AT HASTINGS, MINN.

(H. Doc. —, 79th Cong.)

Location.—Hastings, Minn., is on the Mississippi River 39 miles below Minneapolis, and on the Federal navigation project providing for 9-foot depth in the Mississippi River between Minneapolis and the mouth of the Missouri River.

Report authorized by.—Rivers and Harbors Committee resolution of January 3, 1945.

Existing project.—There is no Federal project for harbor improvement at Hastings. The city, assisted by the Works Progress Administration, has improved a boat landing on the water front by constructing a landing platform, stairway, and driveway, retaining walls, guard rails, and entrance roads. A small-boat landing is maintained one-half mile below the water-front improvement. Both boat docks are subject to damaging wave action from passing vessels on the navigation channel.

Plan of recommended improvement.—The provision of a small-boat harbor at Hastings, Minn., by dredging to a depth of 5 feet below project pool elevation an area 500 feet long with average width of 250 feet at the head of Vermillion slough and construction of protective dikes.

Estimated first cost to United States.—$34,270.

Local cooperation.—The improvement is recommended subject to the condition that responsible local agencies furnish assurances satisfactory to the Secretary of War that they will provide free of cost to the United States all necessary lands, easements, and rights-of-way; spoil-disposal areas for new work and subsequent maintenance when and as required; and provide the necessary floating booms, slips, and service facilities open to all on equal terms.

Annual cost of maintenance to United States.—$200.

Annual benefits.—Boating on the Mississippi River increased with improvement of the river and will be an important factor of general welfare in the future. Facilities for harboring and servicing the boats are required and Hastings is a suitable location between the presently authorized harbor improvements at Red Wing and St. Paul, Minn. The proposed small-boat harbor will produce widespread benefits to boat owners from the standpoint of convenience and safety in addition to relieving a hazard to through commerce on the navigation channel. The anticipated annual benefits of $2,480 gives a cost-to-benefit ratio of 1.0 to 1.3. Therefore the proposed harbor construction is economically justified.

BIG SIOUX, S. DAK.

(H. Doc. 561, 79th Cong.)

Location.—Sioux River, known officially as Big Sioux River, flows south, forming in its lower reaches the boundry between South Dakota and Iowa and at the westerly limits of Sioux City, Iowa, enters the Missouri River 810 miles above the Mississippi River.

Report authorized by.—Rivers and Harbors Committee resolution of November 22, 1939.

Existing project.—At present the Big Sioux is not under improvement for navigation.

Recommended plan of improvement.—Dredging at the mouth a channel 6,600 feet long with project depth of 9 feet, 200 feet wide in a short guide-wall protected entrance from the Missouri River and thence 400 feet wide to the upper end, construction of levees to protect this channel and adjacent areas on which the dredge spoil is to be deposited and provision of mooring facilities along the Missouri River immediately below the entrance.

Estimated first cost to United States.—$325,420.

Local cooperation.—The improvement is recommended subject to the condition that no work shall be undertaken until local interests agree to furnish without cost to the United States all necessary lands, easements, rights-of-way and spoil-disposal areas needed for the initial work and for subsequent maintenance when and as required, and give assurances satisfactory to the Secretary of War that they will construct and maintain under public supervision a public terminal with the necessary utilities and rail and highway connections open to all on equal terms.

Annual maintenance charges to United States.—$23,500.

Annual benefits.—After the Missouri River project channel is sufficiently completed about 1,690,000 tons of commerce, consisting largely of coal, petroleum products, and grain, will use the proposed harbor annually. The resulting savings in transportation costs are estimated at over $1,182,000 during the 8-month navigation season. Thirty-one thousand one hundred dollars of this benefit is attributed to the proposed harbor.

The existence of the harbor will permit navigation operations for 2 weeks longer each season and this benefit is estimated at $69,000 annually. The harbor will make available a site for a winter base for Government plant engaged in river work and lengthen the working season. Its value for this purpose is estimated at $21,500 annually.

Provision of the harbor and filling the adjacent areas for industrial sites will enhance the value of the land. The net annual benefit is estimated at $12,840.

These estimated annual benefits, totaling $134,440, when compared with the estimated annual cost for the harbor of $37,040, indicate a ratio of costs to benefits of 1.0 to 3.6.

CUMBERLAND RIVER AND TRIBUTARIES, KENTUCKY AND TENNESSEE

(H. Doc. —, 79th Cong.)

Location.—Cumberland River is formed by the confluence of Poor and Clover Forks near the city of Harlan, in southeastern Kentucky, and flows southwesterly through Kentucky and Tennessee to Nashville and thence northwesterly to the Ohio River near Smithland, Ky.

Report authorized by.—Rivers and Harbors Committee resolutions of February 14, 1936, November 21, 1938, and March 20, 1941. Also by items in the River and Harbor Act approved August 30, 1935, and the Flood Control Act approved August 28, 1937.

Plan of recommended modification of existing project.—To provide for the comprehensive improvement of the Cumberland River and tributaries for navigation, flood control, power development, and other purposes, to include completion of Wolf Creek, Dale Hollow, and Center Hill Dams with power installations; construction of Stewarts Ferry, and Three Islands Reservoirs for flood control and power development; construction of Rossview Reservoir for flood control; and the construction of Eureka, Dover, and Cheatham locks and dams on the main stream to provide 9-foot navigation between the mouth and Nashville and Old Hickory, Carthage, and Celina Dams above Nashville for navigation and the development of the power resources.

In carrying out the work, it is recommended that the partially constructed Wolf Creek, Center Hill, and Dale Hollow Reservoirs, and

Stewarts Ferry Reservoir should be completed for flood control and power development as the initial step in the construction program.

The second step should consist of the further improvement of the Cumberland River between the mouth and Nashville for navigation by the construction of moderate height dams at Eureka, Dover, and Cheatham sites, 32.2, 87.6, and 146.4 miles, respectively, above the mouth.

The remainder of the projects in the comprehensive plan should be selected for construction in such order as may be found advisable, with modifications if necessary, to meet the needs and requirements of the area. At this time there is not sufficient present or prospective commerce on the river above Nashville to warrant more extensive navigation facilities than now exist.

Estimated first cost to United States.—$230,000,000.

The cost of canalization with locks 110 feet wide and 600 feet long is estimated as $20,730,000.

Annual maintenance charges to United States.—$1,000,000, which includes $150,000 for maintenance and operation of the navigation works.

Annual benefits.—The benefits from the navigation features of the project are evaluated at $2,172,000, giving a ratio of cost to benefits of 1.0 to 3.0.

The flood storage provided in the reservoirs will result in average annual benefits of $2,582,290 of which $610,290 would accrue to Cumberland River areas, $258,000 to Ohio River, and $1,714,000 to Mississippi River areas.

The power developments proposed will have total energy output in average years of 2,364,000,000 kilowatt-hours.

Remarks.—The Cumberland Basin has a population of 1,150,000. Nashville, with 167,000 inhabitants, and Clarksville, with 12,000, both in Tennessee, are the largest cities. Farming, manufacturing, and mining are important activities in the area. Grain, hay, tobacco, fruits, vegetables, and livestock are raised; cement, brick, wood products, chemicals, and iron and steel products are manufactured; and coal, fluorite, and phosphate rock are mined in the area.

BIG SANDY RIVER AND TUG AND LEVISA FORKS, KY., W. VA., AND VA.

(H. Doc. ——, 79th Cong.)

Location.—Big Sandy River is formed by the junction of Levisa and Tug Forks at Louisa, Ky., flows north along the boundary between Kentucky and West Virginia for 26.8 miles and enters the Ohio River at Catlettsburg, Ky., and Kenova, W. Va., 10 miles below Huntington, W. Va.

Report authorized by.—Rivers and Harbors Committee resolution of January 19, 1940. It is also in response to an item in the Flood Control Act approved June 22, 1936, and to an act approved June 25, 1936.

Plan of recommended modification of existing project.—Modification of the existing project for Big Sandy River, W. Va. and Ky., including Levisa and Tug Forks, to provide for securing a channel with project depth of 9 feet, 200 feet wide on Big Sandy River, 150 feet wide on Tug Fork to Sprigg, W. Va., and 150 feet wide on Levisa

Fork to Russell Fork by the construction of 10 locks and dams and channel excavation; the locks to be 80 feet wide and 500 feet long, with auxiliary locks.

Estimated first cost to United States.—$82,300,000.

Local cooperation.—The improvement is recommended subject to the conditions that local interests agree to establish, operate, and maintain adequate terminal and transfer facilities, and that they maintain all parts of railroads, highways, bridges, and utilities which would be altered or constructed as a part of the improvement.

Annual maintenance and operation charges to United States.—$603,710.

Annual benefits.—The recommended improvement will open up to low-cost water transportation one of the country's largest fields of high-volatile coal. In the area there are also extensive beds of low-volatile coal.

The prospective coal commerce is estimated at 8,300,000 tons annually and the prospective annual savings in transportation charges, source to destination, is estimated at $6,700,000. These savings show a favorable ratio of costs to benefits of 1.0 to 1.6.

Remarks.—Within 10 miles of Tug Fork, below Sprigg, and Levisa Fork, below Russell Fork, the basin contains 2,300,000,000 tons of high-volatile coal as estimated by the district engineer and immense deposits of coal are available beyond the 10-mile limit. Coal mining is the most important occupation, the production since 1926 for the principal producing counties having averaged about 44,690,000 tons annually.

ILLINOIS RIVER, HARBOR AT PEORIA, ILL.

(H. Doc. —, 79th Cong.)

Location.—Peoria, Ill., is located about at mile 162 on the Illinois River. The Illinois River is a portion of the Illinois waterway, which connects the Mississippi River with the Great Lakes.

Report authorized by.—Rivers and Harbors Committee resolution adopted October 16, 1944.

Existing project.—There is no Federal project for the improvement of harbor facilities on the Illinois River.

Recommended plan of improvement.—That the existing project for the Illinois waterway be modified to provide for a small-boat harbor in the vicinity of Peoria, Ill., by construction of a basin 510 by 250 feet, dredged to a depth of 7 feet and protected by an earth embankment riprapped on the lakeside.

Estimated first cost to United States.—$32,100.

Local cooperation.—The improvement is recommended subject to the condition that local interests contribute 50 percent of the first cost of dredging and construction of the breakwater and furnish assurances satisfactory to the Secretary of War that they will: (*a*) make provision for the operation of the harbor and the construction of necessary bulkheads and a public landing with servicing facilities for small boats available to all users on equal terms, (*b*) hold and save the United States free from damages due to the construction and maintenance of the works, and (*c*) provide, without cost to the United States, all lands, easements, and rights-of-way (including borrow areas) necessary for the construction of the project. Cost to local

interests $37,900, which includes $32,000 toward first cost of dredging and breakwater construction and $5,900 for land, and construction of a river wall.

Annual cost of maintenance to United States.—$1,000.

Benefits.—The use of recreational craft in the area to be served by the harbor has shown a steady increase, with prospects for greater increase in the postwar era. There is a need of a harbor in the locality suitable for serving as a refuge area during storms, particularly those from the northwest which occur frequently with little advance warning.

ILLINOIS WATERWAY AND GRAND CALUMET RIVER, ILL. AND IND. (CALUMET-SAG CHANNEL)

(H. Doc. —, 79th Cong.)

Location.—The Illinois waterway provides a channel for barge navigation between the Mississippi River, about 38 miles above St. Louis, Mo., and the heads of the Federal projects for deeper-draft lake-boat navigation on the Chicago and Calumet Rivers in Chicago, Ill.

Report authorized by.—Rivers and Harbors Committee resolutions of March 7, 1939, October 24, 1939, and October 15, 1943.

Existing project.—In addition to improvements already constructed, Congress, by the River and Harbor Act of March 2, 1945, modified the project for the Illinois waterway to provide for further improvement and extension at an estimated cost of $25,900,000 for new work and $179,000 annually for maintenance. None of this work has been undertaken. The modification authorizes widening Calumet-Sag Channel to 160 feet; provision of a channel 9 feet deep and 160 feet wide in Grand Calumet River from Little Calumet River to the Indiana Harbor Canal and thence in the latter to One Hundred and Forty-first Street; construction of a lock in Little Calumet River to replace Blue Island Lock; and rebuilding or alteration at Federal expense of all obstructive railroad bridges with one exception across this extended south route of the Illinois waterway between Sag Junction, Turning Basin No. 5, and the terminus of the waterway on the Indiana Harbor Canal. This modification is subject to certain conditions of local cooperation, including the provision that local interests modify the obstructive highway bridges.

Plan of recommended modification of the existing project.—Recommends modification of the existing project for the Illinois waterway, Illinois and Indiana, to provide for substituting the following work for that authorized by the River and Harbor Act approved March 2, 1945: Replacement of the emergency dam in the Chicago sanitary and ship canal; enlargement of that canal thence to Sag Junction and of Calumet-Sag Channel to afford channels 225 feet wide with usable depth of 9 feet; construction along the general route of Grand Calumet River of a channel with usable depth of 9 feet, 225 feet wide between Little Calumet River and the junction with the Indiana Harbor Canal and 160 feet wide thence to Clark Street, Gary, Ind., with a turning basin at Clark Street; enlargement of the Indiana Harbor Canal to a width of 225 feet and usable depth of 9 feet between Grand Calumet River and the vicinity of One Hundred and Forty-first Street, inclu-

sive; removal of Blue Island lock and construction of a lock and control works in Calumet River near its head and of similar structures in the proposed Grand Calumet Channel west of the Indiana Harbor Canal; alteration or elimination of railroad bridges across these channels lakeward of the Chicago sanitary and ship canal, or the construction of new railroad bridges, to provide suitable clearances, with apportionment of the costs between the bridge owners and the United States in general accordance with the provisions of section 6 of Public, No. 647, Seventy-sixth Congress; and making at the expense of the United States all fixed span bridges across the waterway, between McDonough Street, at Joliet, and turning basin No. 5, capable of conversion to lift bridges having vertical clearance of not less than 40 feet.

Estimated first cost to the United States.—For the additional modification $21,000,000. This includes $1,146,000 for certain bridge modifications to pass vessels between Lake Michigan and the Mississippi River during periods of emergency and the cost is justified in the interest of providing for the national defense.

Local cooperation.—The improvement is recommended provided that local interests agree to furnish free of cost to the United States all lands, easements and rights-of-way, and spoil-disposal areas necessary for the new work and for subsequent maintenance when and as required, including the alteration of utilities as necessary, with the exception of such land needed for the waterway as is now occupied by abutments or railroad tracks at the approaches to railroad bridges; and agree to remove at their own expense or satisfactorily alter the highway bridges across Des Plaines River at McDonough and Cass Streets (Joliet) and across the Chicago sanitary and ship canal at Sixteenth Street (Lockport), Romeo Road and Lemont Road, and all highway and street bridges across the channels included in the project, lakeward of Sag Junction which, in the opinion of the Secretary of War, constitute unreasonable obstructions to navigation; construct all necessary new highway, street or foot bridges across these channels; agree to provide near Clark Street, Gary, Ind., an adequate public barge-rail-truck terminal open to all on equal terms; and further provided that the several sections of the proposed channel may be improved as separate units when considered advisable by the Secretary of War and the Chief of Engineers after local interests have provided, or furnished assurances satisfactory to the Secretary of War that they will provide, the cooperation required for any unit.

The estimated cost to local interests is $13,909,800, which includes $6,434,800 provided for by the 1945 River and Harbor Act.

Annual cost of maintenance to United States.—$118,000.

Annual benefits.—The estimates of benefits indicate clear economic justification for the complete work. The special board which prepared the most recent report under review estimated the prospective annual commerce, for channels 160 feet wide with usable depths of 9 feet to Lake Calumet and to One Hundred and Forty-first Street on the Indiana Harbor Canal, at 9,094,000 tons, or 8,094,000 tons in excess of the efficient capacity of the existing channels and the average unit savings in transportation charges for this excess commerce at 57.4 cents per ton or a total annual savings of $4,646,000. It is now

found that these amounts of commerce and benefits may be expected to develop within a period of about 5 years after completion of the channels to these points. The commerce on the Grand Calumet River extension to Clark Street will be such within a similar period as to increase the benefits to $5,194,250 annually. As the estimated annual cost of the complete improvement, exclusive of making certain bridges readily convertible to movable span structures, is $2,628,000, this indicates a ratio of benefits to costs of about 2 to 1. Taking into account the reduced transportation costs because of increase in width of certain channels to 225 feet, and the greater ultimate commerce, the ultimate benefits will be much larger.

Remarks.—The easterly terminal channels of the Illinois waterway will serve Chicago and adjacent populous and industrialized cities in Illinois and Indiana. Calumet-Sag Channel is located in largely undeveloped country but this route leads toward the great industrial area in south Chicago and southeast of Chicago in which are numerous steel mills, oil refineries and storage yards, grain elevators, chemical industries, and plants allied with heavy industries.

CHICAGO RIVER, NORTH BRANCH, NORTH OF NORTH AVENUE, ILL.

(H. Doc. 767, 78th Cong.)

Location.—North Branch of Chicago River rises in Lake County, Ill., flows southeasterly about 24 miles and unites with the South Branch to form Chicago River, which extends 1.6 miles east to Lake Michigan at Chicago Harbor. North Avenue crosses North Branch about 3.8 miles from the lake.

The Chicago River is one of the streams in the waterway system connecting the Mississippi River with Lake Michigan.

Report authorized by.—Rivers and Harbors Committee resolution of June 27, 1941.

Plan of recommended modification of existing project.—Modification of the existing project for Chicago River, Ill., to provide for a channel 9 feet deep between North Avenue and Addison Street, the channel between North and Belmont Avenues to extend to within 30 feet of existing bulkheads and river banks and thence to Addison Street to have a bottom width of 50 feet.

Estimated first cost to United States.—$28,000.

Local cooperation.—The improvement is recommended subject to the conditions that local interests furnish assurances satisfactory to the Secretary of War that they will hold and save the United States free from damages which may result from construction and maintenance of the improvement.

Annual maintenance charges to United States.—$15,000.

Benefits.—The small expenditure required for new work is fully justified by resulting increased safety and convenience to established and prospective navigation.

Remarks.—Receipts by water north of North Avenue have increased from 397,000 tons in 1938 to nearly 892,000 tons in 1941. About 52 percent of the 1941 traffic was moved in barges and the remainder by lake vessels.

GREAT LAKES CONNECTING CHANNELS, MICH.

(H. Doc. —, 79th Cong.)

Location.—The five Great Lakes with their connecting channels form a chain of waters for deep-draft navigation extending from Minnesota, Wisconsin, and Illinois eastward to the State of New York.

Report authorized by.—Rivers and Harbors Committee resolution of February 11, 1941. The present report is the final report under the resolution and is concerned with the connecting channels between Lakes Superior and Huron, Michigan and Huron, and Huron and Erie.

Plan of recommended modification of existing project.—The plan of improvement recommended provides for widening the anchorage area at Point Iroquois Shoals, head of St. Marys River, for a distance of 16,000 feet to provide a depth of 27 feet over maximum widths of 1,500 to 5,300 feet; widening the channel in Lake Nicolet, St. Marys River, below the falls, by 1,000 feet for a distance of 5,500 feet with tapered approaches and to a depth of 26.5 feet to serve as an anchorage area; widening of Southeast Bend Channel, St. Clair River, to 800 feet from Harsens Island Light No. 12 to Light No. 5 thence tapering to 700 feet at Light No. 1 and continuing at that width to the head of St. Clair Flats Canal and deepening to 26 feet; deepening the westerly 300 feet of Amherstburg Channel and of Ballards Reef Channel below Livingstone Channel, Detroit River, to 27 feet; and constructing compensating works in Detroit River below and to the west of Grosse Ile to limit the discharge, which would otherwise increase as a result of the channel enlargement, and control lake stages; improving the North Channel outlet of St. Clair River by dredging a channel for small craft into Lake St. Clair with a depth of 10 feet, width of 100 feet and about 8,000 feet long; and replacing Poe Lock at St. Marys Falls Canal with a new lock on the same site 800 feet long, 100 feet wide, and 32 feet deep with necessary reconstruction of nose and center piers.

Estimated first cost to United States.—$28,063,000.

Annual maintenance and operation charges to United States.—$70,000.

Benefits.—A tremendous volume of commerce passes through the Great Lakes connecting channels. In the prewar year, 1939, the locks at Sault Ste. Marie handled more commodity commerce than the Panama and Suez Canals combined. During the combined navigation seasons of 1942 and 1943, commerce through the canals at Sault Ste. Marie totaled about 235,700,000 tons; for St. Clair River, 245,200,000 tons, and for Detroit River, 265,500,000 tons, as compared with 213,700,000 tons for the port of New York. Taking into account the comparative lengths of navigation seasons, the locks at Sault Ste. Marie handled 57 percent more average tonnage per day than the average daily tonnage for the port of New York. The improved lockage facilities proposed will eliminate vessel delays during periods of heavy traffic and afford more dependable and safer service. Improvement of the channels as found advisable will similarly contribute to assurance against traffic interruptions, afford additional safety to commerce and permit certain vessels to carry increased loads with resulting transportation economies. The proposed work as a whole will improve vessel operations sufficiently to warrant the expenditures required.

Remarks.—The construction of deeper draft vessels, with greater length and beam, engaged in the lake-carrier service during the war period and the immediate planning for the expansion of the fleet of these larger vessels, necessitates prompt provision of the improvements recommended to provide for the safety and conveniences of the Great Lakes fleet. Monetary benefits have not been evaluated. The progressive improvement of the Great Lakes connecting channels has resulted in the very low transportation costs on iron ore, coal, grain, stone, and other commodities with benefits national in scope.

CLEVELAND HARBOR, OHIO

(H. Doc. —, 79th Cong.)

Location.—Cleveland Harbor is on Lake Erie in northeastern Ohio. It consists of a breakwater protected area in the lake at the mouth of Cuyahoga River the lower 5.8 miles of the river and 1 mile of Old River.

Report authorized by.—Rivers and Harbors Committee resolution of September 28, 1943, and a Senate Commerce Committee resolution adopted November 12, 1943.

Existing project.—The existing Federal project provides for, in part, the construction of a turning basin in the Cuyahoga River at an estimated cost of $191,000. No work has been done on the turning basin. It also provides for channel improvements subject to, among other conditions, that local interests bear the expense of railroad bridge modifications. The survey reports with these recommendations were made prior to the passage of the Truman-Hobbs Act (Public Law No. 647, 76th Cong.).

Plan of recommended modification of existing project.—Modification of the existing project for Cleveland Harbor, Ohio, to provide for (*a*) Elimination of the turning basin authorized on Cuyahoga River near mile 5.5; (*b*) elimination of the proviso in the existing project requiring modification of obstructive railroad bridges at non-Federal expense; (*c*) improvement of the channel in Cuyahoga River to the vicinity of mile 5.8 and in Old River to the head of the Sand Products Corp. dock to a project depth of 23 feet; and (*d*) replacement or pier reconstruction of railroad bridges Nos. 25, 8, 9, 15, 3, 1, and 19.

The War Department and railroad representatives have reached agreements deemed equitable by them for apportionment of the construction cost, involved in the railroad bridge modifications, between the United States and the bridge owners in substantial accordance with provisions set forth in Public Law No. 647, Seventy-sixth Congress.

Estimated first cost to United States.—$11,677,000.

Local cooperation.—The improvement is recommended subject to the condition that responsible local agencies furnish assurances satisfactory to the Secretary of War that, without cost to the United States, they will (a) make all necessary changes to buildings and highway bridge structures, (b) construct all necessary bulkheads, (c) furnish all necessary lands, easements, and rights-of-way for the channel except such land needed for the waterway as is now occupied by railroad structures, and (d) hold and save the United States free from damages due to the construction work.

Cost to local interests for work to be done in compliance with the terms of local cooperation is estimated at $11,132,000.

Annual maintenance charges to United States.—$35,000.

Annual benefits.—The savings in the costs of transporting the estimated commerce which would result from the plan of improvement recommended are estimated to total $730,000 annually. These savings are attributable to making it possible to transport the freight in fewer ships, to operate with less expense for tugs, and to save time in navigating the river channel.

The ratio of cost to benefits on expenditures by the War Department is 1.0 to 1.06.

Intangible general and local benefits are considered as equal to the annual costs to other Federal departments and local interests. These benefits include increased safety for land and water traffic, more expeditious movement of land traffic, increase in potential carrying capacity of the lake fleet, increased value of riparian lands, increased design load capacities for certain bridges, and similar items.

Remarks.—Cleveland is an important commercial, industrial, and distribution center. Commerce of the harbor from 1934 to 1943 averaged 15,600,000 tons annually, and in 1943 totaled 20,670,000 tons.

Average annual future commerce for the inner harbor, exclusive of possible diversions from adjacent lake ports, is estimated at 9,430,000 tons, which includes 6,000,000 tons of iron ore, 940,000 tons of limestone, 170,000 tons of molding sand, 210,000 tons of coal, and 2,110,000 tons of miscellaneous freight.

FAIRPORT HARBOR, OHIO

(H. Doc. —, 79th Cong.)

Location.—Fairport Harbor is on the south shore of Lake Erie at the mouth of Grand River, 33 miles east of Cleveland. The harbor comprises the lower 1½ miles of Grand River.

Report authorized by.—Rivers and Harbors Committee resolutions of May 29, 1940, and April 5, 1946.

Plan of recommended modification of the existing project.—That the existing project for Fairport Harbor, Ohio, be modified to provide for deepening to 8 feet of the westerly part of the channel of Grand River at the upper end of and adjacent to the 21-foot depth existing project channel, to a line 20 feet from the westerly dock lines.

Estimated first cost to United States.—$14,500.

Local cooperation.—The improvement is recommended provided that local interests agree to hold and save the United States free from damages resulting from the further improvement.

Annual cost of maintenance to United States.—$1,900.

Benefits.—The War Department finds it impracticable to present an estimate of the monetary benefits of this work; it is of the opinion that, unless the improvement is undertaken, continued shoaling will make use of the docks unprofitable and force their abandonment, that the proposed channel would protect the fishing and boat repair industry which has a business estimated at $200,000 annually and that the general benefits that will accrue in connection therewith will justify the expenditures required. The War Department notes that following enlargement of the river channel by the project work,

flow velocities have decreased and shoaling adjacent to the fishing and boat works docks has increased and regards restoration of the channel depths for small craft as a proper charge against the project deep-draft channel.

SAN DIEGO AND MISSION BAY, CALIF.

(H. Doc. —, 79th Cong.)

Location.—San Diego River enters the Pacific Ocean through Mission Bay.

Report authorized by.—The River and Harbor Act of 1945, an act approved May 6, 1936, and the Flood Control Acts approved June 22, 1936, and August 18, 1936.

Plan of recommended modifications of existing projects.—Modification of the existing flood-control project for San Diego River, Calif., to include a multiple-purpose project for flood control on San Diego River and small-boat navigation on Mission Bay, generally as follows: Construction of a leveed channel 800 feet wide with a capacity of 87,400 cubic feet per second from 0.4 mile above Morena Boulevard 3.3 miles directly to the ocean; dredging of an entrance channel 20 feet deep into Mission Bay and in the bay, a main channel and turning basin about 3,500 feet long and the other about 1,600 feet long and 800 feet wide, all to a depth of 20 feet; construction of 3 jetties at the entrance, and stone revetment for the banks of the entrance and main channels and turning basin.

Estimated first cost to United States.—

Flood control	$2, 778, 000
Navigation	3, 080, 000
Total Federal cost	5, 858, 000

Local cooperation.—The improvement is recommended subject to the provision that local interests provide the necessary bulkheading and give assurances satisfactory to the Secretary of War that they will (a) provide without cost to the United States all lands and rights-of-way including spoil-disposal areas necessary for construction of the improvements; (b) make all necessary alterations to highway bridges, utilities, and side-drainage structures; (c) purchase and hold in the public interest the lands between the flood-control channel and Mission Bay west of Highway U. S. 101; (d) prepare definite plans and construction schedules for the improvements of the bay area for park purposes, which shall be subject to approval by the Secretary of War; (e) complete the improvements of the 8-foot dredging and park development within 5 years after completion of the project; (f) provide adequate facilities for storage, maintenance, and supply of small craft; (g) maintain and operate the entire project, except maintenance of the jetties, stone revetment constructed by the United States and project depths in areas dredged by the United States; (h) protect the carrying capacity of the flood-control channel from future encroachments or obstructions; and (i) hold and save the United States free from damages due to the construction works. The estimated first cost to local interests for compliance with these provisions is $853,000 for flood control and $7,969,000 for navigation and park development, a total of $8,822,000.

Annual cost of maintenance to United States.—$13,000 for the navigation improvement. Annual cost to local interests for maintenance of flood-control improvement is $16,500.

Annual benefits.—The annual tangible benefits are estimated at at $1,233,150, of which $52,000 is prevention of flood damage, $420,000 is from improved land use, $170,000 is from fish catch, $132,000 is revenue from an increased tax base, $257,000 is creation of new business, $135,000 is silt diversion, $15,000 is from mosquito control, $19,450 is savings in travel, and $32,700 is prevention of beach erosion and creation of new beach land. The ratio of costs to benefits is 1.0 to 1.78.

Remarks.—The San Diego River Basin is subject to frequent floods. For a maximum probable flood of 87,400 second-feet, occurring after the authorized levee is constructed, the district engineer finds that the total damage below river mile 3.3 would reach $1,944,000, of which $561,700 would be direct and $1,382,300 indirect. The navigation improvement will provide a safe and convenient channel and harbor for the numerous recreational and fishing craft in the area. The benefits are sufficient to justify the construction of the improvements.

NAPA RIVER, CALIF.

(H. Doc. 397, 79th Cong.)

Location.—Napa River, Calif., is 50 miles long. It flows generally south and empties into Mare Island Strait, through which it connects with the various waterways of the San Francisco Bay system.

Report authorized by.—Rivers and Harbors Committee resolution of December 2, 1944, and an item in the River and Harbor Act approved March 2, 1945.

Plan of recommended modification of existing project.—Modification of the existing navigation project for Napa River, Calif., to provide for a channel 15 feet deep and 100 feet wide between the mouth at Mare Island Strait and Asylum slough and 10 feet deep and 75 feet wide thence to Third Street in Napa with a cut-off at Horseshoe Bend, a turning basin 300 feet wide at Jacks Bend and additional widenings, realinements, and related works in other difficult sections.

Estimated first cost to United States.—$865,000.

Local cooperation.—The improvement is recommended subject to the condition that local interests agree to (a) furnish free of cost to the United States all necessary lands, easements, rights-of-way, and spoil-disposal areas for the new work and subsequent channel maintenance when and as required; (b) provide all necessary spoil-impounding and drainage works; (c) assume responsibility for maintenance of such bank revetments and levees as may be constructed or reconstructed in connection with the works; and (d) hold and save the United States free from damages due to construction and subsequent maintenance of the Federal improvements. First costs to local interests are estimated at $86,400.

Annual maintenance charges to United States.—$7,500.

Annual benefits.—Average annual benefits are estimated at $53,240 for savings in the cost of transporting 120,000 tons of riprap stone, 140,000 tons of sand, gravel, and road materials, and 50,000 tons of petroleum products. These estimates, which do not include benefits

to recreational commerce and benefits which may arise in connection with movements of lumber and package freight, indicate a ratio of costs to benefits of 1.0 to 1.14.

Remarks.—The waterway has demonstrated its usefulness by carrying a substantial and growing commerce in spite of navigation difficulties. Prospective general benefits clearly justify the Federal expenditures required for the proposed additional work.

SACRAMENTO RIVER, CALIF., DEEP-WATER CHANNEL

(S. Doc. 142, 79th Cong.)

Location.—Sacramento River rises in northern California, flows south about 375 miles, and empties into Suisun Bay, an arm of San Francisco Bay, at Collinsville, Calif.

Report authorized by.—Senate Commerce Committee resolution adopted October 26, 1933.

Plan of recommended modification of existing project.—Modification of the existing navigation project for Sacramento River, Calif., to provide for construction of a ship channel 30 feet deep and 200 to 300 feet wide from deep water in Suisun Bay to Washington Lake, including such works as may be necessary to compensate for or to alleviate any detrimental salinity conditions resulting from the ship channel; a basin of equal depth 1,000 feet wide and 1,200 feet long at Washington Lake; and a connecting channel 11 feet deep and 120 feet wide, with lock and drawbridge, thence to Sacramento River.

Estimated first cost to United States for navigation features, $10,742,000, plus an additional amount for salinity-control works when found necessary at an estimated maximum cost of $2,000,000.

Local cooperation.—The improvement is recommended, provided that no work shall be undertaken until responsible local agencies agree to furnish without cost to the United States all necessary lands, easements, rights-of-way and spoil-disposal areas for the initial work and subsequent maintenance when and as required and to make all necessary utility changes, and until they give assurances satisfactory to the Secretary of War that they will (a) construct, operate, and maintain at the Washington Lake Basin and an adequate public terminal with necessary utilities and rail and highway connections open to all on equal terms, (b) hold and save the United States free from any damages which may arise from construction, operation, and maintenance of the improvement.

Annual cost of maintenance and operation to United States.—$66,000.

Annual benefits.—Estimated evaluated annual benefits resulting from the navigation features of the improvement total $795,000 compared to annual cost of $706,000 for these features. This indicates economic justification for the work by a favorable ratio of costs to tangible benefits of 1.0 to 1.13.

Remarks.—If salt-water intrusion require the construction of control methods up to the maximum estimate, $2,000,000, the benefits will still exceed the annual carrying charges.

COOS BAY, OREG.

(S. Doc. —, 79th Cong.)

Location.—Coos Bay is a tidal U-shaped estuary on the Oregon coast 200 miles south of the mouth of Columbia River and 445 miles north of San Francisco.

Report authorized by.—Senate Commerce Committee resolution adopted January 26, 1945, and an item in 1945 River and Harbor Act.

Plan of recommended modification of existing project.—Modification of the existing project for Coos Bay, Oreg., to provide for: A channel across the outer bar 40 feet deep at mean lower low water, and of suitable width with dimensions reduced gradually to Guano Rock; a channel 30 feet deep at mean lower low water and generally 300 feet wide thence to the mouth of Isthmus slough; turning basins of the same depth and 1,000 feet long and 600 feet wide opposite Coalbank slough and at the city of North Bend; anchorage basins 600 feet wide by 2,000 feet long at mile 3.5 and near mile 7.

Estimated first cost to United States.—$5,689,000.

Local cooperation.—The improvement is recommended subject to the provision that local interests give assurances satisfactory to the Secretary of War that they will: (a) furnish free of cost to the United States necessary spoil-disposal areas for new work and subsequent maintenance as and when required; and (b) construct and maintain any additional terminal facilities necessary to the full use of the port, such facilities to be open to all on equal terms.

Annual maintenance charges to United States.—$235,000.

Annual benefits.—The improvement would permit the deeper-draft vessels to load to full capacity, and produce annual benefits estimated at approximately $900,000 of which $701,200 is savings in transportation costs of lumber and logs, $75,000 on pulp, $10,800 on sulfur, $60,000 on petroleum and its products, and $42,000 on general merchandise. The ratio of costs to evaluated benefits is 1.0 to 1.9.

Remarks.—Processing of forest products is the principal industry in the area where the standing timber is estimated at 47½ billion feet, board measure. There are 72 sawmills operating with an annual cutting capacity of 800,000,000 feet. Other industries include the production of plywood, blind slats, battery separators, and various other wood products and the processing of agricultural products. The annual catch of fish is estimated at 4,000 tons.

COLUMBIA AND LOWER WILLAMETTE RIVERS BETWEEN PORTLAND, OREG., AND THE SEA—SMALL-BOAT MOORING BASIN AT ASTORIA, OREG.

(H. Doc. —, 79th Cong.)

Location.—Astoria, Oreg., county seat of Clatsop County, is located on a peninsula on the south side of Columbia River, approximately 10 miles from the ocean.

Report authorized by.—Rivers and Harbors Committee resolution of April 27, 1944, and an item in the 1945 River and Harbor Act.

Existing project.—There is no existing Federal project for improvement of Astoria Harbor.

Federal improvement of the Columbia River has been completed to provide a navigable channel for oceangoing vessels to Vancouver, Wash., 105 miles above its mouth.

Plan of recommended modification of existing project.—Modification of the project for improvement of Columbia and Lower Willamette Rivers below Vancouver, Wash., and Portland, Oreg., to include provision of a small-boat mooring basin at Astoria, Oreg., and that the Federal Government participate to the extent of constructing a steel-pile, sand-filled breakwater about 2,400 feet long with a 20-foot roadway along its full length for maintenance of the breakwater and steel-pile shore wings totaling about 1,460 feet in length.

Estimated cost to United States.—$1,044,000.

Local cooperation.—The improvement is recommended subject to the condition that responsible local interests furnish assurances satisfactory to the Secretary of War that they will: Furnish free of cost to the United States all necessary lands, easements, and rights-of-way for the new work and subsequent maintenance when and as required; provide all necessary dredging in the basin; and construct, maintain, and operate mooring facilities within the basin, sewers, water and electric supply lines, and a public landing with suitable supply facilities open to all on equal terms. The estimated expenditures by local interests in compliance with these conditions will total $705,000.

Annual maintenance charges to United States.—$10,000.

Annual benefits.—The annual benefits from the proposed mooring basin are estimated at $155,000 consisting of $40,000 from elimination of damage to boats, $3,000 from elimination of lost time and expense, $100,000 for increased catch of fish, and $12,000 from certain intangible benefits such as increased property values, increase in the size of the fishing fleet and increase in business activity therefrom, better police and fire protection, and easier servicing.

The ratio of estimated benefits to Federal annual charges is 2.22 to 1.0.

Remarks.—Construction of a mooring basin at Astoria, Oreg., would be of great benefit to the fishing industry and to small craft basing or calling at Astoria. Prospective general benefits to the fishing industry and to other craft are sufficient to warrant Federal participation in the cost of the project.

COLUMBIA RIVER, VANCOUVER, WASH., TO THE DALLES, OREG.

(H. Doc. —, 79th Cong.)

Location.—The section of Columbia River under consideration extends from Vancouver, Wash., river mile 106, easterly along the Oregon-Washington boundary to The Dalles, Oreg., river mile 189.

Report authorized by.—Senate Commerce Committee resolutions adopted December 3, 1935, April 11, 1939, and July 10, 1945, and Rivers and Harbors Committee resolutions adopted April 13, 1939, and December 1, 1944.

Plan of recommended modification of existing project.—Modification of the existing projects for Columbia River between Vancouver, Wash., and The Dalles, Oreg., to provide the following:

(*a*) For a channel 27 feet deep at adopted low water and 300 feet wide between Vancouver, Wash., and The Dalles, Oreg. (This item provides for channel excavation above Bonneville);

(*b*) For a channel 10 feet deep at low water and 300 feet wide at the upstream entrance to Oregon slough, Oregon;

(*c*) For a boat basin at Hood River, Oreg., 500 feet by 1,300 feet and 10 feet deep at normal Bonneville pool level, with a connecting channel of the same depth to deep water, and a protecting breakwater on the easterly side.

(*d*) For a barge channel to the water front at Bingen, Wash., 10 feet deep at normal Bonneville pool level, 200 feet wide and approximately 1 mile long; and for an access channel 7 feet deep at normal Bonneville pool level, 100 feet wide and approximately 1,000 feet long, to a natural mooring basin for small boats near the east end of the channel.

Estimated cost to United States.—

For	First cost	Annual maintenance
(a)	$1,176,000	$5,000
(b)	6,000	1,500
(c)	98,000	2,000
(d)	101,500	5,000
Total	1,381,500	13,500

Local cooperation.—The improvements at Hood River and at Bingen are recommended provided that local interests, at each locality, furnish free of cost to the United States all necessary rights-of-way, agree to maintain depths in the basins, and to construct, operate, and maintain necessary mooring facilities and a public wharf available to all on equal terms. Estimated cost to local interests at Hood River is $35,000, and at Bingen is $125,000.

Annual benefits.—27-foot channel to The Dalles; these improvements are considered essential to full and complete use of the Vancouver-Bonneville ship channel and Bonneville ship lock, which have involved Federal expenditures of about $9,500,000. Without these improvements, the use of the channel by deep-draft vessels would be severely restricted, if not completely discouraged. While evaluation of benefits that would result from the proposed channel improvements is impracticable, it appears that the proposed improvements are the minimum that will be required to make ship navigation practical, and therefore to make effectual the improvements at and below Bonneville.

Oregon slough; benefits not evaluated. The improvement at a small cost will provide free access to the main Columbia River at all times of the year for commercial fishing, log towing, and recreational craft.

Boat basin at Hood River; the evaluated benefits are estimated at $39,670, of which $29,670 will accrue from lowering cost of transfer of commodities between river craft and shore. The ratio of costs to benefits is 1.0 to 6.4.

Channel at Bingen; annual savings attributable to the establishment of barge transportation and to the owners of small fishing and recreational craft is estimated at $43,971. The ratio of costs to benefits is 1.0 to 4.7.

COLUMBIA RIVER, IN THE VICINITY OF THE DALLES, OREG.

(S. Doc. 89, 79th Cong.)

Location.—The Dalles, Oreg., is a city on the south bank of the Columbia River 188 miles above its mouth and 44 miles above Bonneville hydroelectric power and navigation dam.

Report authorized by.—Senate Commerce Committee resolution of November 8, 1943.

Plan of recommended modification of existing project.—Further improvement of the Columbia River by construction of The Dalles Harbor, Oreg., to provide a breakwater and shear boom protected basin approximately 400 by 800 feet in size with depth of 8 feet below a pool elevation of 72.5 feet mean sea level.

Estimated first cost to United States.—$76,500.

Local cooperation.—The improvement is recommended subject to the conditions that local interests (a) furnish free of cost to the United States all lands, easements, and rights-of-way required for new work, and suitable spoil-disposal areas for the new work, and for subsequent maintenance when and as required, (b) provide necessary bulkheads, and (c) agree to construct, maintain, and operate within the basin suitable moorages and a public landing with adequate supply facilities, open to all on equal terms.

Annual maintenance cost to United States.—$2,000.

Annual benefits.—The evaluated benefits are estimated at $9,450, indicating a ratio of costs to benefits of 1.0 to 1.5. The estimated benefits include $1,750 for prevention of damages to existing recreational boats and boathouses regularly moored at The Dalles, $6,200 for its value to commercial fishing operations and $1,500 for making increased catches of salmon possible, stimulating various boating activities, facilitating United States Coast Guard operations, and increasing business activity in the vicinity.

Remarks.—During the salmon fishing season from May to October about 20 commercial fishing boats operate regularly in the vicinity, and during the salmon runs of about 30 days annually approximately 50 transient fishing craft operate in the section. Salmon cannery tenders drawing 6 to 8 feet operate between The Dalles and the mouth of the river. The Dalles is also headquarters for the activities of the United States Coast Guard on the upper Columbia River.

COLUMBIA RIVER IN THE VICINITY OF FOSTER CREEK, WASH.

(H. Doc. — 79th Cong.)

Location.—Foster Creek flows into the Columbia River near Bridgeport, Wash., 545 miles above the mouth and 200 miles downstream from the international border.

Report authorized by.—Rivers and Harbors Committee resolution of March 24, 1942.

Existing project.—The improvement previously considered in the vicinity consisted of power dam which was 1 of 10 dams included in a comprehensive plan of improvement for the Columbia River.

Plan of recommended improvement.—Recommends authorization, as a part of the comprehensive plan for improvement of the Columbia River, of construction of Foster Creek Dam and powerhouse. The plan calls for construction of a concrete gravity dam with maximum height of 220 feet and a power plant with a rated capacity of 960,000 kilowatts in 15 units, with an initial installation of 192,000 kilowatts in 3 units.

Estimated first cost to United States.—Cost of construction for the first 3 units, $71,000,000. Additional first cost for a total of 15 units, $33,000,000.

Annual maintenance and operation costs to United States.—For the first 3 units, $650,000; for the 15 units, $1,200,000.

Benefits.—The cost of production at the site, estimated at 1.63 mills per kilowatt-hour, would permit the sale of energy under the existing rates of the Bonneville Power Administration, with ample margin for transmission and administrative expense.

Remarks.—Columbia River power is distributed by a network serving the States of Idaho, Montana, Oregon, Utah, and Washington. The economic life of these States is based on the production and export of raw materials—lumber, agricultural products, and minerals. In the coastal areas fishing is a large industry. In recent years the processing locally of these raw materials has become a very important factor in the economic growth of the area. The most significant recent industrial development was the establishment of light-metal and special-alloy plants for war production. They are heavy consumers of electric power, and were located in this area because of power supply and existing transmission network. It is anticipated that some of these plants will remain active factors in the industrial and power market situation.

HONOLULU HARBOR, HAWAII

In accordance with the report of the Board of Engineers for Rivers and Harbors dated April 30, 1946, on file in the Office of the Chief of Engineers.

Location.—Honolulu Harbor is located on the south coast of the island of Oahu, about 7 miles east of the entrance to Pearl Harbor.

Report authorized.—Rivers and Harbors Committee resolution of October 19, 1945.

Description.—In the interest of the war effort, extensions were made to the authorized existing navigation project in Honolulu Harbor. Military funds were used to defray the cost of construction.

Recommendation.—In order to protect the interests of the United States it is desirable to provide for adequate maintenance of the areas in the reserve channel and Kapalama Basin dredged with military funds since 1940 by including those areas in the existing project for improvement of Honolulu Harbor. It is recommended that the existing project for improvement of Honolulu Harbor be modified to provide a depth of 35 feet over the full width of 600 feet throughout the reserve channel; a turning basin in Kapalama Basin 35 deep by 1,000 feet long on the easterly side of pier 39, at no additional cost for initial construction and with $10,000 annually for maintenance in addition to the amount presently authorized for maintenance of Honolulu Harbor, Hawaii.

SECTION 2

The project for the Lavon Reservoir on East Fork of Trinity River, Tex., authorized in the River and Harbor Act of March 2, 1945, in accordance with House Document No. 533, Seventy-eighth Congress, specifically provides for a reservoir capacity of 272,000 acre-feet for flood control. In the preparation of construction plans for this project local interests desire that provision be made for conservation storage in the reservoir as a future source of water for municipal and industrial use. The project, as now authorized, precludes enlargement of the reservoir to provide for conservation storage.

The item in the bill modifies the project authorized in the River and Harbor Act of March 2, 1945, to provide for conservation storage in the Lavon Reservoir as may be determined warranted by the Secretary of War upon the recommendations of the Chief of Engineers. This modification of the existing project will give the War Department sufficient latitude in the planning and construction of the project to meet the reasonable water needs of the area and permit the application of section 6 of the Flood Control Act approved December 22, 1944.

SECTION 3

Duncan slough, east of Cushman, Oreg., is a tributary of the Siuslaw River which it parallels for a distance of about 4 miles. There is approximately 450 acres of land between the river and the slough which the local property owners desire to protect from tidal overflows by closing the slough by fills at both ends.

The item in the bill authorizes the port of Siuslaw, a municipal corporation organized under the laws of the State of Oregon, to construct, maintain, and operate, at points suitable to the interests of navigation, dams or dikes for preventing the flow of the waters of the Siuslaw River into Duncan slough. All expense involved would be borne by local interests and the plans for the dams and dikes will be submitted to the Chief of Engineers, United States Army, and the Secretary of War for approval before construction is commenced.

SECTION 4

This section would authorize the assignment of two retired Engineer officers to active duty as senior or resident members of the River and Harbor Board and the Beach Erosion Board. Under present law officers below the rank of brigadier general must retire when they reach the age of 60, and the use of such experienced officers in these key positions will be of great value to the Government. The section would permit their recall to active duty only with their consent and for periods not extending beyond 4 years after the date of their retirement.

SECTION 5

This section would provide for the establishment in the Office of the Chief of Engineers of a civilian engineering position in accordance with the classification act. The committee feels that the large program of civil-works construction which is being carried out under the Engi-

neer Department makes it essential that the Chief of Engineers have at least one full-time top-ranking civilian engineer assistant at a salary above the maximum prescribed for grade 8.

SECTION 6

Section 6 authorizes the Secretary of War to cause preliminary examinations and surveys to be made at the various localities listed therein, and recognizes the authority of the Federal Power Commission under existing law relative to the making of investigations.

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at the time of his enlistment or induction a resident thereof and who (a) was lawfully admitted into the United States, including its Territories and possessions, or (b) having entered the United States, including its Territories and possessions, prior to September 1, 1943, being unable to establish lawful admission into the United States serves honorably in such forces beyond the continental limits of the United States or has so served".

(b) By inserting after the words "no declaration of intention" the following: ", no certificate of arrival for those described in group (b) hereof,".

SEC. 2. The proviso to section 702 of the Nationality Act of 1940, as amended, is amended to read as follows: "*Provided*, That the record of any proceedings hereunder, together with a copy of the certificate of citizenship shall be forwarded to and filed by the clerk of a naturalization court in the district designated by the petitioner and be made a part of the record of the court".

56 Stat. 183.
8 U. S. C., Supp. III, § 1002.
Record of proceedings.

Approved December 22, 1944.

[CHAPTER 663]

AN ACT

To repeal the prohibition against the filling of a vacancy in the office of district judge in the district of New Jersey.

December 22, 1944
[H. R. 3732]
[Public Law 532]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the proviso in subsection (a) of section 2 of the Act approved May 24, 1940 (54 Stat. 219; U. S. C. 1940, title 28, sec. 1, note), entitled "An Act to provide for the appointment of additional district and circuit judges", be, and it is hereby, amended to read as follows: "(a) *Provided*, That the first vacancy occurring in the office of district judge in each of said districts, except the district of New Jersey, shall not be filled."

U. S. courts.

District judge, New Jersey.

SEC. 2. That subsection (d) of the Act approved April 28, 1942 (56 Stat. 247, U. S. C. 1940, Supp., title 28, sec. 1, note), is hereby repealed.

Approved December 22, 1944.

[CHAPTER 664]

AN ACT

To amend section 33 of the Act of September 7, 1916, as amended (39 Stat. 742).

December 22, 1944
[H. R. 4159]
[Public Law 533]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 33 of the Act of September 7, 1916, as amended and extended (39 Stat. 742, and the following), is hereby amended by adding thereto the following new paragraph:

U. S. Employees' Compensation Act, amendment.
39 Stat. 749.
5 U. S. C. § 784.

"The provisions of section 41 of the Act of March 4, 1927 (ch. 509, 44 Stat. 1424), as amended, shall, insofar as not inapplicable, apply in the same manner and to the same extent as though such provisions were incorporated in this Act."

Safety investigations.
44 Stat. 1444.
33 U. S. C. § 941.

Approved December 22, 1944.

[CHAPTER 665]

AN ACT

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

December 22, 1944
[H. R. 4485]
[Public Law 534]

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, In connection with the exercise of jurisdiction over the rivers of the Nation through the construction of works of improvement, for navigation or flood control,

Navigation and flood control.
Declaration of policy.

as herein authorized, it is hereby declared to be the policy of the Congress to recognize the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control, as herein authorized to preserve and protect to the fullest possible extent established and potential uses, for all purposes, of the waters of the Nation's rivers; to facilitate the consideration of projects on a basis of comprehensive and coordinated development; and to limit the authorization and construction of navigation works to those in which a substantial benefit to navigation will be realized therefrom and which can be operated consistently with appropriate and economic use of the waters of such rivers by other users.

In conformity with this policy:

Submission of plans, reports, etc.

(a) Plans, proposals, or reports of the Chief of Engineers, War Department, for any works of improvement for navigation or flood control not heretofore or herein authorized, shall be submitted to the Congress only upon compliance with the provisions of this paragraph (a). Investigations which form the basis of any such plans, proposals, or reports shall be conducted in such a manner as to give to the affected State or States, during the course of the investigations, information developed by the investigations and also opportunity for consultation regarding plans and proposals, and, to the extent deemed practicable by the Chief of Engineers, opportunity to cooperate in the investigations. If such investigations in whole or part are concerned with the use or control of waters arising west of the ninety-seventh meridian, the Chief of Engineers shall give to the Secretary of the Interior, during the course of the investigations, information developed by the investigations and also opportunity for consultation regarding plans and proposals, and to the extent deemed practicable by the Chief of Engineers, opportunity to cooperate in the investigations. The relations of the Chief of Engineers with any State under this paragraph (a) shall be with the Governor of the State or such official or agency of the State as the Governor may designate. The term "affected State or States" shall include those in which the works or any part thereof are proposed to be located; those which in whole or part are both within the drainage basin involved and situated in a State lying wholly or in part west of the ninety-eighth meridian; and such of those which are east of the ninety-eighth meridian as, in the judgment of the Chief of Engineers, will be substantially affected. Such plans, proposals, or reports and related investigations shall be made to the end, among other things, of facilitating the coordination of plans for the construction and operation of the proposed works with other plans involving the waters which would be used or controlled by such proposed works. Each report submitting any such plans or proposals to the Congress shall set out therein, among other things, the relationship between the plans for construction and operation of the proposed works and the plans, if any, submitted by the affected States and by the Secretary of the Interior. The Chief of Engineers shall transmit a copy of his proposed report to each affected State, and, in case the plans or proposals covered by the report are concerned with the use or control of waters which rise in whole or in part west of the ninety-seventh meridian, to the Secretary of the Interior. Within ninety days from the date of receipt of said proposed report, the written views and recommendations of each affected State and of the Secretary of the Interior may be submitted to the Chief of Engineers. The Secretary of War shall transmit to the Congress, with such comments and recommendations as he deems appropriate, the proposed report together with the submitted views and recommendations of affected States and

Interests of affected States.

Waters arising west of 97th meridian.

Representative for State.

"Affected State or States."

Coordination with other plans.

Transmittal of proposed report to States, etc.

Views and recommendations.

Transmittal of proposed report to Congress.

of the Secretary of the Interior. The Secretary of War may prepare and make said transmittal any time following said ninety-day period. The letter of transmittal and its attachments shall be printed as a House or Senate document.

Use of waters of western States for navigation.

(b) The use for navigation, in connection with the operation and maintenance of such works herein authorized for construction, of waters arising in States lying wholly or partly west of the ninety-eighth meridian shall be only such use as does not conflict with any beneficial consumptive use, present or future, in States lying wholly or partly west of the ninety-eighth meridian, of such waters for domestic, municipal, stock water, irrigation, mining, or industrial purposes.

Irrigation works. Investigations and reports.

(c) The Secretary of the Interior, in making investigations of and reports on works for irrigation and purposes incidental thereto shall, in relation to an affected State or States (as defined in paragraph (a) of this section), and to the Secretary of War, be subject to the same provisions regarding investigations, plans, proposals, and reports as prescribed in paragraph (a) of this section for the Chief of Engineers and the Secretary of War. In the event a submission of views and recommendations, made by an affected State or by the Secretary of War pursuant to said provisions, sets forth objections to the plans or proposals covered by the report of the Secretary of the Interior, the proposed works shall not be deemed authorized except upon approval by an Act of Congress; and subsection 9 (a) of the Reclamation Project Act of 1939 (53 Stat. 1187) and subsection 3 (a) of the Act of August 11, 1939 (53 Stat. 1418), as amended, are hereby amended accordingly.

Objection by affected State, etc.; effect.

53 Stat. 1193.
43 U. S. C. § 485h (a).
54 Stat. 1120.
16 U. S. C. § 590z-1 (a); Supp. III, § 590z-1 (a).

"Flood control."
49 Stat. 1570.
33 U. S. C. § 701a.

SEC. 2. That the words "flood control" as used in section 1 of the Act of June 22, 1936, shall be construed to include channel and major drainage improvements, and that hereafter Federal investigations and improvements of rivers and other waterways for flood control and allied purposes shall be under the jurisdiction of and shall be prosecuted by the War Department under the direction of the Secretary of War and supervision of the Chief of Engineers, and Federal investigations of watersheds and measures for run-off and water-flow retardation and soil-erosion prevention on watersheds shall be under the jurisdiction of and shall be prosecuted by the Department of Agriculture under the direction of the Secretary of Agriculture, except as otherwise provided by Act of Congress.

Jurisdiction of Federal activities.

State, etc., cooperation.
49 Stat. 1571; 52 Stat. 1215.
33 U. S. C. §§ 701c, 701c-1; Supp. III, § 701c note.

SEC. 3. 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 Act, 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 War Department of the requirements of local cooperation, unless said interests shall within said time furnish assurances satisfactory to the Secretary of War that the required cooperation will be furnished.

Time limitation.

Recreational facilities in reservoir areas.

SEC. 4. The Chief of Engineers, under the supervision of the Secretary of War, is authorized to construct, maintain, and operate public park and recreational facilities in reservoir areas under the control of the War Department, and to permit the construction, maintenance, and operation of such facilities. The Secretary of War is authorized to grant leases of lands, including structure or facilities

Leases.

Preference in granting of licenses.

thereon, in reservoir areas for such periods and upon such terms as he may deem reasonable: *Provided*, That preference shall be given to Federal, State, or local governmental agencies, and licenses may be granted without monetary consideration, to such agencies for the use of areas suitable for public park and recreational purposes, when the Secretary of War determines such action to be in the public interest.

Public use of water areas.

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 War not to be contrary to the public interest, all under such rules and regulations as the Secretary of War 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 for leases or privileges shall be deposited in the Treasury of the United States as miscellaneous receipts.

Disposal of electric power; rates.

SEC. 5. Electric power and energy generated at reservoir projects under the control of the War Department and in the opinion of the Secretary of War not required in the operation of such projects shall be delivered to the Secretary of the Interior, who shall transmit and dispose of such power and energy in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles, the rate schedules to become effective upon confirmation and approval by the Federal Power Commission. Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the projects) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years.

Preference in sale of power.

Preference in the sale of such power and energy shall be given to public bodies and cooperatives. The Secretary of the Interior is authorized, from funds to be appropriated by the Congress, to construct or acquire, by purchase or other agreement, only such transmission lines and related facilities as may be necessary in order to make the power and energy generated at said projects available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies. All moneys received from such sales shall be deposited in the Treasury of the United States as miscellaneous receipts.

Contracts for surplus water.

SEC. 6. That the Secretary of War is authorized to make contracts with States, municipalities, private concerns, or individuals, at such prices and on such terms as he may deem reasonable, for domestic and industrial uses for surplus water that may be available at any reservoir under the control of the War Department: *Provided*, That no contracts for such water shall adversely affect then existing lawful uses of such water. All moneys received from such contracts shall be deposited in the Treasury of the United States as miscellaneous receipts.

Regulations for use of storage at reservoirs.

SEC. 7. Hereafter, it shall be the duty of the Secretary of War to prescribe regulations for the use of storage allocated for flood control or navigation at all reservoirs constructed wholly or in part with Federal funds provided on the basis of such purposes, and the operation of any such project shall be in accordance with such regulations:

Applicability to TVA.

Provided, That this section shall not apply to the Tennessee Valley Authority, except that in case of danger from floods on the Lower Ohio and Mississippi Rivers the Tennessee Valley Authority is

directed to regulate the release of water from the Tennessee River into the Ohio River in accordance with such instructions as may be issued by the War Department.

Additional irrigation works.

SEC. 8. Hereafter, whenever the Secretary of War determines, upon recommendation by the Secretary of the Interior that any dam and reservoir project operated under the direction of the Secretary of War may be utilized for irrigation purposes, the Secretary of the Interior is authorized to construct, operate, and maintain, under the provisions of the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), such additional works in connection therewith as he may deem necessary for irrigation purposes. Such irrigation works may be undertaken only after a report and findings thereon have been made by the Secretary of the Interior as provided in said Federal reclamation laws and after subsequent specific authorization of the Congress by an authorization Act; and, within the limits of the water users' repayment ability such report may be predicated on the allocation to irrigation of an appropriate portion of the cost of structures and facilities used for irrigation and other purposes. Dams and reservoirs operated under the direction of the Secretary of War may be utilized hereafter for irrigation purposes only in conformity with the provisions of this section, but the foregoing requirement shall not prejudice lawful uses now exisiting: *Provided*, That this section shall not apply to any dam or reservoir heretofore constructed in whole or in part by the Army engineers, which provides conservation storage of water for irrigation purposes.

43 U. S. C. § 485a (a). *Ante*, p. 279.

Prerequisites.

Nonapplicability.

Approval of designated plans.

SEC. 9. (a) The general comprehensive plans set forth in House Document 475 and Senate Document 191, Seventy-eighth Congress, second session, as revised and coordinated by Senate Document 247, Seventy-eighth Congress, second session, are hereby approved and the initial stages recommended are hereby authorized and shall be prosecuted by the War Department and the Department of the Interior as speedily as may be consistent with budgetary requirements.

Missouri River Basin.

(b) The general comprehensive plan for flood control and other purposes in the Missouri River Basin approved by the Act of June 28, 1938, as modified by subsequent Acts, is hereby expanded to include the works referred to in paragraph (a) to be undertaken by the War Department; and said expanded plan shall be prosecuted under the direction of the Secretary of War and supervision of the Chief of Engineers.

52 Stat. 1218.

Reclamation and power developments.

(c) Subject to the basin-wide findings and recommendations regarding the benefits, the allocations of costs and the repayments by water users, made in said House and Senate documents, the reclamation and power developments to be undertaken by the Secretary of the Interior under said plans shall be governed by the Federal Reclamation Laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), except that irrigation of Indian trust and tribal lands, and repayment therefor, shall be in accordance with the laws relating to Indian lands.

43 U. S. C. § 485a (a). *Ante*, p. 279.

Additional sums authorized.

(d) In addition to previous authorizations there is hereby authorized to be appropriated the sum of $200,000,000 for the partial accomplishment of the works to be undertaken under said expanded plans by the Corps of Engineers.

(e) The sum of $200,000,000 is hereby authorized to be appropriated for the partial accomplishment of the works to be undertaken under said plans by the Secretary of the Interior.

Projects authorized.

SEC. 10. That the following works of improvement for the benefit of navigation and the control of destructive flood waters and other purposes are hereby adopted and authorized in the interest of the national security and with a view toward providing an adequate

reservoir of useful and worthy public works for the post-war construction program, to be prosecuted under the direction of the Secretary of War and 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 Act to be constructed by the War Department during the war, with funds from appropriations heretofore or hereafter made for flood control, so as to be ready for rapid inauguration of a post-war program of construction: *Provided further*, That when the existing critical situation with respect to materials, equipment, and manpower no longer exists, and in any event not later than immediately following the cessation of hostilities in the present war, the projects 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 War Department when approved by the Secretary of War on the recommendation of the Chief of Engineers and the Federal Power Commission.

Preparation for post-war construction.

Initiation of projects.

Installation of penstocks.

LAKE CHAMPLAIN BASIN

Modifications of certain dams.

Modifications of the existing Waterbury, Wrightsville, and East Barre Dams in the Winooski River Basin, Vermont, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 629, Seventy-eighth Congress, second session, at an estimated cost of $2,120,000.

BLACKSTONE RIVER BASIN

West Hill Reservoir, Mass.

The project for the West Hill Reservoir on the West River, Massachusetts, for flood control and other purposes in the Blackstone River Basin is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 624, Seventy-eighth Congress, second session, at an estimated cost of $1,070,000.

Worcester, Mass.

The project on Blackstone River for local flood protection at Worcester, Massachusetts, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 624, Seventy-eighth Congress, second session, at an estimated cost of $2,232,000.

Woonsocket, R. I.

The project on Blackstone River for local flood protection at Woonsocket, Rhode Island, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 624, Seventy-eighth Congress, second session, at an estimated cost of $803,000.

Pawtucket, R. I.

The project on Seekonk River, for local flood protection at Pawtucket, Rhode Island, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 624, Seventy-eighth Congress, second session, at an estimated cost of $82,000.

CONNECTICUT RIVER BASIN

Local protection works.
Additional appropriations authorized.
52 Stat. 1216; 55 Stat. 639.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $30,000,000 for the prosecution of the comprehensive plan approved in the Act of June 28, 1938, as modified by the Act approved August 18, 1941, for the Connecticut River Basin: *Provided*, Nothing in this Act or in any previous authorization shall

West River, Vt.

be construed to authorize the construction of a dam, other than a flood control type dam, on the main stream of the West River in the towns of Dummerston or Newfane in the State of Vermont: *Provided further*, That the Army Engineers are authorized and directed to construct eight reservoirs in the West River Basin in Vermont instead of the flood control reservoir authorized by existing law, known as the Williamsville Reservoir in the above mentioned towns, in accordance with an alternative plan submitted by the Vermont State Water Conservation Board as the same may be modified by agreement between the said Board and the Secretary of War and the Chief of Engineers, provided that the Secretary of War determines that the total costs of the alternate plan shall not exceed the sum of $11,000,000 and that the amount of flood control secured by them at the entrance of the waters of the West River into the Connecticut River shall not be less than seventy-five per centum of the flood control which may be secured from the single so-called Williamsville Reservoir now authorized to be constructed by the Army Engineers. Plans, proposals, or reports heretofore authorized for construction at Cambridgeport, Ludlow, South Tunbridge, and Gaysville, in the Connecticut River Basin, or any modification hereafter made of the comprehensive plan for the Connecticut River Basin in Vermont under authority of the Flood Control Act approved June 28, 1938, or of section 3 of the Flood Control Act approved August 18, 1941, shall not be carried out until after compliance with the provisions of paragraph (a) of section 1 of this Act: *Provided further*, That neither this authorization nor any previous authorization shall be construed to authorize the construction of a dam or reservoir at the Sugar Hill site on the Ammonoosuc River.

52 Stat. 1216; 55 Stat. 639.

Sugar Hill site, restriction.

THAMES RIVER BASIN

In addition to previous authorizations, there is hereby authorized the completion of the plan approved in the Act of August 18, 1941, for the Thames River Basin at an estimated cost of $7,200,000.

55 Stat. 639.

HOUSATONIC RIVER BASIN

The project for the Thomaston Reservoir on the Naugatuck River, for flood control in the Housatonic River Basin, Connecticut, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 338, Seventy-seventh Congress, first session, at an estimated cost of $5,151,000.

Thomaston Reservoir.

SUSQUEHANNA RIVER BASIN

The project authorized by the Act of June 22, 1936, to provide for local protection works on the Susquehanna River at Harrisburg, Pennsylvania, is hereby modified substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 702, Seventy-seventh Congress, second session, at an estimated cost of $2,227,000.

Harrisburg, Pa. 49 Stat. 1573.

The project for flood protection at Tyrone, Pennsylvania, on the Little Juniata River, Pennsylvania, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 702, Seventy-seventh Congress, second session, at an estimated cost of $1,392,000.

Tyrone, Pa.

The plan for flood control in southern New York and eastern Pennsylvania authorized by the Act of June 22, 1936, as modified by the Act of August 18, 1941, is hereby further modified to include the South Plymouth and Genegantslet Reservoirs on tributaries of the Chenango River substantially in accordance with the recommenda-

South Plymouth and Genegantslet Reservoirs.

49 Stat. 1573; 55 Stat. 640.

tions of the Chief of Engineers in House Document Numbered 702, Seventy-seventh Congress, second session, at an estimated additional cost of $4,755,000.

ROANOKE RIVER BASIN

The general plan for the comprehensive development of the Roanoke River Basin for flood control and other purposes recommended by the Chief of Engineers in House Document Numbered 650, Seventy-eighth Congress, second session, is approved and the construction of the Buggs Island Reservoir on the Roanoke River in Virginia and North Carolina, and the Philpott Reservoir on the Smith River in Virginia, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in that report at an estimated cost of $36,140,000.

Buggs Island and Philpott Reservoirs.

EDISTO RIVER BASIN

The project for local flood control on Edisto River, South Carolina, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 182, Seventy-eighth Congress, second session, at an estimated cost of $139,000.

SAVANNAH RIVER BASIN

The general plan for the comprehensive development of the Savannah River Basin for flood control and other purposes recommended by the Chief of Engineers in House Document Numbered 657, Seventy-eighth Congress, second session, is approved and the construction of the Clark Hill Reservoir on the Savannah River in South Carolina and Georgia, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in that report at an estimated cost of $35,300,000.

Clark Hill Reservoir.

MOBILE RIVER BASIN—ALABAMA-COOSA RIVER BASIN

In addition to previous authorizations, there is hereby authorized the completion of the Allatoona Reservoir on the Etowah River, Georgia, approved in the Act of August 18, 1941, at an estimated cost of $14,400,000.

Allatoona Reservoir, Ga.

55 Stat. 641.

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 by subsequent Acts of Congress, is hereby modified in accordance with the recommendations of the Chief of Engineers in House Document Numbered 509, Seventy-eighth Congress, second session, and, as modified, is hereby adopted and there is hereby authorized to be appropriated, in addition to the sums previously authorized, $200,000,000 for the accomplishment of the purposes set forth in said document.

Modification of project.
45 Stat. 534.
33 U. S. C. § 702a-702m; Supp. III, §§ 702a-1¾, 702a-12.

Paragraph (d) of the Lower Mississippi River item in section 3 of the Flood Control Act of August 18, 1941, is hereby construed to authorize reimbursement for the actual market value of lands, rights-of-way, and easements, furnished subsequent to August 18, 1941, for set-backs of main-line Mississippi River levees, regardless of State laws limiting payments to local tax assessment valuations.

55 Stat. 643.
33 U. S. C., Supp. III, § 702a-12 (d).
Reimbursement of local authorities.

The project for flood control on the Boeuf and Tensas Rivers and Bayou Macon, Arkansas and Louisiana, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 151, Seventy-eighth Congress, second session, at an estimated cost of $5,013,000.

Boeuf and Tensas Rivers.
Bayou Macon, Ark. and La.

Flood control project, Miss.

The project for flood control on the Big Sunflower, Little Sunflower, Hushpuckena, and Quiver Rivers and their tributaries, and on Hull Brake-Mill Creek Canal, Bogue Phalia, Ditchlow Bayou, Deer Creek, and Steele Bayou, Mississippi, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 516, Seventy-eighth Congress, second session, at an estimated cost of $3,752,000.

Yazoo River, Satartia area. 55 Stat. 642.

The project for flood protection in the backwater area of the Yazoo River authorized in the Flood Control Act of August 18, 1941, is hereby amended to authorize the Chief of Engineers, in his discretion, to include improvements for the protection of the Satartia area at an estimated additional cost of $1,061,000 or, in his discretion, to include improvements for the protection of the Satartia area plus its extension at an estimated additional cost of $1,952,000.

RED-OUACHITA RIVER BASIN

Little Missouri River, Ark. 55 Stat. 645.

In addition to previous authorizations, there is hereby authorized the completion of the plan approved in the Act of August 18, 1941, for the Little Missouri River in Arkansas, at an estimated cost of $3,800,000.

Red River at Shreveport, La.

The project on Red River in the vicinity of Shreveport, Louisiana, for flood control and bank protection is hereby authorized, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 627, Seventy-eighth Congress, second session, at an estimated cost of $3,000,000, except that, in view of the large expenditure already made by local interests, they shall not be required to contribute to the construction cost.

Blakely Mountain Dam.

The project for the Blakely Mountain Dam on the Ouachita River, for flood control and other purposes in the Ouachita River Basin, Arkansas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 647, Seventy-eighth Congress, second session, at an estimated cost of $11,080,000.

ARKANSAS RIVER BASIN

Additional appropriation authorized. 52 Stat. 1218; 55 Stat. 645.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $35,000,000 for the prosecution of the comprehensive plan approved in the Act of June 28, 1938, as modified by the Act approved August 18, 1941, for the Arkansas River Basin.

Local flood protection.

The projects for local flood protection on the Arkansas River are hereby modified and authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 447, Seventy-eighth Congress, second session, at an estimated additional cost of $10,299,400.

Fountaine Que Bouille River at Colorado Springs, Colo.

The project on tributaries of the Fountaine Que Bouille River for flood protection at Colorado Springs, Colorado, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 186, Seventy-eighth Congress, first session, at an estimated cost of $500,000.

Purgatoire River at Trinidad, Colo.

The project on Purgatoire River for local flood protection at Trinidad, Colorado, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 387, Seventy-eighth Congress, second session, at an estimated cost of $909,000.

WHITE RIVER BASIN

Additional appropriation authorized.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $45,000,000 for the prosecution of the

52 Stat. 1218; 55 Stat. 645.

comprehensive plan approved in the Act of June 28, 1938, as modified by the Act approved August 18, 1941, for the White River Basin.

UPPER MISSISSIPPI RIVER BASIN

Additional appropriation authorized.

52 Stat. 1218.
Red Rock Dam on Des Moines River.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $10,000,000 for the prosecution of the comprehensive plan approved in the Act of June 28, 1938, for the Upper Mississippi River Basin, including the project for the Red Rock Dam on the Des Moines River for flood control and other purposes, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 651, Seventy-eighth Congress, second session, at an estimated cost of $15,000,000.

Sainte Genevieve Levee District No. 1, Mo.
49 Stat. 1581.

The project authorized by the Act of June 22, 1936, for local flood protection on the Mississippi River at the Sainte Genevieve Levee District Numbered 1, Missouri, is hereby modified substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 727, Seventy-seventh Congress, second session, at an estimated cost of $141,000.

Des Moines, Iowa.

The project on the Des Moines River for local flood protection of Des Moines, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 651, Seventy-eighth Congress, second session, at an estimated cost of $270,000.

Sabula, Iowa.

The project on the Mississippi River for local flood protection at Sabula, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 328, Seventy-seventh Congress, first session, at an estimated cost of $25,000.

Galena, Ill.

The project on the Galena River, for local flood protection at Galena, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 336, Seventy-seventh Congress, first session, at an estimated cost of $418,000.

Illinois River.

The project for flood control on the Illinois River is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 692, Seventy-seventh Congress, second session, at an estimated cost of $111,500.

Farm Creek, Ill.

The project for flood control on Farm Creek, Illinois, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 802, Seventy-eighth Congress, second session, at an estimated cost of $3,017,900.

Elkport, Iowa.

The project on Elk Creek and Turkey River for local flood protection at Elkport, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 700, Seventy-seventh Congress, second session, at an estimated cost of $13,000.

RED RIVER OF THE NORTH BASIN

Red Lake and Clearwater Rivers, Minn.

The projects for flood control for Red Lake River, Minnesota, including Clearwater River, Minnesota, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 345, Seventy-eighth Congress, first session, at an estimated cost of $902,940.

Sheyenne River, N. Dak.
Bald Hill Reservoir.

The project for the Bald Hill Reservoir on the Sheyenne River for flood control and other purposes in the Sheyenne River Basin, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document

Numbered 193, Seventy-eighth Congress, second session, at an estimated cost of $810,000.

Pembina and Tongue Rivers, N. Dak.

The projects for the construction of one reservoir on the Pembina River and one on the Tongue River for flood control and other purposes in the Pembina River Basin, North Dakota, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 565, Seventy-eighth Congress, second session, at an estimated cost of $333,800.

Park River Basin, N. Dak.

The project for the construction of a reservoir on the South Branch of Park River for flood control and other purposes in the Park River Basin, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 194, Seventy-eighth Congress, second session, at an estimated cost of $358,610.

MISSOURI RIVER BASIN

Kansas Citys, Kans. and Mo. 49 Stat. 1588.

The project adopted by the Act of June 22, 1936, to provide flood protection for the Kansas Citys, Kansas and Missouri, is hereby modified and extended to provide for improvement substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 342, Seventy-eighth Congress, first session, at an estimated additional cost for the modified project of $8,445,000.

Cherry Creek, Colo. 55 Stat. 646.

In addition to previous authorizations, there is hereby authorized the completion of the plan approved in the Act of August 18, 1941, for Cherry Creek and tributaries, Colorado, at an estimated cost of $7,500,000.

Beulah, N. Dak.

The project on Knife River for local flood control at Beulah, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 252, Seventy-eighth Congress, first session, at an estimated cost of $26,100.

Hazen, N. Dak.

The project on Knife River for local flood control at Hazen, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 252, Seventy-eighth Congress, first session, at an estimated cost of $6,600.

Harlem, Mont. 49 Stat. 1589.

The project on Milk River adopted by the Act of June 22, 1936, to provide local flood protection at Harlem, Montana, is hereby modified substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 103, Seventy-eighth Congress, first session, at an estimated cost of $21,100.

Havre, Mont.

The project on Milk River for local flood protection at Havre, Montana, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 103, Seventy-eighth Congress, first session, at an estimated cost of $313,100.

Denison, Iowa.

The project on Boyer River for local flood control on East Fork of Boyer River at Denison, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 254, Seventy-eighth Congress, first session, at an estimated cost of $17,830.

Hamburg, Iowa.

The project on Nishnabotna River for local flood control at Hamburg, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 253, Seventy-eighth Congress, first session, at an estimated cost of $236,000.

Chariton River, Mo.

The plan of improvement for local flood protection on the Chariton River, Missouri, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers

in House Document Numbered 628, Seventy-eighth Congress, second session, at an estimated cost of $1,610,300.

Morrison, Colo.

The project on Bear Creek for local flood protection at Morrison, Colorado, is hereby authorized substantially in accordance with recommendations of the Chief of Engineers in House Document Numbered 356, Seventy-eighth Congress, first session, at an estimated cost of $220,000.

OHIO RIVER BASIN

Additional appropriation authorized. 52 Stat. 1217; 55 Stat. 646.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $70,000,000 for the prosecution of the comprehensive plan approved in the Act of June 28, 1938, as modified by the Act approved August 18, 1941, for the Ohio River Basin, including the following projects in tributary basins, namely:

Lake Chautauqua and Chadakoin River area.

The local flood protection works in the Lake Chautauqua and Chadakoin River area, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 685, Seventy-seventh Congress, second session, at an estimated cost of $135,500;

Dillonvale and Adena, Ohio.

The local flood protection works at Dillonvale and Adena on Short Creek, Ohio, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 889, Seventy-seventh Congress, second session, at an estimated cost of $158,200;

Taylorsville, Ky.

The local flood protection works at Taylorsville on Salt River, Kentucky, substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 105, Seventy-eighth Congress, first session, at an estimated cost of $129,350;

Latrobe, Pa.

The local flood protection works at Latrobe on Loyalhanna Creek, Pennsylvania, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 444, Seventy-eighth Congress, second session, at an estimated cost of $112,500;

Kentucky River Basin.

The plan of improvement for flood control and other purposes in the Kentucky River Basin, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 504, Seventy-eighth Congress, second session, at an estimated cost of $23,822,000;

Middlesborough, Ky.

The local flood protection works at Middlesborough on Yellow Creek, Kentucky, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 495, Seventy-eighth Congress, second session, at an estimated cost of $205,200;

Rough River, Ky.

The local flood protection works on the Rough River and tributaries, Kentucky, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 535, Seventy-eighth Congress, second session, at an estimated cost of $360,000;

Turtle Creek Reservoir, Pa.

The Turtle Creek Reservoir on Turtle Creek, Pennsylvania, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 507, Seventy-eighth Congress, second session, at an estimated cost of $2,613,000;

Burr Oak Reservoir, Ohio.

The Burr Oak Reservoir on the Hocking River, Ohio, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 762, Seventy-seventh Congress, second session, at an estimated cost of $400,000.

Shoals Dam, Ind., restriction.

Neither this authorization nor any previous authorization shall be construed to authorize the construction of the Shoals Dam on the East Fork of the White River in Martin County, Indiana, pending submission and adoption by Congress of the report authorized in the Flood Control Act of August 11, 1939.

53 Stat. 1414.

Ohio River Basin, modification of plan. 52 Stat. 1217.

That the general comprehensive plan for flood control and other purposes, approved in the Flood Control Act of June 28, 1938, for the Ohio River Basin, is hereby modified to include the construction of flood-control works for the protection of Ridgway, Johnsonburg, Saint Marys, and Brockway and vicinity in the State of Pennsylvania.

GREAT LAKES BASIN

Panther Mountain Reservoir, N. Y.

The project for the Panther Mountain Reservoir on Moose River, New York, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 405, Seventy-seventh Congress, first session, at an estimated cost of $600,000.

Chittenango Creek, N. Y.

The project for flood control on Chittenango Creek and tributaries, New York, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 625, Seventy-seventh Congress, second session, at an estimated cost of $111,000.

Owasco Inlet and Outlet, etc., N. Y.

The projects for flood control on Owasco Inlet and Outlet, Montville and Dry Creeks, State Ditch, and Crane Brook, New York, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 815, Seventy-seventh Congress, second session, at an estimated cost of $64,200.

Mount Morris Reservoir, N. Y.

The project for the Mount Morris Reservoir on the Genesee River, New York, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 615, Seventy-eighth Congress, second session, at an estimated cost of $5,360,000.

COLORADO RIVER BASIN (TEXAS)

North Concho River, Tex. 55 Stat. 641.

In addition to previous authorizations, there is hereby authorized the completion of the plan approved in the Act of August 18, 1941, for the North Concho River, Texas, at an estimated cost of $4,800,000.

Pecan Bayou, Tex. 55 Stat. 641.

In addition to previous authorizations, there is hereby authorized the completion of the plan approved in the Act of August 18, 1941, for Pecan Bayou, Texas, at an estimated cost of $1,560,000.

BRAZOS RIVER BASIN

Whitney Reservoir, Tex. 55 Stat. 642.

In addition to previous authorizations, there is hereby authorized the completion of Whitney Reservoir in accordance with the plan approved in the Act of August 18, 1941, for the Brazos River Basin, at an estimated cost of $15,000,000.

RIO GRANDE BASIN

Creede, Colo.

The project on Willow Creek for local flood protection at Creede, Colorado, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 104, Seventy-eighth Congress, first session, at an estimated cost of $68,500.

GREAT SALT BASIN

Redmond, Utah.

The project on the Sevier River for local flood protection at Redmond, Utah, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 614, Seventy-eighth Congress, second session, at an estimated cost of $281,000.

COLORADO RIVER BASIN

Alamo Reservoir, Ariz.

The project for the Alamo Reservoir on the Bill Williams River, Arizona, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 625, Seventy-eighth Congress, second session, at an estimated cost of $3,202,000.

Holbrook, Ariz.

The project on the Little Colorado River for local flood protection at Holbrook, Arizona, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 648, Seventy-eighth Congress, second session, at an estimated cost of $258,000.

SAN DIEGO RIVER BASIN

San Diego, Calif.

The project on the San Diego River for local flood protection at San Diego, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 635, Seventy-seventh Congress, second session, at an estimated cost of $370,000.

VENTURA RIVER BASIN

Ventura and Ojai, Calif.

The projects on the Ventura River and tributaries for local flood protection at Ventura and Ojai, California, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 323, Seventy-seventh Congress, first session, at an estimated cost of $1,600,000.

SANTA ANA RIVER BASIN

Additional appropriation authorized. 49 Stat. 1589; 52 Stat. 1222.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $10,000,000 for the prosecution of the projects approved in the Act of June 22, 1936, as modified by the Act of June 28, 1938, for the Santa Ana River Basin and for the protection of Orange County, California, including the projects on Lytle and Cajon Creeks for local flood protection at San Bernardino and Colton, California, in accordance with the recommendations contained in the report of the Chief of Engineers dated February 11, 1944.

San Bernardino and Colton, Calif.

LOS ANGELES-SAN GABRIEL BASIN AND BALLONA CREEK

Additional appropriation authorized. 55 Stat. 647.

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $25,000,000 for the prosecution of the comprehensive plan approved in the Act of August 18, 1941, for Los Angeles and San Gabriel Rivers and Ballona Creek, California.

PAJARO RIVER BASIN

The plan of improvement for local flood protection on the Pajaro River and tributaries, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 505, Seventy-eighth Congress, second session, at an estimated cost of $511,160.

SACRAMENTO-SAN JOAQUIN RIVER BASIN

SACRAMENTO RIVER

Projects modified. 39 Stat. 949; 45 Stat. 539; 50 Stat. 849; 55 Stat. 647. 33 U. S. C. §§ 703, 704.

The projects for the control of floods and other purposes on the Sacramento River, California, adopted by the Acts approved March 1, 1917, May 15, 1928, August 26, 1937, and August 18, 1941, are hereby modified substantially in accordance with the recommendations of

the Chief of Engineers in House Document Numbered 649, Seventy-eighth Congress, second session, at an estimated cost of $50,100,000; and in addition to previous authorizations there is hereby authorized to be appropriated the sum of $15,000,000 for the prosecution of the modified projects: *Provided*, That this modification of the project shall not be construed to authorize the construction of a high dam at the Table Mountain site but shall authorize only the low-level project to approximately the elevation of four hundred feet above mean sea level, said low-level dam to be built on a foundation sufficient for such dam and not on a foundation for future construction of a higher dam.

Additional appropriation authorized.

Table Mountain.

The project for the Folsom Reservoir on the American River, California, is hereby authorized substantially in accordance with the plans contained in House Document Numbered 649, Seventy-eighth Congress, second session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable, at an estimated cost of $18,474,000.

Folsom Reservoir, Calif.

SAN JOAQUIN RIVER

The project for the Isabella Reservoir on the Kern River for flood control and other purposes in the San Joaquin Valley, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in his report dated January 26, 1944, contained in House Document Numbered 513, Seventy-eighth Congress, second session, at an estimated cost of $6,800,000.

Isabella Reservoir, Calif.

The plan for the Terminus and Success Reservoirs on the Kaweah and Tule Rivers for flood control and other purposes in the San Joaquin Valley, California, in accordance with the recommendations of the Chief of Engineers in Flood Control Committee Document Numbered 1, Seventy-eighth Congress, second session, is approved, and there is hereby authorized $4,600,000 for initiation and partial accomplishment of the plan.

Terminus and Success Reservoirs, Calif.

The project for flood control and other purposes for the Kings River and Tulare Lake Basin, California, is hereby authorized substantially in accordance with the plans contained in House Document Numbered 630, Seventy-sixth Congress, third session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable at an estimated cost of $19,700,000: *Provided*, That the conditions of local cooperation specified in said document shall not apply: *Provided further*, That the Secretary of War shall make arrangements for payment to the United States by the State or other responsible agency, either in lump sum or annual installments, for conservation storage when used: *Provided further*, That the division of costs between flood control, and irrigation and other water uses shall be determined by the Secretary of War on the basis of continuing studies by the Bureau of Reclamation, the War Department, and the local organizations.

Kings River and Tulare Lake Basin, Calif.

Local cooperation.

Payment for conservation storage.

Division of costs.

The plan of improvement for local flood protection on various streams in the Merced County Stream Group in the San Joaquin Valley is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 473, Seventy-eighth Congress, second session, at an estimated cost of $1,300,000.

Merced County Stream Group.

The plan of improvement for flood control and other purposes on the Lower San Joaquin River and tributaries, including Tuolumne and Stanislaus Rivers, in accordance with the recommendations of the Chief of Engineers in Flood Control Committee Document Numbered 2, Seventy-eighth Congress, second session, is approved, and there is hereby authorized $8,000,000 for initiation and partial accomplishment of the plan.

Lower San Joaquin River; Tuolumne and Stanislaus Rivers.

Calaveras River and Littlejohn Creek, Calif.

The plan of improvement for flood control and other purposes on the Calaveras River and Littlejohn Creek and tributaries, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 545, Seventy-eighth Congress, second session, at an estimated cost of $3,868,200.

NAPA RIVER BASIN

Conn Creek Reservoir, Calif.

The project for the Conn Creek Reservoir on Conn Creek for flood control and other purposes in the Napa River Basin, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 626, Seventy-eighth Congress, second session, at an estimated cost of $460,000.

COQUILLE RIVER BASIN

The project for flood protection on the Coquille River, Oregon, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 620, Seventy-seventh Congress, second session, at an estimated cost of $143,000.

NEHALEM RIVER BASIN

The project for flood protection on the Nehalem River, Oregon, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 621, Seventy-seventh Congress, second session, at an estimated cost of $23,000.

WILLAMETTE RIVER BASIN

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of $20,000,000 for the prosecution of the comprehensive plan approved in the Act of June 28, 1938, for the Willamette River Basin, with such modifications thereof as in the discretion of the Chief of Engineers may be advisable.

52 Stat. 1222.

COLUMBIA RIVER BASIN

Snake River, Idaho.

The projects on the Snake River for local flood protection at Heise, Roberts, and Weiser, Idaho, are hereby authorized, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 452, Seventy-seventh Congress, first session, at an estimated cost of $743,000.

Palouse River, Wash.

The projects on the Palouse River and tributaries for local flood protection at Pullman and Colfax, Washington, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 888, Seventy-seventh Congress, second session, at an estimated cost of $478,000.

Alkali Canyon, Arlington, Oreg.

The project on Alkali Canyon for local flood protection at Arlington, Oregon, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 631, Seventy-seventh Congress, second session, at an estimated cost of $118,000.

WILLAPA RIVER BASIN

Raymond, Wash.

The project on the Willapa River for local flood protection at Raymond, Washington, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 701, Seventy-seventh Congress, second session, at an estimated cost of $127,000.

CHEHALIS RIVER BASIN

Hoquiam, Aberdeen, and Cosmopolis, Wash.

The project on Chehalis River for local flood protection at Hoquiam, Aberdeen, and Cosmopolis, Washington, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Nnmbered 494, Seventy-eighth Congress, second session, at an estimated cost of $669,000.

TERRITORY OF HAWAII

Hanapepe River.

The project on the Hanapepe River for local flood protection at Hanapepe, Island of Kauai, Territory of Hawaii, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in the report submitted to Congress by the Secretary of War on March 15, 1944, at an estimated cost of $73,000.

Preliminary flood control examinations, etc.

SEC. 11. The Secretary of War is hereby authorized and directed to cause preliminary examinations and surveys for flood control and allied purposes, including channel and major drainage improvements, 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, and the Secretary of Agriculture is authorized and directed to cause preliminary examinations and surveys for run-off and waterflow retardation and soil-erosion prevention on such drainage areas; the cost thereof to be paid from appropriations heretofore or hereafter made for such purposes: *Provided*, That after the regular or formal reports made on any examination, survey, project, or work under way 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 War may cause a review of any examination or survey to be made and a report thereon submitted to the Congress if such review is required by the national defense or by changed physical or economic conditions: *And provided further*, That the Government shall not be deemed to have entered upon any project for the improvement of any waterway or harbor mentioned in this Act until the project for the proposed work shall have been adopted by law:

Supplemental reports, restriction.

Adoption of projects by law.

North Carolina.

Pasquotank River, North Carolina.

Alabama and Florida.

Chipola River, Alabama and Florida.

Wacasassa River and it tributaries, Florida, and of adjacent areas in Gilchrest and Levy Counties, Florida.

Oklawaha River and its tributaries, Florida, and of adjacent areas in Alachua and Marion Counties, Florida.

Ohio.

Clear Fork of the Mohican River, in Richland County, Ohio.

Hocking River in Hocking County, Ohio.

Leatherwood Creek, Ohio, with particular reference to flood control and water supply for Cambridge, Ohio.

Louisiana.

For flood control, rice irrigation, navigation, pollution, salt-water intrusion, and drainage on all streams and bayous in southwest Louisiana, west of the West Atchafalaya Basin protection levee, and south of the latitude of Boyce; on all streams and bayous in Louisiana lying between the East Atchafalaya Basin protection levee and the Mississippi River; and on Amite River and tributaries, Louisiana.

Florida.

Choctawhatchee River, Florida.

New York.

Scajaquada Creek and its tributaries, New York.

Susquehanna River in the vicinity of Endicott, Johnson City, and Vestal, New York.

New Jersey.

Absecon Island, New Jersey, with a view to the protection of Atlantic City, Ventnor, Margate City, Longport, and other areas on the New Jersey coast, that have been affected from floods due to tide and wind.

Pennsylvania. Juniata River and tributaries, Pennsylvania, with special reference to the proposed Raystown Reservoir.

Delaware. Rehoboth Beach, Bethany Beach, Lewes, and Fenwick Island, Delaware, and other points along the Delaware coast, with a view to providing protection against damage resulting from erosion and from floods due to wind and tide.

Minnesota. Buffalo River, Minnesota.
Wild Rice River, Minnesota.
Marsh River, Minnesota.
Sand Hill River, Minnesota.
Red Lake River, Minnesota.
Roseau River, Minnesota.
Snake River, Minnesota.
Middle River, Minnesota.
Tamarac River, Minnesota.
Two Rivers, Minnesota.
Warroad River and Bull Dog Creek, Minnesota.
Mississippi River and its tributaries, in the county of Aitkin, Minnesota.

Illinois. Apple River, Jo Daviess County, Illinois.

Indiana and Ohio. Maumee River, Indiana and Ohio.
Indian Creek, Indiana.

Pennsylvania and Maryland. Youghiogheny River Basin, Pennsylvania and Maryland.

Ohio. Reno Beach, Lucas County, Ohio, with a view to protection of the Reno Beach-Howards Farm area and adjacent areas from floods caused by frequent windstorms and from increases in the lake level of Lake Erie.

Arkansas. Arkansas River above Pine Bluff, Arkansas, with special reference to control of caving banks in the vicinity of Hensley Bar and the McFadden Place, in Jefferson County, Arkansas.

Missouri and Kansas. Osage River, Missouri and Kansas.

Oklahoma. Big Canyon on Washita River in Murray County, Oklahoma.
Deep Red Run in Tillman County, Oklahoma; Big Elk Creek, Little Elk Creek, Salt Fork, Elm Creek, Saddle Mountain, Turkey Creek, Oklahoma.

California. San Rafael Creek and its tributaries, California.
Napa River, California.

South Dakota. Grand River, South Dakota.
Moreau River, South Dakota.

California. Corte Madera Creek, Marin County, California.

Puerto Rico. Bayamon and Hondo Rivers and their tributaries, Municipality of Bayamon, Puerto Rico.

Nebraska. Elkhorn River and its tributaries, Nebraska.

Appropriations authorized for prosecution of projects. SEC. 12. That the sum of $950,000,000 is hereby authorized to be appropriated for carrying out the improvements herein by the War Department, the sum of $10,000,000 additional is authorized to be appropriated and expended in equal amounts by the Departments of War and Agriculture for carrying out any examination or survey provided for in this Act and any other Acts of Congress, to be prosecuted by said Departments. The sum of $1,500,000 additional is authorized to be appropriated and expended by the Federal Power Commission for carrying out any examinations and surveys provided for in this Act or any other Acts of Congress, to be prosecuted by the said Federal Power Commission.

Federal Power Commission.

Emergency bank protection works. The sum of $500,000 additional is authorized to be appropriated as an emergency fund to be expended under the direction of the Secretary of War and the supervision of the Chief of Engineers for the construction of emergency bank protection works to prevent flood damage to highways, bridge approaches and public works: *Provided*,

Interim allotments

That pending the appropriation of said sum the Secretary of War may allot from existing flood control appropriations such sums as may be necessary for the immediate prosecution of such bank protection works; such appropriations to be reimbursed from the appropriation herein authorized when made.

Run-off and waterflow retardation, etc.

SEC. 13. That the following works of improvement for run-off and waterflow retardation, and soil-erosion prevention, are hereby adopted and authorized in the interest of the national security and with a view toward an adequate reservoir of useful and worthy public works for the post-war construction program to be prosecuted by the Department of Agriculture, under the direction of the Secretary of Agriculture, in accordance with the plans of the respective reports hereinafter designated and subject to the conditions set forth therein: *Provided*, That the necessary plans and preliminary work may be prosecuted during the war with funds from appropriations heretofore or hereafter made for such works so as to be ready for rapid inauguration of post-war construction: *Provided further*, That when the existing critical situation with respect to materials, equipment, and manpower, no longer exists and in any event not later than immediately following the cessation of hostilities in the present war, the projects herein shall be initiated as expeditiously and prosecuted as vigorously as may be consistent with budgetary requirements: *Provided further*, That nothing in this section shall be construed as approving or authorizing the acquisition of any land by the Federal Government until the legislature of the State in which the land lies shall have consented to the acquisition of lands by the United States for the purposes within the scope of this section: *Provided further*, That there shall be paid annually to the county in which any lands acquired under this section may lie, a sum equal to 1 per centum of the purchase price paid for the lands acquired in that county or, if not acquired by purchase, 1 per centum of their valuation at the time of their acquisition.

Preparation for post-war construction.

Initiation of projects.

State consent to land acquisition.

Annual payments to counties.

LOS ANGELES RIVER BASIN

The program on the Los Angeles River watershed is hereby approved substantially in accordance with the recommendation of the Under Secretary of Agriculture in House Document Numbered 426, Seventy-seventh Congress, first session, at an estimated cost to the United States of $8,380,000.

SANTA YNEZ RIVER WATERSHED

The program on the Santa Ynez River watershed is hereby approved substantially in accordance with the recommendation of the Acting Secretary of Agriculture in House Document Numbered 518, Seventy-eighth Congress, first session, at an estimated cost to the United States of $434,000.

TRINITY RIVER BASIN (TEXAS)

The program on the Trinity River watershed is hereby approved substantially in accordance with the recommendation of the Secretary of Agriculture in House Document Numbered 708, Seventy-seventh Congress, second session, at an estimated cost to the United States of $32,000,000.

LITTLE TALLAHATCHIE RIVER WATERSHED

The program on the Little Tallahatchie River watershed is hereby approved substantially in accordance with the recommendation of

the Acting Secretary of Agriculture in House Document Numbered 892, Seventy-seventh Congress, second session, at an estimated cost to the United States of $4,221,000.

YAZOO RIVER WATERSHED

The program on the Yazoo River watershed is hereby approved substantially in accordance with the recommendation of the Acting Secretary of Agriculture in House Document Numbered 564, Seventy-eighth Congress, second session, at an estimated cost to the United States of $21,700,000.

COOSA RIVER WATERSHED (ABOVE ROME, GEORGIA)

The program on the Coosa River watershed above Rome, Georgia, is hereby approved substantially in accordance with the recommendation of the Acting Secretary of Agriculture in House Document Numbered 236, Seventy-eighth Congress, first session, at an estimated cost to the United States of $1,233,000.

LITTLE SIOUX RIVER WATERSHED

The program on the Little Sioux River watershed is hereby approved substantially in accordance with the recommendation of the Assistant Secretary of Agriculture in House Document Numbered 268, Seventy-eighth Congress, first session, at an estimated cost to the United States of $4,280,000.

POTOMAC RIVER WATERSHED

The program on the Potomac River watershed is hereby approved substantially in accordance with the recommendation of the Assistant Secretary of Agriculture in House Document Numbered 269, Seventy-eighth Congress, first session, at an estimated cost to the United States of $859,000.

BUFFALO CREEK WATERSHED (NEW YORK)

BUFFALO, CAYUGA, AND CAZENOVIA CREEKS

The program on the watershed of Buffalo Creek and its tributaries, Cayuga, and Cazenovia Creeks, is hereby approved substantially in accordance with the recommendation of the Acting Secretary of Agriculture in House Document Numbered 574, Seventy-eighth Congress, second session, at an estimated cost to the United States of $739,000.

COLORADO RIVER WATERSHED (TEXAS)

The program on those portions of the Colorado River watershed included in the watersheds of Pecan Bayou, San Saba River, Brady Creek, and the area tributary to the main stream of the Colorado River below its confluence with the Concho River and above the mouth of Pecan Bayou, is hereby approved substantially in accordance with the recommendation of the Assistant Secretary of Agriculture in House Document Numbered 270, Seventy-eighth Congress, first session, at an estimated cost to the United States of $2,693,000.

WASHITA RIVER WATERSHED

The program on the Washita River watershed is hereby approved substantially in accordance with the recommendation of the Under Secretary of Agriculture in House Document Numbered 275, Seventy-eighth Congress, first session, at an estimated cost to the United States of $11,243,000.

Reauthorization of funds.
52 Stat. 1225.

SEC. 14. That the balance remaining from the authorization of $10,000,000 provided in section 7 of the Flood Control Act approved June 28, 1938, for the five-year period ending June 30, 1944, to correlate the program for the improvement of watersheds by the Department of Agriculture for measures of run-off and waterflow retardation and soil-erosion prevention on the watersheds with the program for the improvement of rivers and other waterways by the Department of War is hereby reauthorized to be expended during the post-war period by the Department of Agriculture for the prosecution of the work authorized in section 13 of this Act: *Provided*, That not more than 20 per centum of the authorization made available herein shall be expended on any one project.

52 Stat. 1225.

Emergency work by Department of Agriculture.

SEC. 15. That section 7 of the Act of June 28, 1938 (Public, Numbered 761, Seventy-fifth Congress), is hereby amended by adding at the end of the first sentence thereof the following: "The Secretary of Agriculture is hereby authorized in his discretion to undertake such emergency measures for run-off retardation and soil-erosion prevention as may be needed to safeguard lives and property from floods and the products of erosion on any watershed whenever fire or any other natural element or force has caused a sudden impairment of that watershed: *Provided*, That not to exceed $100,000 out of any funds heretofore or hereafter appropriated for the prosecution by the Secretary of Agriculture of works of improvement or measures for run-off and waterflow retardation and soil-erosion prevention on watersheds may be expended during any one fiscal year for such emergency measures."

Limitation.

Approved December 22, 1944.

[CHAPTER 666]

AN ACT

To amend the Act of Congress approved May 20, 1935, entitled "An Act concerning the incorporated town of Seward, Territory of Alaska", as amended.

December 22, 1944
[H. R. 4502]
[Public Law 535]

Seward, Alaska.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of Congress approved May 20, 1935 (49 Stat. 282), entitled "An Act concerning the incorporated town of Seward, Territory of Alaska", as amended by the Act of Congress approved June 21, 1941 (55 Stat. 253), is hereby amended by inserting after section 6 thereof the following new section:

Acquisition of improvements or extensions to utility properties.

"SEC. 7. The town of Seward is hereby authorized at any time or times to construct, purchase, or otherwise acquire improvements, betterments, or extensions to any electric or other utility properties owned or to be owned by the town of Seward pursuant to this or any other section of this Act, and shall be authorized to issue its revenue bonds to finance in whole or in part the cost of said improvements, betterments, or extensions (including the cost of integrating the systems which may be acquired under section 6 of this Act with the properties theretofore owned and the cost of integrating any other newly acquired properties with those theretofore owned), which bonds may be made payable and be secured in the same manner as other revenue bonds authorized to be issued pursuant to any other sections of this Act, and shall be issued in compliance with other bond provisions contained in this Act, so far as applicable. The issuance of bonds for the purpose or purposes provided in this section may be combined and consolidated with the issuance of any other bonds elsewhere authorized in this or any other section of this Act to be issued for any other purpose or purposes, all of which bonds shall in

Issuance of revenue bonds.

Consolidation of bond issues.

HQ AR006198-HQ AR006211

78TH CONGRESS } HOUSE OF REPRESENTATIVES { REPORT
2d Session } { No. 2051

AUTHORIZATIONS FOR RESERVOIRS, LEVEES, AND FLOOD WALLS FOR FLOOD CONTROL

DECEMBER 11, 1944.—Ordered to be printed

Mr. WHITTINGTON, from the committee of conference, submitted the following

CONFERENCE REPORT

[To accompany H. R. 4485]

The committee of conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H. R. 4485) entitled "An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes," having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

Amendment numbered 27:

That the Senate recede from its amendment numbered 27.

Amendment numbered 30:

That the Senate recede from its amendment numbered 30.

Amendment numbered 36:

That the Senate recede from its amendment numbered 36.

Amendment numbered 39:

That the Senate recede from its amendment numbered 39.

Amendment numbered 44:

That the Senate recede from its amendment numbered 44.

Amendments numbered 87 and 88.

That the Senate recede from its amendments numbered 87 and 88.

Amendment numbered 91:

That the Senate recede from its amendment numbered 91.

Amendments numbered 2, 3, 4, 5, 6, and 7:

That the House recede from its disagreement to the amendments of the Senate numbered 2, 3, 4, 5, 6, and 7 and agree to the same.

Amendment numbered 10:

That the House recede from its disagreement to the amendment of the Senate numbered 10 and agree to the same.

Amendments numbered 12, 13, 14, 15, 16, 17, and 18:

That the House recede from its disagreement to the amendments of the Senate numbered 12, 13, 14, 15, 16, 17, and 18 and agree to the same.

Amendments numbered 20, 21, 22, 23, 24, and 25:

That the House recede from its disagreement to the amendments of the Senate numbered 20, 21, 22, 23, 24, and 25, and agree to the same.

Amendments numbered 28 and 29:

That the House recede from its disagreement to the amendments of the Senate numbered 28 and 29 and agree to the same.

Amendments numbered 31 and 32:

That the House recede from its disagreement to the amendments of the Senate numbered 31 and 32 and agree to the same.

Amendments numbered 34 and 35:

That the House recede from its disagreement to the amendments of the Senate numbered 34 and 35 and agree to the same.

Amendment numbered 38:

That the House recede from its disagreement to the amendment of the Senate numbered 38 and agree to the same.

Amendments numbered 40, 41, 42, and 43:

That the House recede from its disagreement to the amendments of the Senate numbered 40, 41, 42, and 43 and agree to the same.

Amendments numbered 45, 46, 47, 48, 49, 50, and 51:

That the House recede from its disagreement to the amendments of the Senate numbered 45, 46, 47, 48, 49, 50, and 51 and agree to the same.

Amendments numbered 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, and 81:

That the House recede from its disagreement to the amendments of the Senate numbered 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, and 81 and agree to the same.

Amendment numbered 84:

That the House recede from its disagreement to the amendment of the Senate numbered 84 and agree to the same.

Amendment numbered 90:

That the House recede from its disagreement to the amendment of the Senate numbered 90 and agree to the same.

Amendment numbered 92:

That the House recede from its disagreement to the amendment of the Senate numbered 92 and agree to the same.

Amendment numbered 94:

That the House recede from its disagreement to the amendment of the Senate numbered 94 and agree to the same.

Amendment numbered 1:

That the House recede from its disagreement to the amendment of the Senate numbered 1, and agree to the same with an amendment as follows:

In said Senate amendment, on page 1, strike out lines 3 through 11 and on page 2, strike out lines 1 through 4; and the Senate agree to the same.

Amendment numbered 8:

That the House recede from its disagreement to the amendment of the Senate numbered 8, and agree to the same with an amendment, as follows:

In said Senate amendment, on page 8, line 4, insert commas after the word "generally" and after the word "charge"; and the Senate agree to the same.

Amendment numbered 9:

That the House recede from its disagreement to the amendment of the Senate numbered 9, and agree to the same with amendments, as follows:

In said Senate amendment, on page 8, line 24, after the period insert the following: *Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the projects) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years*; on page 9, line 2, before the word "to" insert the following: *from funds to be appropriated by the Congress*; line 2, strike out the word "and" and insert in lieu thereof the word *or*; line 2, after the word "acquire" insert the words *by purchase or other agreement*; line 8, after the period insert the words *All moneys received from such sales shall be deposited in the Treasury of the United States as miscellaneous receipts*; and the Senate agree to the same.

Amendment numbered 11:

That the House recede from its disagreement to the amendment of the Senate numbered 11, and agree to the same with an amendment, as follows:

In said Senate amendment, line 13, after the word "uses" insert the word *for*; and the Senate agree to the same.

Amendment numbered 19:

That the House recede from its disagreement to the amendment of the Senate numbered 19, and agree to the same with amendments, as follows:

In said Senate amendment, line 23, after the word "prosecuted" insert the words *on any project authorized in this Act to be constructed by the War Department*; page 14, line 11, strike out the word "herein" and after the word "authorized" insert the words *in this Act for construction by the War Department*; and the Senate agree to the same.

Amendment numbered 26:

That the House recede from its disagreement to the amendment of the Senate numbered 26, and agree to the same with amendments, as follows:

In said Senate amendment, line 17, after the word "provided" insert the words *that the Secretary of War determines that*; line 18, after the word "and" insert the word *that*; and the Senate agree to the same.

Amendment numbered 33:

That the House recede from its disagreement to the amendment of the Senate numbered 33, and agree to the same with an amendment, as follows:

In said Senate amendment, on page 21, strike out lines 10 through 25, and on page 22, strike out lines 1 and 2 and insert in lieu thereof the following: *Paragraph (d) of the Lower Mississippi River item in section 3 of the Flood Control Act of August 18, 1941, is hereby construed to authorize reimbursement for the actual market value of lands, rights-of-way, and easements, furnished subsequent to August 18, 1941, for setbacks of main-line Mississippi River levees, regardless of State laws limiting payments to local tax assessment valuations*; and the Senate agree to the same.

Amendment numbered 37:

That the House recede from its disagreement to the amendment of the Senate numbered 37, and agree to the same with an amendment, as follows:

In said Senate amendment, change the colon on line 17 to a period and strike out the remainder of that line and all of lines 18 and 19.

Amendment numbered 40½:

That the House recede from its disagreement to the amendment of the Senate numbered 40½, and agree to the same with an amendment, as follows:

In said Senate amendment, on line 3, strike out the words "his report of" and on line 4, strike out the words "November 16, 1944", and insert the words *House Document Numbered 802, Seventy-eighth Congress, Second Session,*; and the Senate agree to the same.

Amendment numbered 52:

That the House recede from its disagreement to the amendment of the Senate numbered 52, and agree to the same with amendments, as follows:

In said Senate amendment, line 9, strike out the words "No provision of this or any other Act" and insert the words *Neither this authorization nor any previous authorization*; line 11, change the period to a comma and insert the following *pending submission and adoption by Congress of the report authorized in the Flood Control Act of August 11, 1939.*

And the Senate agree to the same.

Amendment numbered 82:

That the House recede from its disagreement to the amendment of the Senate numbered 82, and agree to the same with amendments, as follows:

In said Senate amendment, line 23, strike out the figures "$959,465,000" and insert in lieu thereof the figures *$950,000,000*; line 24 after the word "herein" insert the words *by the War Department*; and the Senate agree to the same.

Amendment numbered 83:

That the House recede from its disagreement to the amendment of the Senate numbered 83, and agree to the same with an amendment, as follows:

In said Senate amendment, line 14, before the word "protection" insert the word *bank*; and the Senate agree to the same.

Amendment numbered 85:

That the House recede from its disagreement to the amendment of the Senate numbered 85, and agree to the same with an amendment, as follows:

In said Senate amendment, line 17, delete the period after the word "government" and add the following: *until the legislature of the state in which the land lies shall have consented to the acquisition of lands by the United States for the purposes within the scope of this section: Provided further, That there shall be paid annually to the county in which any lands acquired under this section may lie, a sum equal to one per centum of the purchase price paid for the lands acquired in that county or, if not acquired by purchase, one per centum of their valuation at the time of their acquisition.*

And the Senate agree to the same.

Amendment numbered 86:

That the House recede from its disagreement to the amendment of the Senate numbered 86, and agree to the same with an amendment, as follows:

In said Senate amendment, line 6, strike out the figures "$418,000" and insert in lieu thereof the figures *$434,000*; and the Senate agree to the same.

Amendment numbered 89:

That the House recede from its disagreement to the amendment of the Senate numbered 89, and agree to the same with an amendment, as follows:

In said Senate amendment, on page 52, line 2, strike out the figures "$12,500,000" and insert in lieu thereof the figures *$21,700,000*; and the Senate agree to the same.

Amendment numbered 93:

That the House recede from its disagreement to the amendment of the Senate numbered 93, and agree to the same with an amendment, as follows:

In said Senate amendment, line 10, strike out the figures "12" and insert in lieu thereof the figures *13*; and the Senate agree to the same.

WILL M. WHITTINGTON,
A. LEONARD ALLEN,
A. J. ELLIOTT,
CHARLES R. CLASON,
CARL T. CURTIS,
Managers on the part of the House.

JOSIAH W. BAILEY,
JOHN H. OVERTON,
THEO. G. BILBO,
HAROLD H. BURTON,
OWEN BREWSTER,
HATTIE W. CARAWAY,
BENNETT CHAMP CLARK,
HIRAM W. JOHNSON,
Managers on the part of the Senate.

STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE

The managers on the part of the House at the conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H. R. 4485) entitled "An act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes" submit the following statement in explanation of the effect of the action agreed upon and recommended in the accompanying conference report as to each of such amendments, namely:

AMENDMENTS

Amendment No. 1: This amendment of the Senate as modified declares it to be the Federal policy to recognize the interest and rights of the States in determining the development of watersheds within their borders and their interests and rights in water utilization and control. It provides for review of reports of the Chief of Engineers and of the Secretary of the Interior by the State or States affected by the reports, and the comments of such affected States will become a part of the report when transmitted to Congress and published as a House or Senate document. In cases of plans or proposals concerned with the use or control of waters which rise in whole or in part west of the ninety-seventh meridian, the written views and recommendations of the Secretary of the Interior also become a part of the report of the Chief of Engineers and the written views and recommendations of the Secretary of War become part of the report of the Secretary of the Interior. The amendment also provides that in connection with the operation and maintenance of projects authorized in this act, the use of waters of the Western States for navigation shall not conflict with beneficial consumptive use of the water for domestic, municipal, stock-water, irrigation, mining, or industrial purposes.

Amendment No. 2: This amendment of the Senate changes the designation of section 1 of the bill passed by the House to section 2 of the bill passed by the Senate.

Amendment No. 3: This amendment of the Senate changes the designation of section 2 of the bill passed by the House to section 3 of the bill passed by the Senate.

Amendment No. 4: This amendment of the Senate changes the designation of section 3 of the bill passed by the House to section 4 of the bill passed by the Senate.

Amendments Nos. 5, 6, and 7: These amendments of the Senate insert additional wording for clarification of the bill.

Amendment No. 8: This amendment of the Senate provides that preference in the granting of leases for the use of areas suitable for public park and recreational purposes shall be given to Federal, State, or local governmental agencies; that water areas shall be open to the general public without charge; and that no use of any area to which section 4 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.

Amendment No. 9: This amendment of the Senate, as modified, authorizes the Secretary of the Interior to dispose of electric energy generated at reservoir projects under control of the War Department not required in the operation of such projects; authorizes, from funds to be appropriated by the Congress, the construction, or acquisition by purchase or other agreement, of such transmission lines or related facilities as may be necessary in order to make the power and energy generated at such projects available in wholesale quantities on fair and reasonable terms and conditions; it establishes a preference in the sale of such power and energy to public bodies and cooperatives; and it provides that all moneys received from such sales shall be deposited in the Treasury of the United States as miscellaneous receipts. It follows the formula previously established by law for the Bonneville project that rate schedules shall be drawn with regard to recovering to the Government the cost of producing and transmitting the electric energy, including the amortization of the capital investment allocated to power, over a reasonable period of years.

Amendment No. 10: This amendment of the Senate changes the designation of section 4 of the bill passed by the House to section 6 of the bill passed by the Senate.

Amendments Nos. 11 and 13: These amendments of the Senate recognize the established laws and principles pertaining to ownership of the waters in the Western States and clarifies the House-approved language by authorizing contracts for storage of surplus water at War Department reservoirs rather than sale of such water.

Amendment No. 12: This amendment of the Senate protects existing lawful uses of surplus water available at reservoirs under the control of the War Department.

Amendment No. 14: This amendment of the Senate changes the designation of section 5 of the bill passed by the House to section 7 of the bill passed by the Senate.

Amendment No. 15: This amendment of the Senate clarifies the bill by substituting the word "allocated" for "available".

Amendment No. 16: This amendment of the Senate defines and limits the authority of the Secretary of War with regard to the reservoirs under the jurisdiction of the Tennessee Valley Authority to only the issuing of instructions for release of water from the Tennessee River into the Ohio River at such times as there is danger from floods on the lower Ohio and Mississippi Rivers.

Amendment No. 17: This amendment of the Senate replaces section 6 of the House approved bill with certain modified language substantially as requested by the Secretary of the Interior and constitutes section 8 of the Senate approved bill. The Senate language will provide for more effective administration in relation to the various technical features of the Federal reclamation law. It establishes a procedure for the utilization of multiple-purpose projects for irrigation purposes when the Secretary of War determines upon recommendations of the Secretary of the Interior that a project operated under the direction of the Secretary of War may be utilized for irrigation purposes.

Amendment No. 18: This amendment of the Senate is a new section which authorizes the comprehensive plans for the development

of the Missouri River Basin proposed by the War Department and the Department of the Interior, as coordinated by the joint report of the Chief of Engineers and the Commissioner of Reclamation (Sc. Doc. No. 247 of the 78th Cong.), and it authorizes the appropriation of $200,000,000 to be expended by the Corps of Engineers and $200,000,000 to be expended by the Secretary of the Interior for the partial accomplishment of the works authorized in this section to be undertaken by the Corps of Engineers and by the Secretary of the Interior. This section replaces the item in the House-approved bill, which expanded the approved general comprehensive plan for flood control in the Missouri River Basin to include the work recommended by the Corps of Engineers and authorized an appropriation of $200,000,000 for the partial accomplishment of that work. The Senate has recently accepted an amendment to the river and harbor bill (H. R. 3961) the effect of which is to provide duplicate authorization for the coordinated comprehensive plans for the Missouri River Basin. Such duplicate authority is undesirable and the Senate conferees have given assurances that if this conference report is approved by the House and Senate the duplicating item will be eliminated from the river and harbor bill.

Amendment No. 19: This amendment of the Senate, as modified, changes the designation of section 7 of the bill passed by the House to section 10 of the bill passed by the Senate; and clarifies the language in the House-approved bill to show that the authority for planning projects and for installation of penstocks applies to all projects authorized in this bill for the War Department and does not exclude War Department projects in the Missouri River Basin contained in an earlier section of the bill.

Amendment No. 20: This amendment of the Senate modifies the existing Waterbury, Wrightsville, and East Barre Dams in the Winooski River Basin to provide adequate spillway capacity for present design floods, at an estimated cost of $2,120,000.

Amendment No. 21: This amendment of the Senate adds a title for an additional river basin; namely, the Blackstone River Basin.

Amendment No. 22: This amendment of the Senate authorizes the construction of the West Hill Reservoir on the West River in Massachusetts for flood control and other purposes, at an estimated cost of $1,070,000.

Amendment No. 23: This amendment of the Senate authorizes a project on the Blackstone River for local flood protection at Worcester, Mass., by means of a diversion conduit and channel, at an estimated cost of $2,232,000.

Amendment No. 24: This amendment of the Senate authorizes a project on the Blackstone River for local flood protection at Woonsocket, R. I., by means of channel improvement, at an estimated cost of $803,000.

Amendment No. 25: This amendment of the Senate authorizes the project for local flood protection on the Seekonk River at Pawtucket, R. I., by means of levees for the protection of the city and adjacent areas, at an estimated cost of $82,000.

Amendment No. 26: This amendment of the Senate authorizes the Army engineers to construct eight reservoirs in the West River Basin in Vermont instead of the flood-control reservoir authorized by existing law at the Williamsville site in the towns of Dummerston or Newfane, in accordance with an alternative plan submitted by the Vermont

State Water Conservation Board as that plan may be modified by agreement between the Board and the Secretary of War and the Chief of Engineers; provided that the total cost of the alternate plan as determined by the Secretary of War does not exceed the sum of $11,000,000, and that 75 percent of the flood-control can be secured from that plan which may be secured from the Williamsville Reservoir. In the event that the eight-reservoir plan does not satisfy the above requirements, the Army engineers are authorized to proceed with the construction of the Williamsville project for flood control. The amendment also requires a further report and subsequent authorization by Congress before the projects at Cambridgeport, Ludlow, South Tunbridge, and Gaysville can be built. And it prohibits the construction of a dam or reservoir at the Sugar Hill site on the Ammonoosuc River under previous authority or that contained in this bill. It is understood that an alternate site is under study and if found feasible authority exists for initiation of such project.

Amendment No. 27: The conferees recommend that the Senate recede from this amendment which would have required a further report and subsequent authorization prior to the initiation of the House-approved project for the Thomaston Reservoir on the Naugatuck River for flood control in the Housatonic River Basin, Conn., at an estimated cost of $5,151,000. If further study discloses that the project should be abandoned or modified extensively the Chief of Engineers will withhold initiation of construction.

Amendment No. 28: This amendment of the Senate eliminates the Raystown Reservoir on the Raystown Branch of the Juniata River, Pa., for flood control and other purposes, for which the House-approved bill authorized $2,000,000 for the initiation and partial accomplishment.

Amendment No. 29: This amendment of the Senate approves a general plan for the long-range, comprehensive development of the Roanoke River Basin for flood control and other purposes, and authorizes the construction of the Buggs Island Reservoir on the Roanoke River in Virginia and North Carolina and the Philpott Reservoir on the Smith River in Virginia, at an estimated cost of $36,140,000.

Amendment No. 30: The conferees recommend that the Senate recede from this amendment, thereby eliminating the Yadkin-Pee Dee project from the bill. It is expected that a restudy of the basin may be authorized by committee resolutions at a later date.

Amendment No. 31: This amendment of the Senate authorizes a project for the Edisto River Basin in South Carolina, consisting of channel and bank clearing along 43 miles of Edisto River and its north and south forks, at an estimated cost of $139,000.

Amendment No. 32: This amendment of the Senate approves the general plan for the long-range, comprehensive development of the Savannah River Basin for flood control and other purposes and authorizes the construction of the Clark Hill Reservoir on the Savannah River in South Carolina and Georgia, at an estimated cost of $35,300,000. The river and harbor bill, H. R. 3961, as passed by the House contains an item for the Savannah River, the effect of which is to provide duplicate authorization for the Clark Hill Reservoir project. Such duplicate authority is undesirable and the Senate

conferees have given assurances that if this conference report is approved by the House and Senate the duplicating item will be eliminated from the river and harbor bill.

Amendment No. 33: Under the laws of the State of Louisiana and existing Federal laws, local interests in acquiring easements and levee rights-of-way may not pay more than the assessed value of the property, and the assessed value is usually lower than the actual market value. This amendment of the Senate establishes a construction of existing law to allow reimbursements for levee rights-of-way at actual market value regardless of State laws, limiting payments to local tax assessment valuations, thereby placing Louisiana and other States on the same basis for reimbursement.

Amendment No. 34: This amendment of the Senate authorizes local flood control and bank protection in the vicinity of Shreveport, La., at an estimated cost of $3,000,000.

Amendment No. 35: This amendment of the Senate authorizes the Blakely Mountain Dam and Reservoir on the Ouachita River for flood control and other purposes, at an estimated cost of $11,080,000.

Amendment No. 36: The conferees recommend that the Senate recede from this amendment, thereby eliminating the authority for modifying the project to include reservoirs upstream from Trinidad. The conferees agree that a modification of this magnitude should be undertaken only after full report by the Chief of Engineers and authorization by Congress. The appropriate investigation and report to Congress are now in progress.

Amendment No. 37: This amendment of the Senate as modified incorporates a project for the construction of the Red Rock Dam on the Des Moines River for flood control and other purposes into the approved general comprehensive plan for flood control in the upper Mississippi River Basin. The estimated cost of the Red Rock Dam and Reservoir on the Des Moines River is $15,000,000. The modification agreed to by the conferees removes the rigid restriction on elevation of spillway crest. The Chief of Engineers will, within existing authority, make any modifications in the design needed to protect existing sewers and public facilities.

Amendment No. 38: This amendment of the Senate authorizes a project for local flood protection on the Des Moines River at the city of Des Moines, Iowa, by means of levees, at an estimated cost of $270,000.

Amendment No. 39: The conferees recommend that the Senate recede from this amendment, thereby restoring the estimated cost of the project as contained in the bill passed by the House.

Amendment No. 40½: This amendment of the Senate as modified authorizes five small detention reservoirs for local flood control on Farm Creek, Ill. and for the protection of East Peoria, in accordance with the recommendations of the Chief of Engineers, at an estimated cost of $3,017,900.

Amendment No. 40: This amendment of the Senate authorizes the construction of the Bald Hill Reservoir on the Sheyenne River for flood control and other purposes at an estimated cost of $810,000.

Amendment No. 41: This amendment of the Senate authorizes the construction of one reservoir on the Pembina River and one on the Tongue River for flood control and other purposes in the Pembina River Basin in North Dakota, at an estimated cost of $333,800.

Amendment No. 42: This amendment of the Senate authorizes the construction of a reservoir on the south branch of Park River for flood control and other purposes, at an estimated cost of $358,610.

Amendment No. 43: This amendment of the Senate eliminates the language in the House-approved bill for the Missouri River Basin, which has been superseded by Senate amendment No. 18.

Amendment No. 44: The conferees recommend that the Senate recede from this amendment, thereby eliminating the language which would have removed the Tuttle Creek project from the comprehensive plan for the Missouri River Basin. The Chief of Engineers is now making an investigation of possible alternate projects and if feasible will recommend them as substitutes for Tuttle Creek. The conferees, however, in eliminating the amendment recognize the necessity for adequate reservoir control in the plan for protecting the Kansas Citys and leave the way open for selection of Tuttle Creek Reservoir if alternates are found to be infeasible.

Amendment No. 45: This amendment of the Senate authorizes a project for local flood protection on the Chariton River, Mo., consisting of channel and levee improvements, at an estimated cost of $1,610,300.

Amendments Nos. 46, 47, 48, and 49. These amendments of the Senate expand the approved general comprehensive plan for flood control in the Ohio River Basin adopted by the act approved June 28, 1938, as modified by the act approved August 18, 1941, to include: (*a*) Improvement in the Kentucky River Basin, consisting of the construction of a cut-off at the north fork of Kentucky River at Jackson and local flood protection at that community, and the modification of the plan for the Jessamine Creek, and Booneville projects to include the development of hydroelectric power at these sites, all at an estimated cost of $23,822,000; (*b*) local flood protection at Middlesborough on Yellow Creek, Ky., by means of supplemental levees, at an estimated cost of $205,200; (*c*) local flood protection on the Rough River and tributaries, Kentucky, by means of clearing of the channel banks of the lower Rough River and channel improvement in the lower portion of Barnett Creek, a tributary of the Rough River, all at an estimated cost of $360,000; and (*d*) the construction of the Turtle Creek Reservoir on Turtle Creek, Pa., for local flood protection in the lower Turtle Creek Valley, at an estimated cost of $2,613,000.

Amendments Nos. 50 and 51: These amendments of the Senate eliminate from the bill the Rowlesburg Reservoir on the Cheat River and the improvement of the Youghioghony River Basin which the House-approved bill placed into the comprehensive plan for flood control in the Ohio River Basin.

Amendment No. 52: This amendment of the Senate as modified provides that neither this authorization nor previous authorizations shall be construed to authorize the construction of the Shoals Dam on the east fork of the White River, Ind., pending congressional action subsequent to submission by the Chief of Engineers of the report on the Wabash River and tributaries now in progress under authority of the Flood Control Act of August 11, 1939.

Amendment No. 53: This amendment of the Senate authorizes the construction of the Mount Morris Reservoir on the Genesee River, N. Y., at an estimated cost of $5,360,000.

Amendment No. 54: This amendment of the Senate authorizes the construction of local protection works at Redmond, Utah, on the Sevier River, by the construction of a leveed channel, at an estimated cost of $281,000.

Amendment No. 55: This amendment of the Senate adds a title for an additional river basin; namely, the Colorado River Basin.

Amendment No. 56: This amendment of the Senate authorizes the construction of the Alamo Reservoir on the Bill Williams River in Arizona, at an estimated cost of $3,202,000.

Amendment No. 57: This amendment of the Senate authorizes the project on Little Colorado River for local flood protection at Holbrook, Ariz., by means of levees, at an estimated cost of $258,000.

Amendment No. 58: This amendment of the Senate authorizes the construction of local flood protection on the Pajaro River and tributaries, California, by means of levees and bank protection works along the lower Pajaro River and on Carnadero Creek at Gilroy, at an estimated cost of $511,160.

Amendment No. 59: This amendment of the Senate modifies the language of the House-approved item, based on the report of the Board of Engineers for River and Harbors, to reflect the views and recommendations of the Chief of Engineers which became available subsequent to the passage of this item by the House.

Amendment No. 60: This amendment of the Senate authorizes the construction of the Folsom Reservoir on the American River in California, at an estimated cost of $18,474,000. The Folsom project will control flood peaks on the American River and thereby reduce the threat to the city of Sacramento resulting from an uncontrolled flood on the American River synchronized with a major flood crest on the Sacramento River.

Amendment No. 61: This amendment of the Senate authorizes improvements in the Calaveras River and Littlejohn Creek Stream Group consisting of the Farmington Reservoir on Littlejohn Creek; channel enlargements, diversions and dikes; and enlargement of Hogan Reservoir, all at an estimated cost of $3,868,200.

Amendment No. 62: This amendment of the Senate authorizes construction of the Conn Creek Reservoir on Conn Creek for flood control and other purposes in the Napa River Basin in California, at an estimated cost of $460,000.

Amendment No. 63: This amendment of the Senate authorizes local flood protection in the Chehalis River at Aberdeen, Hoquiam, and Cosmopolis, by means of earth levees, concrete sheet piling, walls, and appurtenant works, at an estimated cost of $669,000.

Amendment No. 64: This amendment of the Senate authorizes the construction of local flood-protection works at Hanapepe on the Hanapepe River in the Territory of Hawaii, by means of concrete flood walls, at an estimated cost of $73,000.

Amendment No. 65: This amendment of the Senate changes the designation of section 8 of the bill passed by the House to section 11 of the bill passed by the Senate.

Amendments Nos. 66, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, and 80: These amendments of the Senate authorize preliminary examinations and surveys of certain streams not in the bill passed by the House.

Amendment No. 67: This amendment of the Senate clarifies an item for a preliminary examination and survey.

Amendment No. 81: This amendment of the Senate changes the designation of section 9 of the bill passed by the House to section 12 of the bill passed by the Senate.

Amendment No. 82: This amendment of the Senate as modified raises to $950,000,000 (increase of $140,000,000) the authorization provided by the bill, in order that sufficient authority may be available to cover the additional improvements included in the bill by Senate amendments and it clarifies the intent of this authorization to show clearly that the amount specified is for work authorized to be prosecuted under the direction of the Secretary of War and the supervision of the Chief of Engineers. The $200,000,000 authorization for War Department projects in the Missouri River Basin is included in this amount. The $200,000,000 authorization for Department of the Interior projects in the Missouri River Basin is contained in section 9 and is not included in this amount.

Amendment No. 83: This amendment of the Senate as modified authorizes the expenditure of $500,000 as an emergency fund under the direction of the Secretary of War and the supervision of the Chief of Engineers, for the construction of emergency bank-protection works to prevent flood damage to highways, bridge approaches, and public works.

Amendment No. 84: This amendment of the Senate changes the designation of section 10 of the bill passed by the House to section 13 of the bill passed by the Senate.

Amendment No. 85: This amendment of the Senate as modified provides that in connection with the works authorized to be undertaken by the Department of Agriculture land may be acquired only with the consent of the States and it lessens the burden on local communities of removal of large areas from taxation by providing for payments to local governments in lieu of taxes on the land acquired.

Amendment No. 86: This amendment of the Senate as modified authorizes works of improvement in the Santa Ynez River watershed to be undertaken by the Department of Agriculture, at an estimated cost of $434,000. The increased amount is to cover land acquisition as recommended by the Department of Agriculture in House Document No. 518.

Amendment No. 87: The conferees recommend that the Senate recede from this amendment, thereby restoring the full amount of the estimated cost ($32,000,000) including cost of land acquisition as recommended by the Department of Agriculture in House Document No. 708.

Amendment No. 88: The conferees recommend that the Senate recede from this amendment, thereby restoring the full amount of the estimated cost ($4,221,000) including cost of land acquisition as recommended by the Department of Agriculture in House Document No. 892.

Amendment No. 89: This amendment of the Senate, as modified, authorizes works of improvement in the Yazoo River watershed to be undertaken by the Department of Agriculture, at an estimated cost of $21,700,000. The increased amount is to cover land acquisition as recommended by the Department of Agriculture in House Document No. 564.

Amendment No. 90: This amendment of the Senate authorizes works of improvement in the watershed of Buffalo Creek and its tributaries, Cayuga and Cazenovia Creeks to be undertaken by the Department of Agriculture, at an estimated cost of $739,000.

Amendment No. 91: The conferees recommend that the Senate recede from this amendment, thereby restoring the full amount of the estimated cost ($11,243,000) including cost of land acquisition as recommended by the Department of Agriculture in House Document No. 275.

Amendment No. 92: This amendment of the Senate changes the designation of section 11 of the bill passed by the House to section 14 of the bill passed by the Senate.

Amendment No. 93: This amendment of the Senate as modified changes the reference to a number of a section in the bill passed by the House to the corresponding number of the section of the bill as passed by the Senate.

Amendment No. 94: This amendment of the Senate changes the designation of section 12 of the bill passed by the House to section 15 of the bill passed by the Senate.

WILL M. WHITTINGTON,
A. LEONARD ALLEN,
A. J. ELLIOTT,
CHARLES R. CLASON,
CARL T. CURTIS,
Managers on the Part of the House.

HQ AR006212-HQ AR006242

Calendar No. 1047

78TH CONGRESS 2d Session } SENATE { REPORT No. 1030

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

JUNE 22 (legislative day, MAY 9), 1944.—Ordered to be printed

Mr. OVERTON, from the Committee on Commerce, submitted the following

REPORT

[To accompany H. R. 4485]

The Committee on Commerce, to whom was referred the bill (H. R. 4485) authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes, having considered the same, report favorably thereon with amendments, with the recommendation that the bill, as amended, do pass.

AMENDMENT NO. 1

On page 1, after line 2, insert a new section as follows:

It is the purpose of this Act to establish a definite policy of making use of existing Federal agencies for the construction, operation, and maintenance of all public improvements in connection with navigation, flood control, and allied activities; to insure coordinated operation of all Federal projects therein for the improvement of navigation and alleviation of flood conditions; to provide for realization of other benefits to be derived from such projects; to facilitate preparations and planning for post-war construction by the Federal Government in the interest of employment; and to secure efficient executive management under the direction and supervision of the permanent executive agencies already established by Act of Congress.

The committee is of the opinion that the best interest of the country as a whole will be served by fully utilizing existing Federal agencies in the planning, construction, maintenance, and operation of all improvements for the development of the Nation's water resources. The established Federal agencies have highly trained personnel that are specialists in their respective fields. The chiefs of the principal bureaus and commissions directly responsible for the preparation of plans and for the administration of the national program for the development of the water resources of the country have entered into an agreement to insure cooperation on multiple-purpose projects.

Under the terms of that agreement, conferences are held in Washington at least once each calendar month for the purpose of discussing the results of studies and investigations, adjusting differences of opinion, and promoting ways and means for implementing the agreement.

The committee believes that the most effective means of insuring efficient executive management and a uniform administration of the national policies enunciated by Congress with respect to navigation, flood control, irrigation, development of hydroelectric power, water-flow retardation, and soil-erosion prevention is through the utilization of the permanent executive agencies already established by acts of Congress for the administration of these programs and it recommends adoption of the amendment.

AMENDMENT NO. 2

On page 2, line 23, after the word "operate", insert the word "public".

Amendment 2 specifies that the authority of the Secretary of War to construct, operate, and maintain park and recreational facilities applies only to facilities for public use.

AMENDMENT NO. 3

On page 3, line 2, strike out the word "structures" and insert the words "including structures".

AMENDMENT NO. 4

On page 3, line 2, after the word "facilities", insert the word "thereon,".

Amendments 3 and 4 limit the authority of the Secretary of War with respect to reservoir areas to granting leases on lands only of the Federal Government and does not extend the authority to the granting of leases covering the water surface of such reservoirs.

It is intended that the waters of the reservoirs shall be devoted to public use free of charge for the purposes of boating, fishing, swimming, and other recreational activities.

AMENDMENT NO. 5

On page 3 strike out all of lines 4, 5, 6, 7, and on line 8 through the word "interest", and insert the following:

That preference shall be given to Federal, State, or local governmental agencies, and licenses may be granted, without monetary consideration, to such agencies for the use of areas suitable for public park and recreational purposes, when the Secretary of War determines such action to be in the public interest. 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 War not to be contrary to the public interest, all under such rules and regulations as the Secretary of War may deem necessary.

Amendment 5 provides that preference in the granting of licenses for the use of areas suitable for public park and recreational purposes shall be given to Federal, State, and local governmental agencies.

AMENDMENT NO. 6

On page 3, after line 10, insert a new section as follows:

Electric power and energy generated at reservoir projects under the control of the War Department and in the opinion of the Secretary of War not required in the operation of such projects shall be delivered to the Secretary of the Interior, who shall transmit and dispose of such power and energy in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles, the rate schedules to become effective upon confirmation and approval by the Federal Power Commission. Preference in the sale of such power and energy shall be given to public bodies and cooperatives. The Secretary of the Interior is authorized to construct and acquire only such transmission lines and related facilities as may be necessary in order to make the power and energy generated at said projects available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies.

Amendment 6 authorizes the Secretary of the Interior to dispose of electric power generated at reservoir projects under the control of the War Department.

Existing authority for flood-control projects and the authority contemplated in H. R. 4485 provides for a number of multiple-purpose dam and reservoir projects where large blocks of hydroelectric power will be produced but there is at the present time no general law governing the sale and distribution of power generated at projects under the control of the War Department. In order to attain the greatest benefit to the general public from this hydroelectric power, the time has come to place by law the responsibility for disposal of such power in an existing Federal agency. In the Bonneville Power Administration Act and the Fort Peck Power Administration Act, Congress has authorized the Secretary of the Interior to dispose of the power generated at the Bonneville and Fort Peck projects. More recently, under Executive Order No. 9366, the Secretary of the Interior has been made responsible for the disposal of power from the Denison and Norfork projects.

The committee has heard testimony from the Secretary of the Interior and from the Director of the Division of Power of the Department of the Interior on this subject. The latter official has informed the committee that the provisions of amendment No. 6 contain sufficient authority and latitude for efficient administration and will satisfactorily enable the Department of the Interior to carry out the intent of the amendment. The committee desires an amendment which provides a convenient and practical method of disposing of power at projects under the control of the War Department without setting up a public power trust which would be unduly competitive with established private power utilities. The committee, therefore, has inserted a proviso which authorizes the Secretary of the Interior to construct and acquire only such transmission lines or related facilities as may be necessary in order to make the power and energy generated at such projects available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies. The committee recognizes the desirability of granting preferences in the sale of such power and energy to public bodies and cooperatives when the power is generated at projects financed by the Federal Government.

AMENDMENT NO. 7

On page 3, line 16, change the period after "Department" to a colon and add the following:

Provided, That no sale of such water shall adversely affect then existing lawful uses of such water.

In connection with the sale for domestic and industrial use of surplus water available at any reservoir under the control of the War Department, the committee believes that existing lawful uses of water should be protected.

AMENDMENT NO. 8

On page 3, line 15, strike out the word "available" and insert in lieu thereof "allocated".

AMENDMENT NO. 9

On page 3, line 18, change the period to a colon and insert the following:

Provided, That this section shall not apply to the Tennessee Valley Authority except in case of danger from floods.

AMENDMENT NO. 10

On page 3 strike out line 25 and on page 4 strike out the first 10 lines and line 11 through the word "receipts" and insert in lieu thereof the following:

Hereafter, whenever the Secretary of War determines, upon recommendation by the Secretary of the Interior that any dam and reservoir project operated under the direction of the Secretary of War may be utilized for irrigation purposes, the Secretary of the Interior is authorized to construct, operate, and maintain, under the provisions of the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), such additional works in connection therewith as he may deem necessary for irrigation purposes. Such irrigation works may be undertaken only after a report and findings thereon have been by the Secretary of the Interior as provided in said Federal reclamation laws and after subsequent specific authorization of the Congress by an authorization Act; and, within the limits of the water users' repayment ability such report may be predicated on the allocation to irrigation of an appropriate portion of the cost of structures and facilities used for irrigation and other purposes. Dams and reservoirs operated under the direction of the Secretary of War may be utilized hereafter for irrigation purposes only in conformity with the provisions of this section, but the foregoing requirement shall not prejudice lawful uses now existing:

During the hearings and also by letter the Secretary of the Interior expressed to the committee his views with regard to the utilization of multiple purpose projects under the control of the the War Department where irrigation may be involved and he expressed the view that the language in H. R. 4485, if modified, would provide for more effective administration in relation to the various technical features of the Federal reclamation laws. The committee therefore recommends the adoption of amendment No. 10 which is generally in accord with existing law and the expressed views of the Secretary of the Interior.

AMENDMENT NO. 11

On page 5, after line 15, insert the following:

LAKE CHAMPLAIN BASIN

Modifications of the existing Waterbury, Wrightsville, and East Barre Dams in the Winooski River Basin, Vermont, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 629, Seventy-eighth Congress, second session, at an estimated cost of $2,120,000.

BLACKSTONE RIVER BASIN

The project for the West Hill Reservoir on the West River, Mass., for flood control and other purposes in the Blackstone River Basin is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 624, Seventy-eighth Congress, second session, at an estimated cost of $1,070,000.

The project on Blackstone River for local flood protection at Worcester, Mass., is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 624, Seventy-eighth Congress, second session, at an estimated cost of $2,232,000.

The project on Blackstone River for local flood protection at Woonsocket, R. I., is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 624, Seventy-eighth Congress, second session, at an estimated cost of $803,000.

The project on Seekonk River, for local flood protection at Pawtucket, R. I., is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document No. 624, Seventy-eighth Congress, second session, at an estimated cost of $82,000.

Amendment 11 authorizes modification of three existing flood-control dams on tributaries of the Winooski River, and construction of flood-control projects in the Blackstone River Basin.

WINOOSKI RIVER, VT.

(H. Doc. No. 629, 78th Cong., 2d sess.)

Winooski River rises in the northeast section of Washington County, Vt., and flows generally westerly for a distance of about 90 miles to Lake Champlain. Under an emergency relief project authorized on June 2, 1933, by the Director of Emergency Conservation Work, the Civilian Conservation Corps, working under the engineering supervision of the Chief of Engineers constructed certain flood-control works within the Winooski River watershed. This work included the construction of Wrightsville Dam on the North Branch, the East Barre Dam on the Jail Branch, and the Waterbury Dam on the Waterbury River.

Subsequent to the construction of those dams, much more comprehensive meteorological and hydrological data have been developed and computations based on these data now indicate that by a combination of certain conditions, nature could produce a flood of such magnitude in the Winooski watershed that the dams could be overtopped and destroyed.

The plan of improvement provides for the modification of the Waterbury, Wrightsville and East Barre Dams to provide adequate spillway capacity for present design floods at an estimated cost to the United States of $2,120,000.

The committee finds that the proposed modifications are necessary to insure the safety of the structures and to protect the lives and security of the people in the valley below, and recommends the modifications of these structures.

BLACKSTONE RIVER, MASS., AND R. I.

(H. Doc. No. 624, 78th Cong., 2d sess.)

The Blackstone River is formed by the confluence of Mill Brook and the Middle River at Worcester, Mass., and flows about 49 miles in a southeasterly direction to Narragansett Bay. The tidal section of the Blackstone River, below Main Street in Pawtucket, R. I., is generally referred to as the Seekonk River. The Blackstone River drains an area of 540 square miles, of which 382 are in Massachusetts and 158 are in Rhode Island.

Floods on Blackstone River are frequently accompanied by failures of existing dams that intensify flood conditions in many localities in the basin. The major flood losses are the result of inundation of business and industrial districts in municipalities; failure of storage and power dams; interruption of highway and railroad traffic; and suspension of power, water supply, sewage disposal and telephone facilities.

The recommended plan for flood control provides for (*a*) the construction of the West Hill Reservoir, at an estimated cost to the United States of $1,070,000, with provisions for increasing the gross capacity to provide conservation storage in the amount desired by the State of Massachusetts or other local interests, provided that the estimated increased cost of the enlarged reservoir be contributed by the State or other local interests; (*b*) construction of a diversion conduit and channel from Kettle Brook to the Blackstone River bypassing the city of Worcester, at an estimated cost to the United States of $2,232,000; (*c*) channel improvement at Woonsocket, at an estimated cost to the United States of $803,000; and (*d*) construction of a flood wall at Pawtucket, R. I., for the protection of the city hall and adjacent area, at an estimated cost to the United States of $82,000.

The committee finds that the economic benefits of the projects amply justify the cost and recommends that the works be constructed in accordance with the plans recommended by the Chief of Engineers.

AMENDMENT NO. 12

On page 5, line 24, change the period to a colon and insert the following:

Provided further, That none of the dams herein authorized for the Connecticut River Basin shall be utilized for the generation of hydroelectric power.

The committee does not favor the expenditure of large sums of money at dams in the Connecticut River Basin looking toward the future development of hydroelectric power at those projects in face of local objections and without full reports and hearings thereon and subsequent specific authorization therefor by Congress. Accordingly, the committee recommends the approval of amendment No. 12, which prohibits the generation of hydroelectric power at authorized flood-control dams in the Connecticut River Basin.

AMENDMENT NO. 13

On page 7, after line 19, insert the following:

ROANOKE RIVER BASIN

The general plan for the comprehensive development of the Roanoke River Basin for flood control and other purposes recommended by the Chief of Engineers in House Document Numbered 650, Seventy-eighth Congress, second session, is approved and the construction of the Buggs Island Reservoir on the Roanoke River in Virginia and North Carolina, and the Philpott Reservoir on the Smith River in Virginia, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in that report at an estimated cost of $36,140,000.

YADKIN-PEE DEE RIVER BASIN

The general plan for the comprehensive development of the Yadkin-Pee Dee River Basin for flood control and other purposes recommended by the Chief of Engineers in House Document Numbered 652, Seventy-eighth Congress, second session, is approved and the construction of the Wilkesboro Reservoir on the Yadkin-Pee Dee River in North Carolina is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in that report at an estimated cost of $10,840,000

EDISTO RIVER BASIN

The project for local flood control on Edisto River, S. C., is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 182, Seventy-eighth Congress, second session, at an estimated cost of $139,000.

SAVANNAH RIVER BASIN

The general plan for the comprehensive development of the Savannah River Basin for flood control and other purposes recommended by the Chief of Engineers in House Document Numbered 657, Seventy-eighth Congress, second session, is approved and the construction of the Clark Hill Reservoir on the Savannah River in South Carolina and Georgia is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in that report at an estimated cost of $35,300,000.

Amendment 13 authorizes improvements for flood control and other purposes in the Roanoke, Yadkin-Pee Dee, Edisto, and Savannah River Basins.

ROANOKE RIVER, VA. AND N. C.

(H Doc. No. 650, 78th Cong., 2d sess.)

The Roanoke River rises on the eastern slope of the Appalachian Mountains in south-central Virginia, flows 410 miles in a general southeasterly direction and empties into Albemarle Sound, 7 miles northeasterly from Plymouth, N. C. The drainage basis contains 9,580 square miles, of which 6,610 are in Virginia and 3,420 in North Carolina. Section 7 of the Flood Control Act approved June 22, 1936, authorized the Secretary of War to continue surveys, studies, and reports at certain specific localities, including the Roanoke River Basin, where, according to the surveys and estimates previously made, opportunities appear to exist for useful flood-control operations with economical development of hydroelectric power whenever sufficient markets to absorb such power become available. The authorization recommended in this amendment is based on the report of the Chief of Engineers submitted pursuant to the 1936 act.

The report presents a step-by-step comprehensive plan which would provide for the full utilization of the water resources of the Roanoke River Basin. The plan consists of the construction of 11 multiple-purpose projects for flood control, power development and other purposes, at an estimated cost of $124,000,000 for construction. Due to the flood protection that would be secured and the immediate requirements for additional power-generating capacity, the Buggs Island and Philpott projects on the Roanoke and Smith Rivers, respectively, are recommended for authorization and construction as the initial step in the development of the comprehensive plan, at an estimated cost of $36,140,000.

The committee notes that the Buggs Island project (initial development) will produce 278,000,000 kilowatt-hours of prime and 153,000,000 of secondary energy per year and that the Philpott project (initial development) will produce 22,400,000 kilowatt-hours of prime and 1,200,000 of secondary energy per year, that over 90 percent of the flood losses to the two main flood-damage areas in the Roanoke River Basin will be eliminated, and that the expected benefits exceed the average annual charges by about 30 percent. The committee recommends approval of the comprehensive plan and authorization for construction of the Buggs Island and Philpott Reservoirs in accordance with the recommendations of the Chief of Engineers.

YADKIN-PEE DEE RIVER, N. C. AND S. C.

(H. Doc. No. 652, 78th Cong., 2d sess.)

The Yadkin River rises on the eastern slope of the Blue Ridge Mountains of western North Carolina, flows northeasterly, easterly, and southeasterly about 202 miles to the mouth of the Uharie River near Badin, N. C., where it changes its name to Pee Dee or Great Pee Dee River, thence it continues southeasterly about 253 miles to enter the Atlantic Ocean through Winyah Bay near Georgetown, S. C. It drains an area of 16,340 square miles in the coastal plain, Piedmont Plateau, and the mountain region. Section 7 of the Flood Control Act approved June 22, 1936, authorized the Secretary of War to continue surveys, studies, and reports at certain specific localities, including the Rocky River (Loves Ford and Crumps Ford), N. C., and at Wilkesboro Dam, Yadkin River, N. C., where, according to the surveys and estimates previously made, opportunities appear to exist for useful flood-control operations with economical development of hydro-electric power whenever sufficient markets to absorb such power become available. The authorization recommended in this amendment is based on the report of the Chief of Engineers submitted pursuant to the 1936 act.

The report presents a comprehensive plan for the step-by-step development of the basin which would provide for the optimum development of the potentialities of the Yadkin-Pee Dee Basin. The plan consists of the construction of multiple-purpose reservoirs at Wilkesboro, Tuckertown, Junction, Morven, Greater Blewett, and Crumps Ford for flood control, power development, and other purposes, at an estimated cost of $105,840,000 for construction. Due to the flood protection that would be secured, the Wilkesboro project is recommended for authorization and construction as the initial step

in the development of the comprehensive plan at an estimated cost of $10,840,000.

The committee notes that the Wilkesboro project as an initial development will produce 32,600,000 kilowatt-hours of primary and 1,700,000 of secondary energy per year and that the annual charges estimated at $499,000 are substantially less than the annual benefits estimated at $604,000. The committee recommends approval of the comprehensive plan and authorization for construction of the Wilkesboro Dam and Reservoir, in accordance with the recommendations of the Chief of Engineers.

EDISTO RIVER, S. C.

(S. Doc. No. 182, 78th Cong., 2d sess.)

The Edisto River, formed by the junction of its north and south forks in southern South Carolina, flows southeasterly 118 miles to the Atlantic Ocean, 30 miles southwest of Charleston. It drains an area of 2,983 square miles in the coastal plain region.

The Edisto River Basin is subject to frequent overflow and because of the flat slopes throughout the watershed and the inadequate channel capacities, the main stream and its tributaries remain at high stages for long periods.

The plan of improvement recommended by the Chief of Engineers provides for channel and bank clearing along 43 miles of Edisto River and its north and south forks, at an estimated first cost of $139,000.

The committee concurs in the studies made by the Chief of Engineers and recommends that the project be adopted in accordance with the recommendations of the Chief of Engineers.

SAVANNAH RIVER, S. C. AND GA.

(H. Doc. No. 657, 78th Cong., 2d sess.)

The Savannah River is formed by the junction of Tugaloo and Seneca Rivers on the boundary line between Georgia and South Carolina, and flows easterly along the boundary for 313.7 miles to the Atlantic Ocean. It drains an area of 10,579 square miles, of which 359 are in North Carolina, 4,282 in South Carolina, and 5,938 in Georgia. Section 7 of the Flood Control Act approved June 22, 1936, authorized the Secretary of War to continue surveys, studies, and reports at certain specific localities, including Clark Hill Reservoir, Ga., where, according to the surveys and estimates already made, opportunities appear to exist for usable flood-control operation with economical development of hydroelectric power whenever sufficient markets to absorb such power become available. The authorization recommended in this amendment is based on the report submitted by the Chief of Engineers pursuant to the 1936 act.

The report presents a comprehensive plan for the step-by-step development to provide for the optimum development of the potentialities of the Savannah River Basin. The plan consists of the construction of multiple-purpose reservoirs at Clark Hill, Hartwell, Goat Island, Middleton Shoals, four projects operated conjointly on the Chattooga River, Tallow Hill, Anthony Shoals, and Newry-Old Pickens for flood control, power development and other purposes, at an estimated cost of $140,400,000 for construction as the initial step

in the development of the comprehensive plan, at an estimated cost of $35,300,000 for construction.

The committee notes that the Clark Hill project as an initial development will produce 474,100,000 kilowatt-hours of primary and 231,200,000 kilowatt-hours of secondary energy annually, and that the project develops a favorable ratio of costs to benefits of 1 to 2.26. The committee recommends approval of the comprehensive plan and authorization for construction of the Clark Hill project, in accordance with the recommendations of the Chief of Engineers.

AMENDMENT NO. 14

On page 9, after line 13, insert the following:

The project on Red River in the vicinity of Shreveport, Louisiana, for flood control and bank protection is hereby authorized, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 627, Seventy-eighth Congress, second session, at an estimated cost of $3,000,000, except that, in view of the large expenditure already made by local interests, they shall not be required to contribute to the construction cost.

The project for the Blakely Mountain Dam on the Ouachita River, for flood control and other purposes in the Ouachita River Basin, Arkansas, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 647, Seventy-eighth Congress, second session, at an estimated cost of $11,080,000.

Amendment 14 authorizes projects for flood-control and other purposes along the Red River in the vicinity of Shreveport and on the Ouachita River at the Blakely Mountain site.

RED RIVER, VICINITY OF SHREVEPORT, LA.

(H. Doc. No. 627, 78th Cong., 2d sess.)

The section of Red River in the vicinity of Shreveport, La., considered in this report, extends from mile 315, above Twelve Mile Bayou Bend, downstream to Eagle Bend at mile 295. Shreveport, La., occupies the west bank of the river between miles 305 and 308 and Bossier City, and the east bank from mile 305 to mile 309. Upstream from the lower limits of Shreveport, the river channel consists of three bends and its bed and banks are composed of readily erodible alluvium.

The Red River at Shreveport is subject to floods which result principally from the run-off from general storms. Bank caving is a serious problem. Local interests have expended approximately $2,120,000 between 1906 and 1941 for bank protection, set-back levees, and railroad and highway relocations made necessary by the caving banks.

The plan of improvement recommended by the Chief of Engineers provides for the control of bank caving by restoration, enlargement, extension or replacement of the existing protective works at critical areas along both banks of the river in the vicinity of Shreveport, at an estimated cost of $3,000,000 for construction, of which $1,500,000 would be chargeable to the United States.

The importance of the bank-erosion problem in this area is evidenced by the large expenditures heretofore made by local interests for control works. The committee finds that the proposed improvements are economically justified. In view of the large expenditure already

made by local interests, it is of the opinion that local interests should be relieved of the requirement to contribute $1,500,000 toward the cost of the improvement. The committee, therefore, recommends that the project be adopted substantially in accordance with the recommendations of the Chief of Engineers except that local interests shall not be required to contribute to the construction cost. Local interests are required to provide the necessary land and meet other requirements of local cooperation.

OUACHITA RIVER—BLAKELY MOUNTAIN DAM

(H. Doc. No. 647, 78th Cong., 2d sess.)

The Ouachita River rises in Polk County, Ark., and flows 605 miles in a southeasterly direction across the southwestern corner of Arkansas and the northeastern corner of Louisiana and empties into Red River 35 miles above its mouth. It drains an area of 24,280 square miles, of which 1,105 square miles of mountainous terrain are located above the Blakely Mountain Dam site.

Six damaging floods occurred in the Ouachita River Basin between 1927 and 1940. The flood of 1927 caused damage estimated at $1,260,000.

The plan of improvement recommended by the Chief of Engineers provides for the construction of a multiple-purpose reservoir at the Blakely Mountain site for flood control and power production, by means of an earth-rock fill dam at mile 490, with an initial power installation of 38,000 kilowatts. The dam would create a reservoir of 1,915,000 acre-feet capacity, of which 525,000 acre-feet of storage would be reserved for flood control.

The committee notes that the annual tangible benefits from flood control along the Ouachita River between Remmel Dam and the mouth of the Little Missouri River, resulting from the construction of the Blakely Mountain Dam, are estimated at $129,900. The committee finds that the multiple-purpose development has a favorable ratio of cost to benefits of 1 to 1.49 and recommends adoption of the project.

AMENDMENT NO. 15

On page 10, line 25, change the period after "Basin" to a comma and add the following:

including the project for the Red Rock Dam on the Des Moines River for flood control and other purposes, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 651, Seventy-eighth Congress, second session, at an estimated cost of $15,000,000.

AMENDMENT NO. 16

On page 11, after line 7, insert the following:

The project on the Des Moines River for local flood protection at Des Moines, Iowa, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 651, Seventy-eighth Congress, second session, at an estimated cost of $270,000.

Amendments 15 and 16 authorize projects on the Des Moines River.

DES MOINES RIVER, IOWA AND MINN.

(H. Doc. No. 651, 78th Cong., 2d sess.)

The Des Moines River rises in southwestern Minnesota, flows southeasterly across the State of Iowa, and empties into the Mississippi River at Keokuk. It drains an area of 14,540 square miles of flat and rolling plains. Des Moines with a population of 160,000 is the largest city.

Damaging floods may be expected with an average frequency of more than once a year in the lower reaches of Des Moines River and about once every year and a half in the upper basin.

The plan of improvement provides for: (*a*) The construction of a multiple-purpose reservoir at the Red Rock site for flood-control power and other purposes, with 800,000 acre-feet of storage for flood control, 190,000 acre-feet of storage for the development of power, and 210,000 acre-feet of dead storage to create power head and afford a pool for boating and other recreational uses and to provide conservation benefits; and (*b*) the enlargement and provision of levees and related works at the city of Des Moines. The estimated costs are $15,000,000 for the reservoir and $270,000 for the local protection works.

The committee concurs in the views of the Chief of Engineers and recommends the authorization of a multiple-purpose reservoir at the Red Rock site on the Des Moines River and local protection works for Des Moines.

AMENDMENT NO. 17

On page 11, line 18, strike out "$418,000" and insert "$300,000."

Amendment 17 is a clarifying amendment with respect to the Galena River project.

The report of the Chief of Engineers on the Galena River, Ill. and Wis., published in House Document No. 336, Seventy-seventh Congress, second session, recommends the construction of local protection works at an estimated cost of $418,000 for construction, subject to certain conditions of local cooperation, including a cash contribution of $118,000, toward the first cost of construction.

Since the amounts shown in the bill consistently represent the estimated Federal cost of the various projects, as shown in the documents referred to and inasmuch as the amendment adopted by the House did not remove the requirements of local cooperation, the committee, in order to avoid an interpretation that any of the conditions of local cooperation for that project have been waived, considers it advisable that the bill cite the estimated Federal cost as shown in House Document No. 336, Seventy-seventh Congress, first session.

AMENDMENT NO. 18

On page 12, after line 11, insert the following:

The project for the Bald Hill Reservoir on the Sheyenne River for flood control and other purposes in the Sheyenne River Basin, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of

Engineers in Senate Document Numbered 193, Seventy-eighth Congress, second session, at an estimated cost of $810,000.

The projects for the construction of one reservoir on the Pembina River and one on the Tongue River for flood control and other purposes in the Pembina River Basin, North Dakota, are hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 565, Seventy-eighth Congress, second session, at an estimated cost of $333,800.

The project for the construction of a reservoir on the South Branch of Park River for flood control and other purposes in the Park River Basin, North Dakota, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in Senate Document Numbered 194, Seventy-eighth Congress, second session, at an estimated cost of $358,610.

Amendment 18 authorizes projects on the Sheyenne, Pembina, and Park Rivers in the drainage basin of the Red River of the North.

SHEYENNE RIVER, N. DAK.

(S. Doc. No. 193, 78th Cong., 2d sess.)

The Sheyenne River rises in central North Dakota and flows 500 miles generally southeast to enter the Red River about 10 miles north of Fargo, N. Dak. The drainage area of 7,320 square miles is characterized by rolling drift prairie lands in the headwaters section, irregular and hilly delta land in the intermediate section, and the flat Red River Valley plain in the lower 70 miles.

Floods in Sheyenne River are usually the result of snow melt followed by warm spring rains. The Chief of Engineers finds that the construction of works solely to prevent flood damages in the basin of the Sheyenne River is not economically justified. However, he finds it practicable by means of reservoir storage, to provide a substantial degree of flood control and to increase the low-water flow of the stream with resultant large water supply and pollution-abatement benefits.

The plan of improvement provides for the construction of the Bald Hill Reservoir on the Sheyenne River for flood control and water conservation and the construction of a low concrete diversion dam in Sheyenne River 35 miles above the mouth and of a short ditch leading thence to the existing Stanley ditch to permit part of the regulated flow to be used for water supply and pollution abatement in Red River of the North at Fargo. Because of the large water-supply benefits to the city of Fargo, N. Dak., the War Department proposes that local interests bear the cost of the Fargo diversion dam and ditch and contribute $208,000 toward the first cost of the reservoir, and bear the expense of all the necessary alterations of utilities, roads, highways, and bridges. The estimated cost of the project is $1,341,300, of which $810,000 is allocated to the Federal Government and $531,300 to local interests.

As the Bald Hill Reservoir would provide complete protection from floods of record for the section of the river between the dam and the flood plain of the Red River of the North and since the general benefits resulting from increasing the low flow of the river would be considerable, the committee recommends adoption of the project.

PEMBINA RIVER, N. DAK.

(H. Doc. No. 565, 78th Cong., 2d sess.)

The Pembina River has its origin in the Turtle Mountains and the Drift Prairie of southern Manitoba and flows 275 miles southeasterly and easterly to join the Red River of the North in northeastern North Dakota. It drains an area of 3,619 square miles, of which 1,947 are in Canada and 1,672 in the United States. The Tongue River, its principal tributary, drains an area in North Dakota south of the Pembina River.

Floods on the Pembina and Tongue Rivers occur nearly annually in the spring from melting snow and occasionally in the summer from heavy rainfall but generally are not of sufficient magnitude to cause serious damage. The areas subject to inundation are principally flat farm lands with poor drainage. They remain saturated for long periods which delays planting, reduces crop yields, and destroys crops. Local interests are particularly concerned about the serious depletion of the supply of water during the drought year following 1930 and have pointed out that the past floods, the expectancy of future floods, and the danger of a water famine constitute a serious menace to the well-being and prosperity of the various communities along the river.

The Chief of Engineers finds that the average annual flood damages in the Pembina River Basin are too small to warrant the construction of improvements solely for flood protection, and that the best plan of improvement would be the construction of storage reservoirs for the dual purpose of reducing flood flows and increasing low-water flows in the lower reaches of the stream. The plan of improvement provides for the construction of a reservoir on the Pembina River 1 mile downstream from the confluence of Pembina and Little Pembina Rivers and the construction of a reservoir on the Tongue River near Akra, at an estimated cost of $333,800.

The over-all benefits for the reservoirs on the Pembina and Tongue Rivers exceed the annual charges. The committee has reviewed the benefits resulting from these improvements and is of the opinion that the allocation of costs proposed by the Chief of Engineers between local interests and the United States is a fair and reasonable distribution, that the benefits of a general nature justify the participation by the United States in the amounts proposed. It recommends that the projects on the Tongue and Pembina Rivers be adopted in accordance with the recommendations of the Chief of Engineers.

PARK RIVER, N. DAK.

(S. Doc. No. 194, 78th Cong., 2d Sess.)

The Park River, a small tributary of the Red River of the North, drains an area of 1,010 square miles in northeastern North Dakota. Its headwater streams, South, Middle, and North Branches, rise in the Drift Prairie in Southeastern Cavalier County, and flow in an easterly direction to an almost common confluence near Grafton, forming the main stream which flows easterly 35 miles to the Red River of the North, 36 miles south of the international boundary.

Floods occur nearly annually in the Park River Basin from melting snows, but generally are not of sufficient magnitude to cause damage. The area subject to inundation amounts to about 13,000 acres and

lies principally along the South Branch from 3 to 9 miles west of Grafton. The areas inundated are poorly drained lands which remain saturated for long periods which delays planting and reduces crop yields.

The Chief of Engineers finds that serious water problems concerning both quality and quantity are present in the Park River Basin, and that the construction of a reservoir on South Branch is desirable and economically justified. The plan of improvement proposes the construction of a reservoir on the South Branch for the dual purpose of flood control and water conservation, at an estimated cost of $358,610.

Water conservation is generally a matter of community or local enterprise in which the Federal Government does not participate. In this case, however, the causes of the prevailing water shortages are beyond the control of the people affected and general public health and welfare justify Federal participation in the cost. The committee has analyzed the nature of the benefits resulting from the construction of a reservoir on the South Branch of Park River and believes that the allocations of costs between the United States and local interests are reasonable. Adoption of the project is recommended.

AMENDMENT NO. 19

On page 13, after line 10, insert the following:

In the interest of developing the natural resources of the Missouri River Basin there is hereby created a commission to be known as the Missouri River Commission, which shall be in the War Department and shall function in accordance with existing law under the direction of the Secretary of War and the supervision of the Chief of Engineers in planning, constructing, operating, and maintaining improvements for navigation and flood control in the Missouri River Basin. The Missouri River Commission shall consist of the same number of members with the same qualifications and methods of appointment, replacement, and removal as prescribed in the Act approved June 28, 1879, for the Mississippi River Commission and the compensation for the members of the Missouri River Commission shall be the compensation presently provided for members of the Mississippi River Commission. The President of the Missouri River Commission shall have the same qualification and shall be designated in the manner prescribed by existing law for the President of the Mississippi River Commission and he shall have the same functions and perquisites including title, pay, allowances, and rank while actually serving as President of the Missouri River Commission as well as the same subsequent retirement privileges under the same conditions as prescribed by law for the President of the Mississippi River Commission.

Amendment No. 19 provides for a Missouri River Commission in connection with the planning, construction, operation, and maintenance of the improvements for navigation and flood control in the Missouri River Basin in order that the water resources of that stream may be developed in the most beneficial manner.

The oldest time-tested waterway organization of the Federal Government is the Army engineers, but the next oldest is the Mississippi River Commission. This Commission has jurisdiction over the greatest flood-control project in the world, which has been developed and prosecuted in a thoroughly scientific and democratic way. The Commission is required by law to make inspections of the works and to hold public hearings through the valley. It submits recommendations to the Chief of Engineers in regard to all works of improvement in the Lower Mississippi Valley.

In view of proven experience with the organization that has operated so successfully, so long, in the Mississippi Valley, this committee

recommend that provision be made in the bill for a Missouri River Commission similar in all respects to the Mississippi River Commission to exercise jurisdiction over flood-control and navigation improvements in the Missouri River Basin, which, with the exception of the Mississippi Valley, is the largest river valley in the United States.

AMENDMENT NO. 20

On page 15, after line 4, insert the following:

The plan of improvement for local flood protection on the Chariton River, Missouri, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 628, Seventy-eighth Congress, second session, at an estimated cost of $1,610,300.

Amendment 20 authorizes a flood-control project on the Chariton River.

CHARITON RIVER, MO.

(H. Doc. No. 628, 78th Cong., 2d sess.)

The Chariton River rises near Osceola in south-central Iowa, flows southeasterly and southerly 278 miles to empty into the Missouri River in Chariton County, about 7 miles above Glasgow, Mo. The Chariton River drains 3,080 square miles of plains area varying in topography from flat to rolling, of which 925 square miles are in Iowa and 2,155 square miles in north-central Missouri.

The basin is subject to frequent damaging floods which occur during all seasons of the year. During the 16-year period from 1926 to 1941, 28 floods were experienced. The Chief of Engineers recommends improvement of the Chariton River, Mo., in Chariton, Macon, and Adair Counties and in Schuyler and Putnam Counties in the vicinity of Reinhart ranch by channel and levee improvement, at an estimated cost of $1,610,300.

The committee believes that these improvements will constitute a suitable and economically justified plan for improvement of Chariton River, and it recommends construction of the works proposed by the Chief of Engineers in the Chariton River Basin.

AMENDMENT NO. 21

On page 16, after line 12, insert the following:

The plan of improvement for flood-control and other purposes in the Kentucky River Basin, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 504, Seventy-eighth Congress, second session, at an estimated cost of $23,822,000.

The local flood-protection works at Middlesborough on Yellow Creek, Kentucky, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 495, Seventy-eighth Congress, second session, at an estimated cost of $205,200.

The local flood-protection works on the Rough River and tributaries, Kentucky, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 535, Seventy-eighth Congress, second session, at an estimated cost of $360,000.

The Turtle Creek Reservoir on Turtle Creek, Pennsylvania, substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 507, Seventy-eighth Congress, second session, at an estimated cost of $2,613,000.

Amendment 21 authorizes flood-control projects on North Fork of Kentucky River, Yellow Creek, Rough River and tributaries, and Turtle Creek.

KENTUCKY RIVER, KY.

(H. Doc. No. 504, 78th Cong., 2d sess.)

The Kentucky River is formed by the junction of the North and Middle Forks, 4 miles east of Beattyville, Ky., and flows 263 miles northwesterly to join the Ohio River about 546 miles below Pittsburgh. The river drains an area of 6,935 square miles.

Floods are of frequent occurrence in the Kentucky River Basin. The agricultural areas subject to flooding, although not extensive, are highly productive. The most important urban centers subject to damage from floods are Jackson, Hazard, Beattyville, Clay City, and Frankfort.

The plan of improvement recommended by the Chief of Engineers provides for the construction of a cut-off in the North Fork of the Kentucky River at Jackson to connect parallel reaches of the North Fork, a short distance downstream from Jackson, at an estimated cost of $66,000. The cut-off would shorten the stream about 4¼ miles and would reduce flood heights at Jackson, Ky., from 4 to 6 feet. The Chief of Engineers also recommends modification of the approved general comprehensive plan for flood control in the Ohio River Basin to permit the development of hydroelectric power at the Jessamine Creek and Booneville projects, which are included in the previously approved comprehensive plan for the Ohio River Basin, and the abandonment of the existing navigation project on the Kentucky River above the site of Jessamine Creek Dam, when that project is built. Detailed studies show that the development of hydroelectric power in the Kentucky River Basin is economically feasible with incidental benefit to water supply and pollution abatement resulting from a better regulation of stream flow.

The committee believes that the Jackson cut-off is warranted by the reduction in flood damages at that point, and that the Kentucky River is a suitable stream for the development of hydroelectric power. It has reviewed the navigation project on the Kentucky River and finds that, during recent years, commerce on the upper river above lock 7 has been rather small or negligible. It is believed that prospective commerce which might use the authorized navigation improvement on the upper river is contingent upon a number of factors that are rather indeterminate. Trends indicate that the commerce on the river below lock 7 will retain its present volume and may increase somewhat but any increase above lock 7 appears improbable. Under these circumstances, the committee feels that the construction of a dam at the Jessamine Creek site would not constitute an unreasonable obstruction to practical navigation on the Kentucky River. Accordingly, the committee recommends the adoption by the Congress of the proposals of the Chief of Engineers.

YELLOW CREEK, KY.

(H. Doc. No. 495, 78th Cong., 2d sess.)

Yellow Creek is formed by the confluence of Stony and Bennetts Forks in Middlesborough, Ky., and flows northward to the Cumberland River, 5 miles above Pineville, Ky. It drains an area of 103 square miles.

Flood damage in the basin is negligible, except at Middlesborough, a coal-mining and manufacturing center, with a population of 12,000. The Flood Control Act of June 22, 1936, authorized the construction of a diversion channel, levees, and appurtenant works to collect and divert the floodwaters of Bennetts, Stony, and Licks Forks and Four Mile Run around the north side of the city. The work was completed in 1940, at a cost of $807,200, and will be effective in preventing overflow and damage in the city, except for an area at the lower end of the project, subject to overflow by backwater from Yellow Creek.

The plan of improvement provides for the modification of the existing flood-control project for Middlesborough, Ky., on Yellow Creek, to provide for the construction of a supplemental levee system with adequate floodgates, at an estimated cost of $205,200. The committee finds that the benefits accruing from the works recommended by the Chief of Engineers amply justify the proposed expenditures, and it recommends the adoption of the project.

ROUGH RIVER, KY.

(H. Doc. No. 535, 78th Cong., 2d sess.)

Rough River rises in northwestern Kentucky, flows in a generally westerly direction 136 miles and joins Green River at Livermore, Ky., 71 miles above the confluence of the Green and Ohio Rivers. It drains an area of 1,080 square miles.

Agricultural lands in the lower Rough River Basin are subject to frequent inundation. As a result of the threat of crop losses only about one-half of the area once farmed is now under cultivation and the net yield of cultivated land after crop losses, averages considerably less than half of the normal yield for land of equal productivity but not subject to flooding.

The comprehensive flood-control plan for the Ohio River Basin approved by Congress, includes a reservoir on Rough River which is eligible to be selected for construction. The Chief of Engineers finds that clearing of the channel banks of the lower 64 miles of Rough River and channel improvements in the lower 6.7 miles of Barnett Creek, a tributary, are economically feasible as supplemental works of improvement in the Rough River Basin, and that they will produce important flood-control benefits. The estimated cost of this work is $360,000.

The committee concurs in the recommendations of the Chief of Engineers and recommends the adoption of the project.

TURTLE CREEK, PA.

(H. Doc. No. 507, 78th Cong., 2d sess.)

Turtle Creek rises in Westmoreland County, Pa., and flows westerly into pool No. 2 of the Monongahela River navigation project, 11.6 miles above the junction of the Monongahela and Allegheny Rivers at Pittsburgh. It drains a watershed about 15 miles long having an area of 148 square miles.

Lower Turtle Creek Valley is subject to destructive floods both from run-off originating within the Creek Basin and from backwater from the Monongahela River when it is at high stage.

The plan of improvement recommended by the Chief of Engineers provides for relief from headwater floods in the lower valley in conjunction with low-water flow improvement for pollution abatement by the construction of a multiple-purpose reservoir on Turtle Creek, 8 miles above the mouth, at an estimated cost of $2,613,000.

Since flood crests from Turtle Creek reach Pittsburgh ahead of Monongahela-Allegheny River crests, all of the flood-control benefits of the reservoir accrue to the local valley. After carefully considering the nature of the benefits resulting from the construction of the Turtle Creek Reservoir, the committee believes that the allocation of the cost between the United States and local interests, as proposed by the Chief of Engineers, is reasonable and the committee recommends adoption of the project, in accordance with the recommendations of the Chief of Engineers.

The committee desires to point out that amendment No. 21 puts the aforementioned projects into the approved comprehensive basin plan and makes them eligible for selection by the Chief of Engineers for construction under the authorizations made available by the Congress for the prosecution of the comprehensive plan.

AMENDMENT NO. 22

On page 18, after line 3, insert the following:

The project for the Mount Morris Reservoir on the Genesee River, New York, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 615, Seventy-eighth Congress, second session, at an estimated cost of $5,360,000.

Amendment 22 authorizes construction of a reservoir for flood control on the Genesee River.

GENESEE RIVER, N. Y.

(H. Doc. No. 615, 78th Cong., 2d sess.)

Genesee River has its source in the Allegheny Mountains in northern Pennsylvania, and flows northward 158 miles to Lake Ontario at Rochester. It drains an area of 2,476 square miles consisting of a series of terraces descending northward from the Allegheny plateau to Lake Ontario. Rochester, with a population of 328,000, is an industrial and distributing center and is the largest city in the basin.

Floods are a frequent occurrence in the Genesee Basin and affect residential and industrial centers in Rochester, Mount Morris, Cumminsville, and Wellsville; agricultural land in the Genesee and Canaseraga Valleys; and railroads and utilities at a number of localities. The plan of improvement recommended by the Chief of Engineers consists of the construction of the Mount Morris Reservoir on Genesee River, N. Y., for flood control and other purposes, at an estimated cost of $5,360,000.

The committee notes that the Mount Morris Reservoir would fit into any comprehensive plan for the development of the water resources of the Genesee River Basin. It finds that the Mount Morris Reservoir is economically justified and will provide flood protection to the city of Rochester and to the valley lands between Mount Morris and Rochester. Accordingly, it recommends adoption of the project.

AMENDMENT NO. 23

On page 18, after line 24, insert the following:

GREAT SALT BASIN

The project on the Sevier River for local flood protection at Redmond, Utah, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 614, Seventy-eighth Congress, second session, at an estimated cost of $281,000.

COLORADO RIVER BASIN

The project for the Alamo Reservoir on the Bill Williams River, Arizona, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 625, Seventy-eighth Congress, second session, at an estimated cost of $3,202,000.

Amendment 23 authorizes projects on the Sevier River in the Great Salt Basin and on the Bill Williams River in the Colorado River Basin.

SEVIER RIVER AT REDMOND, UTAH

(H. Doc. No. 614, 78th Cong., 2d sess.)

The Sevier River rises in the mountains of southern Utah, flows northerly 240 miles, then southwesterly 85 miles and empties into Sevier Lake which has no outlet. It drains an area of about 11,100 square miles. Redmond, with a population of 640, is on the west bank of the river, 155 miles above its mouth.

Floods occur in Sevier River at Redmond about three times every 5 years. They cause damages to crops on and irrigation facilities appurtenant to about 3,300 acres of farm land near Redmond; to roads, bridges, the diversion dams of the Westview and Gunnison-Fayette canals and crops on about 3,900 acres of irrigated lands served by the diversions; to main canals; and to the town of Redmond.

The plan of improvement recommended by the Chief of Engineers provides for the construction of a leveed channel from near Salina to a point about 50,000 feet downstream, of a levee extending from the relocated Westview Diversion Dam to Redmond Lake Dam, and of two diversion dams to replace existing structures, all at an estimated cost of $281,000.

The committee finds that the project for the improvement of the Sevier River at Redmond is economically justified by a wide margin and recommends the adoption of the project in accordance with the recommendation of the Chief of Engineers.

BILL WILLIAMS RIVER, ARIZ.

(H. Doc. No. 625, 78th Cong., 2d sess.)

The Bill Williams River is formed by the junction of the Big Sandy and Santa Maria Rivers in west central Arizona and flows westerly 47 miles into Havasu Lake on Colorado River. The basin has an area of 5,500 square miles and consists largely of desert valleys lying between irregularly distributed minor mountain ranges.

Floods occur on the Bill Williams River on an average of once in 3 or 4 years. It is estimated that about 26,000 acres of land are subject to inundation during major floods and that flood damages in the basin

average about $5,000 annually. Floods on Bill Williams River, however, also cause damage in the lower Colorado River Valley. It is estimated that from 220,000 to 233,000 acres of arable land in Parker, Palo Verde and Yuma Valleys are affected and that future damages in these highly developed agricultural areas will average $184,000 annually.

The plan of improvement recommended by the Chief of Engineers provides for the construction of a multiple-purpose reservoir on the Bill Williams River at the Alamo site, at an estimated cost of $3,202,000. The reservoir is to be used initially for flood control with provisions for its future use as a multiple-purpose project for flood control and to include conservation storage for ultimate development of irrigation and power in and near the Bill Williams Basin.

The project proposed by the Chief of Engineers will provide immediately the needed protection for lives and property in the highly developed lower Colorado River Valley and will provide for ultimate utilization of the water resources of Bill Williams River to the maximum practicable extent for irrigation and water power with incidental benefits to water supplies, recreation and wildlife. The committee recommends the adoption of the project, in accordance with the recommendation of the Chief of Engineers.

AMENDMENT NO. 24

On page 20, after line 6, insert the following:

PAJARO RIVER BASIN

The plan of improvement for local flood protection on the Pajaro River and tributaries, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 505, Seventy-eighth Congress, second session, at an estimated cost of $511,160.

Amendment 24 authorizes a project for flood control and other purposes in the Pajaro River Basin.

PAJARO RIVER, CALIF.

(H. Doc. No. 505, 78th Cong., 2d sess.)

The Pajaro River rises in San Felipe Lake, flows westerly about 30 miles and empties into Monterey Bay about 75 miles south of San Francisco. It drains an area of 1,303 square miles of mountain and valley lands in western California.

Damages due to floods are confined principally to South Santa Clara Valley and to lands along the Pajaro River. Damaging floods occur on Pajaro River below the San Benito River, with an average frequency of once in 2 or 3 years.

The Chief of Engineers recommends a project for flood control consisting of levees with bank protection works along the lower Pajaro River and on Carnadero Creek at Gilroy at an estimated cost of $511,160.

The committee believes that the improvements recommended by the Chief of Engineers are warranted and recommends the adoption of the project.

AMENDMENT NO. 25

On page 20 strike out lines 9 through 17 and insert in lieu thereof the following:

The projects for the control of floods and other purposes on the Sacramento River, California, adopted by the Acts approved March 1, 1917, May 15, 1928, August 26, 1937, and August 18, 1941, are hereby modified substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 649, Seventy-eighth Congress, second session, at an estimated cost of $50,100,000; and in addition to

SACRAMENTO RIVER, CALIF.

(H. Doc. No. 649, 78th Cong., 2d sess.)

Amendment 25 modifies the existing project on the Sacramento River in accordance with the recommendations of the Chief of Engineers as contained in House Document No. 649, Seventy-eighth Congress, second session, instead of in accordance with the recommendations of the Board of Engineers, for Rivers and Harbors since the report of the Chief of Engineers has now been submitted. At the time the House of Representatives passed H. R. 4485, the report of the Chief of Engineers had not been transmitted to Congress. The only essential change in the recommendations provides for the installation of a small power plant in connection with the Table Mountain project as recommended by the Federal Power Commission, if found advisable, at an estimated additional cost of $4,050,000.

AMENDMENT NO. 26

On page 21 after line 2, insert the following:

The project for the Folsom Reservoir on the American River, California, is hereby authorized substantially in accordance with the plans contained in House Document Numbered 649, Seventy-eighth Congress, second session, with such modifications thereof as in the discretion of the Secretary of War and the Chief of Engineers may be advisable, at an estimated cost of $18,474,000.

SACRAMENTO RIVER, CALIF.

(H. Doc. No. 649, 78th Cong., 2d sess.)

Amendment 26 authorizes the construction of the Folsom Reservoir project on the American River in accordance with the plans contained in House Document No. 694, Seventy-eighth Congress, second session. The plan of improvement provides for the construction of a concrete gravity dam at the Folsom site for flood control and irrigation. The structure would be 265 feet high creating a reservoir having a total storage capacity of 355,000 acre-feet, of which 303,000 acre-feet would be usable storage and 52,000 acre-feet dead storage. The maximum storage reserved for flood control would be 260,000 acre-feet, which is equivalent to 2.6 inches of run-off over the 1,875 square miles of drainage area above the dam. The design of the structure includes power intake facilities, as it is considered that power development at this site may be warranted in the future.

The Folsom project will control flood peaks on the American River and thereby reduce the threat to the city of Sacramento which would be seriously flooded if an uncontrolled flood on the American River

should synchronize with a major flood crest on the Sacramento River. The possibility of the occurrence of the synchronization of flood crests on these two rivers is a constant peril to the residents of Sacramento and vicinity.

AMENDMENT NO. 27

On page 22, after line 24, insert the following:

The plan of improvement for flood control and other purposes on the Calaveras River and Littlejohn Creek and tributaries, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 545, Seventy-eighth Congress, second session, at an estimated cost of $3,868,200.

NAPA RIVER BASIN

The project for the Conn Creek Reservoir on Conn Creek for flood control and other purposes in the Napa River Basin, California, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 626, Seventy-eighth Congress, second session, at an estimated cost of $460,000.

Amendment 27 authorizes projects in the San Joaquin and Napa River Basins.

CALAVERAS RIVER AND LITTLEJOHN CREEK, CALIF.

(H. Doc. No. 545, 78th Cong., 2d sess.)

The streams comprising the Littlejohn and Calaveras River groups rise in the Sierra Nevada and its foothills, flow westerly across the flat lands of the San Joaquin Valley and empty into the San Joaquin River directly, or through various sloughs in the vicinity of Stockton. Together, they drain an area of 1,220 square miles. The valley lands are essentially a delta area in which the streams of both groups are more or less interconnected by creeks and swales.

Floods on these streams are flashy and of relatively small volume of run-off. At least 16 damaging floods have occurred in the 42-year period between 1899 and 1940. Stockton and the rural towns of French Camp, Farmington, and Linden are subject to inundation by major floods.

The Chief of Engineers recommends a plan of improvement consisting of the construction of the Farmington Reservoir on Littlejohn Creek in the foothill section to control the run-off from 210 square miles; a diversion channel from Duck Creek to Littlejohn Creek below the reservoir to limit Duck Creek flows below Farmington; two dikes across downstream channels leading from Duck Creek to Mormon Slough; enlargement of Hogan Reservoir to provide storage capacity for flood control and irrigation; enlargement of 14.4 miles of existing channel in Bear Creek; excavation of 1.3 miles of new channel; and construction of 30.1 miles of levee, all at an estimated cost of $3,868,200.

The works proposed will afford complete protection from floods of the magnitude of the maximum of record and in addition will provide opportunity for the storage of water for irrigation and municipal water supply. The committee finds that the works proposed by the Chief of Engineers are urgently needed to maintain the orderly economic development of the watershed, and recommends that the project be adopted in accordance with the recommendations of the

Chief of Engineers and subject to the conditions of local cooperation set forth in his report.

NAPA RIVER, CALIF.

(H. Doc. No. 626, 78th Cong., 2d sess.)

The Napa River rises on the south slope of Mount St. Helena in Lake County, Calif., flows in a southeasterly direction 50 miles and empties into Mare Island Strait, an arm of Carquinez Strait. The drainage basin comprises 394 square miles, ranging from tidal marshes in the downstream portion to mountainous terrain along the eastern, northern, and western borders.

The Napa River Basin is subject to severe winter rainstorms which cause damaging floods in the main stream and many of its tributaries. The summers are dry, and the normal flow in the stream is inadequate to meet the demands for domestic water supplies and irrigation.

The Chief of Engineers recommends a plan of improvement consisting of the construction of a multiple-purpose reservoir on Conn Creek for flood control and water conservation supplemented by channel clearing, bank protection, and dikes at certain points between the proposed dam and Napa, at an estimated cost of $1,296,000, of which $460,000 would be borne by the Federal Government. Since the proposed project will have a portion of its storage reserved exlusively for water supply, the Chief of Engineers recommends that local interests contribute toward the cost of the reservoir, the cost of the conservation feature estimated as $836,000.

The committee believes that the project recommended by the Chief of Engineers is both desirable and economically justified and it recommends that the project be adopted in accordance with the recommendations of the Chief of Engineers.

AMENDMENT NO. 28

On page 24, after line 20, insert the following:

CHEHALIS RIVER BASIN

The project on Chehalis River for local flood protection at Hoquiam, Aberdeen, and Cosmopolis, Washington, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 494, Seventy-eighth Congress, second session, at an estimated cost of $669,000.

TERRITORY OF HAWAII

The project of the Hanapepe River for local flood protection at Hanapepe, Island of Kauai, Territory of Hawaii, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in the report submitted to Congress by the Secretary of War on March 15, 1944, at an estimated cost of $73,000.

Amendment 28 authorizes local flood protection works in the Chehalis River Basin and on the island of Kauai, T. H.

CHEHALIS RIVER, WASH.

(H. Doc. No. 494, 78th Cong., 2d sess.)

Chehalis River rises in southwestern Washington, flows north and east 42 miles to the city of Chehalis, thence northwesterly 68 miles to Aberdeen where it empties into Grays Harbor, an arm of the Pacific Ocean. It drains an area of 2,063 square miles.