

Federal funds unless the State in which the proposed project will be located has established or committed to establish a beach front management program that includes—

- (1) restrictions on new development seaward of an erosion setback line (based on preproject beach size) of at least 30 times the annual erosion rate;
- (2) restrictions on construction of new structural stabilization projects, such as seawalls and groins, and their reconstruction if damaged by 50 percent or more;
- (3) provisions for the relocation of structures in erosion-prone areas;
- (4) provisions to assure public access to beaches stabilized or renourished with Federal funds after January 1, 1991; and
- (5) such other provisions as the Secretary may prescribe by regulation to prevent hazardous or environmentally damaging shoreline development.

#### SEC. 310. RESERVOIR MANAGEMENT.

33 USC 2319.

(a) **TECHNICAL ADVISORY COMMITTEE.**—Not later than 2 years after the date of the enactment of this Act, the Secretary shall establish for major reservoirs under the jurisdiction of the Corps of Engineers a technical advisory committee to provide to the Secretary and Corps of Engineers recommendations on reservoir monitoring and options for reservoir research. The Secretary shall determine the membership of the committee, except that the Secretary may not appoint more than 6 members and shall ensure a predominance of members with appropriate academic, technical, or scientific qualifications. Members shall serve without pay, and the Secretary shall provide any necessary facilities, staff, and other support services in accordance with the Federal Advisory Committee Act (5 U.S.C. App. 1 et seq.).

(b) **PUBLIC PARTICIPATION.**—The Secretary shall ensure that, in developing or revising reservoir operating manuals of the Corps of Engineers, the Corps shall provide significant opportunities for public participation, including opportunities for public hearings. The Secretary shall issue regulations to implement this subsection, including a requirement that all appropriate informational materials relating to proposed management decisions of the Corps be made available to the public sufficiently in advance of public hearings. Not later than January 1, 1992, the Secretary shall transmit to Congress a report on measures taken pursuant to this subsection.

Regulations.

Reports.

#### SEC. 311. RESERVOIR PROJECT OPERATIONS.

(a) **STUDY.**—The Secretary shall conduct a study of the operations of reservoir projects which are under the jurisdiction of the Secretary—

- (1) to identify the purposes for which each such project is authorized; and
- (2) to identify the purposes for which each such project is being operated.

(b) **REPORT.**—Not later than 6 months after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under subsection (a).

#### SEC. 312. ENVIRONMENTAL DREDGING.

33 USC 1252  
note.

(a) **OPERATION AND MAINTENANCE OF NAVIGATION PROJECTS.**—Whenever necessary to meet the requirements of the Federal Water

Pollution Control Act, the Secretary, in consultation with the Administrator of the Environmental Protection Agency, may remove, as part of operation and maintenance of a navigation project, contaminated sediments outside the boundaries of and adjacent to the navigation channel.

(b) **NONPROJECT SPECIFIC.**—

(1) **IN GENERAL.**—The Secretary may remove contaminated sediments from the navigable waters of the United States for the purpose of environmental enhancement and water quality improvement if such removal is requested by a non-Federal sponsor and the sponsor agrees to pay 50 percent of the cost of such removal.

(2) **MAXIMUM AMOUNT.**—The Secretary may not expend more than \$10,000,000 in a fiscal year to carry out this subsection.

(c) **JOINT PLAN REQUIREMENT.**—The Secretary may only remove contaminated sediments under subsection (b) in accordance with a joint plan developed by the Secretary and interested Federal, State, and local government officials. Such plan must include an opportunity for public comment, a description of the work to be undertaken, the method to be used for dredged material disposal, the roles and responsibilities of the Secretary and non-Federal sponsors, and identification of sources of funding.

(d) **DISPOSAL COSTS.**—Costs of disposal of contaminated sediments removed under this section shall be a non-Federal responsibility.

(e) **LIMITATION ON STATUTORY CONSTRUCTION.**—Nothing in this section shall be construed to affect the rights and responsibilities of any person under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.

(f) **TERMINATION DATE.**—This section shall not be effective after the last day of the 5-year period beginning on the date of the enactment of this Act; except that the Secretary may complete any project commenced under this section on or before such last day.

33 USC 2320.

**SEC. 313. PROTECTION OF RECREATIONAL AND COMMERCIAL USES.**

(a) **GENERAL RULE.**—In planning any water resources project, the Secretary shall consider the impact of the project on existing and future recreational and commercial uses in the area surrounding the project.

(b) **MAINTENANCE.**—Whenever the Secretary maintains, repairs, rehabilitates, or reconstructs a water resources project which will result in a change in the configuration of a structure which is a part of such project, the Secretary, to the maximum extent practicable, shall carry out such maintenance, repair, rehabilitation, or reconstruction in a manner which will not adversely affect any recreational use established with respect to such project before the date of such maintenance, repair, rehabilitation, or reconstruction.

(c) **MITIGATION.**—

(1) **IN GENERAL.**—If maintenance, repair, rehabilitation, or reconstruction of a water resources project by the Secretary results in a change in the configuration of any structure which is a part of such project and has an adverse effect on a recreational use established with respect to such project before the date of such maintenance, repair, rehabilitation, or reconstruction, the Secretary, to the maximum extent practicable, shall take such actions as may be necessary to restore such recreational use or provide alternative opportunities for comparable recreational use.



(2) **MAXIMUM AMOUNT.**—The Secretary may not expend more than \$2,000,000 in a fiscal year to carry out this subsection.

(3) **TERMINATION DATE.**—This subsection shall not be effective after the last day of the 5-year period beginning on the date of the enactment of this Act; except that the Secretary may complete any restoration commenced under this subsection on or before such last day.

(d) **APPLICABILITY.**—

(1) **GENERAL RULE.**—Subsections (b) and (c) shall apply to maintenance, repair, rehabilitation, or reconstruction for which physical construction is initiated after May 1, 1988.

(2) **LIMITATION.**—Subsections (b) and (c) shall not apply to any action of the Secretary which is necessary to discontinue the operation of a water resources project.

(e) **COST SHARING.**—Costs incurred by the Secretary to carry out the objectives of this section shall be allocated to recreation and shall be payable by the beneficiaries of the recreation.

**SEC. 314. OPERATION AND MAINTENANCE OF HYDROELECTRIC FACILITIES.** 33 USC 2321.

Activities currently performed by personnel under the direction of the Secretary in connection with the operation and maintenance of hydroelectric power generating facilities at Corps of Engineers water resources projects are to be considered as inherently governmental functions and not commercial activities. This section does not prohibit contracting out major maintenance or other functions which are currently contracted out or studying services not directly connected with project maintenance and operations.

**SEC. 315. MATTERS TO BE ADDRESSED IN PLANNING.**

Section 904 of the Water Resources Development Act of 1986 (33 U.S.C. 2281) is amended by inserting “(including preservation and enhancement of the environment)” after “environment”.

**SEC. 316. HARBOR MAINTENANCE TRUST FUND AMENDMENT.**

Section 210(a)(2) of the Water Resources Development Act of 1986 (33 U.S.C. 2238) is amended by striking “not more than 40 percent” and inserting “up to 100 percent”.

**SEC. 317. SINGLE ENTITIES.**

33 USC 2322.

For purposes of Federal participation in water resource development projects which are to be carried out by the Secretary, benefits which are to be provided to a facility owned by a State (including the District of Columbia and a territory or possession of the United States), county, municipality, or other public entity shall not be treated as benefits to be provided a single owner or single entity. The Secretary shall not treat such a facility as a single owner or single entity for any purpose.

District of  
Columbia.

**SEC. 318. TECHNICAL ASSISTANCE TO PRIVATE ENTITIES.**

33 USC 2323.

(a) **USE OF CORPS RESEARCH AND DEVELOPMENT LABS.**—The Secretary is authorized to use Corps of Engineers research and development laboratories to provide research and development assistance to corporations, partnerships, limited partnerships, consortia, public and private foundations, universities, and nonprofit organizations operating within the United States, territories or possessions of the United States, and the Commonwealths of Puerto Rico and the Northern Mariana Islands—

Territories.

(1) if the entity furnishes in advance of fiscal obligation by the United States such funds as are necessary to cover any and all costs of such research and development assistance;

(2) if the Secretary determines that the research and development assistance to be provided is within the mission of the Corps of Engineers and is in the public interest;

(3) if the entity has certified to the Secretary that provision of such research and development assistance is not otherwise reasonably and expeditiously obtainable from the private sector; and

(4) if the entity has agreed to hold and save the United States free from any damages due to any such research and development assistance.

(b) **CONTRACT.**—The Secretary may provide research and development assistance under subsection (a), or any part thereof, by contract.

(c) **TECHNICAL ASSISTANCE PROGRAM.**—Section 9 of the Water Resources Development Act of 1988 (102 Stat. 4024; 33 U.S.C. 2314 note) is amended—

(1) in the section heading by striking “**DEMONSTRATION**”;

(2) in the first sentence of subsection (a) by striking “to undertake a demonstration program for a 2-year period, which shall begin within 6 months after the date of the enactment of this Act,”;

(3) by striking subsection (d); and

(4) by redesignating subsection (e), and any reference thereto, as subsection (d).

#### SEC. 319. FEES FOR DEVELOPMENT OF STATE WATER PLANS.

Section 22 of the Water Resources Development Act of 1974 (42 U.S.C. 1962d-16), is amended—

(1) by redesignating subsections (b) and (c), and any reference thereto, as subsections (c) and (d), respectively; and

(2) by inserting after subsection (a) the following new subsection:

“(b) **FEES.**—

“(1) **ESTABLISHMENT AND COLLECTION.**—For the purpose of recovering 50 percent of the total cost of providing assistance pursuant to this section, the Secretary of the Army is authorized to establish appropriate fees, as determined by the Secretary, and to collect such fees from States and other non-Federal public bodies to whom assistance is provided under this section.

“(2) **PHASE-IN.**—The Secretary shall phase in the cost sharing program under this subsection by recovering—

“(A) approximately 10 percent of the total cost of providing assistance in fiscal year 1991;

“(B) approximately 30 percent of the total cost in fiscal year 1992; and

“(C) approximately 50 percent of the total cost in fiscal year 1993 and each succeeding fiscal year.

“(3) **DEPOSIT AND USE.**—Fees collected under this subsection shall be deposited into the account in the Treasury of the United States entitled, ‘Contributions and Advances, Rivers and Harbors, Corps of Engineers (8862)’ and shall be available until expended to carry out this section.”.



## PUBLIC LAW 101-640—NOV. 28, 1990

104 STAT. 4643

## SEC. 320. CABIN SITE LEASES.

Section 1134(d) of the Water Resources Development Act of 1986 (100 Stat. 4251) is amended by inserting "cabin or trailer and" after "lawfully installed dock or".

16 USC 460d  
note.

## SEC. 321. INFORMATION ON FLOODS AND FLOOD DAMAGES.

Section 206 of the Flood Control Act of 1960 (74 Stat. 500, 33 U.S.C. 709a), is amended—

- (1) by redesignating subsection (b), and any reference thereto, as subsection (c); and
- (2) by inserting after subsection (a) the following new subsection:

"(b) FEES.—The Secretary of the Army is authorized to establish and collect fees from Federal agencies and private persons for the purpose of recovering the cost of providing services pursuant to this section. Funds collected pursuant to this section shall be deposited into the account of the Treasury of the United States entitled 'Contributions and Advances, Rivers and Harbor, Corps of Engineers (8862)' and shall be available until expended to carry out this section. No fees shall be collected from State, regional, or local governments or other non-Federal public agencies for services provided pursuant to this section."

## SEC. 322. REDUCED PRICING FOR CERTAIN WATER SUPPLY STORAGE. 33 USC 2324.

(a) PROVISION OF STORAGE SPACE.—If a low income community requests the Secretary to provide water supply storage space in a water resources development project operated by the Secretary and if the amount of space requested is available or could be made available through reallocation of water supply storage space in the project or through modifications to operation of the project, the Secretary may provide such space to the community at a price determined under subsection (c).

(b) MAXIMUM AMOUNT OF STORAGE SPACE.—The maximum amount of water supply storage space which may be provided to a community under this section may not exceed an amount of water supply storage space sufficient to yield 2,000,000 gallons of water per day.

(c) PRICE.—The Secretary shall provide water supply storage space under this section at a price which is the greater of—

- (1) the updated construction cost of the project allocated to provide such amount of water supply storage space or \$100 per acre foot of storage space, whichever is less; and
- (2) the value of the benefits which are lost as a result of providing such water supply storage space.

(d) DETERMINATIONS.—For purposes of subsection (c), the determinations of updated construction costs and value of benefits lost shall be made by the Secretary on the basis of the most recent information available.

(e) INFLATION ADJUSTMENT OF DOLLAR AMOUNT.—The \$100 amount set forth in subsection (c) shall be adjusted annually by the Secretary for changes in the Consumer Price Index of All Urban Consumers published by the Bureau of Labor Statistics.

(f) NON-FEDERAL RESPONSIBILITIES.—Nothing in this section shall be construed as affecting the responsibility of non-Federal interests to provide operation and maintenance costs assigned to water supply storage provided under this section.

(g) **LOW INCOME COMMUNITY DEFINED.**—The term “low income community” means a community with a population of less than 20,000 which is located in a county with a per capita income less than the per capita income of two-thirds of the counties in the United States.

## TITLE IV—MISCELLANEOUS PROVISIONS

33 USC 1268  
note.

### SEC. 401. GREAT LAKES REMEDIAL ACTION PLANS.

(a) **ASSISTANCE.**—The Secretary is authorized to provide technical, planning, and engineering assistance to States and local governments in the development and implementation of remedial action plans for areas of concern in the Great Lakes identified under the Great Lakes Water Quality Agreement of 1978. Non-Federal interests shall contribute 50 percent of the costs of such assistance.

(b) **MAXIMUM AMOUNT.**—The Secretary may not expend more than \$3,000,000 in a fiscal year to carry out this section.

### SEC. 402. CROSS FLORIDA BARGE CANAL.

Section 1114 of the Water Resources Development Act of 1986 (16 U.S.C. 460tt; 100 Stat. 4232) is amended to read as follows:

#### “SEC. 1114. CROSS FLORIDA BARGE CANAL.

“(a) **DEAUTHORIZATION.**—The barge canal project located between the Gulf of Mexico and the Atlantic Ocean (hereinafter in this section referred to as the ‘project’), as described in the Act of July 23, 1942 (56 Stat. 703), shall be deauthorized by operation of law immediately upon the Governor and Cabinet of the State of Florida adopting a resolution specifically agreeing on behalf of the State of Florida (hereinafter in this section referred to as the ‘State’) to all of the terms of the agreement prescribed in subsection (b).

Intergovernmental  
relations.

“(b) **TRANSFER OF PROJECT LANDS.**—Notwithstanding any other provision of law, the Secretary is, subject to the provisions of subsections (d) and (e), directed to transfer to the State all lands and interests in lands acquired by the Secretary and facilities completed for the project in subsection (a), without consideration, if the State agrees to each of the following:

Claims.

“(1) The State shall agree to hold the United States harmless from all claims arising from or through the operations of the lands and facilities conveyed by the United States.

Recreation and  
recreation areas.

“(2) The State shall agree to preserve and maintain a greenway corridor which shall be open to the public for compatible recreation and conservation activities and which shall be continuous, except for areas referred to in subparagraphs (A) and (C) of this paragraph, along the project route over lands acquired by the Secretary or by the State or State Canal Authority, or lands acquired along the project route in the future by the State or State Canal Authority, to the maximum width possible, as determined in the management plan to be developed by the State for former project lands. Such greenway corridor shall not be less than 300 yards wide, except for the following areas:

“(A) Any area of the project corridor where, as of the date of the enactment of this subparagraph, no land is owned by the State or State Canal Authority.



“(B) Any area of the project corridor where, as of the date of the enactment of this subparagraph, the land owned by the State or State Canal Authority is less than 300 yards wide.

“(C) Any area of the project corridor where a road or bridge crosses the project corridor.

“(3) Consistent with paragraph (2) of this subsection, the State shall create a State park or conservation/recreation area in the lands and interests in lands acquired for the project lying between the Atlantic Ocean and the western boundaries of sections 20 and 29, township 15 south, range 23 east.

National parks.  
Recreation and  
recreation areas.

“(4) The State shall agree, consistent with paragraphs (2), (5) and (6) of this subsection, to preserve, enhance, interpret, and manage the water and related land resources of the area containing cultural, fish and wildlife, scenic, and recreational values in the remaining lands and interests in land acquired for the project, lying west of sections 20 and 29, township 15 south, range 23 east, as determined by the State, for the benefit and enjoyment of present and future generations of people and the development of outdoor recreation.

“(5) The State shall agree to pay, from the assets of the State Canal Authority and the Cross Florida Canal Navigation District, including revenues from the sale of former project lands declared surplus by the State management plan, to the counties of Citrus, Clay, Duval, Levy, Marion, and Putnam a minimum aggregate sum of \$32,000,000 in cash or, at the option of the counties, payment to be made by conveyance of surplus former project lands selected by the State at current appraised values.

“(6) The State shall agree to provide that, after repayment of all sums due to the counties of Citrus, Clay, Duval, Levy, Marion, and Putnam, the State may use any remaining funds generated from the sale of former project lands declared surplus by the State to acquire the fee title to lands along the project route as to which less than fee title was obtained, or to purchase privately owned lands, or easements over such privately owned lands, lying within the proposed project route, consistent with paragraphs (2), (3), and (4) of this subsection, according to such priorities as are determined in the management plan to be developed by the State for former project lands. Any remaining funds generated from the sale of former project lands declared surplus by the State shall be used for the improvement and management of the greenway corridor consistent with paragraphs (2), (3), and (4) of this subsection.

“(c) ENFORCEMENT.—

Courts.

“(1) REMEDIES AND JURISDICTION.—The United States is directed to vigorously enforce the agreement referred to in subsections (a) and (b) in the courts of the United States and shall be entitled to any remedies in equity or law, including, without limitation, injunctive relief. The court, in issuing any final order in any suit brought pursuant to this subsection, may, in its discretion, award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing party. The United States district courts shall have original and exclusive jurisdiction of any action under this subsection.

“(2) STATE REMEDIES.—The State shall be entitled to the same remedies listed in paragraph (1) of this subsection in the courts of the State or of the United States.

“(d) TIME OF TRANSFER.—Actual transfer of lands and management responsibilities under this section shall not occur on the constructed portions of the project lying between the Atlantic Ocean and the Eureka Lock and Dam, inclusive, and between the Gulf of Mexico and the Inglis Lock and Dam, inclusive, until the last day of the 24-month period beginning on the date of the enactment of the Water Resources Development Act of 1990.

“(e) MANAGEMENT PENDING TRANSFER.—In the 24-month period following the date of the enactment of the Water Resources Development Act of 1990, the Secretary shall carry out any and all programmed maintenance on the portions of the project outlined in subsection (d).

“(f) SURVEY.—The exact acreage and legal description of the real property to be transferred pursuant to this section shall be determined by a survey which is satisfactory to the Secretary and to the State. The cost of such survey shall be borne by the State.”

#### SEC. 403. WAPPINGERS LAKE AND LAKE GEORGE, NEW YORK.

Section 602(a) of the Water Resources Development Act of 1986 (100 Stat. 4148-49) is amended—

- (1) by striking “and” at the end of paragraph (8);
- (2) by striking the period at the end of paragraph (9) and inserting a semicolon; and
- (3) by adding at the end the following new paragraphs:  
“(10) Wappingers Lake, New York, for removal of silt and aquatic growth; and  
“(11) Lake George, New York, for removal of silt and aquatic growth, stump removal, and the control of pollution.”

33 USC 2232  
note.

Cooperative  
agreements.

#### SEC. 404. DEMONSTRATION OF CONSTRUCTION OF FEDERAL PROJECT BY NON-FEDERAL INTERESTS.

(a) IN GENERAL.—For purposes of demonstrating the safety benefits and economic efficiencies which would accrue as a consequence of non-Federal management of harbor improvement projects, the Secretary shall enter into agreements with 2 non-Federal interests pursuant to which the non-Federal interests will undertake part or all of a harbor project authorized by law, by utilizing their own personnel or by procuring outside services, if the cost of doing so will not exceed the cost of the Secretary undertaking the project. If proposals for such agreements meet the criteria of section 204 of the Water Resources Development Act of 1986, the agreements shall be entered into not later than 1 year after the date of the enactment of this Act.

Cargo vessels.  
Passenger  
vessels.

(b) LIMITATION.—At least 1 project carried out pursuant to this section shall pertain to improvements to a major ship channel which carries a substantial volume of both passenger and cargo traffic.

(c) REPORT.—The Secretary shall transmit to Congress a report regarding the safety benefits and economic efficiencies accrued from entering into agreements with non-Federal interests under this section.

#### SEC. 405. UPPER MISSISSIPPI RIVER PLAN.

Section 1103 of the Water Resources Development Act of 1986 (33 U.S.C. 652) is amended—

- (1) in paragraph (e)(2) by striking “ten” and inserting “15”;
- (2) in paragraph (e)(3) by striking “eight” and inserting “13”;
- (3) in paragraph (e)(4) by striking “nine” and inserting “14”;



- (4) in paragraph (e)(5) by striking “seven” and inserting “12”;  
and  
(5) in paragraph (f)(2)(A) by striking “ten” and inserting “15”.

**SEC. 406. CONSTRUCTION OF VIRGIN ISLANDS PROJECTS BY SECRETARY OF THE ARMY.**

48 USC 1405c  
note.

(a) **GENERAL RULE.**—Upon request of the Governor of the Virgin Islands with respect to a construction project in the Virgin Islands for which Federal financial assistance is available under any law of the United States, the Federal official administering such assistance may make such assistance available to the Secretary instead of the Virgin Islands. The Secretary shall use such assistance to carry out such project in accordance with the provisions of such law.

(b) **LIMITATION ON STATUTORY CONSTRUCTION.**—Nothing in this section shall be construed as relieving the Virgin Islands from complying with any requirements for non-Federal cooperation with respect to a construction project carried out with Federal financial assistance provided to the Secretary pursuant to this section; except that the Secretary shall be responsible for complying with administrative and fiscal requirements associated with utilization of such assistance.

(c) **TERMINATION DATE.**—Subsection (a) shall not be effective after the last day of the 3-year period beginning on the date of the enactment of this Act; except that the Secretary shall complete construction of any project commenced under subsection (a) before such day.

**SEC. 407. VIRGINIA BEACH, VIRGINIA.**

(a) **LOCAL COOPERATION AGREEMENT EFFECTIVE DATE.**—The Secretary shall enter into a local cooperative agreement with the city of Virginia Beach, Virginia, for beach nourishment in accordance with section 145 of the Water Resources Development Act of 1976 (33 U.S.C. 426j). The local cooperation agreement shall be effective from February 6, 1987.

(b) **REIMBURSEMENT.**—The Secretary is authorized to reimburse the city of Virginia Beach for the Federal share of beach nourishment in accordance with section 103(c)(5) of the Water Resources Development Act of 1986.

**SEC. 408. DECLARATION OF NONNAVIGABILITY FOR PORTIONS OF LAKE ERIE.**

33 USC 59bb.

(a) **AREA TO BE DECLARED NONNAVIGABLE; PUBLIC INTEREST.**—Unless the Secretary finds, after consultation with local and regional public officials (including local and regional public planning organizations), that the proposed projects to be undertaken within the boundaries of Lake Erie described in Committee Print 101-48 of the Committee on Public Works and Transportation of the House of Representatives, dated July 1990, are not in the public interest then, subject to subsections (b) and (c) of this section, those portions of Lake Erie, bounded and described in such Committee print, are declared to be nonnavigable waters of the United States.

(b) **LIMITS ON APPLICABILITY; REGULATORY REQUIREMENTS.**—The declaration under subsection (a) shall apply only to those parts of the areas described in the Committee print referred to in subsection (a) which are or will be bulkheaded and filled or otherwise occupied by permanent structures, including marina facilities. All such work is subject to all applicable Federal statutes and regulations includ-

ing, but not limited to, sections 9 and 10 of the Act of March 3, 1899 (30 Stat. 1151; 33 U.S.C. 401 and 403), commonly known as the Rivers and Harbors Appropriations Act of 1899, section 404 of the Federal Water Pollution Control Act, and the National Environmental Policy Act of 1969.

(c) **EXPIRATION DATE.**—If, 20 years from the date of the enactment of this Act, any area or part thereof described in the Committee print referred to in subsection (a) is not bulkheaded or filled or occupied by permanent structures, including marina facilities, in accordance with the requirements set out in subsection (b), or if work in connection with any activity permitting in subsection (b) is not commenced within 5 years after issuance of such permits, then the declaration of nonnavigability for such area or part thereof shall expire.

33 USC 2317  
note.

#### **SEC. 409. WETLANDS ENHANCEMENT OPPORTUNITIES.**

Not later than January 20, 1992, the Secretary shall transmit to Congress a list which specifically identifies opportunities of enhancing wetlands in connection with construction and operation of water resource projects.

#### **SEC. 410. RAYSTOWN LAKE, PENNSYLVANIA.**

The Secretary shall submit to Congress for approval any proposed changes in the allocation of storage for the Raystown Lake project, Pennsylvania, which result from the on-going Raystown Lake reallocation study undertaken by the District Engineer for the Baltimore District. Pending submission to and approval by Congress of the results of the study, the Secretary may not reallocate storage at the project.

#### **SEC. 411. ONONDAGA LAKE, NEW YORK.**

(a) **MANAGEMENT CONFERENCE.**—The Assistant Secretary of the Army for Civil Works, the Administrator of the Environmental Protection Agency, and the Governor of the State of New York, acting jointly, shall convene a management conference for the restoration, conservation, and management of Onondaga Lake, New York. The purposes of the management conference shall include—

(1) the development, in the 2-year period beginning on the date of the enactment of this Act, of a comprehensive restoration, conservation, and management plan for Onondaga Lake that recommends priority corrective actions and compliance schedules for the cleanup of such lake; and

(2) the coordination of the implementation of such plan by the State of New York, the Army Corps of Engineers, the Environmental Protection Agency, and all local agencies, governments, and other groups participating in such management conference.

#### **(b) ADMINISTRATIVE PROVISIONS.—**

(1) **MEMBERSHIP.**—The members of the management conference shall include, at a minimum, the Assistant Secretary of the Army for Civil Works, the Administrator of the Environmental Protection Agency, the Governor of the State of New York, and representatives of—

- (A) the attorney general of the State of New York;
- (B) Onondaga County, New York; and
- (C) the city of Syracuse, New York.

(2) **DESIGNATED REPRESENTATIVE.**—Any member of the management conference may designate a representative to



attend meetings of the management conference and otherwise represent such member on the management conference.

(3) **EX OFFICIO MEMBERS.**—The management conference shall have ex officio members which shall include, at a minimum—

(A) the United States Senators from the State of New York; and

(B) each member of the United States House of Representatives within whose congressional district any portion of Onondaga Lake lies.

(4) **STANDING COMMITTEES.**—The management conference shall have standing committees which shall include, at a minimum—

(A) a Citizens Advisory Committee; and

(B) a Technical Review Committee.

(c) **REQUIRED ACTIONS UPON PLAN COMPLETION.**—

(1) **APPROVAL.**—Not later than 120 days after the completion of the plan developed pursuant to subsection (a) and after providing for public review and comment, the Assistant Secretary of the Army for Civil Works and the Administrator of the Environmental Protection Agency shall approve such plan if such plan meets the requirements of this section and if the Governor of the State of New York concurs in such approval.

(2) **IMPLEMENTATION.**—Upon approval of the plan under this subsection, such plan shall be implemented.

(d) **GRANTS.**—

(1) **IN GENERAL.**—The Assistant Secretary of the Army for Civil Works and the Administrator of the Environmental Protection Agency are authorized to make grants to the State of New York to perform activities authorized under this section or to contract for such performance. Such grants may not exceed 70 percent of the costs of such activities and the non-Federal share of such costs shall be provided by non-Federal sources. Administrative services for the development and implementation of the plan approved pursuant to subsection (a) shall be provided by a not-for-profit corporation established for the purpose of assisting with the planning and coordination of the cleanup of Onondaga Lake.

(2) **USE OF GRANTS.**—To carry out this section, the Governor of the State of New York may, using funds made available pursuant to paragraph (1), make grants for—

(A) research, surveys, administrative services, and studies approved by the management conference as necessary for the development of the plan under this section;

(B) other activities, including administrative services, that are approved by the management conference and are necessary to implement the plan approved by the management conference pursuant to subsection (a); and

(C) gathering data and retaining expert consultants in support of litigation undertaken by the State of New York to compel cleanup or obtain cleanup and damage costs from parties responsible for the pollution of Onondaga Lake, including administrative services.

(3) **IN-KIND PAYMENTS.**—In-kind payments shall qualify for the purpose of meeting the total non-Federal matching requirements of this subsection.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to the Secretary and the Administrator of the

Environmental Protection Agency such sums as may be necessary to carry out this section.

(f) **EFFECT ON LIABILITY.**—Grants made under this section shall not relieve from liability any person who would otherwise be liable under Federal or State law for damages, response costs, natural resource damages, restitution, equitable relief, or any other relief.

33 USC 2239  
note.

**SEC. 412. ALTERNATIVES TO MUD DUMP SITE FOR DISPOSAL OF DREDGED MATERIAL.**

(a) **REPORT.**—Within 90 days after the date of the enactment of this Act, the Administrator of the Environmental Protection Agency shall submit to the Congress a final report on the feasibility of designating an alternative site to the Mud Dump Site at a distance not less than 20 miles from the shoreline.

New York.  
New Jersey.

(b) **PLAN.**—Within 180 days after the date of the enactment of this Act, the Secretary and the Administrator of the Environmental Protection Agency shall submit to Congress a plan for the long-term management of dredged material from the New York/New Jersey Harbor region. The plan shall include—

- (1) an identification of the source, quantities, and characteristics of material to be dredged;
- (2) a discussion of potential alternative sites for disposal of dredged material, including the feasibility of altering the boundaries of the Mud Dump Site;
- (3) measures to reduce the quantities of dredged material proposed for ocean disposal;
- (4) measures to reduce the amount of contaminants in materials proposed to be dredged from the Harbor through source controls and decontamination technology;
- (5) a program for monitoring the physical, chemical, and biological effects of dumping dredged material at the Mud Dump Site; and
- (6) a study of the characteristics of the bottom sediments, including type and distribution.

New York.  
New Jersey.

(c) **DEMONSTRATION PROJECT.**—The Secretary, in consultation with the Administrator of the Environmental Protection Agency, shall implement a demonstration project for disposing on an annual basis up to 10 percent of the material dredged from the New York/New Jersey Harbor region in an environmentally sound manner other than by ocean disposal. Environmentally sound alternatives may include, among others, capping of borrow pits, construction of a containment island, application for landfill cover, habitat restoration, and use of decontamination technology.

(d) **MUD DUMP SITE DEFINED.**—For purposes of this section, the term “Mud Dump Site” means the area located approximately 5¼ miles east of Sandy Hook, New Jersey, with boundary coordinates of 40 degrees, 23 minutes, 48 seconds North, 73 degrees, 51 minutes, 28 seconds West; 40 degrees, 21 minutes, 48 seconds North, 73 degrees, 50 minutes, 00 seconds West; 40 degrees, 21 minutes, 48 seconds North; 73 degrees, 51 minutes, 28 seconds West; and 40 degrees, 23 minutes, 48 seconds North; 73 degrees, 50 minutes, 00 seconds West.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to the Secretary for fiscal year 1991, \$3,000,000 to implement subsection (b) and \$1,000,000 to implement subsection (c), and such sums as may be necessary for fiscal year 1992.

(f) **REPEAL.**—Section 211 of the Water Resources Development Act of 1986 (33 U.S.C. 2239) is repealed.



**SEC. 413. ALBEMARLE SOUND-ROANOKE RIVER BASIN, NORTH CAROLINA.**

Not later than January 1, 1992, the Secretary shall review the report mandated by section 5 of Public Law 100-589 with respect to project application 83-0747-06, make a determination of the impact of the project in light of such report, and take all action he deems appropriate, including permit modification, notwithstanding any construction that may have occurred.

**SEC. 414. RONDOUT CREEK AND WALLKILL RIVER, NEW YORK AND NEW JERSEY.**

(a) **NON-FEDERAL SHARE.**—If the Secretary determines that a design deficiency exists in the North Ellenville portion of the project for flood control, Rondout Creek and Wallkill River and their tributaries, New York and New Jersey, authorized by section 203 of the Flood Control Act of 1962 (76 Stat. 1181), the non-Federal share of correcting such deficiency shall be the same as the non-Federal share of the project as originally authorized and constructed.

(b) **DEADLINE FOR DETERMINATION.**—The Secretary must make the determination under subsection (a) not later than the 90th day following the date of the enactment of this Act.

**SEC. 415. REGULATION OF DWORSHAK DAM, IDAHO.**

(a) **JOINT REPORT.**—On or before January 1, 1994, or as soon thereafter as reasonably practicable, as part of the joint systems operations review by the Army Corps of Engineers, the Secretary, the Commissioner of the Bureau of Reclamation, and the Administrator of the Bonneville Power Administration shall issue a joint report to Congress on the regulation of Dworshak Dam, Idaho, including the following:

(1) An analysis of the current recreational and transportation usage of Dworshak Reservoir and the potential for such usage given differing operating criteria for the dam.

(2) Identification of the annual time period during which the operating criteria for Dworshak Dam has the greatest impact on recreational and transportation usage of the reservoir.

(3) Recommendations for achieving to the greatest degree the Corps of Engineers' project purposes and suggestions for mitigating any adverse impacts on recreational and transportation usage of the Dworshak Reservoir.

(b) **PUBLIC MEETINGS.**—The Secretary shall, in cooperation with the Administrator of the Bonneville Power Administration, conduct public meetings in the vicinity of Dworshak Dam, Idaho, for the purpose of keeping the public informed about projected drawdowns of Dworshak Reservoir and the reasons for such drawdowns.

**SEC. 416. SOUTHEAST LIGHT ON BLOCK ISLAND, RHODE ISLAND.**

(a) **RELOCATION.**—The Secretary shall relocate the Southeast Light on Block Island, Rhode Island, to a more suitable location on such island.

(b) **TERMS, CONDITIONS, AND OBLIGATIONS.**—Nothing in this section shall be construed as relieving any person operating the Southeast Light on Block Island of any term, condition, or obligation to which such person is subject with respect to such operation on the day before the date of the enactment of this Act.

(c) **AUTHORIZATION OF APPROPRIATIONS.**—There is authorized to be appropriated to the Secretary to carry out this section the lesser of

\$970,000 or 50 percent of the total cost of relocating the southeast light.

33 USC 2313  
note.

#### SEC. 417. MAGNETIC LEVITATION TECHNOLOGY.

(a) **RESEARCH AND DEVELOPMENT.**—The Secretary is authorized, in cooperation with the Secretary of Transportation, to conduct research and development activities on magnetic levitation technology or to provide for such research and development.

(b) **COLLABORATION.**—The Secretary is authorized to collaborate with non-Federal entities (including State and local governments, colleges and universities, and corporations, partnerships, sole proprietorships, and trade associations which are incorporated or established under laws of a State or the District of Columbia) in carrying out research and development on magnetic levitation technology.

(c) **COOPERATIVE RESEARCH CONTRACTS.**—In carrying out this section, the Secretary may enter into contracts or cooperative research and development agreements under section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a), except that the Secretary may fund up to 50 percent of the cost of each collaborative research and development project undertaken.

(d) **LICENSING OF RESEARCH AND DEVELOPMENT.**—The research, development, and use of any technology developed under an agreement entered into pursuant to this section, including the terms under which such technology may be licensed and the resulting royalties may be distributed, shall be subject to the provisions of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701-3714). In addition, the Secretary may require the non-Federal entity to certify that such research and development will be performed substantially in the United States and that products embodying inventions made under an agreement entered into pursuant to this section or produced through the use of such inventions will be manufactured substantially in the United States.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—For purposes of carrying out this section, there is authorized to be appropriated \$1,000,000 for fiscal year 1990 and \$4,000,000 for fiscal year 1991. Such funds shall remain available until expended. No funds are authorized to be appropriated under this section for any fiscal year beginning after September 30, 1991.

#### SEC. 418. RIVERSIDE, CALIFORNIA.

If the holder and owner of a leasehold mineral and royalty interest in the existing Prado Flood Control Basin in Riverside, California, requests the Administrator of General Services to exchange such interest for excess Federal property, the Administrator shall acquire such interest by exchange of excess Federal property. Such acquisition must be completed not later than 270 days after the date of such request. The Administrator shall undertake an evaluation and appraisal of an interest to be acquired under this section.

#### SEC. 419. BUY AMERICAN.

(a) **STUDY.**—The Secretary shall conduct a study of the requirements of the use of materials and products produced in the United States as they apply to water resource projects carried out by the Secretary for the purpose of determining whether or not such requirements are meeting the objectives for which they are being



imposed and whether or not additional requirements are necessary to meet such objectives.

(b) **REVIEW.**—The study under this section shall include a review of the application of existing requirements and a description of the types and amounts of domestic and foreign materials and products used in water resource projects administered by the Secretary.

(c) **REPORT.**—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this section, together with recommendations for any modifications to requirements described in subsection (a).

#### SEC. 420. SENSE OF CONGRESS.

It is the sense of Congress that priority consideration will be given to the authorization of water resources development projects which are recommended by the Chief of Engineers in reports completed after the date of the enactment of this Act.

#### SEC. 421. WOODLAWN BEACH, HAMBURG, NEW YORK.

(a) **DEMONSTRATION PROJECT.**—The Administrator of the Environmental Protection Agency is authorized to undertake a demonstration project to eliminate contamination of the waters in the vicinity of Woodlawn Beach, Hamburg, New York, from nonpoint sources of pollution resulting from surface runoff and septic system contamination entering Rush and Blasdell Creeks. The project shall include control of sources of pollution, relocation of Rush and Blasdell Creeks, and construction of a settling pond.

(b) **NON-FEDERAL SHARE.**—The non-Federal share of the cost of the project under this section shall be 50 percent.

Approved November 28, 1990.

#### LEGISLATIVE HISTORY—S. 2740 (H.R. 5314):

HOUSE REPORTS: No. 101-705 accompanying H.R. 5314 (Comm. on Public Works and Transportation) and No. 101-966 (Comm. of Conference).

SENATE REPORTS: No. 101-333 (Comm. on Environment and Public Works).

CONGRESSIONAL RECORD, Vol. 136 (1990):

Aug. 1, considered and passed Senate.

Sept. 26, H.R. 5314 considered and passed House; S. 2740, amended, passed in lieu.

Oct. 27, House and Senate agreed to conference report.

WEEKLY COMPILATION OF PRESIDENTIAL DOCUMENTS, Vol. 26 (1990):

Nov. 28, Presidential statement.

HQ AR001860-HQ AR001929



## WATER RESOURCES DEVELOPMENT ACT OF 1990

OCTOBER 27, 1990.—Ordered to be printed

Mr. NOWAK, from the committee of conference,  
submitted the following

### CONFERENCE REPORT

[To accompany S. 2740]

The committee of conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 2740) to provide for the conservation and development of water and related resources, to authorize the United States Army Corps of Engineers civil works program to construct various projects for improvements to the Nation's infrastructure, and for other purposes, having met, after full and free conference, have agreed to recommend and do recommend to their respective Houses as follows:

That the Senate recede from its disagreement to the amendment of the House and agree to the same with an amendment as follows:

In lieu of the matter proposed to be inserted by the House amendment insert the following:

#### SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) *SHORT TITLE.*—This Act may be cited as the “Water Resources Development Act of 1990”.

(b) *TABLE OF CONTENTS.*—

Sec. 1. *Short title; table of contents.*

Sec. 2. *Secretary defined.*

#### TITLE I—WATER RESOURCES PROJECTS

Sec. 101. *Project authorizations.*

Sec. 102. *Project modifications.*

Sec. 103. *Small navigation projects.*

Sec. 104. *Small flood control projects.*

Sec. 105. *Bay City, Michigan.*

Sec. 106. *Delaware River and tributaries, Pennsylvania.*

Sec. 107. *Continuation of authorization of certain projects.*

Sec. 108. *Hazard, Kentucky.*

Sec. 109. *Sauk Lake, Minnesota.*

Sec. 110. *Rehabilitation of Federal flood control levees.*

Sec. 111. *Belen, New Mexico.*

Sec. 112. *Lower Truckee River, Nevada.*

- Sec. 113. Arkansas Post Navigation Canal.*
- Sec. 114. Struthers, Ohio.*
- Sec. 115. Maysville, Kentucky.*
- Sec. 116. Studies.*
- Sec. 117. Cranston, Rhode Island.*
- Sec. 118. Technical assistance for New York Harbor.*
- Sec. 119. Project deauthorizations.*
- Sec. 120. Half Moon Bay Harbor.*

## *TITLE II—LAND TRANSFERS*

- Sec. 201. Sneads, Florida.*
- Sec. 202. Ira D. MacLachlan American Legion Post, Sault Sainte Marie, Michigan.*
- Sec. 203. Aberdeen, Washington.*
- Sec. 204. Release of reversionary interest to Clay County, Georgia.*
- Sec. 205. Conveyance of Oakland Inner Harbor Tidal Canal property to cities of Oakland and Alameda, California.*

## *TITLE III—GENERALLY APPLICABLE PROVISIONS*

- Sec. 301. Planning and engineering.*
- Sec. 302. Emergency response.*
- Sec. 303. Construction of navigation projects by non-federal interests.*
- Sec. 304. Project modifications for improvement of environment.*
- Sec. 305. Ability to pay.*
- Sec. 306. Environmental protection mission.*
- Sec. 307. Wetlands.*
- Sec. 308. Flood plain management.*
- Sec. 309. Shoreline protection.*
- Sec. 310. Reservoir management.*
- Sec. 311. Reservoir project operations.*
- Sec. 312. Environmental dredging.*
- Sec. 313. Protection of recreational and commercial uses.*
- Sec. 314. Operation and maintenance of hydroelectric facilities.*
- Sec. 315. Matters to be addressed in planning.*
- Sec. 316. Harbor maintenance trust fund amendment.*
- Sec. 317. Single entities.*
- Sec. 318. Technical assistance to private entities.*
- Sec. 319. Fees for development of State water plans.*
- Sec. 320. Cabin site leases.*
- Sec. 321. Information on floods and flood damages.*
- Sec. 322. Reduced pricing for certain water supply storage.*

## *TITLE IV—MISCELLANEOUS PROVISIONS*

- Sec. 401. Great Lakes remedial action plans.*
- Sec. 402. Cross Florida Barge Canal.*
- Sec. 403. Wappingers Lake and Lake George, New York.*
- Sec. 404. Demonstration of construction of Federal project by non-federal interests.*
- Sec. 405. Upper Mississippi River plan.*
- Sec. 406. Construction of Virgin Islands projects by Secretary of the Army.*
- Sec. 407. Virginia Beach, Virginia.*
- Sec. 408. Declaration of nonnavigability for portions of Lake Erie.*
- Sec. 409. Wetlands enhancement opportunities.*
- Sec. 410. Raystown Lake, Pennsylvania.*
- Sec. 411. Onondaga Lake, New York.*
- Sec. 412. Alternatives to mud dump site for disposal of dredged material.*
- Sec. 413. Albermarle Sound-Roanoke River Basin, North Carolina.*
- Sec. 414. Rondout Creek and Wallkill River, New York and New Jersey.*
- Sec. 415. Regulation of Dworshak Dam, Idaho.*
- Sec. 416. Southeast light on Block Island, Rhode Island.*
- Sec. 417. Magnetic levitation technology.*
- Sec. 418. Riverside, California.*
- Sec. 419. Buy American.*
- Sec. 420. Sense of Congress.*
- Sec. 421. Woodlawn Beach, Hamburg, New York.*



**SEC. 2. SECRETARY DEFINED.**

*For purposes of this Act, the term "Secretary" means the Secretary of the Army.*

**TITLE I—WATER RESOURCES PROJECTS****SEC. 101. PROJECT AUTHORIZATIONS.**

*(a) PROJECTS WITH REPORT OF THE CHIEF OF ENGINEERS.—Except as provided in this subsection, the following projects for water resources development and conservation and other purposes are authorized to be carried out by the Secretary substantially in accordance with the plans, and subject to the conditions, recommended in the respective reports designated in this subsection:*

*(1) BAYOU LA BATRE, ALABAMA.—The project for navigation for Bayou La Batre, Alabama: Report of the Chief of Engineers, dated August 3, 1989, at a total cost of \$16,230,000, with an estimated first Federal cost of \$4,490,000 and an estimated first non-Federal cost of \$11,740,000.*

*(2) HOMER SPIT, ALASKA.—The project for storm damage prevention, Homer Spit, Alaska: Report of the Chief of Engineers, dated June 28, 1990, at a total cost of \$4,700,000, with an estimated first Federal cost of \$3,050,000 and an estimated first non-Federal cost of \$1,650,000, and an average annual cost of \$242,000 for periodic nourishment over the 50-year life of the project, with an estimated annual Federal cost of \$157,000 and an estimated annual non-Federal cost of \$85,000.*

*(3) CLIFTON, SAN FRANCISCO RIVER, ARIZONA.—The project for flood control on the San Francisco River at Clifton, Arizona, authorized by section 401(d) of the Water Resources Development Act of 1986 (100 Stat. 4130), is modified to authorize the Secretary to construct the project substantially in accordance with the report of the Chief of Engineers, dated September 6, 1988, at a total cost of \$12,510,000, with an estimated first Federal cost of \$9,150,000 and an estimated first non-Federal cost of \$3,360,000.*

*(4) NOGALES WASH AND TRIBUTARIES, ARIZONA.—The project for flood control, Nogales Wash and tributaries, Arizona: Report of the Chief of Engineers, dated February 28, 1989, at a total cost of \$11,100,000, with an estimated first Federal cost of \$8,300,000 and an estimated first non-Federal cost of \$2,800,000. The Secretary shall cooperate with the Government of Mexico as necessary to provide for flood warning gauges in Mexico. The Secretary may proceed with the portion of the project in the United States before an agreement is reached with the Government of Mexico with respect to the portion of the project in Mexico.*

*(5) COYOTE AND BERRYESSA CREEKS, CALIFORNIA.—The project for flood control, Coyote and Berryessa Creeks, California: Report of the Chief of Engineers, dated February 7, 1989, at a total cost of \$56,300,000, with an estimated first Federal cost of \$39,000,000 and an estimated first non-Federal cost of \$17,300,000.*

(6) **OCEANSIDE HARBOR, CALIFORNIA.**—The project for navigation and storm damage reduction, Oceanside Harbor, California: Report of the Chief of Engineers, dated May 21, 1990, at a total cost of \$5,100,000, with an estimated first Federal cost of \$3,350,000 and an estimated first non-Federal cost of \$1,750,000.

(7) **VENTURA HARBOR, CALIFORNIA.**—The project for navigation, Ventura Harbor, California: Report of the Chief of Engineers, dated June 5, 1990, at a total cost of \$6,455,000, with an estimated first Federal cost of \$5,175,000 and an estimated first non-Federal cost of \$1,280,000.

(8) **MARTIN COUNTY, FLORIDA.**—The project for storm damage reduction, Martin County, Florida: Report of the Chief of Engineers dated November 20, 1989, at a total first cost of \$9,400,000, with an estimated first Federal cost of \$3,850,000 and an estimated first non-Federal cost of \$5,550,000, and an average annual cost of \$472,300 for periodic nourishment over the 50-year life of the project, with an estimated annual Federal cost of \$193,600 and an estimated annual non-Federal cost of \$278,700.

(9) **MIAMI HARBOR CHANNEL, FLORIDA.**—The project for navigation, Miami Harbor Channel, Florida: Report of the Chief of Engineers dated September 25, 1989, at a total cost of \$67,100,000, with an estimated first Federal cost of \$42,810,000 and an estimated first non-Federal cost of \$24,290,000.

(10) **MCALPINE LOCK AND DAM, INDIANA AND KENTUCKY.**—The project for navigation, McAlpine Lock and Dam, Indiana and Kentucky: Report of the Chief of Engineers, dated June 29, 1990, at a total cost of \$219,600,000, with a first Federal cost of \$219,600,000. The Federal share of costs of construction of the project is to be paid one-half from amounts appropriated from the general fund of the Treasury and one-half from amounts appropriated from the Inland Waterways Trust Fund.

(11) **FORT WAYNE, ST. MARY'S AND MAUMEE RIVERS, INDIANA.**—The project for flood control, Fort Wayne, St. Mary's and Maumee Rivers, Indiana: Report of the Chief of Engineers, dated May 1, 1989, at a total cost of \$35,618,400, with an estimated first Federal cost of \$26,493,000 and an estimated first non-Federal cost of \$9,125,400.

(12) **ALOHA-RIGOLETTE, LOUISIANA.**—The project for flood control, Aloha-Rigolette Area, Louisiana: Report of the Chief of Engineers dated April 11, 1990, at a total cost of \$8,283,000, with an estimated first Federal cost of \$6,212,000 and an estimated first non-Federal cost of \$2,071,000.

(13) **BOSTON HARBOR, MASSACHUSETTS.**—The project for navigation, Boston Harbor, Massachusetts: Report of the Chief of Engineers, dated May 11, 1989, at a total cost of \$26,200,000, with an estimated first Federal cost of \$16,230,000 and an estimated first non-Federal cost of \$9,970,000.

(14) **ECORSE CREEK, WAYNE COUNTY, MICHIGAN.**—The project for flood control, Ecorse Creek, Wayne County, Michigan: Report of the Chief of Engineers, dated August 8, 1989, at a total cost of \$9,296,000, with an estimated first Federal cost of \$6,754,000 and an estimated first non-Federal cost of \$2,542,000.



(15) *GREAT LAKES CONNECTING CHANNELS AND HARBORS, MICHIGAN AND MINNESOTA.*—The project for navigation, Great Lakes Connecting Channels and Harbors, Michigan and Minnesota: Report of the Chief of Engineers, dated January 30, 1990, at a total cost of \$13,148,400, with an estimated first Federal cost of \$8,791,700 and an estimated first non-Federal cost of \$4,356,700.

(16) *COLDWATER CREEK, MISSOURI.*—The project for flood control, Coldwater Creek, Missouri: Report of the Chief of Engineers, dated August 9, 1988, at a total cost of \$22,829,000, with an estimated first Federal cost of \$15,496,000 and an estimated first non-Federal cost of \$7,333,000.

(17) *RIVER DES PERES, MISSOURI.*—The project for flood control, River Des Peres, Missouri: Report of the Chief of Engineers, dated May 23, 1989, at a total cost of \$21,318,000, with an estimated first Federal cost of \$15,846,000 and an estimated first non-Federal cost of \$5,472,000.

(18) *PASSAIC RIVER MAIN STEM, NEW JERSEY AND NEW YORK.*—  
(A) *FLOOD CONTROL ELEMENTS.*—

(i) *IN GENERAL.*—The project for flood control, Passaic River Main Stem, New Jersey and New York: Report of the Chief of Engineers, dated February 3, 1989, except that the main diversion tunnel shall be extended to include the outlet to Newark Bay, New Jersey, at a total cost of \$1,200,000,000, with an estimated first Federal cost of \$890,000,000 and an estimated first non-Federal cost of \$310,000,000.

(ii) *DESIGN AND CONSTRUCTION.*—The Secretary shall design and construct the project in accordance with the Newark Bay tunnel outlet alternative described in the Phase I General Design Memorandum of the District Engineer, dated December 1987. The main diversion tunnel shall be extended approximately 6½ miles to outlet in Newark Bay, the 9 levee systems in Bergen, East Essex, and Passaic Counties which were associated with the eliminated Third River tunnel outlet shall be excluded from the project, and no dikes or levees shall be constructed along the Passaic River in Bergen County in connection with the project. With respect to the Newark Bay tunnel outlet project, all acquisition, use, condemnation, or requirement for parklands or properties in connection with the excluded 9 levee systems and the eliminated Third River tunnel outlet works, and any other acquisition, use or condemnation, or requirement for parkland or properties in Bergen County in connection with the project, is prohibited. The Secretary shall certify to the Committee on Public Works and Transportation of the House of Representatives and the Committee on Environment and Public Works of the Senate that no detrimental flood impact will accrue in Bergen County as a result of the project.

(iii) *APPLICABILITY OF COST SHARING.*—Except as otherwise provided in this paragraph, the total project, including the extension to Newark Bay, shall be subject

to cost sharing in accordance with section 103 of the Water Resources Development Act of 1986.

(iv) *OPERATION AND MAINTENANCE.*—The non-Federal sponsor shall maintain and operate the project after its completion in accordance with the regulations prescribed by the Secretary; except that the Secretary shall perform all measures to ensure integrity of the tunnel, including staffing of operation centers, cleaning and periodically inspecting the tunnel structure, and testing and assuring the effectiveness of mechanical equipment at gated structures and pump stations.

(v) *CREDIT FOR NON-FEDERAL WORK.*—In recognition of the State of New Jersey's commitment to the project on June 28, 1984, all work completed after such date by the State or other non-Federal interests which is either compatible with or complementary to the project shall be considered as part of the project and shall be credited by the Secretary toward the non-Federal share of the cost of the project. Such work shall include, but not be limited to, those activities specified in the letter of the New Jersey Department of Environmental Protection, dated December 9, 1988, to the Office of the Chief of Engineers. However, only the portion of such work that meets the guidelines established under section 104 of the Water Resources Development Act of 1986 shall be considered as project costs for economic purposes. In applying such section 104 to the project, the Secretary shall likewise consider work carried out by non-Federal interests after June 28, 1984, and before the date of the enactment of this Act that otherwise meets the requirements of such section 104.

(B) *STREAMBANK RESTORATION MEASURES.*—The project shall include the construction of environmental and other streambank restoration measures (including bulkheads, recreation, greenbelt, and scenic overlook facilities) on the west bank of the Passaic River between Bridge and Jackson Streets in the city of Newark, New Jersey, at a total cost of \$6,000,000. The non-Federal share of the project element authorized by this subparagraph shall be 25 percent. The value of the lands, easements, and rights-of-way provided by non-Federal interests shall be credited to the non-Federal share. Construction of the project element authorized by this subparagraph may be undertaken in advance of the other project features and shall not await implementation of the overall project.

(C) *WETLANDS BANK.*—

(i) *PURPOSES.*—The purposes of this subparagraph are to evaluate and demonstrate, for application on a national basis, the feasibility of and methods of obtaining an interim goal of no overall net loss of the Nation's remaining wetlands base and a long-term goal to increase the quality and quantity of the Nation's wetlands; of restoring and creating wetlands; of developing public and private initiatives to search out op-



portunities of restoring, preserving, and enhancing wetlands; and of improving understanding of the function of wetlands ecosystems in order to improve the effectiveness of the Nation's wetlands program, including evaluating the functions and values of wetlands, assessing cumulative impacts and the effectiveness of protection programs, and wetlands restoration and creation techniques.

(ii) *ESTABLISHMENT*.—The State of New Jersey shall establish a Passaic River Central Basin Wetlands Bank (hereinafter in this paragraph referred to as the “Wetlands Bank”) to be comprised of lands which are acquired before, on, or after the date of the enactment of this Act by the State or any other non-Federal interest and which lie within the Passaic River Central Basin, New Jersey, natural storage area discussed in the report of the Chief Engineers and the Phase I General Design Memorandum.

(iii) *USE*.—The Wetlands Bank shall be available for mitigation purposes required under Federal or State law with respect to non-Federal activities carried out in the State.

(iv) *COMPENSATION*.—The State may receive compensation for making lands available under clause (iii).

(v) *STATE OWNERSHIP AND OPERATION*.—The State shall continue to own and operate, consistent with the purposes of the project authorized by this paragraph, lands made available for mitigation purposes under clause (iii).

(vi) *ACQUISITION OF ADDITIONAL LANDS*.—The State or other non-Federal interests may acquire for the Wetlands Bank additional lands which are in, adjacent to, or provide drainage for runoff and streamflows into the storage area described in clause (ii) and may use funds provided by sources other than the State for such purpose. Such lands shall include transition and buffer areas adjacent to the Central Basin natural storage wetlands and other Passaic River Basin areas, including the Rockaway, Pequannock, Ramapo, and Wanaque River watershed areas.

(vii) *CREDIT*.—The fair market value of lands acquired by the State or other non-Federal interests in the storage area described in clause (ii) before, on, or after the date of the enactment of this Act, the fair market value of lands acquired for the Wetlands Bank under clause (vi) before, on, or after such date of enactment, and the costs incurred by the State or other non-Federal interests in converting any of such lands to wetlands shall be credited to the non-Federal share of the cost of the project authorized by this paragraph.

(viii) *TREATMENT OF ACQUIRED LANDS*.—Lands acquired by the State for the Wetlands Bank shall not be treated as a project cost for purposes of economic evaluation of the project.

(ix) *EFFECT ON OTHER LAWS.*—*Nothing in this subparagraph shall be construed as affecting any requirements under section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344) or section 10 of the Act of March 3, 1899 (33 U.S.C. 403).*

(19) *RIO DE LA PLATA, PUERTO RICO.*—*The project for flood control, Rio De La Plata, Puerto Rico: Report of the Chief of Engineers, dated January 3, 1989, at a total cost of \$58,968,000, with an estimated first Federal cost of \$35,900,000 and an estimated first non-Federal cost of \$23,068,000.*

(20) *MYRTLE BEACH, SOUTH CAROLINA.*—*The project for storm damage reduction, Myrtle Beach, South Carolina: Report of the Chief of Engineers, dated March 2, 1989, at a total cost of \$59,730,000, with an estimated first Federal cost of \$38,820,000 and an estimated first non-Federal cost of \$20,910,000, and an average annual cost of \$1,215,000 for period nourishment over the 50-year life of the project, with an estimated annual Federal cost of \$790,000 and an estimated annual non-Federal cost of \$425,000.*

(21) *BUFFALO BAYOU AND TRIBUTARIES, TEXAS.*—*The project for flood control, Buffalo Bayou and tributaries, Texas: Report of the Chief of Engineers, dated February 12, 1990, at a total cost of \$727,364,000, with an estimated first Federal cost of \$403,359,500 and an estimated first non-Federal cost of \$324,004,500.*

(22) *RAY ROBERTS LAKE, GREENBELT, TEXAS.*—*The multiple purpose project, Ray Roberts Lake, Greenbelt, Texas, authorized by section 301 of the Rivers and Harbors Act of 1965, is modified to authorize the Secretary to construct recreation features substantially in accordance with the Report of the Chief of Engineers, dated December 24, 1987, at a total cost of \$8,503,000, with an estimated first Federal cost of \$3,189,000 and an estimated first non-Federal cost of \$5,314,000.*

(23) *UPPER JORDAN RIVER, UTAH.*—*The project for flood control, Upper Jordan River, Utah: Report of the Chief of Engineers, dated November 16, 1988, at a total cost of \$7,900,000, with an estimated first Federal cost of \$5,200,000 and an estimated first non-Federal cost of \$2,700,000.*

(24) *BUENA VISTA, VIRGINIA.*—*The project for flood control, Buena Vista, Virginia: Report of the Chief of Engineers, dated June 27, 1990, at a total cost of \$55,100,000, with an estimated first Federal cost of \$41,300,000 and an estimated first non-Federal cost of \$13,800,000.*

(25) *MOOREFIELD, WEST VIRGINIA.*—*The project for flood control, Moorefield, West Virginia: Report of the Chief of Engineers, dated July 23, 1990, at a total cost of \$16,260,000, with an estimated first Federal cost of \$11,675,000 and an estimated first non-Federal cost of \$4,585,000.*

(26) *PETERSBURG, WEST VIRGINIA.*—*The project for flood control, Petersburg, West Virginia: Report of the Chief of Engineers, dated June 29, 1990, at a total cost of \$17,904,000, with an estimated first Federal cost of \$10,044,000 and an estimated first non-Federal cost of \$7,860,000.*



(b) **PROJECT SUBJECT TO FAVORABLE REPORT OF THE CHIEF OF ENGINEERS.**—The project for flood control, Los Angeles County Drainage Area, California, at a total cost of \$327,000,000, with an estimated first Federal cost of \$163,500,000 and an estimated first non-Federal cost of \$163,500,000, is authorized to be prosecuted by the Secretary in accordance with a final report of the Chief of Engineers and with such modifications as are recommended by the Secretary. No construction on the project may be initiated until such a report of the Chief of Engineers is issued and approved by the Secretary.

**SEC. 102. PROJECT MODIFICATIONS.**

(a) **VILLAGE CREEK, ALABAMA.**—The project for flood control, Village Creek, Alabama, authorized by section 401 of the Water Resources Development Act of 1986 (100 Stat. 4111), is modified to authorize the Secretary to acquire private vacant lands within the definite project boundaries established in the Real Estate Design Memorandum, dated March 4, 1988, as a nonstructural element of the project.

(b) **KODIAK HARBOR, ALASKA.**—The project for navigation, Kodiak Harbor, Alaska, authorized by section 202(a) of the Water Resources Development Act of 1986 (100 Stat. 4091), is modified to authorize the Secretary to construct the project at a total cost of \$25,000,000, with an estimated first Federal cost of \$22,500,000 and an estimated first non-Federal cost of \$2,500,000.

(c) **LOS ANGELES AND LONG BEACH HARBORS, SAN PEDRO BAY, CALIFORNIA.**—Section 4(d) of the Water Resources Development Act of 1988 (102 Stat. 4015) is amended by inserting after “approved by the Secretary” in the first sentence the following: “or which is carried out after approval of the final report by the Secretary and which is determined by the Secretary to be compatible with the project”.

(d) **SACRAMENTO DEEP WATER SHIP CHANNEL, CALIFORNIA.**—The project for navigation, Sacramento Deep Water Ship Channel, California, authorized by section 202(a) of the Water Resources Development Act of 1986 (100 Stat. 4092), is modified to direct the Secretary, if requested by a non-Federal sponsor, to enforce, on a reimbursable basis, the terms of any permit issued by the Secretary under section 10 of the Act of March 3, 1899 (30 Stat. 1151; 33 U.S.C. 403), commonly known as the Rivers and Harbors Appropriations Act of 1899, to compel the relocation of any utility necessitated by the construction of such project.

(e) **SANTA ANA MAINSTEM, CALIFORNIA.**—The project for flood control, Santa Ana Mainstem, including Santiago Creek, California, authorized by section 401(a) of the Water Resources Development Act of 1986 (100 Stat. 4113), is modified to authorize the Secretary to develop recreational trails and facilities on lands between Seven Oaks Dam and Prado Dam, including flood plain management areas.

(f) **SAN LUIS REY RIVER, CALIFORNIA.**—The project for flood control, San Luis Rey River, California, authorized pursuant to section 201 of the Flood Control Act of 1965 (42 U.S.C. 1962d-5), is modified to authorize the Secretary to construct the project at a total cost of \$60,400,000, with an estimated first Federal cost of \$45,100,000 and an estimated first non-Federal cost of \$15,300,000.

(g) **DELAWARE RIVER TO CHESAPEAKE BAY, DELAWARE AND MARYLAND.**—The project for navigation, inland waterway from the Delaware River to the Chesapeake Bay, Delaware and Maryland, authorized by the first section of the Act of August 30, 1935 (49 Stat. 1030), and modified by the Act entitled “An Act authorizing construction of a highway bridge across the Chesapeake and Delaware Canal at Saint Georges, Delaware”, approved August 7, 1939 (53 Stat. 1240-1241), is modified to direct the Secretary to replace the highway bridge on United States Route 13 in the vicinity of St. Georges, Delaware, to meet current and projected traffic needs, at a Federal cost of \$115,000,000. The State may carry out the bridge replacement. If the State carries out the bridge replacement, the Secretary may reimburse the State for costs incurred.

(h) **ALAFIA CHANNEL, FLORIDA.**—

(1) **PROJECT DEPTH.**—The project for navigation, Tampa Harbor, Florida, authorized by section 4 of the Rivers and Harbors Act of September 22, 1922 (42 Stat. 1042), is modified to authorize the Secretary to maintain the Alafia Channel at a depth of 34 feet if the non-Federal sponsor dredges the Channel to such depth; except that the non-Federal sponsor shall reimburse the United States for the incremental costs incurred by the Secretary in maintaining the channel at a depth greater than 30 feet.

(2) **MAINTENANCE.**—Nothing in this subsection shall be construed as affecting the Federal responsibility for maintenance of the Alafia Channel to a depth of 30 feet.

(i) **FERNANDINA HARBOR, FLORIDA.**—The project for navigation, Fernandina Harbor, Florida, authorized by the River and Harbor Appropriation Act of June 14, 1880, is modified to redesignate the location of the turning basin between stations 0+00 of cut 8 and 5+45 of cut 10 to the area between stations 11+70 and 23+30 of cut 5. Such redesignation shall remain in effect until the ongoing study of Fernandina Harbor under section 107 of the River and Harbor Act of 1960 is completed and the resulting project is constructed.

(j) **MANATEE HARBOR, FLORIDA.**—The project for navigation, Manatee Harbor, Florida, authorized by section 202(a) of the Water Resources Development Act of 1986 (100 Stat. 4093), is modified to direct the Secretary to construct the project substantially in accordance with the post authorization change report, dated April 1990, at an estimated total cost of \$27,589,000, with an estimated first Federal cost of \$12,381,000 and an estimated first non-Federal cost of \$15,208,000.

(k) **ALENAIO STREAM, HAWAII.**—The project for flood control, Alenaio Stream, Hawaii, authorized by section 401(a) of the Water Resources Development Act of 1986 (100 Stat. 4114), is modified to authorize the Secretary to construct the project substantially in accordance with the report of the Chief of Engineers, dated August 15, 1983, as modified by the General Design Memorandum and Environmental Assessment, dated March 1990, at a total cost of \$12,060,000, with an estimated first Federal cost of \$7,730,000 and an estimated first non-Federal cost of \$4,330,000.

(l) **LOCKS AND DAM 26, MISSISSIPPI RIVER, ALTON, ILLINOIS AND MISSOURI.**—The navigation project for replacement of locks and



dam 26, Mississippi River, Alton, Illinois and Missouri, authorized by section 102 of Public Law 95-502, is modified to authorize the Secretary to provide project-related recreational development in the State of Illinois, that requires no separable project lands and includes site preparations and infrastructure for a marina and docking facilities, access roads and parking, a boat launching ramp, hiking trails, and picnicking facilities, at a Federal construction cost that will not increase the overall project cost estimate for recreational development. The recreational development shall be subject to cost-sharing with the State of Illinois.

(m) **FALLS OF THE OHIO NATIONAL WILDLIFE CONSERVATION AREA, INDIANA.**—The Falls of the Ohio National Wildlife Conservation Area, Indiana, authorized by title II of Public Law 97-137, is modified to authorize the Secretary to design and construct an interpretive center for such area, at a total cost of \$3,200,000, with an estimated first Federal cost of \$1,600,000 and an estimated first non-Federal cost of \$1,600,000.

(n) **DES MOINES RIVER AND GREENBELT, IOWA.**—

(1) **AREA DESCRIPTION.**—The project for Des Moines Recreational River and Greenbelt, Iowa, authorized by the Supplemental Appropriations Act, 1985 (99 Stat. 313), is modified to include the area described in the Des Moines Recreational River and Greenbelt map, which description is printed in Committee Print 101-47 of the Committee on Public Works and Transportation of the House of Representatives, dated July 1990.

(2) **FORMER AREA DESCRIPTION.**—Section 604 of the Water Resources Development Act of 1986 (100 Stat. 4153) is repealed.

(o) **SOUTH FRANKFORT, KENTUCKY.**—The project for flood protection for the Ohio River Basin, authorized by section 4 of the Flood Control Act of June 28, 1938 (52 Stat. 1217), is modified to direct the Secretary, subject to section 903(c) of the Water Resources Development Act of 1986, to carry out a project for flood protection for South Frankfort, Kentucky, in accordance with plan R-1 of the Louisville District Commander's Re-evaluation Report, dated June 1990. The level of protection shall be no less than that afforded North Frankfort, Kentucky. In addition, the Secretary shall execute a local cooperation agreement for the project for South Frankfort not later than October 1991.

(p) **RED RIVER WATERWAY, LOUISIANA.**—The project for mitigation of fish and wildlife losses, Red River Waterway, Louisiana, authorized by section 601(a) of the Water Resources Development Act of 1986 (100 Stat. 4142), is modified to authorize the Secretary to acquire an additional 12,000 acres adjacent to or close to the Bayou Bodcau Wildlife Management Area.

(q) **CROOKED AND INDIAN RIVERS, MICHIGAN.**—

(1) **NON-FEDERAL OPERATION AND MAINTENANCE.**—The navigation project for the Crooked and Indian Rivers, Michigan, authorized by the Act entitled "An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, flood control, and for other purposes", approved September 3, 1954 (68 Stat. 1248), is modified to authorize the Secretary to enter into agreements with the State of Michigan and other non-Federal interests in such State

to make operation and maintenance of such project a non-Federal responsibility.

(2) **TERMS AND CONDITIONS.**—The agreements referred to in paragraph (1) may—

(A) contain such terms and conditions as the Secretary determines to be necessary to protect the interests of the United States; and

(B) require the Secretary to make payments to the State of Michigan to cover the costs of operation, maintenance, and repair of such project for lake level regulation and other flood control purposes, including payments made in advance of such costs being incurred by the State.

(3) **NON-FEDERAL IMPOSITION OF TOLLS.**—Notwithstanding section 4 of the Act entitled “An Act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes”, approved July 5, 1884 (33 U.S.C. 5; 23 Stat. 147), during any period in which a non-Federal interest is responsible for operation and maintenance of the project described in paragraph (1), the non-Federal interest may impose upon boats and other watercraft using the project such tolls, operating charges, and other fees as may be necessary to pay the costs incurred by the non-Federal interest in connection with such project which are not covered by payments made by the Secretary under this subsection.

(r) **ROUGE RIVER, MICHIGAN.**—The multipurpose project at Rouge River, Michigan, authorized by the Act of August 30, 1935 (49 Stat. 1036–1037), is modified to authorize and direct the Secretary, in consultation with appropriate State and local agencies, to conduct a 1-year comprehensive study of the Rouge River streamflow enhancement project at the Rouge River, Huron River, and Belleville Lake for the purpose of identifying measures which will optimize achievement of the project’s purposes while preserving and enhancing the quality of the Rouge River, Huron River, and Belleville Lake for current and future users. Upon completion of the study, the Secretary is authorized to provide, on a reimbursable basis, technical assistance in the implementation of measures identified in such study.

(s) **MISSISSIPPI RIVER, ST. PAUL, MINNESOTA.**—The project for flood control, Mississippi River at St. Paul, Minnesota, authorized by section 401(a) of the Water Resources Development Act of 1986 (100 Stat. 4118), is modified to authorize the Secretary to construct the project substantially in accordance with the Design Memorandum, dated March 1990, and the Recreational Supplement, dated April 1990, at a total cost of \$18,021,000, with an estimated first cost of \$10,226,000 and an estimated first non-Federal cost of \$7,795,000.

(t) **BRUSH CREEK AND TRIBUTARIES, MISSOURI AND KANSAS.**—The project for flood control, Brush Creek and tributaries, Missouri and Kansas, authorized by section 401(a) of the Water Resources Development Act of 1986 (100 Stat. 4168), is modified to authorize the Secretary to construct the project substantially in accordance with the Post Authorization Change Report, dated April 1969, as revised in January 1990, at a total cost of \$26,200,000, with an estimated first Federal cost of \$16,090,000 and an estimated first non-Federal cost of \$10,110,000.



(u) *MISSOURI RIVER BETWEEN FORT PECK DAM, MONTANA, AND GAVINS POINT DAM, SOUTH DAKOTA AND NEBRASKA.*—Section 9 of the Act entitled “An Act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes”, approved December 22, 1944 (58 Stat. 891), is amended by inserting “acquisition of real property and associated improvements (from willing sellers), and monetary compensation to affected land-owners” after “including maintenance and rehabilitation of existing structures,”.

(v) *NEW YORK HARBOR DRIFT REMOVAL PROJECT, NEW YORK AND NEW JERSEY.*—

(1) *REMOVAL OF FLOATING MATERIAL.*—The New York Harbor collection and removal of drift project, authorized by section 2 of the Act entitled “An Act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes”, approved March 4, 1915 (38 Stat. 1051) and section 91 of the Water Resources Development Act of 1974 (88 Stat. 39), is modified to authorize the Secretary to collect and remove floating material whenever the Secretary is collecting and removing debris which is an obstruction to navigation.

(2) *CONTINUATION.*—The Secretary shall continue engineering, design, and construction on the New York Harbor collection and removal of drift project, including construction of the 2nd phase in the Jersey City North reach which shall include remaining piers and debris in the Harsimus Cove area, construction of the Brooklyn II reach, and engineering and design for the remaining unconstructed reaches.

(3) *BARGE REMOVAL.*—As part of the New York Harbor collection and removal of drift project, the Secretary shall expedite necessary engineering, design, and removal of 7 abandoned barges from the Passaic River in Kearny, Nutley, and Passaic, New Jersey.

(4) *PROHIBITION OF BURNING OF WOOD.*—

(A) *GENERAL RULE.*—The New York Harbor collection and removal of drift project referred to in paragraph (1), including construction described in paragraph (2), is further modified to provide (i) that after December 31, 1990, material collected by the Secretary in carrying out the project may be disposed of only as provided in subparagraph (D), and (ii) that no later than December 31, 1993, the Administrator shall prohibit the burning of wood collected in carrying out the project on ocean waters.

(B) *DEMONSTRATION OF ALTERNATIVES.*—

(i) *SURVEY.*—The Secretary shall conduct a survey of potential acceptable alternative methods to the burning of wood on ocean waters which could be used for disposal of wood collected in carrying out the project.

(ii) *GOAL.*—Methods of disposal identified in the survey shall be demonstrated in accordance with subparagraph (D), with the goal of arriving at an implementable acceptable alternative method at the earliest practicable date.

(C) *REPORT TO CONGRESS.*—The Secretary shall report to the Committee on Public Works and Transportation of the House of Representatives, the Committee on Environment and Public Works of the Senate, and the Committee on Merchant Marine and Fisheries of the House of Representatives by February 1, 1991, by January 1, 1992, and, if an implementable acceptable alternative method is not identified under this paragraph, by January 1, 1993, on the progress being made toward achieving an early end to the practice of burning of wood on ocean waters. Each of such reports shall describe specific methods and strategies and the results of the demonstration of those methods, specify a date by which an acceptable alternative method or methods is likely to be implementable, and include an estimate of the volume of wood collected in carrying out the project to be disposed of in calendar year 1991, 1992, or 1993, as the case may be. A final report shall be issued no later than December 31, 1993.

(D) *DISPOSAL OF WOOD.*—Effective January 1, 1991, and until December 31, 1993, at least half of the volume of wood estimated by the Secretary under subparagraph (C) to be collected in carrying out the project each year shall be disposed so as to demonstrate alternative methods of disposal. If bids received for alternative methods are substantially greater in cost than the cost of disposal by burning on ocean waters, the Secretary shall dispose of no more than half of the estimated volume at the lesser cost; except that, if a bid received for an alternative method is not substantially greater than the cost of disposal by burning on ocean waters, the Secretary shall select the alternative method.

(E) *EPA PERMIT FOR DISPOSAL ON OCEAN WATERS.*—The Administrator shall continue to issue permits for the disposal of wood collected in carrying out the project by burning on ocean waters until December 31, 1993, and shall designate an interim site for such disposal. If an acceptable alternative method for disposal of wood is determined to be implementable under subparagraph (F), the Administrator shall prohibit the burning of such wood at a date earlier than December 31, 1993.

(F) *IMPLEMENTABLE ACCEPTABLE ALTERNATIVE.*—The Administrator shall, by regulation, end the permitting of the disposal of wood collected in carrying out the project by burning on ocean waters at such time as one or more alternative methods of disposal are determined to be acceptable alternative methods and implementable by the Regional Administrator for Region II of the Environmental Protection Agency, the District Engineer for the New York District, the State of New Jersey, and the State of New York. Such determination shall be published in the Federal Register 5 working days after the date of such determination.

(G) *DEFINITIONS.*—For purposes of this paragraph, the following definitions apply:

(i) **ACCEPTABLE ALTERNATIVE METHOD.**—The term “acceptable alternative method” means a method of disposal of wood other than burning on ocean waters that is both environmentally appropriate and economically feasible.

(ii) **ADMINISTRATOR.**—The term “Administrator” means the Administrator of the Environmental Protection Agency.

(w) **HARSHA LAKE, OHIO.**—

(1) **PROJECT MODIFICATION.**—The project for flood control, water supply, and recreation, Harsha Lake, Ohio, authorized by section 4 of the Flood Control Act of June 28, 1938 (52 Stat. 1217), is modified to provide that, if the State of Ohio does not enter into a contract before October 1, 1991, with the Clermont County Board of Commissioners for the delivery of not less than 20,000,000 gallons of water a day from water supply storage assigned to the State of Ohio from the project, water supply storage from the project sufficient to yield 20,000,000 gallons of water a day shall be reassigned to the Board.

(2) **REIMBURSEMENT.**—Upon a reassignment of water supply storage under paragraph (1), the Clermont County Board of Commissioners shall reimburse the State of Ohio for a proportionate share of amounts previously paid by the State to the Secretary for costs which are attributable to water supply storage which has been so reassigned.

(x) **WEST COLUMBUS, OHIO.**—The project for flood control, West Columbus, Ohio, authorized by section 3(a)(11) of the Water Resources Development Act of 1988 (102 Stat. 4014), is modified to authorize the Secretary to construct the project substantially in accordance with the report of the Chief of Engineers, dated February 9, 1988, as modified by the Phase II West Columbus Local Protection Project Re-evaluation Report, dated May 1990, at a total cost of \$89,600,000, with an estimated first Federal cost of \$63,700,000 and an estimated first non-Federal cost of \$25,900,000.

(y) **CANTON LAKE, OKLAHOMA.**—The second paragraph under the heading “ARKANSAS RIVER BASIN” in section 10 of the Flood Control Act of 1946 (60 Stat. 647), as amended by the first paragraph under the heading “ARKANSAS RIVER BASIN” in section 203 of the Flood Control Act of 1948 (62 Stat. 1176), is amended—

(1) by striking “Enid, Oklahoma” and inserting “Oklahoma City, Oklahoma”; and

(2) by adding at the end the following: “Not later than 180 days after the date of the enactment of the Water Resources Development Act of 1990, the Secretary of the Army is directed (subject to agreement between the city of Oklahoma City, Oklahoma, or the Oklahoma City Municipal Improvement Authority and the city of Enid, Oklahoma, providing for such reassignment) to reassign to the city of Oklahoma City all the municipal and industrial storage in the Canton Reservoir for the city of Enid and all irrigation storage to municipal and industrial water supply storage (under the terms of the Water Supply Act of 1958 (72 Stat. 319–320)).”.

(z) **ROCHESTER, PENNSYLVANIA.**—The project for navigation on the Ohio River at Rochester, Pennsylvania, authorized by section 13 of



the River and Harbor Act of 1909 (35 Stat. 831), is modified to authorize the Secretary to construct safety facilities of a floating dock, a river access ramp, and roadway and parking areas at a total cost of \$90,000.

(aa) COOPER LAKE AND CHANNELS, TEXAS.—The project for mitigation of fish and wildlife resource losses, Cooper Lake and Channels, Texas, authorized by section 601 of the Water Resources Development Act of 1986 (100 Stat. 4145), is modified to authorize the Secretary to construct the project substantially in accordance with the Post Authorization Change Notification Report, dated April 1990, at a total cost of \$22,500,000, with an estimated first Federal cost of \$12,400,000 and an estimated first non-Federal cost of \$10,100,000.

(bb) DENISON, TEXAS.—The Act entitled “An Act to authorize the utilization of a limited amount of storage space in Lake Texoma for the purpose of water supply for the city of Denison, Texas”, approved August 14, 1953 (67 Stat. 583), is amended by striking “in an amount not to exceed 13,000 acre-feet annually”.

(cc) ROANOKE RIVER UPPER BASIN, VIRGINIA.—The flood control project for Roanoke River Upper Basin, Virginia, is modified—

(1) to provide that, notwithstanding section 215 of the Flood Control Act of 1968 (82 Stat. 747), work completed by non-Federal interests on flood protection measures at Roanoke Memorial Hospital shall be credited toward the non-Federal share of the cost of the project; and

(2) to direct the Secretary, notwithstanding such section 215, to reimburse the non-Federal sponsor \$700,000, an amount equal to the Federal share of the costs of such work completed by the non-Federal interests, which may be applied to the non-Federal share of the cost of the project.

(dd) McNARY LOCK AND DAM, WASHINGTON AND OREGON.—The project for McNary Lock and Dam, Second Powerhouse, Columbia River, Washington and Oregon, authorized by section 601(a) of the Water Resources Development Act of 1986 (100 Stat. 4146), is modified to direct the Secretary to construct the levee beautification portion of the project described in the Phase I General Design Memorandum: Report of the Chief of Engineers, dated June 24, 1981. In determining the new levee heights, the Secretary shall complete the feasibility studies underway for the Tri-Cities Levees, Washington, giving full consideration to the impact that present upstream reservoir storage has had in lowering water surface elevations during major floods.

(ee) WISCONSIN AND FOX RIVERS, WISCONSIN.—

(1) NON-FEDERAL OPERATION AND MAINTENANCE.—The navigation project for the Wisconsin and Fox Rivers, Wisconsin, authorized to be acquired pursuant to the Act entitled “An Act for the Improvement of Water Communication between the Mississippi River and Lake Michigan, by the Wisconsin and Fox Rivers”, approved July 7, 1870 (16 Stat. 189), is modified to authorize the Secretary to enter into agreements with the State of Wisconsin and other non-Federal interests in such State to make operation and maintenance of such project a non-Federal responsibility.

(2) *NON-FEDERAL IMPOSITION OF TOLLS.*—Notwithstanding section 4 of the Act entitled “An Act making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes”, approved July 5, 1884 (33 U.S.C. 5; 23 Stat. 147), during any period in which a non-Federal interest is responsible for operation, maintenance, and repair of the project described in paragraph (1), the non-Federal interest may impose upon boats and other watercraft using the project such tolls, operating charges, and other fees as may be necessary to pay the costs incurred by the non-Federal interest in connection with the project.

**SEC. 103. SMALL NAVIGATION PROJECTS.**

The Secretary shall conduct a study for each of the following projects and, after completion of such study, shall carry out the project under section 107 of the River and Harbor Act of 1960 (33 U.S.C. 577):

(1) *BOLLES HARBOR, MICHIGAN.*—A navigation project at the mouth of the LaPlasance Creek, Bolles Harbor, Michigan, by construction of an offshore barrier.

(2) *WARROAD HARBOR, MINNESOTA.*—A navigation project to dredge the navigation channel and adjacent basin at Warroad Harbor, Minnesota. The project shall be undertaken to provide safe boating access and egress and to upgrade existing retaining walls.

(3) *BUFFALO, NEW YORK.*—A navigation project south of the existing dike disposal area in Buffalo, New York, by construction of a breakwater, fishing pier, and floating docks.

(4) *ROCHESTER, NEW YORK.*—A navigation project for the mouth of the Genesee River in Rochester, New York, by development and implementation of wave surge control measures.

**SEC. 104. SMALL FLOOD CONTROL PROJECTS.**

(a) *PROJECT AUTHORIZATIONS.*—The Secretary shall conduct a study for each of the following projects and, after completion of such study, shall carry out the project under section 205 of the Flood Control Act of 1948 (33 U.S.C. 701s):

(1) *DRY JORDAN AND CROOKED CREEKS, ARKANSAS.*—A project for flood control, Dry Jordan and Crooked Creeks, Harrison, Arkansas, including construction of improvements to provide enhanced flood control and recreation benefits.

(2) *OLD SULFUR CREEK, ORLEANS, INDIANA.*—A project for flood control, Old Sulfur Creek, Orleans, Indiana.

(3) *FARMERS BRANCH CREEK, WHITE SETTLEMENT, TEXAS.*—A nonstructural project for flood control, Farmers Branch Creek, White Settlement, Texas. Such project shall consist of relocation and purchase of residential structures located within the flood plain and shall be carried out on an expedited basis.

(4) *KROUTS CREEK, WEST VIRGINIA.*—A project for flood control, Krouts Creek in the vicinity of Huntington, West Virginia, including deepening and widening of the channel and culvert replacement.

(b) *SAVAN GUT, VIRGIN ISLANDS.*—

(1) *MAXIMUM ALLOTMENT.*—The maximum amount which may be allotted under section 205 of the Flood Control Act of

1948 (33 U.S.C. 701s) for the project for flood control, Savan Gut, Virgin Islands, shall be \$10,000,000 instead of \$5,000,000.

(2) **COST SHARING.**—Nothing in this subsection shall be construed as affecting any cost sharing requirements applicable to the project under the Water Resources Development Act of 1986.

**SEC. 105. BAY CITY, MICHIGAN.**

The Secretary may undertake a project for shoreline protection along the Saginaw River in Bay City, Michigan, at a total estimated cost of \$6,105,000.

**SEC. 106. DELAWARE RIVER AND TRIBUTARIES, PENNSYLVANIA.**

The Secretary may carry out a project for shoreline protection for the Glen Foerd Historic Property in Philadelphia, Pennsylvania, along the Delaware River and tributaries, including restoration of seawalls.

**SEC. 107. CONTINUATION OF AUTHORIZATION OF CERTAIN PROJECTS.**

(a) **GENERAL RULE.**—Notwithstanding section 1001(b)(1) of the Water Resources Development Act of 1986, the following projects shall remain authorized to be carried out by the Secretary:

(1) **PAJARO RIVER, SANTA CRUZ, CALIFORNIA.**—The project for flood control, Pajaro River and tributaries, Santa Cruz, California, authorized by the Flood Control Act of 1966 (80 Stat. 1421).

(2) **SANTA CRUZ HARBOR, CALIFORNIA.**—The modification for sealing the east jetty of the project for Santa Cruz Harbor, California, authorized by section 811 of the Water Resources Development Act of 1986 (100 Stat. 4168).

(3) **HILLSBORO INLET, FLORIDA.**—Dredging of Hillsboro Inlet, Florida, authorized by section 301 of the River and Harbor Act of 1965 (79 Stat. 1090).

(4) **LITTLE CALUMET RIVER BASIN, INDIANA.**—The project for flood control, Little Calumet River basin (Cady Marsh Ditch), Indiana, authorized by section 401(a) of the Water Resources Development Act of 1986 (100 Stat. 4115).

(5) **LOUISIANA STATE PENITENTIARY LEVEE, LOUISIANA.**—The project for flood control, Louisiana State Penitentiary Levee, Mississippi River, Louisiana, authorized by section 401(a) of the Water Resources Development Act of 1986 (100 Stat. 4117).

(6) **ONTONAGON HARBOR, MICHIGAN.**—The project for navigation, Ontonagon Harbor, Michigan, authorized by the Rivers and Harbors Appropriations Act of June 25, 1910 (36 Stat. 655).

(7) **OTTAWA RIVER HARBOR, MICHIGAN AND OHIO.**—The project for navigation, Ottawa River Harbor, Michigan and Ohio, authorized by section 201 of the Flood Control Act of 1965 (79 Stat. 1073) and approved by committee resolution, in accordance with the Phase I General Design Memorandum for such project, dated November 1976, at a total cost of \$13,200,000, with an estimated first Federal cost of \$6,530,000 and an estimated non-Federal cost of \$6,670,000.

(8) **SAULT SAINTE MARIE, MICHIGAN.**—The second lock for Sault Sainte Marie, Michigan, authorized by section 1149 of the Water Resources Development Act of 1986 (100 Stat. 4254–55); except that the Secretary shall conduct, not later than 180 days after the date of the enactment of this Act and after providing



*an opportunity for notice and comment, an analysis of the projected total tonnage of commercial cargo which will be delivered by vessels using such lock to or from ports in Canada and the States of Minnesota, Wisconsin, Indiana, Illinois, Michigan, Ohio, Pennsylvania, and New York. Such analysis shall be based on the Secretary's estimate, using current traffic statistics.*

(9) **CONNEAUT, OHIO.**—*The small boat harbor project for Conneaut, Ohio, authorized by section 101 of the River and Harbor Act of 1966 (80 Stat. 1405).*

(10) **FAIRPORT, OHIO.**—*The small boat harbor project for Fairport, Ohio, and the dredging of the navigation project for Fairport, Ohio, authorized pursuant to section 201 of the Flood Control Act of 1965 (42 U.S.C. 1962d-f).*

(11) **MEMPHIS HARBOR, MEMPHIS, TENNESSEE.**—*The project for navigation, Memphis Harbor, Memphis, Tennessee, authorized by section 601(a) of the Water Resources Development Act of 1986 (100 Stat. 4145).*

(12) **EAST FORK OF TRINITY RIVER, TEXAS.**—*The project for flood protection on the East Fork of the Trinity River, Texas, authorized by section 203 of the Flood Control Act of 1962 (76 Stat. 1185).*

(13) **NORFOLK HARBOR, VIRGINIA.**—*The project for deepening of 3 navigation anchorages at Norfolk Harbor, Virginia, authorized by section 301 of the River and Harbor Act of 1965 (79 Stat. 1090).*

(b) **LIMITATION.**—*A project described in subsection (a) shall not be authorized for construction after the last day of the 5-year period that begins on the date of the enactment of this Act unless, during such period, funds have been obligated for the construction (including planning and design) of the project.*

(c) **FREEPORT, ILLINOIS.**—*The project for flood control, Freeport, Illinois, authorized by section 5 of the Flood Control Act of June 22, 1936 (49 Stat. 1586) and deauthorized by section 1002 of the Water Resources Development Act of 1986 (100 Stat. 4208), is authorized to be carried out by the Secretary.*

**SEC. 108. HAZARD, KENTUCKY.**

*The Secretary is authorized and directed to design and construct such flood control measures at or in the vicinity of Hazard, Kentucky, on the North Fork of the Kentucky River as the Secretary determines necessary and appropriate to afford the city of Hazard, Kentucky, and its immediate environs a level of protection against flooding at least sufficient to prevent any future losses to such city from the likelihood of flooding such as occurred in January 1957, at a total cost of \$30,000,000. With respect to such project, Congress finds that the benefits determined in accordance with section 209 of the Flood Control Act of 1970 and attributable to the flood measures authorized for such project exceed the cost of such measures.*

**SEC. 109. SAUK LAKE, MINNESOTA.**

*The Secretary shall complete the project for removal of silt and aquatic weeds, Sauk Lake, Minnesota, authorized by section 602 of the Water Resources Development Act of 1986 (100 Stat. 4148), including acquisition of weed harvesting equipment using funds ap-*

*propriated by Congress for such purpose, and shall carry out measures to protect and enhance water quality, including implementation of best management practices in the drainage basin.*

**SEC. 110. REHABILITATION OF FEDERAL FLOOD CONTROL LEVEES.**

*(a) PROJECTS.—The Secretary shall undertake—*

*(1) projects for rehabilitation and reconstruction of Federal flood control levees on the Arkansas River, Arkansas and Oklahoma, substantially in accordance with the Little Rock District Engineer's Arkansas River Basin, Arkansas and Oklahoma, Draft Feasibility Report, dated March 1990, and the Tulsa District Engineer's Keystone to Tulsa Reconnaissance Report, dated September 1989; and*

*(2) projects for rehabilitation and reconstruction of Federal flood control levees on the Red River, Oklahoma and Arkansas, below Denison Dam.*

*(b) PURPOSE OF PROJECTS.—The purpose of projects under this section shall be to make the levees comply with current Federal design standards.*

*(c) INCLUDED FEATURES.—The projects under this section shall include repairs of design deficiencies and replacement of deteriorated drainage structures and other appurtenances.*

*(d) COST SHARING.—Work carried out under this section shall be treated as new construction for purposes of determining the Federal and non-Federal shares of the cost of such work.*

*(e) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this section \$5,000,000 per fiscal year for each of fiscal years 1992, 1993, 1994, 1995, and 1996.*

**SEC. 111. BELEN, NEW MEXICO.**

*(a) PROJECT AUTHORIZATION.—Subject to section 903(c) of the Water Resources Development Act of 1986, the Secretary is authorized to carry out a project for flood protection for the city of Belen, New Mexico, at a total cost of \$19,576,000, with an estimated first Federal cost of \$12,130,000 and an estimated first non-Federal cost of \$7,446,000.*

*(b) REQUIRED MEASURES.—The project authorized by this section shall include measures to increase the capacity of the Belen High-line Canal so that such canal will function as a conveyance system to divert flood waters safely around the city of Belen and as an irrigation facility.*

**SEC. 112. LOWER TRUCKEE RIVER, NEVADA.**

*(a) PLANNING, ENGINEERING, AND DESIGN.—The Secretary is authorized to carry out planning, engineering, and design—*

*(1) for rehabilitation of the Lower Truckee River, Nevada, including—*

*(A) restoration of the riparian habitat and vegetative cover;*

*(B) stabilization of the course of the Lower Truckee River and minimization of erosion damage;*

*(C) provision of the best possible spawning habitat for the cui-ui fish; and*

*(D) provision of improved spawning habitat for the Lahontan cutthroat trout to the extent deemed feasible; and*

(2) for facilities to enable the efficient passage of cui-ui and Lahontan cutthroat trout through or around the delta at the mouth of the Lower Truckee River to obtain access to their upstream spawning grounds.

**SEC. 113. ARKANSAS POST NAVIGATION CANAL.**

The Secretary is authorized to carry out planning, engineering, and design for modifications to the Arkansas Post Navigation Canal of the McClellan-Kerr Arkansas River Navigation System for the purpose of improving environmental quality. Such modifications shall include a closure structure at the downstream end of the Morgan Point Bendway and related work.

**SEC. 114. STRUTHERS, OHIO.**

The Secretary is authorized to carry out design for replacement of the Bridge Street bridge in Struthers, Ohio, at a total cost of \$2,400,000. The non-Federal share of the cost of such design shall be 50 percent.

**SEC. 115. MAYSVILLE, KENTUCKY.**

The Secretary is authorized to carry out design for construction of a bridge between Maysville, Kentucky, and the State of Ohio, at a total cost of \$2,000,000. The non-Federal share of the cost of such design shall be 50 percent.

**SEC. 116. STUDIES.**

**(a) SOUTH ATLANTIC CARGO TRAFFIC.—**

(1) **STUDY.**—The Secretary, in conjunction with the Administrator of the Federal Maritime Administration of the Department of Transportation, shall conduct a study of the market for container ship traffic in the South Atlantic region of the United States from Port Everglades, Florida, to Norfolk, Virginia.

(2) **PURPOSES.**—The purposes of the study to be conducted under this subsection are as follows:

(A) Identifying major containerized cargo trade routes and commodity flows.

(B) Identifying inland transportation infrastructure needs.

(C) Projecting future traffic volumes.

(D) Forecasting future container vessel fleets.

(E) Developing origin-to-destination transportation costs.

(F) Developing differential trade route costs for origin-destination pairs.

(G) Forecasting future micro- and mini-bridging opportunities.

(H) Developing a computerized database of all traffic flows and costs.

(I) Forecasting future port infrastructure needs.

(3) **REPORT.**—Not later than 14 months after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection.

(4) **AUTHORIZATION OF APPROPRIATIONS.**—There is authorized to be appropriated to carry out this subsection \$1,200,000.



(b) **NORCO BLUFFS, CALIFORNIA.**—*The Secretary shall conduct a feasibility study of bank stabilization measures for Norco Bluffs, California, under the flood control program of the Corps of Engineers.*

(c) **RANCHO PALOS VERDES, CALIFORNIA.**—*The Secretary shall—*

(1) *complete the study of the feasibility of constructing shoreline erosion mitigation measures along the Rancho Palos Verdes coastline and in the city of Rolling Hills, California, authorized by section 712 of the Water Resources Development Act of 1986 (100 Stat. 4160); and*

(2) *in connection with such study, investigate measures to conserve fish and wildlife (as specified in section 704 of the Water Resources Development Act of 1986), including measures to demonstrate the effectiveness of intertidal marine habitat.*

(d) **SOUTHERN CALIFORNIA INFRASTRUCTURE RESTORATION.**—

(1) **STUDY.**—*The Secretary, in consultation with the Director of the Federal Emergency Management Agency, shall conduct a feasibility study in the Southern California region of the problems and alternative solutions, including governmental roles and responsibilities, of restoring such region's public works infrastructure (including roads and highways, fixed rails, bridges, airports, flood control channels, dams, aqueducts, and utility pipes and lines) to full service following earthquakes which cause substantial damage to such infrastructure.*

(2) **REPORT.**—*Not later than 24 months after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection.*

(3) **AUTHORIZATION OF APPROPRIATIONS.**—*There is authorized to be appropriated to carry out this subsection \$1,500,000.*

(e) **SANTA MONICA BREAKWATER, CALIFORNIA.**—*The Secretary shall complete the reconnaissance investigation and feasibility study for the breakwater project, Santa Monica, California, not later than July 1, 1992, and may consider as commercial benefits, for purposes of section 119 of the 1970 River and Harbor Act, benefits from reestablishment of past charter fishing vessel accommodation activities which existed in the area from the 1930's prior to damage of the breakwater structure.*

(f) **CALIFORNIA OIL SPILL RESTORATION.**—

(1) **STUDY.**—*The Secretary, in consultation with the Director of the Federal Emergency Management Agency and the Commandant of the Coast Guard, shall conduct a feasibility study in the California coastal region of the problems and alternative solutions, including Federal and non-Federal roles and responsibilities, of containment and restoration of coastal waters and lands (including natural wildlife, habitat restoration, commercial, and recreational activities) following a major oil spill.*

(2) **REPORT.**—*Not later than 24 months after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection.*

(3) **AUTHORIZATION OF APPROPRIATIONS.**—*There is authorized to be appropriated to carry out this subsection \$1,500,000.*

(g) *SANTA ROSA, CALIFORNIA.*—The Secretary may conduct a review and evaluation of proposals for storage facilities associated with wastewater reclamation and irrigation in Santa Rosa, California, for the purpose of developing recommendations concerning Federal and non-Federal participation in construction of such facilities.

(h) *KISSIMMEE RIVER, CENTRAL AND SOUTHERN FLORIDA.*—

(1) *STUDY.*—The Secretary shall conduct a feasibility study of the Kissimmee River in central and southern Florida for the purpose of determining modifications of the flood control project for central and southern Florida, authorized by section 203 of the Flood Control Act of 1948 (62 Stat. 1176), which are necessary to provide a comprehensive plan for the environmental restoration of the Kissimmee River. The study shall be based on implementing the Level II Backfilling Plan specified in the Kissimmee River Restoration, Alternative Plan Evaluation and Preliminary Design Report, dated June 1990, published by the South Florida Water Management District.

(2) *REPORT.*—Not later than April 1, 1992, the Secretary shall transmit to Congress a final report of the Chief of Engineers on the results of the study conducted under this subsection, together with such modifications as are recommended by the Secretary.

(3) *POST-STUDY WORK.*—All work necessary to prepare the project recommended by the Chief of Engineers, as modified by the Secretary, for construction bidding, including Feature Design Memoranda, shall be completed by June 1, 1994.

(i) *NASSAU COUNTY, FLORIDA.*—The Secretary is authorized to study the project for beach erosion control, Nassau County (Amelia Island), Florida, authorized by section 3 of the Water Resources Development Act of 1988 (102 Stat. 4013), for the purpose of determining whether or not such project should be modified to authorize beach nourishment for the southern beaches of Fernandina (south Amelia Island) from Florida Department of Natural Resources monument number 60 to monument number 79.

(j) *THURMAN TO HAMBURG, IOWA.*—The Secretary shall complete the feasibility phase of the study authorized by section 1152 of the Water Resources Development Act of 1986 (100 Stat. 4255), including completion of planning and specifications, not later than August 1, 1991.

(k) *LAKE PONTCHARTRAIN, LOUISIANA.*—

(1) *STUDY.*—The Secretary shall study the benefits which accrue to non-Federal sponsors from the project for flood protection on Lake Pontchartrain, Louisiana, authorized by section 204 of the Flood Control Act of 1965 (79 Stat. 1077), for the purposes of determining—

(A) whether or not such sponsors have received the expected benefits from the project; and

(B) whether or not there should be a reallocation of costs as a result of any unrealized expected benefits from the project.

(2) *REPORT.*—Not later than 12 months after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection.

(3) *NON-FEDERAL RESPONSIBILITY DURING STUDY.*—During the period beginning on the date of the enactment of this Act and ending on the 30th day following the date of transmission of the report under paragraph (2), non-Federal sponsors of the project referred to in paragraph (1) shall not be required to make payments on non-Federal responsibilities incurred for the St. Bernard Parish portion of the Chalmette area before or during such period.

(l) *BUFFUMVILLE LAKE, MASSACHUSETTS.*—The Secretary may study the flood control project for Buffumville Lake, Massachusetts, authorized by the Flood Control Act of August 18, 1941 (55 Stat. 639), for the purpose of determining whether or not such project should be modified to authorize low flow augmentation for improving water quality on the French River.

(m) *PEARL RIVER BASIN, MISSISSIPPI.*—The Secretary shall conduct a feasibility study of providing flood protection for the metropolitan area of Jackson, Mississippi, and the counties of Rankin, Hinds, Simpson, Lawrence, Marion, and Madison, Mississippi.

(n) *ROCK CREEK, MARYLAND.*—

(1) *WATER QUALITY STUDY.*—The Secretary shall conduct a study of methods of improving water quality of Rock Creek, Maryland.

(2) *REPORT.*—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection.

(o) *SAGINAW BAY, MICHIGAN.*—

(1) *EXTENSION OF DEADLINE FOR FEASIBILITY REPORT.*—Section 711 of the Water Resources Development Act of 1986 (100 Stat. 4160) is amended by striking “1989” and inserting “1992”.

(2) *CONTINUATION OF FEASIBILITY STUDY AUTHORIZATION.*—For purposes of section 710 of the Water Resources Development Act of 1986, the study authorized by section 711 of such Act shall be treated as being authorized on the date of the enactment of this Act.

(p) *WATER SUPPLY, MINNESOTA AND NORTH DAKOTA.*—

(1) *IN GENERAL.*—The Secretary shall conduct a study, with the States of Minnesota and North Dakota—

(A) to determine and recommend alternative plans to augment flows in the Red River of the North, Minnesota and North Dakota, including plans to supplement flows for municipal, industrial, agricultural, and fish and wildlife purposes; and

(B) to utilize and conserve water within the area.

(2) *ADDITIONAL PURPOSES.*—Additional purposes of the study under this subsection are as follows:

(A) To identify alternative courses of action during drought conditions.

(B) To address such issues as system capabilities, regulatory actions, water quality, treaty constraints, and institutional arrangements.

(C) To recommend short and long-term approaches to resolving water supply and use problems, including those that occur outside the area.



(3) *SPECIFIC REQUIREMENTS.*—In conducting the study under this subsection, the Secretary shall—

(A) recognize the need for continued flow into Canada;

(B) coordinate with the Bureau of Reclamation on actions being undertaken by the Bureau with respect to the Garrison Diversion Unit; and

(C) provide for appropriate consideration for protection of the Nation's water resources as well as the needs of the area for water management and water availability.

(q) *LAKE WINNIBIGOSHISH, MINNESOTA.*—The Secretary is authorized to conduct a study to determine whether the Secretary's jurisdiction should be expanded to include areas above the current pool regulation levels at Lake Winnibigoshish, Minnesota, and to identify methods for bank stabilization and preservation needed due to lake level regulation.

(r) *LAKE OF THE WOODS, MINNESOTA.*—

(1) *INVESTIGATION.*—The Secretary may undertake an investigation of the lands bordering on the Lake of the Woods, Minnesota, to determine if such lands and improvements thereto in the United States currently meet applicable requirements of international agreements concerning regulation of the levels of the Lake of the Woods.

(2) *REPORT.*—Not later than 1 year after the date of the enactment of this Act, the Secretary shall report to Congress on the progress made in carrying out this subsection and the need for further legislation to resolve any outstanding claims for damages caused by the need for additional protective works and measures to satisfy the requirements referred to in paragraph (1).

(s) *HEADWATERS RESERVOIRS OF THE MISSISSIPPI RIVER, MINNESOTA.*—The Secretary shall conduct a study of the 6 headwaters reservoirs of the Mississippi River, Minnesota, to assess lake currents and resulting siltation behavior and to determine the impact of lake levels on fish habitat and spawning success.

(t) *HIGHFIELD WATER COMPANY, NEW JERSEY.*—

(1) *STUDY.*—The Comptroller General shall conduct a study of the facts and circumstances concerning the claims of the Highfield Water Company, New Jersey, against the United States Army Corps of Engineers for the purpose of making recommendations for an appropriate settlement of such claims.

(2) *REPORT.*—Not later than 6 months after the date of the enactment of this Act, the Comptroller General shall transmit to Congress a report on the results of the study conducted under this subsection.

(u) *MANASQUAN RIVER, NEW JERSEY.*—

(1) *STUDY.*—The Secretary shall conduct a study of the feasibility of implementing flood control measures on the Manasquan River to alleviate flooding in Freehold, Howell, and other affected townships in New Jersey.

(2) *REPORT.*—Not later than December 31, 1992, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection.

(v) *ACEQUIAS IRRIGATION SYSTEM, NEW MEXICO.*—The Secretary is authorized to conduct a study of the Acequias irrigation system,

*New Mexico, to determine whether the project for restoration and preservation of such system, authorized by section 1113 of the Water Resources Development Act of 1986 (100 Stat. 4232), should be expanded to include additional areas of the system.*

*(w) BUFFALO, NEW YORK.—*

*(1) REVIEW AND EVALUATION.—The Secretary shall conduct a review and evaluation of the plan prepared by the city of Buffalo, New York, on flooding and associated water quality problems (including those associated with combined sewer overflows, sewer backups, and riverside outfalls) in the Buffalo, New York, metropolitan area.*

*(2) PURPOSES.—The purposes of the review and evaluation to be conducted under this subsection are to develop recommendations for Federal and non-Federal participation in solving the problems described in paragraph (1) and to identify flood control benefits of implementing the plan.*

*(3) REPORT.—Not later than 9 months after the date of the enactment of this Act, the Secretary shall transmit to Congress and the mayor of Buffalo, New York, a report on the results of the review and evaluation conducted under this subsection.*

*(x) CAESAR'S CREEK LAKE, OHIO.—*

*(1) STUDY.—The Secretary shall conduct a study of the water supply needs of Clinton County, Ohio.*

*(2) REPORT.—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection, together with recommendations for meeting the projected water supply needs of Clinton County, Ohio.*

*(y) LIBERTY, OHIO.—*

*(1) STUDY.—The Secretary shall conduct a study of the water supply needs of Liberty, Ohio.*

*(2) REPORT.—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection, together with recommendations for meeting the projected water supply needs of Liberty, Ohio.*

*(z) WASHINGTONVILLE, OHIO.—*

*(1) STUDY.—The Secretary shall conduct a study of the water supply needs of Washingtonville, Ohio.*

*(2) REPORT.—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection, together with recommendations for meeting the projected water supply needs of Washingtonville, Ohio.*

*(aa) MILL CREEK, TENNESSEE.—*

*(1) FEASIBILITY STUDY.—The Secretary shall study the feasibility of nondam options to alleviate flooding along Mill Creek and Seven Mile Creek, Tennessee.*

*(2) REPORT.—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this subsection, together with a recommended plan for alleviating the flooding referred to in paragraph (1).*

*(bb) NEW MADRID INFRASTRUCTURE RESTORATION.—*

(1) *STUDY.*—The Secretary, in consultation with the Director of the Federal Emergency Management Agency, shall conduct a feasibility study in the region surrounding the New Madrid Fault (including the States of Tennessee, Missouri, Arkansas, Kentucky, Mississippi, Indiana, and Illinois) of the problems and alternative solutions, including governmental roles and responsibilities, of restoring such region's public works infrastructure (including roads and highways, fixed rails, bridges, airports, flood control channels, dams, aqueducts, and utility pipes and lines) to full service following earthquakes which cause substantial damage to such infrastructure.

(2) *REPORT.*—Not later than 24 months after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the study conducted under this subsection.

(3) *AUTHORIZATION OF APPROPRIATIONS.*—There is authorized to be appropriated to carry out this subsection \$1,500,000.

(cc) *SOUTHWEST REGION FLOOD RESPONSE.*—

(1) *STUDY.*—The Secretary, in consultation with the Secretary of Agriculture and the Director of the Federal Emergency Management Agency, shall conduct a study to evaluate—

(A) existing flood control measures in the Arkansas, Red, and Ouachita River basins, including the adequacy of flood control storage at existing reservoirs, operation of such reservoirs, and downstream flood control and local protection projects;

(B) the effectiveness of Federal emergency response capabilities to prevent or minimize loss of life and damage to property resulting from flooding; and

(C) the effectiveness of Federal disaster assistance programs in providing adequate and prompt compensation to flood victims.

(2) *REPORT.*—The Secretary shall transmit a report to Congress on the results of the study conducted under this subsection not later than 1 year after the date of the enactment of this Act. The report shall contain a detailed statement of the findings and conclusions of the Secretary, together with recommendations for such legislation and administrative actions as the Secretary considers appropriate.

(dd) *RADIUM REMOVAL.*—

(1) *STUDY.*—The Secretary, in cooperation with State public authorities, may conduct a study of methods of mitigating radium contamination in ground water.

(2) *TECHNICAL ASSISTANCE.*—Upon application of a State public authority, the Secretary may provide, on a reimbursable basis, technical assistance with respect to development and installation of ground water treatment technologies needed to remove radium from ground water used as a source of public drinking water for residents of small communities.

(ee) *MISSISSIPPI RIVER WATER QUALITY.*—

(1) *STUDY.*—The Secretary shall conduct a study of the water quality of the Mississippi River.

(2) *CONSULTATION AND ASSISTANCE.*—In conducting the study under this subsection, the Secretary is authorized to consult with, and request the assistance of, the United States Geologi-



cal Survey, the United States Fish and Wildlife Service, the Environmental Protection Agency, and appropriate States.

(3) **FRAMEWORK.**—The Secretary shall consult with the Federal agencies and States referred to in paragraph (2) to develop a framework for the study to be conducted under this subsection. Such framework shall be completed on or before the 120th day after the date of the enactment of this Act.

(4) **REPORT.**—Not later than December 31, 1992, the Secretary shall transmit a report to Congress on the results of the study conducted under this subsection, including findings and recommendations of the Secretary.

(5) **FEDERAL SHARE.**—The Federal share of the costs of carrying out this subsection shall be 50 percent.

(6) **AUTHORIZATION OF APPROPRIATIONS.**—There is authorized to be appropriated to carry out this subsection \$2,000,000.

#### **SEC. 117. CRANSTON, RHODE ISLAND.**

(a) **STUDY.**—The Secretary, in consultation with the Administrator of the Environmental Protection Agency, shall conduct a feasibility study of wastewater treatment options for transporting contamination from the central landfill site and other sources of pollution in Rhode Island to a wastewater treatment facility in Cranston, Rhode Island, through the use of a regional connector system.

(b) **REPORT.**—Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this section.

(c) **DEMONSTRATION PROGRAM.**—After completion of the feasibility study under this section, the Secretary shall conduct a technology demonstration of the connector system described in subsection (a) to determine the capability of the system design to operate properly.

(d) **FEDERAL SHARE.**—The Federal share for carrying out this section shall be 50 percent.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—There is authorized to be appropriated \$1,000,000 to carry out subsection (a) and \$10,000,000 to carry out subsection (c).

#### **SEC. 118. TECHNICAL ASSISTANCE FOR NEW YORK HARBOR.**

The Secretary may provide, on a reimbursable basis, technical assistance with respect to a comprehensive review of New York Harbor and a systems investigation of the system of channels and anchorages of the Port of New York and New Jersey (including areas and channels outside the Federal system). Such technical assistance may include analysis of traffic design, shoaling, and hydraulics in order to determine the potential of streamlining the operation of such system and of reducing the potential for maritime accidents.

#### **SEC. 119. PROJECT DEAUTHORIZATIONS.**

(a) **NOTIFICATION OF MEMBERS OF CONGRESS.**—Section 1001(b)(2) of the Water Resources Development Act of 1986 (33 U.S.C. 579a(b)(2)) is amended by inserting after the first sentence the following new sentence: "Before submission of such list to Congress, the Secretary shall notify each Senator in whose State, and each Member of the House of Representatives in whose district, a project (including any part thereof) on such list would be located."

(b) **REPEAL OF OUTDATED DEAUTHORIZATION PROVISION.**—Section 12 of the Water Resources Development Act of 1974 (33 U.S.C. 579) is repealed.

(c) **SPECIFIED PROJECTS.**—The following projects are not authorized after the date of the enactment of this Act, except with respect to any portion of such a project which portion has been completed before such date or is under construction on such date:

(1) **GREENWICH HARBOR, CONNECTICUT.**—The following portion of the channel at Greenwich Harbor, Connecticut, authorized by the Rivers and Harbors Appropriations Act of March 2, 1919 (40 Stat. 1276):

Beginning at a point on the limit line of the Federal Anchorage Area in Greenwich Harbor, such point having coordinates of N66,309.76 E358,059.81 and running thence northwesterly along the limit line of the Federal Anchorage Area N50°0104W, a distance of 621.62 feet to an angle point on the existing Federal Anchorage Area Limit Line having coordinates N66,709.18 E357,583.50; thence continuing along the existing Federal Anchorage Area Limit Line N39°5855E a distance of 200.00 feet to an angle point on the existing Federal Anchorage Area Limit Line having coordinates N66,862.43 E357,712.01; thence continuing along the existing Federal Anchorage Area Limit Line S50°0104E a distance of 140.00 feet to a point on the existing Federal Anchorage Area Limit Line having coordinates N66,772.47 E357,819.28; thence running into the existing Federal Anchorage Area S39°5855W a distance of 187.66 feet to a point having coordinates N66,628.75 E357,698.76; thence running in the existing Federal Anchorage Area S59°1032"E a distance of 376.47 feet to a point having coordinates N66,435.85 E358,022.05; thence running in the existing Federal Anchorage Area S16°4026"E a distance of 131.62 feet to the point and place of the beginning for a total area of 47,737 square feet.

(2) **CONNEAUT HARBOR, OHIO.**—The feature of the navigation project for Conneaut Harbor, Ohio, authorized by section 101 of the River and Harbor Act of 1962 (76 Stat. 1176), which feature is a channel lying easterly of the access channel and adjacent to the municipal pier.

(3) **BIG RIVER RESERVOIR, RHODE ISLAND.**—The water supply project, Big River Reservoir, Providence, Rhode Island, authorized by section 601(a) of the Water Resources Development Act of 1986 (100 Stat. 4144).

#### **SEC. 120. HALF MOON BAY HARBOR.**

(a) **DESIGNATION.**—The harbor commonly known as Half Moon Bay Harbor, located in El Granada, California, shall hereafter be known and designated as "Pillar Point Harbor".

(b) **LEGAL REFERENCES.**—A reference in any law, map, regulation, document, record, or other paper of the United States to the harbor referred to in subsection (a) shall be deemed to be a reference to "Pillar Point Harbor".

## TITLE II—LAND TRANSFERS

### SEC. 201. SNEADS, FLORIDA.

(a) *IN GENERAL.*—The Secretary shall convey to the trustees of the Salem Wesleyan Church all right, title, and interest of the United States in and to the parcel of land described in subsection (b).

(b) *PROPERTY DESCRIPTION.*—The parcel of land referred to in subsection (a) contains approximately 2.30 acres lying in section 12, township 4 north, range 8 west, Tallahassee meridian, Jackson County, Florida, and is more particularly described as follows:

Beginning at a point that is 294 feet west of the east line and 294 feet north of the south line of the northeast quarter of the northeast quarter of such section 12, and at a corner of a tract of land now or formerly owned by the Salem Wesleyan Church;

Thence south along a line parallel to the east line of such section a distance of approximately 269 feet to a point that is 25 feet north of the south line of the northeast quarter of the northeast quarter of such section;

Thence west along a line parallel to the south line of the northeast quarter of the northeast quarter of such section a distance of approximately 425 feet to the eastern right-of-way line of Florida State Road Numbered S-69A;

Thence northerly along the eastern right-of-way line of such State road a distance of approximately 200 feet to the boundary of such Salem Wesleyan Church tract; and

Thence northeasterly along the boundary of such Salem Wesleyan Church tract approximately 450 feet to the point of beginning.

(c) *PAYMENT OF FAIR MARKET VALUE.*—The conveyance authorized by this section shall be made upon payment to the United States of a sum equal to the fair market value of the land as determined by the Secretary.

(d) *CONDITIONS AND RESTRICTIONS.*—The conveyance under this section shall be subject to a reversionary interest in the United States if the lands conveyed are used for other than church purposes. The Secretary may require such additional terms, conditions, reservations, and restrictions in connection with the conveyance as the Secretary determines are necessary to protect the interests of the United States.

(e) *SURVEY COSTS.*—The cost of any surveys necessary as an incident to the conveyance authorized by this section shall be borne by the trustees of the Salem Wesleyan Church.

(f) *DEADLINE.*—Subject to compliance with this section, the Secretary shall convey the parcel of land described in subsection (b) not later than 2 years after the date of the enactment of this Act.

### SEC. 202. IRA D. MACLACHLAN AMERICAN LEGION POST, SAULT SAINTE MARIE, MICHIGAN.

The Secretary shall convey to the Commandant of the Coast Guard the parcel of land described in the Act of June 5, 1936 (49 Stat. 1481), and the building located thereon for use as a clubhouse for the local American Legion Post of Sault Sainte Marie, Michigan.



**SEC. 203. ABERDEEN, WASHINGTON.**

(a) *IN GENERAL.*—The Secretary may transfer to the city of Aberdeen, Washington, by quitclaim deed, all rights, interests, and title of the United States in the approximately 570.5 acres of land under the administrative jurisdiction of the Department of the Army acquired for the purposes of the project for Wynoochee Lake, Wynoochee River, Washington, authorized by section 203 of the Flood Control Act of 1962 (76 Stat. 1193), together with any improvements thereon.

(b) *CONDITIONS.*—A transfer under this section shall be subject to the following conditions:

(1) *The city shall operate, maintain, repair, replace, and rehabilitate the project in accordance with regulations prescribed by the Secretary which are consistent with the project's authorized purposes, including fish and wildlife mitigation.*

(2) *The city shall hold and save the United States free from any claims or damages resulting from the operation, maintenance, repair, or rehabilitation of the project by the city or its contractors.*

(3) *If the city uses the land transferred under this section for any purpose other than the project's authorized purposes or generation of hydropower or fails to comply with paragraph (1) or (2), the Secretary shall notify the city of such use or failure. If the city does not correct such nonconforming use or failure during the 1-year period beginning on the date of such notification, the Secretary shall have a right of reverter to reclaim possession and title to the land transferred under this section.*

(c) *LIMITATION.*—No transfer under this section may be made until the Secretary has determined that the city can operate, maintain, repair, replace, and rehabilitate the project.

(d) *REPAYMENT OF CAPITAL COSTS.*—Nothing in this section shall be construed to relieve the city of its obligations under the project contract to repay the capital costs of the project allocated to water supply. The Secretary may negotiate a cash settlement to allow the city to prepay the present value of the payments for capital costs due under the contract.

**SEC. 204. RELEASE OF REVERSIONARY INTEREST TO CLAY COUNTY, GEORGIA.**

(a) *IN GENERAL.*—Subject to the condition stated in subsection (b) and notwithstanding the Federal Property and Administrative Services Act of 1949 (40 U.S.C. 471 et seq.) and section 108 of the River and Harbor Act of 1960 (33 U.S.C. 578), the Secretary shall release to Clay County, Georgia, without reimbursement, the reversionary interest of the United States in approximately 50 acres of land in the deed described in subsection (c).

(b) *CONDITION.*—

(1) *REPLACEMENT REVERSIONARY INTEREST.*—The condition referred to in subsection (a) is that Clay County, Georgia, agree to an amendment of the deed described in subsection (c) by which the reversionary interest that is released pursuant to subsection (a) is replaced with a reversionary interest as described in paragraph (2).

(2) *DESCRIPTION.*—*The deed described in subsection (c) shall be amended to provide that the property conveyed by the deed is subject to the condition and restriction that it is to be used and enjoyed solely for the development of a retirement community, as that term may be defined by the parties in the instrument described in subsection (d), operated on a nonprofit basis by Clay County, Georgia, and its successors and assigns, or under a lease arrangement between the county and the South Georgia Methodist Home for the Aging, Inc., and that if the property is used for any other purpose, title to the property, including any improvements, shall revert to the United States.*

(c) *DESCRIPTION OF DEED.*—*The deed referred to in subsections (a) and (b) is the quitclaim deed dated October 22, 1963, by which the United States conveyed to Clay County, Georgia, the parcel of land lying in land lots 263 and 264, Seventh Land District, Clay County, Georgia.*

(d) *INSTRUMENT OF RELEASE.*—*The Secretary and Clay County, Georgia, shall execute and file in the appropriate office an amendment of deed, amended deed, deed of release, or other appropriate form of instrument or instruments effecting the substitution of reversionary interest authorized by this section.*

**SEC. 205. CONVEYANCE OF OAKLAND INNER HARBOR TIDAL CANAL PROPERTY TO CITIES OF OAKLAND AND ALAMEDA, CALIFORNIA.**

*The Secretary may convey, by quitclaim deed, the title of the United States in all or portions of the approximately 86 acres of uplands, tidelands, and submerged lands, commonly referred to as the Oakland Inner Harbor Tidal Canal, California, as follows:*

(1) *To the city of Oakland, the United States title to all or portions of that part of the Oakland Inner Harbor Tidal Canal which are located within the boundaries of the city of Oakland.*

(2) *To the city of Alameda, the United States title to all or portions of that part of the Oakland Inner Harbor Tidal Canal which are located within the boundaries of the city of Alameda. The Secretary may reserve and retain from any such conveyance a right-of-way for the operation and maintenance of the authorized Federal channel in the Oakland Inner Harbor Tidal Canal.*

## **TITLE III—GENERALLY APPLICABLE PROVISIONS**

**SEC. 301. PLANNING AND ENGINEERING.**

*Section 105(b) of the Water Resources Development Act of 1986 (33 U.S.C. 2215(b)) is amended by adding at the end the following new sentence: “Costs of planning and engineering of projects for which non-Federal interests contributed 50 percent of the cost of the feasibility study shall be treated as costs of construction.”.*

**SEC. 302. EMERGENCY RESPONSE.**

*Section 5(a)(1) of the Act entitled “An Act authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes”, approved August 18, 1941 (33 U.S.C. 701n(a)(1)), is amended—*

(1) in the first sentence by striking “flood emergency preparation,” and inserting “preparation for emergency response to any natural disaster,”; and

(2) by inserting after the first sentence the following: “The emergency fund may also be expended for emergency dredging for restoration of authorized project depths for Federal navigable channels and waterways made necessary by flood, drought, earthquake, or other natural disasters.”.

#### **SEC. 303. CONSTRUCTION OF NAVIGATION PROJECTS BY NON-FEDERAL INTERESTS.**

(a) **TRANSMISSION OF HARBOR IMPROVEMENT STUDIES TO NON-FEDERAL INTERESTS.**—Section 204(c) of the Water Resources Development Act of 1986 (33 U.S.C. 2232(c)) is amended by inserting after the first sentence the following new sentence: “The Secretary is further authorized to complete and transmit to the appropriate non-Federal interest any study for improvement to harbors or inland harbors of the United States that is initiated pursuant to section 107 of the River and Harbor Act of 1960 or, upon request of such non-Federal interest, to terminate such study and transmit such partially completed study to the non-Federal interest.”.

(b) **REIMBURSEMENT.**—Section 204 of such Act is amended—

(1) by redesignating the second subsection (e) and subsection (f), and any reference thereto, as subsections (f) and (g), respectively;

(2) in paragraph (1) of the first subsection (e) by inserting “including any small navigation project approved pursuant to section 107 of the River and Harbor Act of 1960,” after “or separable element thereof,”; and

(3) in paragraph (1)(A) of the first subsection (e) by inserting “(or, in the case of a small navigation project, after completion of a favorable project report by the Corps of Engineers)” after “authorization of the project”.

#### **SEC. 304. PROJECT MODIFICATIONS FOR IMPROVEMENT OF ENVIRONMENT.**

(a) **REVIEW OF PROJECT OPERATIONS.**—Section 1135(a) of the Water Resources Development Act of 1986 (33 U.S.C. 2294 note), is amended by striking “before the date of enactment of this Act”.

(b) **MODIFICATION PROGRAM.**—Section 1135(b) of such Act is amended—

(1) by striking “demonstration program in the 5-year period beginning on the date of enactment of this Act” and inserting “program”; and

(2) by striking “before the date of enactment of this Act”.

(c) **REPORT.**—Section 1135(d) of such Act as amended to read as follows:

“(d) **BIENNIAL REPORT.**—Beginning in 1992 and every 2 years thereafter, the Secretary shall transmit to Congress a report on the results of reviews conducted under subsection (a) and on the program conducted under subsection (b).”.

(d) **FUNDING.**—Section 1135(e) of such Act is amended by striking “\$25,000,000 to carry out this section.” and inserting “\$15,000,000 annually to carry out this section.”.

**SEC. 305. ABILITY TO PAY.**

(a) **GENERAL RULE.**—Section 103(m) of the Water Resources Development Act of 1986 (33 U.S.C. 2213(m)) is amended to read as follows:

“(m) **ABILITY TO PAY.**—

“(1) **GENERAL RULE.**—Any cost-sharing agreement under this section for flood control or agricultural water supply shall be subject to the ability of a non-Federal interest to pay.

“(2) **PROCEDURES.**—

“(A) **IN GENERAL.**—The ability of any non-Federal interest to pay shall be determined by the Secretary in accordance with procedures established by the Secretary.

“(B) **LIMITATIONS.**—The procedures established pursuant to this subsection shall provide for a reduction in any non-Federal cash contribution required under subsection (a)(2) of this section. In addition, such procedures shall provide for determination of the eligibility of the non-Federal interest for a reduction in the required cash contribution on the basis of local, not statewide, economic and financial data.

“(C) **REGULATIONS.**—Not later than 1 year after the date of the enactment of this subparagraph, the Secretary shall issue regulations establishing the procedures required by this paragraph.”

(b) **CONTINUATION OF EXISTING REGULATIONS.**—Regulations issued to carry out section 103(m) of the Water Resources Development Act of 1986 before the date of the enactment of this Act and in effect on such date shall continue in effect until regulations are issued pursuant to paragraph (2)(C) of such section, as added by subsection (a) of this section.

**SEC. 306. ENVIRONMENTAL PROTECTION MISSION.**

(a) **GENERAL RULE.**—The Secretary shall include environmental protection as one of the primary missions of the Corps of Engineers in planning, designing, constructing, operating, and maintaining water resources projects.

(b) **LIMITATION.**—Nothing in this section affects—

(1) existing Corps of Engineers' authorities, including its authorities with respect to navigation and flood control;

(2) pending Corps of Engineers permit applications or pending lawsuits involving permits or water resources projects; or

(3) the application of public interest review procedures for Corps of Engineers permits.

**SEC. 307. WETLANDS.**

(a) **GOALS AND ACTION PLAN.**—

(1) **GOALS.**—There is established, as part of the Corps of Engineers water resources development program, an interim goal of no overall net loss of the Nation's remaining wetlands base, as defined by acreage and function, and a long-term goal to increase the quality and quantity of the Nation's wetlands, as defined by acreage and function.

(2) **USE OF AUTHORITIES.**—The Secretary shall utilize all appropriate authorities, including those to restore and create wetlands, in meeting the interim and long-term goals.

(3) **ACTION PLAN.**—



(A) *DEVELOPMENT.*—The Secretary shall develop, in consultation with the Environmental Protection Agency, the Fish and Wildlife Service, and other appropriate Federal agencies, a wetlands action plan to achieve the goals established by this subsection as soon as possible.

(B) *CONTENTS.*—The plan shall include and identify actions to be taken by the Secretary in achieving the goals and any new authorities which may be necessary to accelerate attainment of the goals.

(C) *COMPLETION DEADLINE.*—The Secretary shall complete the plan not later than 1 year after the date of enactment of this Act.

(b) *CONSTRUCTED WETLANDS FOR MUD CREEK, ARKANSAS.*—Notwithstanding any other provision of law, the Secretary is authorized and directed to establish and carry out a research and pilot project to evaluate and demonstrate—

(1) the use of constructed wetlands for wastewater treatment, and

(2) methods by which such projects contribute—

(A) to meeting the objective of the Federal Water Pollution Control Act to restore and maintain the physical, chemical, and biological integrity of the Nation's waters, and

(B) to attaining the goals established by subsection (a).

The project under this subsection shall be carried out to improve the quality of effluent discharged from publicly owned treatment works operated by the city of Fayetteville, Arkansas, into Mud Creek or its tributaries.

(c) *NON-FEDERAL RESPONSIBILITIES.*—For the project conducted under subsection (b), the non-Federal interest shall agree—

(1) to provide, without cost to the United States, all lands, easements, rights-of-way, relocations, and dredged material disposal areas necessary for construction and subsequent research and demonstration work;

(2) to hold and save the United States free from damages due to construction, operation, and maintenance of the project, except damages due to the fault or negligence of the United States or its contractors; and

(3) to operate and maintain the restored or constructed wetlands in accordance with good management practices; except that nothing in this paragraph shall be construed as precluding a Federal agency from agreeing to operate and maintain the restored or reconstructed wetlands.

The value of the non-Federal lands, easements, rights-of-way, relocations, and dredged material disposal areas provided by the non-Federal interest shall be credited toward the non-Federal share of project design and construction costs. The non-Federal share of project design and construction costs shall be 25 percent.

(d) *WETLANDS RESTORATION AND ENHANCEMENT DEMONSTRATION PROGRAM.*—

(1) *ESTABLISHMENT AND IMPLEMENTATION.*—The Secretary, in consultation with the Administrator, is authorized to establish and implement a demonstration program for the purpose of determining the feasibility of wetlands restoration, enhancement,

and creation as a means of contributing to the goals established by subsection (a).

(2) **GOAL.**—The goal of the program under this subsection shall be to establish a limited number of demonstration wetlands restoration, enhancement, and creation areas in districts of the Corps of Engineers for the purpose of evaluating the technical and scientific long-term feasibility of such areas as a means of contributing to the attainment of the goals established by subsection (a). Federal and State land-owning agencies and private parties may contribute to such areas.

(3) **FACTORS TO CONSIDER.**—In establishing the demonstration program under this subsection, the Secretary shall consider—

(A) past experience with wetlands restoration, enhancement, and creation;

(B) the appropriate means of measuring benefits of compensatory mitigation activities, including enhancement or restoration of existing wetlands or creation of wetlands;

(C) the appropriate geographic scope for which wetlands loss may be offset by restoration, enhancement, and creation efforts;

(D) the technical feasibility and scientific likelihood that wetlands can be successfully restored, enhanced, and created;

(E) means of establishing liability for, and long-term ownership of, wetlands restoration, enhancement, and creation areas; and

(F) responsibilities for short- and long-term project monitoring.

(4) **REPORTING.**—

(A) **TO THE CHIEF OF ENGINEERS.**—The district engineer for each district of the Corps of Engineers in which a wetlands restoration, enhancement, and creation area is established under this subsection shall transmit annual reports to the Chief of Engineers describing the amount and value of wetlands restored, enhanced, and created for the area and a summary of whether the area is contributing to the goal established in paragraph (2).

(B) **TO CONGRESS.**—Not later than 3 years after the date of the enactment of this Act, the Secretary shall transmit to Congress a report evaluating the use of wetlands restoration, enhancement, and creation areas in fulfilling the goal established by paragraph (2), together with recommendations on whether or not to continue use of such areas as a means of meeting the goals established by subsection (a).

(5) **EFFECT ON OTHER LAWS.**—Nothing in this subsection affects any requirements under section 404 of the Federal Water Pollution Control Act (33 U.S.C. 1344) or section 10 of the Act of March 3, 1899 (33 U.S.C. 403).

(e) **TRAINING AND CERTIFICATION OF DELINEATORS.**—

(1) **IN GENERAL.**—The Secretary is authorized to establish a program for the training and certification of individuals as wetlands delineators. As part of such program, the Secretary shall carry out demonstration projects in districts of the Corps of Engineers. The program shall include training and certifica-

tion of delineators and procedures for expediting consideration and acceptance of delineations performed by certified delineators.

(2) **REPORTS.**—The Secretary shall transmit to Congress periodic reports concerning the status of the program and any recommendations on improving the content and implementation of the Federal Manual for Identifying and Delineating Jurisdictional Wetlands.

**SEC. 308. FLOOD PLAIN MANAGEMENT.**

(a) **BENEFIT-COST ANALYSIS.**—The Secretary shall not include in the benefit base for justifying Federal flood damage reduction projects—

(1)(A) any new or substantially improved structure (other than a structure necessary for conducting a water-dependent activity) built in the 100-year flood plain with a first floor elevation less than the 100-year flood elevation after July 1, 1991; or

(B) in the case of a county substantially located within the 100-year flood plain, any new or substantially improved structure (other than a structure necessary for conducting a water-dependent activity) built in the 10-year flood plain after July 1, 1991; and

(2) any structure which becomes located in the 100-year flood plain with a first floor elevation less than the 100-year flood elevation or in the 10-year flood plain, as the case may be, by virtue of constrictions placed in the flood plain after July 1, 1991.

(b) **COUNTIES SUBSTANTIALLY LOCATED WITHIN 100-YEAR FLOOD PLAIN.**—For the purposes of subsection (a), a county is substantially located within the 100-year flood plain—

(1) if the county is comprised of lands of which 50 percent or more are located in the 100-year flood plain; and

(2) if the Secretary determines that application of the requirement contained in subsection (a)(1)(A) with respect to the county would unreasonably restrain continued economic development or unreasonably limit the availability of needed flood control measures.

(c) **COST SHARING.**—Not later than January 1, 1992, the Secretary shall transmit to Congress a report on the feasibility and advisability of increasing the non-Federal share of costs for new projects in areas where new or substantially improved structures and other constrictions are built or placed in the 100-year flood plain or the 10-year flood plain, as the case may be, after the initial date of the affected governmental unit's entry into the regular program of the national flood insurance program of the National Flood Insurance Act of 1968.

(d) **REGULATIONS.**—Not later than 6 months after the date on which a report is transmitted to Congress under subsection (b), the Secretary, in consultation with the Director of the Federal Emergency Management Agency, shall issue regulations to implement subsection (a). Such regulations shall define key terms, such as new or substantially improved structure, constriction, 10-year flood plain, and 100-year flood plain.

(e) **APPLICABILITY.**—The provisions of this section shall not apply to any project, or separable element thereof, for which a final report of the Chief of Engineers has been forwarded to the Secretary before the last day of the 6-month period beginning on the date on which regulations are issued pursuant to subsection (a) but not later than July 1, 1993.

#### **SEC. 309. SHORELINE PROTECTION.**

Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the advisability of not participating in the planning, implementation, or maintenance of any beach stabilization or renourishment project involving Federal funds unless the State in which the proposed project will be located has established or committed to establish a beach front management program that includes—

(1) restrictions on new development seaward of an erosion setback line (based on preproject beach size) of at least 30 times the annual erosion rate;

(2) restrictions on construction of new structural stabilization projects, such as seawalls and groins, and their reconstruction if damaged by 50 percent or more;

(3) provisions for the relocation of structures in erosion-prone areas;

(4) provisions to assure public access to beaches stabilized or renourished with Federal funds after January 1, 1991; and

(5) such other provisions as the Secretary may prescribe by regulation to prevent hazardous or environmentally damaging shoreline development.

#### **SEC. 310. RESERVOIR MANAGEMENT.**

(a) **TECHNICAL ADVISORY COMMITTEE.**—Not later than 2 years after the date of the enactment of this Act, the Secretary shall establish for major reservoirs under the jurisdiction of the Corps of Engineers a technical advisory committee to provide to the Secretary and Corps of Engineers recommendations on reservoir monitoring and options for reservoir research. The Secretary shall determine the membership of the committee, except that the Secretary may not appoint more than 6 members and shall ensure a predominance of members with appropriate academic, technical, or scientific qualifications. Members shall serve without pay, and the Secretary shall provide any necessary facilities, staff, and other support services in accordance with the Federal Advisory Committee Act (5 U.S.C. App. 1 et seq.).

(b) **PUBLIC PARTICIPATION.**—The Secretary shall ensure that, in developing or revising reservoir operating manuals of the Corps of Engineers, the Corps shall provide significant opportunities for public participation, including opportunities for public hearings. The Secretary shall issue regulations to implement this subsection, including a requirement that all appropriate informational materials relating to proposed management decisions of the Corps be made available to the public sufficiently in advance of public hearings. Not later than January 1, 1992, the Secretary shall transmit to Congress a report on measures taken pursuant to this subsection.



**SEC. 311. RESERVOIR PROJECT OPERATIONS.**

(a) **STUDY.**—*The Secretary shall conduct a study of the operations of reservoir projects which are under the jurisdiction of the Secretary—*

(1) *to identify the purposes for which each such project is authorized; and*

(2) *to identify the purposes for which each such project is being operated.*

(b) **REPORT.**—*Not later than 6 months after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under subsection (a).*

**SEC. 312. ENVIRONMENTAL DREDGING.**

(a) **OPERATION AND MAINTENANCE OF NAVIGATION PROJECTS.**—*Whenever necessary to meet the requirements of the Federal Water Pollution Control Act, the Secretary, in consultation with the Administrator of the Environmental Protection Agency, may remove, as part of operation and maintenance of a navigation project, contaminated sediments outside the boundaries of and adjacent to the navigation channel.*

(b) **NONPROJECT SPECIFIC.**—

(1) **IN GENERAL.**—*The Secretary may remove contaminated sediments from the navigable waters of the United States for the purpose of environmental enhancement and water quality improvement if such removal is requested by a non-Federal sponsor and the sponsor agrees to pay 50 percent of the cost of such removal.*

(2) **MAXIMUM AMOUNT.**—*The Secretary may not expend more than \$10,000,000 in a fiscal year to carry out this subsection.*

(c) **JOINT PLAN REQUIREMENT.**—*The Secretary may only remove contaminated sediments under subsection (b) in accordance with a joint plan developed by the Secretary and interested Federal, State, and local government officials. Such plan must include an opportunity for public comment, a description of the work to be undertaken, the method to be used for dredged material disposal, the roles and responsibilities of the Secretary and non-Federal sponsors, and identification of sources of funding.*

(d) **DISPOSAL COSTS.**—*Costs of disposal of contaminated sediments removed under this section shall be a non-Federal responsibility.*

(e) **LIMITATION ON STATUTORY CONSTRUCTION.**—*Nothing in this section shall be construed to affect the rights and responsibilities of any person under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980.*

(f) **TERMINATION DATE.**—*This section shall not be effective after the last day of the 5-year period beginning on the date of the enactment of this Act; except that the Secretary may complete any project commenced under this section on or before such last day.*

**SEC. 313. PROTECTION OF RECREATIONAL AND COMMERCIAL USES.**

(a) **GENERAL RULE.**—*In planning any water resources project, the Secretary shall consider the impact of the project on existing and future recreational and commercial uses in the area surrounding the project.*

(b) **MAINTENANCE.**—*Whenever the Secretary maintains, repairs, rehabilitates, or reconstructs a water resources project which will*

result in a change in the configuration of a structure which is a part of such project, the Secretary, to the maximum extent practicable, shall carry out such maintenance, repair, rehabilitation, or reconstruction in a manner which will not adversely affect any recreational use established with respect to such project before the date of such maintenance, repair, rehabilitation, or reconstruction.

(c) MITIGATION.—

(1) *IN GENERAL.*—If maintenance, repair, rehabilitation, or reconstruction of a water resources project by the Secretary results in a change in the configuration of any structure which is a part of such project and has an adverse effect on a recreational use established with respect to such project before the date of such maintenance, repair, rehabilitation, or reconstruction, the Secretary, to the maximum extent practicable, shall take such actions as may be necessary to restore such recreational use or provide alternative opportunities for comparable recreational use.

(2) *MAXIMUM AMOUNT.*—The Secretary may not expend more than \$2,000,000 in a fiscal year to carry out this subsection.

(3) *TERMINATION DATE.*—This subsection shall not be effective after the last day of the 5-year period beginning on the date of the enactment of this Act; except that the Secretary may complete any restoration commenced under this subsection on or before such last day.

(d) APPLICABILITY.—

(1) *GENERAL RULE.*—Subsections (b) and (c) shall apply to maintenance, repair, rehabilitation, or reconstruction for which physical construction is initiated after May 1, 1988.

(2) *LIMITATION.*—Subsections (b) and (c) shall not apply to any action of the Secretary which is necessary to discontinue the operation of a water resources project.

(e) *COST SHARING.*—Costs incurred by the Secretary to carry out the objectives of this section shall be allocated to recreation and shall be payable by the beneficiaries of the recreation.

**SEC. 314. OPERATION AND MAINTENANCE OF HYDROELECTRIC FACILITIES.**

Activities currently performed by personnel under the direction of the Secretary in connection with the operation and maintenance of hydroelectric power generating facilities at Corps of Engineers water resources projects are to be considered as inherently governmental functions and not commercial activities. This section does not prohibit contracting out major maintenance or other functions which are currently contracted out or studying services not directly connected with project maintenance and operations.

**SEC. 315. MATTERS TO BE ADDRESSED IN PLANNING.**

Section 904 of the Water Resources Development Act of 1986 (33 U.S.C. 2281) is amended by inserting “(including preservation and enhancement of the environment)” after “environment”.

**SEC. 316. HARBOR MAINTENANCE TRUST FUND AMENDMENT.**

Section 210(a)(2) of the Water Resources Development Act of 1986 (33 U.S.C. 2238) is amended by striking “not more than 40 percent” and inserting “up to 100 percent”.

**SEC. 317. SINGLE ENTITIES.**

*For purposes of Federal participation in water resource development projects which are to be carried out by the Secretary, benefits which are to be provided to a facility owned by a State (including the District of Columbia and a territory or possession of the United States), county, municipality, or other public entity shall not be treated as benefits to be provided a single owner or single entity. The Secretary shall not treat such a facility as a single owner or single entity for any purpose.*

**SEC. 318. TECHNICAL ASSISTANCE TO PRIVATE ENTITIES.**

*(a) USE OF CORPS RESEARCH AND DEVELOPMENT LABS.—The Secretary is authorized to use Corps of Engineers research and development laboratories to provide research and development assistance to corporations, partnerships, limited partnerships, consortia, public and private foundations, universities, and nonprofit organizations operating within the United States, territories or possessions of the United States, and the Commonwealths of Puerto Rico and the Northern Mariana Islands—*

*(1) if the entity furnishes in advance of fiscal obligation by the United States such funds as are necessary to cover any and all costs of such research and development assistance;*

*(2) if the Secretary determines that the research and development assistance to be provided is within the mission of the Corps of Engineers and is in the public interest;*

*(3) if the entity has certified to the Secretary that provision of such research and development assistance is not otherwise reasonably and expeditiously obtainable from the private sector; and*

*(4) if the entity has agreed to hold and save the United States free from any damages due to any such research and development assistance.*

*(b) CONTRACT.—The Secretary may provide research and development assistance under subsection (a), or any part thereof, by contract.*

*(c) TECHNICAL ASSISTANCE PROGRAM.—Section 9 of the Water Resources Development Act of 1988 (102 Stat. 4024; 33 U.S.C. 2314 note) is amended—*

*(1) in the section heading by striking “DEMONSTRATION”;*

*(2) in the first sentence of subsection (a) by striking “to undertake a demonstration program for a 2-year period, which shall begin within 6 months after the date of the enactment of this Act,”;*

*(3) by striking subsection (d); and*

*(4) by redesignating subsection (e), and any reference thereto, as subsection (d).*

**SEC. 319. FEES FOR DEVELOPMENT OF STATE WATER PLANS.**

*Section 22 of the Water Resources Development Act of 1974 (42 U.S.C. 1962d-16), is amended—*

*(1) by redesignating subsections (b) and (c), and any reference thereto, as subsections (c) and (d), respectively; and*

*(2) by inserting after subsection (a) the following new subsection:*

*“(b) FEES.—*

“(1) *ESTABLISHMENT AND COLLECTION.*—For the purpose of recovering 50 percent of the total cost of providing assistance pursuant to this section, the Secretary of the Army is authorized to establish appropriate fees, as determined by the Secretary, and to collect such fees from States and other non-Federal public bodies to whom assistance is provided under this section.

“(2) *PHASE-IN.*—The Secretary shall phase in the cost sharing program under this subsection by recovering—

“(A) approximately 10 percent of the total cost of providing assistance in fiscal year 1991;

“(B) approximately 30 percent of the total cost in fiscal year 1992; and

“(C) approximately 50 percent of the total cost in fiscal year 1993 and each succeeding fiscal year.

“(3) *DEPOSIT AND USE.*—Fees collected under this subsection shall be deposited into the account in the Treasury of the United States entitled, ‘Contributions and Advances, Rivers and Harbors, Corps of Engineers (8862)’ and shall be available until expended to carry out this section.”.

#### **SEC. 320. CABIN SITE LEASES.**

Section 1134(d) of the Water Resources Development Act of 1986 (100 Stat. 4251) is amended by inserting “cabin or trailer and” after “lawfully installed dock or”.

#### **SEC. 321. INFORMATION ON FLOODS AND FLOOD DAMAGES.**

Section 206 of the Flood Control Act of 1960 (74 Stat. 500; 33 U.S.C. 709a), is amended—

(1) by redesignating subsection (b), and any reference thereto, as subsection (c); and

(2) by inserting after subsection (a) the following new subsection:

“(b) *FEEs.*—The Secretary of the Army is authorized to establish and collect fees from Federal agencies and private persons for the purpose of recovering the cost of providing services pursuant to this section. Funds collected pursuant to this section shall be deposited into the account of the Treasury of the United States entitled ‘Contributions and Advances, Rivers and Harbors, Corps of Engineers (8862)’ and shall be available until expended to carry out this section. No fees shall be collected from State, regional, or local governments or other non-Federal public agencies for services provided pursuant to this section.”.

#### **SEC. 322. REDUCED PRICING FOR CERTAIN WATER SUPPLY STORAGE.**

(a) *PROVISION OF STORAGE SPACE.*—If a low income community requests the Secretary to provide water supply storage space in a water resources development project operated by the Secretary and if the amount of space requested is available or could be made available through reallocation of water supply storage space in the project or through modifications to operation of the project, the Secretary may provide such space to the community at a price determined under subsection (c).

(b) *MAXIMUM AMOUNT OF STORAGE SPACE.*—The maximum amount of water supply storage space which may be provided to a community under this section may not exceed an amount of water



supply storage space sufficient to yield 2,000,000 gallons of water per day.

(c) **PRICE.**—The Secretary shall provide water supply storage space under this section at a price which is the greater of—

(1) the updated construction cost of the project allocated to provide such amount of water supply storage space or \$100 per acre foot of storage space, whichever is less; and

(2) the value of the benefits which are lost as a result of providing such water supply storage space.

(d) **DETERMINATIONS.**—For purposes of subsection (c), the determinations of updated construction costs and value of benefits lost shall be made by the Secretary on the basis of the most recent information available.

(e) **INFLATION ADJUSTMENT OF DOLLAR AMOUNT.**—The \$100 amount set forth in subsection (c) shall be adjusted annually by the Secretary for changes in the Consumer Price Index of All Urban Consumers published by the Bureau of Labor Statistics.

(f) **NON-FEDERAL RESPONSIBILITIES.**—Nothing in this section shall be construed as affecting the responsibility of non-Federal interests to provide operation and maintenance costs assigned to water supply storage provided under this section.

(g) **LOW INCOME COMMUNITY DEFINED.**—The term “low income community” means a community with a population of less than 20,000 which is located in a county with a per capita income less than the per capita income of two-thirds of the counties in the United States.

## **TITLE IV—MISCELLANEOUS PROVISIONS**

### **SEC. 401. GREAT LAKES REMEDIAL ACTION PLANS.**

(a) **ASSISTANCE.**—The Secretary is authorized to provide technical, planning, and engineering assistance to States and local governments in the development and implementation of remedial action plans for areas of concern in the Great Lakes identified under the Great Lakes Water Quality Agreement of 1978. Non-Federal interests shall contribute 50 percent of the costs of such assistance.

(b) **MAXIMUM AMOUNT.**—The Secretary may not expend more than \$3,000,000 in a fiscal year to carry out this section.

### **SEC. 402. CROSS FLORIDA BARGE CANAL.**

Section 1114 of the Water Resources Development Act of 1986 (16 U.S.C. 460tt; 100 Stat. 4232) is amended to read as follows:

#### **“SEC. 1114. CROSS FLORIDA BARGE CANAL.**

“(a) **DEAUTHORIZATION.**—The barge canal project located between the Gulf of Mexico and the Atlantic Ocean (hereinafter in this section referred to as the ‘project’), as described in the Act of July 23, 1942 (56 Stat. 703), shall be deauthorized by operation of law immediately upon the Governor and Cabinet of the State of Florida adopting a resolution specifically agreeing on behalf of the State of Florida (hereinafter in this section referred to as the ‘State’) to all of the terms of the agreement prescribed in subsection (b).

“(b) **TRANSFER OF PROJECT LANDS.**—Notwithstanding any other provision of law, the Secretary is, subject to the provisions of subsec-

tions (d) and (e), directed to transfer to the State all lands and interests in lands acquired by the Secretary and facilities completed for the project in subsection (a), without consideration, if the State agrees to each of the following:

"(1) The State shall agree to hold the United States harmless from all claims arising from or through the operations of the lands and facilities conveyed by the United States.

"(2) The State shall agree to preserve and maintain a greenway corridor which shall be open to the public for compatible recreation and conservation activities and which shall be continuous, except for areas referred to in subparagraphs (A) and (C) of this paragraph, along the project route over lands acquired by the Secretary or by the State or State Canal Authority, or lands acquired along the project route in the future by the State or State Canal Authority, to the maximum width possible, as determined in the management plan to be developed by the State for former project lands. Such greenway corridor shall not be less than 300 yards wide, except for the following areas:

"(A) Any area of the project corridor where, as of the date of the enactment of this subparagraph, no land is owned by the State or State Canal Authority.

"(B) Any area of the project corridor where, as of the date of the enactment of this subparagraph, the land owned by the State or State Canal Authority is less than 300 yards wide.

"(C) Any area of the project corridor where a road or bridge crosses the project corridor.

"(3) Consistent with paragraph (2) of this subsection, the State shall create a State park or conservation/recreation area in the lands and interests in lands acquired for the project lying between the Atlantic Ocean and the western boundaries of sections 20 and 29, township 15 south, range 23 east.

"(4) The State shall agree, consistent with paragraphs (2), (5) and (6) of this subsection, to preserve, enhance, interpret, and manage the water and related land resources of the area containing cultural, fish and wildlife, scenic, and recreational values in the remaining lands and interests in land acquired for the project, lying west of sections 20 and 29, township 15 south, range 23 east, as determined by the State, for the benefit and enjoyment of present and future generations of people and the development of outdoor recreation.

"(5) The State shall agree to pay, from the assets of the State Canal Authority and the Cross Florida Canal Navigation District, including revenues from the sale of former project lands declared surplus by the State management plan, to the counties of Citrus, Clay, Duval, Levy, Marion, and Putnam a minimum aggregate sum of \$32,000,000 in cash or, at the option of the counties, payment to be made by conveyance of surplus former project lands selected by the State at current appraised values.

"(6) The State shall agree to provide that, after repayment of all sums due to the counties of Citrus, Clay, Duval, Levy, Marion, and Putnam, the State may use any remaining funds generated from the sale of former project lands declared surplus by the State to acquire the fee title to lands along the project

route as to which less than fee title was obtained, or to purchase privately owned lands, or easements over such privately owned lands, lying within the proposed project route, consistent with paragraphs (2), (3), and (4) of this subsection, according to such priorities as are determined in the management plan to be developed by the State for former project lands. Any remaining funds generated from the sale of former project lands declared surplus by the State shall be used for the improvement and management of the greenway corridor consistent with paragraphs (2), (3), and (4) of this subsection.

**“(c) ENFORCEMENT.—**

**“(1) REMEDIES AND JURISDICTION.—**The United States is directed to vigorously enforce the agreement referred to in subsections (a) and (b) in the courts of the United States and shall be entitled to any remedies in equity or law, including, without limitation, injunctive relief. The court, in issuing any final order in any suit brought pursuant to this subsection, may, in its discretion, award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing party. The United States district courts shall have original and exclusive jurisdiction of any action under this subsection.

**“(2) STATE REMEDIES.—**The State shall be entitled to the same remedies listed in paragraph (1) of this subsection in the courts of the State or of the United States.

**“(d) TIME OF TRANSFER.—**Actual transfer of lands and management responsibilities under this section shall not occur on the constructed portions of the project lying between the Atlantic Ocean and the Eureka Lock and Dam, inclusive, and between the Gulf of Mexico and the Inglis Lock and Dam, inclusive, until the last day of the 24-month period beginning on the date of the enactment of the Water Resources Development Act of 1990.

**“(e) MANAGEMENT PENDING TRANSFER.—**In the 24-month period following the date of the enactment of the Water Resources Development Act of 1990, the Secretary shall carry out any and all programmed maintenance on the portions of the project outlined in subsection (d).

**“(f) SURVEY.—**The exact acreage and legal description of the real property to be transferred pursuant to this section shall be determined by a survey which is satisfactory to the Secretary and to the State. The cost of such survey shall be borne by the State.”.

**SEC. 403. WAPPINGERS LAKE AND LAKE GEORGE, NEW YORK.**

Section 602(a) of the Water Resources Development Act of 1986 (100 Stat. 4148–49) is amended—

(1) by striking “and” at the end of paragraph (8);

(2) by striking the period at the end of paragraph (9) and inserting a semicolon; and

(3) by adding at the end the following new paragraphs:

“(10) Wappingers Lake, New York, for removal of silt and aquatic growth; and

“(11) Lake George, New York, for removal of silt and aquatic growth, stump removal, and the control of pollution.”.

**SEC. 404. DEMONSTRATION OF CONSTRUCTION OF FEDERAL PROJECT BY NON-FEDERAL INTERESTS.**

(a) *IN GENERAL.*—For purposes of demonstrating the safety benefits and economic efficiencies which would accrue as a consequence of non-Federal management of harbor improvement projects, the Secretary shall enter into agreements with 2 non-Federal interests pursuant to which the non-Federal interests will undertake part or all of a harbor project authorized by law, by utilizing their own personnel or by procuring outside services, if the cost of doing so will not exceed the cost of the Secretary undertaking the project. If proposals for such agreements meet the criteria of section 204 of the Water Resources Development Act of 1986, the agreements shall be entered into not later than 1 year after the date of the enactment of this Act.

(b) *LIMITATION.*—At least 1 project carried out pursuant to this section shall pertain to improvements to a major ship channel which carries a substantial volume of both passenger and cargo traffic.

(c) *REPORT.*—The Secretary shall transmit to Congress a report regarding the safety benefits and economic efficiencies accrued from entering into agreements with non-federal interests under this section.

**SEC. 405. UPPER MISSISSIPPI RIVER PLAN.**

Section 1103 of the Water Resources Development Act of 1986 (33 U.S.C. 652) is amended—

- (1) in paragraph (e)(2) by striking “ten” and inserting “15”;
  - (2) in paragraph (e)(3) by striking “eight” and inserting “13”;
  - (3) in paragraph (e)(4) by striking “nine” and inserting “14”;
  - (4) in paragraph (e)(5) by striking “seven” and inserting “12”;
- and

- (5) in paragraph (f)(2)(A) by striking “ten” and inserting “15”.

**SEC. 406. CONSTRUCTION OF VIRGIN ISLANDS PROJECTS BY SECRETARY OF THE ARMY.**

(a) *GENERAL RULE.*—Upon request of the Governor of the Virgin Islands with respect to a construction project in the Virgin Islands for which Federal financial assistance is available under any law of the United States, the Federal official administering such assistance may make such assistance available to the Secretary instead of the Virgin Islands. The Secretary shall use such assistance to carry out such project in accordance with the provisions of such law.

(b) *LIMITATION ON STATUTORY CONSTRUCTION.*—Nothing in this section shall be construed as relieving the Virgin Islands from complying with any requirements for non-Federal cooperation with respect to a construction project carried out with Federal financial assistance provided to the Secretary pursuant to this section; except that the Secretary shall be responsible for complying with administrative and fiscal requirements associated with utilization of such assistance.

(c) *TERMINATION DATE.*—Subsection (a) shall not be effective after the last day of the 3-year period beginning on the date of the enactment of this Act; except that the Secretary shall complete construction of any project commenced under subsection (a) before such day.



**SEC. 407. VIRGINIA BEACH, VIRGINIA.**

(a) **LOCAL COOPERATION AGREEMENT EFFECTIVE DATE.**—The Secretary shall enter into a local cooperative agreement with the city of Virginia Beach, Virginia, for beach nourishment in accordance with section 145 of the Water Resources Development Act of 1976 (33 U.S.C. 426j). The local cooperation agreement shall be effective from February 6, 1987.

(b) **REIMBURSEMENT.**—The Secretary is authorized to reimburse the city of Virginia Beach for the Federal share of beach nourishment in accordance with section 103(c)(5) of the Water Resources Development Act of 1986.

**SEC. 408. DECLARATION OF NONNAVIGABILITY FOR PORTIONS OF LAKE ERIE.**

(a) **AREA TO BE DECLARED NONNAVIGABLE; PUBLIC INTEREST.**—Unless the Secretary finds, after consultation with local and regional public officials (including local and regional public planning organizations), that the proposed projects to be undertaken within the boundaries of Lake Erie described in Committee Print 101-48 of the Committee on Public Works and Transportation of the House of Representatives, dated July 1990, are not in the public interest then, subject to subsections (b) and (c) of this section, those portions of Lake Erie, bounded and described in such Committee print, are declared to be nonnavigable waters of the United States.

(b) **LIMITS ON APPLICABILITY; REGULATORY REQUIREMENTS.**—The declaration under subsection (a) shall apply only to those parts of the areas described in the Committee print referred to in subsection (a) which are or will be bulkheaded and filled or otherwise occupied by permanent structures, including marina facilities. All such work is subject to all applicable Federal statutes and regulations including, but not limited to, sections 9 and 10 of the Act of March 3, 1899 (30 Stat. 1151; 33 U.S.C. 401 and 403), commonly known as the Rivers and Harbors Appropriations Act of 1899, section 404 of the Federal Water Pollution Control Act, and the National Environmental Policy Act of 1969.

(c) **EXPIRATION DATE.**—If, 20 years from the date of the enactment of this Act, any area or part thereof described in the Committee print referred to in subsection (a) is not bulkheaded or filled or occupied by permanent structures, including marina facilities, in accordance with the requirements set out in subsection (b), or if work in connection with any activity permitting in subsection (b) is not commenced within 5 years after issuance of such permits, then the declaration of nonnavigability for such area or part thereof shall expire.

**SEC. 409. WETLANDS ENHANCEMENT OPPORTUNITIES.**

Not later than January 20, 1992, the Secretary shall transmit to Congress a list which specifically identifies opportunities of enhancing wetlands in connection with construction and operation of water resource projects.

**SEC. 410. RAYSTOWN LAKE, PENNSYLVANIA.**

The Secretary shall submit to Congress for approval any proposed changes in the allocation of storage for the Raystown Lake project, Pennsylvania, which result from the on-going Raystown Lake reallocation study undertaken by the District Engineer for the Balti-

more District. Pending submission to and approval by Congress of the results of the study, the Secretary may not reallocate storage at the project.

**SEC. 411. ONONDAGA LAKE, NEW YORK.**

(a) **MANAGEMENT CONFERENCE.**—The Assistant Secretary of the Army for Civil Works, the Administrator of the Environmental Protection Agency, and the Governor of the State of New York, acting jointly, shall convene a management conference for the restoration, conservation, and management of Onondaga Lake, New York. The purposes of the management conference shall include—

(1) the development, in the 2-year period beginning on the date of the enactment of this Act, of a comprehensive restoration, conservation, and management plan for Onondaga Lake that recommends priority corrective actions and compliance schedules for the cleanup of such lake; and

(2) the coordination of the implementation of such plan by the State of New York, the Army Corps of Engineers, the Environmental Protection Agency, and all local agencies, governments, and other groups participating in such management conference.

(b) **ADMINISTRATIVE PROVISIONS.**—

(1) **MEMBERSHIP.**—The members of the management conference shall include, at a minimum, the Assistant Secretary of the Army for Civil Works, the Administrator of the Environmental Protection Agency, the Governor of the State of New York, and representatives of—

(A) the attorney general of the State of New York;

(B) Onondaga County, New York; and

(C) the city of Syracuse, New York.

(2) **DESIGNATED REPRESENTATIVE.**—Any member of the management conference may designate a representative to attend meetings of the management conference and otherwise represent such member on the management conference.

(3) **EX OFFICIO MEMBERS.**—The management conference shall have ex officio members which shall include, at a minimum—

(A) the United States Senators from the State of New York; and

(B) each member of the United States House of Representatives within whose congressional district any portion of Onondaga Lake lies.

(4) **STANDING COMMITTEES.**—The management conference shall have standing committees which shall include, at a minimum—

(A) a Citizens Advisory Committee; and

(B) a Technical Review Committee.

(c) **REQUIRED ACTIONS UPON PLAN COMPLETION.**—

(1) **APPROVAL.**—Not later than 120 days after the completion of the plan developed pursuant to subsection (a) and after providing for public review and comment, the Assistant Secretary of the Army for Civil Works and the Administrator of the Environmental Protection Agency shall approve such plan if such plan meets the requirements of this section and if the Governor of the State of New York concurs in such approval.

(2) **IMPLEMENTATION.**—Upon approval of the plan under this subsection, such plan shall be implemented.

(d) **GRANTS.**—

(1) **IN GENERAL.**—The Assistant Secretary of the Army for Civil Works and the Administrator of the Environmental Protection Agency are authorized to make grants to the State of New York to perform activities authorized under this section or to contract for such performance. Such grants may not exceed 70 percent of the costs of such activities and the non-Federal share of such costs shall be provided by non-Federal sources. Administrative services for the development and implementation of the plan approved pursuant to subsection (a) shall be provided by a not-for-profit corporation established for the purpose of assisting with the planning and coordination of the cleanup of Onondaga Lake.

(2) **USE OF GRANTS.**—To carry out this section, the Governor of the State of New York may, using funds made available pursuant to paragraph (1), make grants for—

(A) research, surveys, administrative services, and studies approved by the management conference as necessary for the development of the plan under this section;

(B) other activities, including administrative services, that are approved by the management conference and are necessary to implement the plan approved by the management conference pursuant to subsection (a); and

(C) gathering data and retaining expert consultants in support of litigation undertaken by the State of New York to compel cleanup or obtain cleanup and damage costs from parties responsible for the pollution of Onondaga Lake, including administrative services.

(3) **IN-KIND PAYMENTS.**—In-kind payments shall qualify for the purpose of meeting the total non-Federal matching requirements of this subsection.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to the Secretary and the Administrator of the Environmental Protection Agency such sums as may be necessary to carry out this section.

(f) **EFFECT ON LIABILITY.**—Grants made under this section shall not relieve from liability any person who would otherwise be liable under Federal or State law for damages, response costs, natural resource damages, restitution, equitable relief, or any other relief.

**SEC. 412. ALTERNATIVES TO MUD DUMP SITE FOR DISPOSAL OF DREDGED MATERIAL.**

(a) **REPORT.**—Within 90 days after the date of the enactment of this Act, the Administrator of the Environmental Protection Agency shall submit to the Congress a final report on the feasibility of designating an alternative site to the Mud Dump Site at a distance not less than 20 miles from the shoreline.

(b) **PLAN.**—Within 180 days after the date of the enactment of this Act, the Secretary and the Administrator of the Environmental Protection Agency shall submit to Congress a plan for the long-term management of dredged material from the New York/New Jersey Harbor region. The plan shall include—

(1) an identification of the source, quantities, and characteristics of material to be dredged;

(2) a discussion of potential alternative sites for disposal of dredged material, including the feasibility of altering the boundaries of the Mud Dump Site;

(3) measures to reduce the quantities of dredged material proposed for ocean disposal;

(4) measures to reduce the amount of contaminants in materials proposed to be dredged from the Harbor through source controls and decontamination technology;

(5) a program for monitoring the physical, chemical, and biological effects of dumping dredged material at the Mud Dump Site; and

(6) a study of the characteristics of the bottom sediments, including type and distribution.

(c) **DEMONSTRATION PROJECT.**—The Secretary, in consultation with the Administrator of the Environmental Protection Agency, shall implement a demonstration project for disposing on an annual basis up to 10 percent of the material dredged from the New York/New Jersey Harbor region in an environmentally sound manner other than by ocean disposal. Environmentally sound alternatives may include, among others, capping of borrow pits, construction of a containment island, application for landfill cover, habitat restoration, and use of decontamination technology.

(d) **MUD DUMP SITE DEFINED.**—For purposes of this section, the term “Mud Dump Site” means the area located approximately 5¼ miles east of Sandy Hook, New Jersey, with boundary coordinates of 40 degrees, 23 minutes, 48 seconds North, 73 degrees, 51 minutes, 28 seconds West; 40 degrees, 21 minutes, 48 seconds North, 73 degrees, 50 minutes, 00 seconds West; 40 degrees, 21 minutes, 48 seconds North; 73 degrees, 51 minutes, 28 seconds West; and 40 degrees, 23 minutes, 48 seconds North; 73 degrees, 50 minutes, 00 seconds West.

(e) **AUTHORIZATION OF APPROPRIATIONS.**—There are authorized to be appropriated to the Secretary for fiscal year 1991, \$3,000,000 to implement subsection (b) and \$1,000,000 to implement subsection (c), and such sums as may be necessary for fiscal year 1992.

(f) **REPEAL.**—Section 211 of the Water Resources Development Act of 1986 (33 U.S.C. 2239) is repealed.

#### **SEC. 413. ALBEMARLE SOUND-ROANOKE RIVER BASIN, NORTH CAROLINA.**

Not later than January 1, 1992, the Secretary shall review the report mandated by section 5 of Public Law 100-589 with respect to project application 83-0747-06, make a determination of the impact of the project in light of such report, and take all action he deems appropriate, including permit modification, notwithstanding any construction that may have occurred.

#### **SEC. 414. RONDOUT CREEK AND WALLKILL RIVER, NEW YORK AND NEW JERSEY.**

(a) **NON-FEDERAL SHARE.**—If the Secretary determines that a design deficiency exists in the North Ellenville portion of the project for flood control, Rondout Creek and Wallkill River and their tributaries, New York and New Jersey, authorized by section 203 of the Flood Control Act of 1962 (76 Stat. 1181), the non-Federal share of



correcting such deficiency shall be the same as the non-Federal share of the project as originally authorized and constructed.

(b) **DEADLINE FOR DETERMINATION.**—The Secretary must make the determination under subsection (a) not later than the 90th day following the date of the enactment of this Act.

**SEC. 415. REGULATION OF DWORSHAK DAM, IDAHO.**

(a) **JOINT REPORT.**—On or before January 1, 1994, or as soon thereafter as reasonably practicable, as part of the joint systems operations review by the Army Corps of Engineers, the Secretary, the Commissioner of the Bureau of Reclamation, and the Administrator of the Bonneville Power Administration shall issue a joint report to Congress on the regulation of Dworshak Dam, Idaho, including the following:

(1) An analysis of the current recreational and transportation usage of Dworshak Reservoir and the potential for such usage given differing operating criteria for the dam.

(2) Identification of the annual time period during which the operating criteria for Dworshak Dam has the greatest impact on recreational and transportation usage of the reservoir.

(3) Recommendations for achieving to the greatest degree the Corps of Engineers' project purposes and suggestions for mitigating any adverse impacts on recreational and transportation usage of the Dworshak Reservoir.

(b) **PUBLIC MEETINGS.**—The Secretary shall, in cooperation with the Administrator of the Bonneville Power Administration, conduct public meetings in the vicinity of Dworshak Dam, Idaho, for the purpose of keeping the public informed about projected drawdowns of Dworshak Reservoir and the reasons for such drawdowns.

**SEC. 416. SOUTHEAST LIGHT ON BLOCK ISLAND, RHODE ISLAND.**

(a) **RELOCATION.**—The Secretary shall relocate the Southeast Light on Block Island, Rhode Island, to a more suitable location on such island.

(b) **TERMS, CONDITIONS, AND OBLIGATIONS.**—Nothing in this section shall be construed as relieving any person operating the Southeast Light on Block Island of any term, condition, or obligation to which such person is subject with respect to such operation on the day before the date of the enactment of this Act.

(c) **AUTHORIZATION OF APPROPRIATIONS.**—There is authorized to be appropriated to the Secretary to carry out this section the lesser of \$970,000 or 50 percent of the total cost of relocating the southeast light.

**SEC. 417. MAGNETIC LEVITATION TECHNOLOGY.**

(a) **RESEARCH AND DEVELOPMENT.**—The Secretary is authorized, in cooperation with the Secretary of Transportation, to conduct research and development activities on magnetic levitation technology or to provide for such research and development.

(b) **COLLABORATION.**—The Secretary is authorized to collaborate with non-Federal entities (including State and local governments, colleges and universities, and corporations, partnerships, sole proprietorships, and trade associations which are incorporated or established under laws of a State or the District of Columbia) in carrying out research and development on magnetic levitation technology.

(c) **COOPERATIVE RESEARCH CONTRACTS.**—*In carrying out this section, the Secretary may enter into contracts or cooperative research and development agreements under section 12 of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3710a), except that the Secretary may fund up to 50 percent of the cost of each collaborative research and development project undertaken.*

(d) **LICENSING OF RESEARCH AND DEVELOPMENT.**—*The research, development, and use of any technology developed under an agreement entered into pursuant to this section, including the terms under which such technology may be licensed and the resulting royalties may be distributed, shall be subject to the provisions of the Stevenson-Wydler Technology Innovation Act of 1980 (15 U.S.C. 3701–3714). In addition, the Secretary may require the non-Federal entity to certify that such research and development will be performed substantially in the United States and that products embodying inventions made under an agreement entered into pursuant to this section or produced through the use of such inventions will be manufactured substantially in the United States.*

(e) **AUTHORIZATION OF APPROPRIATIONS.**—*For purposes of carrying out this section, there is authorized to be appropriated \$1,000,000 for fiscal year 1990 and \$4,000,000 for fiscal year 1991. Such funds shall remain available until expended. No funds are authorized to be appropriated under this section for any fiscal year beginning after September 30, 1991.*

#### **SEC. 418. RIVERSIDE, CALIFORNIA.**

*If the holder and owner of a leasehold mineral and royalty interest in the existing Prado Flood Control Basin in Riverside, California, requests the Administrator of General Services to exchange such interest for excess Federal property, the Administrator shall acquire such interest by exchange of excess Federal property. Such acquisition must be completed not later than 270 days after the date of such request. The Administrator shall undertake an evaluation and appraisal of an interest to be acquired under this section.*

#### **SEC. 419. BUY AMERICAN.**

(a) **STUDY.**—*The Secretary shall conduct a study of the requirements of the use of materials and products produced in the United States as they apply to water resource projects carried out by the Secretary for the purpose of determining whether or not such requirements are meeting the objectives for which they are being imposed and whether or not additional requirements are necessary to meet such objectives.*

(b) **REVIEW.**—*The study under this section shall include a review of the application of existing requirements and a description of the types and amounts of domestic and foreign materials and products used in water resource projects administered by the Secretary.*

(c) **REPORT.**—*Not later than 1 year after the date of the enactment of this Act, the Secretary shall transmit to Congress a report on the results of the study conducted under this section, together with recommendations for any modifications to requirements described in subsection (a).*

**SEC. 420. SENSE OF CONGRESS.**

*It is the sense of Congress that priority consideration will be given to the authorization of water resources development projects which are recommended by the Chief of Engineers in reports completed after the date of the enactment of this Act.*

**SEC. 421. WOODLAWN BEACH, HAMBURG, NEW YORK.**

*(a) DEMONSTRATION PROJECT.—The Administrator of the Environmental Protection Agency is authorized to undertake a demonstration project to eliminate contamination of the waters in the vicinity of Woodlawn Beach, Hamburg, New York, from nonpoint sources of pollution resulting from surface runoff and septic system contamination entering Rush and Blasdell Creeks. The project shall include control of sources of pollution, relocation of Rush and Blasdell Creeks, and construction of a settling pond.*

*(b) NON-FEDERAL SHARE.—The non-Federal share of the cost of the project under this section shall be 50 percent.*

And the House agree to the same.

From the Committee on Public Works and Transportation, for consideration of the Senate bill, and the House amendment, and modifications committed to conference:

GLENN M. ANDERSON,  
ROBERT A. ROE

(except for consideration of  
section 309 of the Senate  
bill),

NORMAN Y. MINETA

(except for consideration of  
section 309 of the Senate  
bill),

JAMES L. OBERSTAR,  
HENRY J. NOWAK,  
JOHN PAUL HAMMERSCHMIDT,  
BUD SHUSTER,  
ARLAN STANGELAND.

Solely for consideration of section 309 of the Senate bill:  
NICK RAHALL,  
DOUG APPLEGATE.

From the Committee on Merchant Marine and Fisheries, for consideration of matters within jurisdiction of that committee contained in the Senate bill, and in the House amendment, and modifications committed to conference:

WALTER B. JONES,  
BOB DAVIS,  
DON YOUNG.

From the Committee on Energy and Commerce, for consideration of section 309 of the Senate bill, and modifications committed to conference:

JOHN D. DINGELL,  
TOM LUKEN,  
AL SWIFT,  
JIM SLATTERY,  
DOUG WALGREN,  
NORMAN F. LENT,

HQ AR001912

BOB WHITTAKER,  
MATT RINALDO.

From the Committee on Science, Space, and Technology,  
for consideration of section 309 of the Senate bill, and sec-  
tion 13 of the House amendment, and modifications com-  
mitted to conference:

ROBERT A. ROE,  
NORMAN Y. MINETA,  
ROBERT G. TORRICELLI,  
TIM VALENTINE,  
JIMMY HAYES,

*Managers on the Part of the House.*

DANIEL PATRICK MOYNIHAN,  
FRANK R. LAUTENBERG,  
HARRY REID,  
JOHN W. CHAFEE,  
STEVE SYMMS,  
J.W. WARNER,

*Managers on the Part of the Senate.*



## JOINT EXPLANATORY STATEMENT OF THE COMMITTEE OF CONFERENCE

The managers on the part of the House and the Senate at the conference on the disagreeing votes of the two Houses on the amendment of the House to the bill (S. 2740) to provide for the conservation and development of water and related resources, to authorize the United States Army Corps of Engineers civil works program to construct various projects for improvements to the Nation's infrastructure, and for other purposes, submit the following joint statement to the House and the Senate in explanation of the effect of the action agreed upon by the managers and recommended in the accompanying conference report:

The House amendment struck out all of the Senate bill after the enacting clause and inserted a substitute text.

The Senate recedes from its disagreement to the amendment of the House with an amendment which is a substitute for the Senate bill and the House amendment. The differences between the Senate bill, the House amendment, and the substitute agreed to in conference are noted below, except for clerical corrections, conforming changes made necessary by agreements reached by the Conferees, and minor drafting and clarifying changes.

### STATEMENT OF MANAGERS

Passage of the 1990 Water Resources Development Act continues the practice of enacting omnibus water resources authorizing legislation on a biennial basis. Adhering to this schedule is possible because the Congress and the Executive Branch concur in their commitment to the environmental and cost sharing reforms of the Water Resources Development Act of 1986 (Public Law 99-662).

All of the provisions of this act comply with the cost sharing and financial reforms of the Water Resources Development Act of 1986. The environmental reforms of that legislation have been continued and in some instances expanded in this legislation as well.

The Conferees have deleted a number of projects which would have been authorized subject to the satisfactory completion of the Corps planning process and approval of the recommended project by the Secretary of the Army. In doing so, the Conferees do not imply that these are not meritorious projects. The reason they were proposed for authorization prior to completion of Corps review was precisely because of their merit. However, the biennial schedule for passage of water resources development legislation is firmly established and will allow Congress to revisit these projects soon after they complete the Corps planning process. The commitment to give these projects priority consideration is confirmed in the sense of the Congress resolution in section 420. All costs in the conference agreement are based on October 1989 price levels.

## PROJECT AUTHORIZATIONS

*Senate Bill*

The Senate bill authorizes twenty-five water resources development projects for construction in accordance with favorable reports of the Chief of Engineers, and three projects for construction subject to favorable reports of the Chief of Engineers and approval by the Secretary of the Army.

*House Bill*

The House amendment authorizes twenty-five projects for construction in accordance with favorable reports of the Chief of Engineers, and six projects for construction subject to favorable reports of the Chief of Engineers and approval by the Secretary of the Army.

*Conference Agreement*

The Conference agreement authorizes twenty-five projects for construction in accordance with favorable reports of the Chief of Engineers, and one project for construction subject to a favorable report of the Chief of Engineers and approval by the Secretary of the Army. Twenty-five of these projects are contained in both the Senate bill and the House amendment. The projects in the conference agreement are as follows:

- Bayou La Batre, Alabama—Navigation
- Homer Spit, Alaska—Storm Damage Prevention
- Clifton, San Francisco River, Arizona—Flood Control
- Nogales Wash and Tributaries, Arizona—Flood Control
- Coyote and Berryessa Creeks, California—Flood Control
- Los Angeles County Drainage Area, California—Flood Control
- Oceanside Harbor, California—Navigation & Storm Damage Prevention
- Ventura Harbor, California—Navigation
- Martin County, Florida—Storm Damage Prevention
- Miami Harbor Channel, Florida—Navigation
- McAlpine Lock and Dam, Indiana & Kentucky—Inland Navigation
- Fort Wayne, St. Mary's and Maumee Rivers, Indiana—Flood Control
- Aloha-Rigolette, Louisiana—Flood Control
- Boston Harbor, Massachusetts—Navigation
- Ecorse Creek, Wayne County, Michigan—Flood Control
- Great Lakes Connecting Channels and Harbors, Michigan and Minnesota—Navigation
- Coldwater Creek, Missouri—Flood Control
- River Des Peres, Missouri—Flood Control
- Passaic River Main Stem, New Jersey and New York—Flood Control
- Rio De La Plata, Puerto Rico—Flood Control
- Myrtle Beach, South Carolina—Storm Damage Reduction
- Buffalo Bayou and Tributaries, Texas—Flood Control
- Ray Roberts Lake Greenbelt, Texas—Multi-purpose
- Upper Jordan River, Utah—Flood Control

Buena Vista, Virginia—Flood Control  
 Moorefield, West Virginia—Flood Control  
 Petersburg, West Virginia—Flood Control

The project authorized subject to a favorable report of the Chief of Engineers, as approved by the Secretary, is for flood control, Los Angeles County Drainage Area.

#### PROJECT MODIFICATIONS

##### *Senate Bill*

The Senate bill contains eleven modifications of previously authorized projects.

##### *House Amendment*

The House amendment contains forty-six modifications of previously authorized projects.

##### *Conference Agreement*

The conference agreement contains the following modifications to previously authorized projects.

The agreed to provisions are as follows:

Village Creek, Alabama.—Authorizes the Secretary to acquire private vacant lands in the project boundary.

Los Angeles and Long Beach Harbors, California.—Modifies the existing process for determining what work will be eligible for credit against the non-Federal share of project costs.

Sacramento Deep Water Ship Channel, California.—Directs the Secretary to enforce any permits issued under Section 10 of the Rivers and Harbors Act of 1899 to compel utility relocations necessary for project construction.

Santa Ana Mainstem, California.—Authorizes the Secretary to develop recreation facilities between Seven Oaks Dam and Prado Dam.

San Luis Rey, California.—Increases the project cost ceiling.

Delaware River to Chesapeake Bay, Delaware.—Directs the Secretary to replace the highway bridge currently owned by the Federal government on U.S. Route 13 in the vicinity of St. Georges, Delaware.

Alafia Channel, Florida.—Authorizes the Secretary to maintain the channel to a depth of 34 feet with the incremental cost of maintaining the channel at the increased depth over 30 feet to be paid for by non-Federal interests.

Fernandina Harbor, Florida.—Redesignates the location of the turning basin in the harbor.

Kissimmee River, Central and Southern Florida.—Authorizes the Secretary to complete a feasibility study of a plan to restore the Kissimmee River for environmental purposes.

Manatee Harbor, Florida.—Increases the cost ceiling.

Alenaio Stream, Hawaii.—Increases the cost ceiling.

Falls of the Ohio Conservation Area, Indiana.—Authorizes the Secretary to design and construct an interpretive center for the area.

Des Moines River Greenbelt, Iowa.—Modifies the project to include the area described in the Des Moines Recreational River and

Greenbelt as reflected in Committee Print 101-47 of the Committee on Public Works and Transportation of the House of Representatives, dated July 1990.

Lake Pontchartrain, Louisiana.—Authorizes the Secretary to conduct a study of the reallocation of project costs.

Red River Waterway, Louisiana.—Authorizes the Secretary to include an additional twelve thousand acres of land adjacent to the Bayou Bodcau Wildlife Management Area in the mitigation of the Red River Waterway project.

Buffumville Lake, Massachusetts.—Authorizes the Secretary to study the prospects for low flow augmentation for the improvement of water quality on the French River.

Crooked and Indian Rivers, Michigan.—Authorizes the Secretary to enter into agreements with the State of Michigan and other non-Federal interests in the State to make operation and maintenance of the project a non-Federal responsibility.

Locks and Dam 26, Mississippi River, Alton, Illinois and Missouri.—Authorizes the Secretary to construct recreation facilities in Illinois.

Rouge River, Michigan.—Authorizes the Secretary to study water resource problems and provide reimbursable technical assistance.

Mississippi River, St. Paul, Minnesota.—Increases the cost ceiling.

Pearl River Basin, Shoccoe, Mississippi.—Authorizes the Secretary to conduct a feasibility study of potential solutions to flood control problems in the area.

Brush Creek and Tributaries, Missouri and Kansas.—Increases the cost ceiling.

Acequias System, New Mexico.—Authorizes the Secretary to study modifications to the existing project.

New York Harbor Drift Removal Project, New York.—Authorizes various new work under the existing project authority.

Harsha Lake, Ohio.—Authorizes the reassignment of water supply storage.

Canton Lake, Oklahoma.—Authorizes the reassignment of water supply storage.

Cooper Lake and Channels, Texas.—Increases the cost ceiling.

Denison, Texas.—Modifies the current allocation of water supply storage space.

McNary Lock and Dam, Washington and Oregon.—Reauthorizes the levee beautification portion of the project.

Wisconsin and Fox Rivers, Wisconsin.—Authorizes the Secretary to enter into an agreement with the State of Wisconsin and other non-Federal interests to make operation and maintenance of the project a non-Federal responsibility.

#### GENERAL PROVISIONS

Both the Senate bill and the House amendment contain a number of provisions dealing generally with the water resources program of the Corps of Engineers and with individual projects or programs. Those agreed to by the conferees include the following:

Planning and Engineering.—Clarifies Section 105(b) of the 1986 Water Resources Development Act.



**Funding of Costs Advanced to Commercial Navigation.**—Amends Section 210 of the Water Resources Development Act of 1986 to allow for not more than 100 percent of the eligible operation and maintenance costs assigned to commercial navigation of all harbors and inland harbors within the United States to be appropriated from the navigation trust fund.

**Emergency Response.**—Authorizes the participation of the Corps of Engineers in the preparations for any natural disaster and allows for the use of emergency funds for emergency dredging.

**Construction of Navigation Projects by non-Federal Interests.**—Authorizes the construction of small navigation projects by non-Federal interests.

**Project Modifications for Improvement of the Environment.**—Modifies Section 1135 of the Water Resources Development Act of 1986 to make the program permanent.

**Ability to Pay.**—Directs the Secretary to redraft regulations relating to Section 103(m) of the Water Resources Development Act of 1986 to require determinations be made on the basis of local economic data.

**Environmental Protection Mission.**—Directs the Secretary to include environmental protection as one of the primary missions of the Corps of Engineers in planning, designing, constructing, operating, and maintaining water projects.

**Wetlands.**—Establishes wetland protection goals for the Corps of Engineers.

**Flood Plain Management.**—Restricts Corps of Engineers involvement in projects which would protect structures built in the 100 year flood plain after July 1, 1991.

**Shoreline Protection.**—Directs the Secretary to transmit a report on the advisability of not participating in beach stabilization projects unless a State beach front management program is established.

**Reservoir Management.**—Establishes a commission to provide the Secretary with recommendations on reservoir monitoring and options for research.

**Reservoir Project Operations.**—Directs the Secretary to prepare a study on the authorized project purposes of all existing Corps reservoir projects and the purposes for which each project is currently being operated.

**Environmental Dredging.**—Establishes a five year program to allow the Corps of Engineers to perform dredging outside navigation channels for environmental purposes if cost shared by non-Federal interests on a 50-50 basis. \$10 million annually is authorized for this purpose.

**Operation and Maintenance of Hydroelectric Facilities.**—Defines operation and maintenance activities in connection with hydroelectric power generating facilities at Corps of Engineers projects to be inherently governmental functions.

**Great Lakes Remedial Action Plans.**—Establishes a program of technical assistance for the development of such plans on a 50-50 cost shared basis. Authorizes \$3 million annually for this purpose.

**Planning.**—Amends Section 904 of the 1986 Water Resources Development Act by adding preservation and enhancement of the en-

vironment to the list of those matters to be addressed in the planning of water resources projects.

**Cross Florida Barge Canal.**—Provides for the deauthorization of the Canal and the transfer of Canal assets and property to the state of Florida.

**Small Navigation Projects.**—Authorizes the completion of reports under section 107 of the River and Harbor Act of 1960 for Buffalo, New York, Rochester, New York, Bolles Harbor, Michigan and Warroad Harbor, Minnesota.

**Onondaga Lake, New York.**—Authorizes the establishment of a management conference for the restoration, conservation, and management of Onondaga Lake, New York.

**Clean Lakes.**—Adds Wappingers Lake, New York, and Lake George, New York to the list of projects eligible under Section 602 of the Water Resources Development Act of 1986 and amends the existing authority for the Sauk Lake, Minnesota project under this program.

**Small Flood Control Projects.**—Authorizes the completion of reports under section 205 of the Flood Control Act of 1948 for Dry Jordan and Crooked Creeks, Arkansas; Old Sulphur Creek, Orleans, Indiana; Farmers Branch Creek, White Settlement, Texas; Savan Gut, Virgin Islands; and Krouts Creek, West Virginia.

**Bay City, Michigan.**—Authorizes the Secretary to undertake shoreline protection work along the Saginaw River.

**Delaware River, Pennsylvania.**—Authorizes the Secretary to undertake shoreline protection work at the Glen Foerd Historic Property.

**Continuation of authorizations.**—Directs that the following projects are to remain authorized for construction for an additional period of five years:

- Santa Cruz Harbor, California
- Pajaro River, California
- Hillsboro Inlet, Florida
- Little Calumet River, Indiana
- Louisiana State Penitentiary Levee
- Ontonagon Harbor, Michigan
- Ottawa River Harbor, Michigan
- Sault Ste. Marie Second Lock, Michigan
- Conneaut, Ohio
- Fairport, Ohio
- Memphis Harbor, Tennessee
- East Fork of the Trinity River, Texas
- Norfolk Harbor Anchorages, Virginia
- Freeport, Illinois

**Hazard, Kentucky.**—Authorizes the Secretary to construct this project in such a manner as to provide protection from flooding and damages such as occurred in January, 1957.

**Demonstration of Construction.**—Directs the Secretary to enter into agreements with two non-Federal interests to undertake construction of harbor projects authorized by law, and provides that at least one of these demonstrations shall pertain to improvements to a major ship channel which carries a large volume of passenger and cargo traffic.

**Modification of Reversionary Interest.**—Modifies the reversionary interest in land conveyed to Clay County, Georgia in 1963 to allow the United Methodist Church to build and operate a retirement village.

**Upper Mississippi River Plan.**—Continues the authorization for Section 1103(e)(2) of the Water Resources Development Act of 1986 for an additional five years.

**Cabin Site Leases.**—Modifies Section 1134(d) of the 1986 Water Resources Development Act to include cabins and trailers.

**Land Conveyances.**—Authorizes the conveyance of property in Sneads, Florida to the Salem Wesleyan Church; transfers the Ira D. MacLachlan American Legion Post property from the Corps of Engineers to the Coast Guard; and transfers the project for Wynoochee Lake to the city of Aberdeen, Washington.

**Alternatives to the Mud Dump.**—Authorizes a review of alternatives to the placement of dredged material at this site.

**Projects in the Virgin Islands.**—Allows the Secretary to accept federal financial assistance made available to the Virgin Islands to carry out projects in the Islands.

**Water Supply Studies.**—Authorizes the Secretary to conduct a study of the water supply needs of Liberty, Ohio.

**Cranston, Rhode Island.**—Authorizes the Secretary, in consultation with the Administrator of the Environmental Protection Agency, to participate in the development of an environmental remediation and enhancement project in Cranston, Rhode Island.

**Rondout Creek and Wallkill River, New York and New Jersey.**—The Secretary is authorized to correct the problems at this project upon a finding that the existing situation is the result of a design deficiency of the Corps of Engineers.

**Virginia Beach, Virginia.**—Directs the Secretary to enter into a local cooperation agreement with the city of Virginia Beach for beach nourishment in accordance with Section 934 of the 1986 Water Resources Development Act, and related purposes.

**Southwest Region Flood Response.**—Authorizes the Secretary to conduct a study of existing flood control measures and flood response in the Arkansas, Red, and Ouachita River Basins.

**Rehabilitation of Levees.**—Authorizes a program of levee repair for the Arkansas River to be cost shared as if the work were new construction. The program is authorized for a period of five years with an annual authorization ceiling of five million dollars.

**Casesar's Creek Lake, Ohio.**—Authorizes a study of water supply needs at this facility.

**Non-Navigability.**—Portions of Lake Erie described in Committee Print 101-48 of the Committee on Public Works and Transportation of the House of Representatives, dated July, 1990 are declared to be non-navigable waters of the United States.

**Wetlands Enhancement.**—Authorizes a report on opportunities to enhance wetlands in connection with construction and operation of water resources projects.

**Radium Removal.**—Authorizes a study of methods to mitigate radium contamination in water and a program of reimbursable technical assistance.

**Studies.**—Authorizes the following studies of water resources related issues:

South Atlantic Cargo Traffic Study  
 Rancho Palos Verdes, California  
 Southern California Infrastructure Study  
 California Oil Spill study  
 Thurman to Hamburg, Iowa  
 Rock Creek, Maryland  
 Saginaw Bay, Michigan  
 Water Supply, Minnesota and North Dakota  
 Upper Mississippi River Water Quality  
 Highfield Water County, New Jersey  
 Manasquan River, New Jersey  
 Buffalo, New York  
 Mill Creek, Tennessee  
 New Madrid Infrastructure Study  
 Lake of the Woods, Minnesota

New York Harbor Traffic Review.—Authorizes the Secretary to provide reimbursable technical assistance in conjunction with a study of New York Harbor Traffic.

Deauthorizations.—Specifically deauthorizes the following projects:

Greenwich Harbor, Connecticut  
 Conneaut Harbor, Ohio  
 Big River Reservoir, Rhode Island

Half Moon Bay.—Renames Half Moon Bay Harbor, in El Granada, California, as “Pillar Point Harbor”.

Raystown Lake, Pennsylvania.—Directs the Secretary to submit to Congress proposed changes in the allocation of storage for the Raystown Lake.

Buy America.—Requires a study related to the acquisition of materials by the Corps of Engineers.

Oakland Land Conveyance.—Authorizes the Secretary to convey 86 acres referred to as the Oakland Inner Harbor Tidal Canal partly to the city of Oakland, and partly to the city of Alameda.

Belen, New Mexico.—Authorizes the Secretary to construct the project pursuant to Section 903(c) of the Water Resources Development Act of 1986.

Pyramid Lake, Nevada.—Authorizes the Secretary to conduct planning, engineering, and design for environmental enhancement work.

Roanoke Hospital.—Authorizes the Secretary to reimburse the non-Federal interests for work completed which was a federal responsibility.

Dworshak Dam.—Directs the Secretary to make a report on the operations of this facility.

Lake Winnibigoshish.—Authorizes a study of the bank erosion problems at this location.

Mississippi River headwaters.—Authorizes a study of the siltation and fish habitat at the Mississippi River headwater lakes.

Block Island, Rhode Island.—Authorizes the Secretary to relocate the Southeast Light at Block Island.

Arkansas Post Navigation Canal.—Authorizes the Secretary to conduct planning, engineering and design for environmental enhancement activity at this location.



**Single Entity.**—Establishes that public facilities are not to be considered single entity beneficiaries.

**Missouri River Streambank Erosion.**—Amends Section 33 of the Water Resources Development Act of 1988 to allow for the acquisition of real property, and monetary compensation.

**Maglev.**—Authorizes the Secretary to undertake Research and Development activities relating to MAGLEV.

**Work for others.**—Amends the authority of the Corps of Engineers to contract with non-Federal interests for services.

**Section 22 Cost Sharing.**—Authorizes cost sharing for this program of technical assistance.

**Flood Plain Management Services.**—Authorizes reimbursement to the Federal government for certain of these services.

#### DEEP DRAFT NAVIGATION MAINTENANCE

The conferees have included authority for the Corps of Engineers to use up to one hundred percent of navigation maintenance costs from the navigation trust fund established in the Water Resources Development Act of 1986. The funds which flow into this trust fund are determined by the level of the ad valorem fee applied to exports and imports. Setting the rate of this fee is not the responsibility of the Public Works Committees. The conferees have provided this authority to the Corps in order to ensure that all funds which are deposited into the Navigation Trust Fund are expended on harbor maintenance.

The conferees recognize, however, that no definition of eligible operation and maintenance costs—for which the monies of the Navigation Trust Fund may be used—exists. It is the intention of the conferees that money in this Trust Fund be fully utilized for the maintenance activities which the Corps currently performs in order to keep authorized channels at authorized depths. The conferees wish to express their concern that the Corps fully utilize the funds available in this Trust Fund and makes no effort to exclude any maintenance function now performed by the Corps from its annual maintenance program.

#### PUBLIC COMMENT

During the Conference on this legislation concerns were raised with Senate language relating to public review of the Corps of Engineers "Engineer Regulations". Compromise language could not be agreed upon. The conferees wish to make clear that the Public Works Committees intend to review this issue in the next Congress.

#### PASSAIC RIVER BASIN

Section 101(a)(18) authorizes the project for flood control in the Passaic River Basin, including the extension of the main diversion tunnel to Newark Bay. The conferees have included language in the House bill which excludes project works from Bergen County, New Jersey.

The extension of the tunnel to Newark Bay, which has been shown to be engineeringly sound, is a necessary adjustment to the plan recommended by the Secretary of the Army, as the recommended plan is not considered to be implementable because of

overriding social, environmental, and political concerns associated with a Third River Tunnel outlet location. In reaching this conclusion, the conferees considered both the concerns of those who would be protected and those who would be impacted by the recommended plan. The conferees also note the importance of the project, which will treat the most significant unresolved flood problem on the east coast of the United States. In consideration of these factors, the conferees recognize that the project with the Newark Bay tunnel outlet is the only viable comprehensive plan.

The project as authorized contains the necessary adjustments to the project resulting from the extension of the main diversion tunnel to Newark Bay. This change in the project eliminates nine Lower Passaic River levee systems along with the Third River tunnel outlet with which they were associated. However, the diversion tunnel with the Newark Bay outlet, which provides comprehensive protection to Morris, Passaic, Essex, Bergen, and Hudson Counties, will divert floodwaters away from and around the Lower Passaic River, thus providing significant fluvial flood protection to additional areas in Bergen, East Essex, and Passaic Counties without any levee systems. It is recognized that the elimination of the nine Lower Passaic River Levees will result in a continued vulnerability to hurricane and tidal storms in these areas. However, the conferees accept the desire of local interests to preserve existing open space, parklands, and properties along these Lower Passaic River areas despite the need for hurricane and tidal storm protection. The conferees note particularly the fluvial flood protection which will be provided to these areas of the project. The exclusion of the Third River tunnel outlet and its associated levees also prohibits any acquisition, use, condemnation or requirement of Bergen County parklands or property for the project. This is intended to insure that the excluded features, or any other such project works in Bergen County, are not to be implemented, nor surveyed, studied or designed as part of the preconstruction engineering and design for the project.

The conferees recognize the regional nature of the main stem Passaic River Flood Protection Project, which directly involves five counties and forty municipalities, and whose operation encompasses the monitoring of rainfall and streamflows over the entire 935 square mile Passaic River watershed, including portions of the States of New Jersey and New York, ten counties, and 132 municipalities. Most significantly, the operation and maintenance of the diversion tunnels are central to protecting portions of the most densely developed metropolitan area in the nation against frequent and destructive flooding. The conferees are aware that the operation of the diversion tunnels, including inlet and outlet works, and integral levees and channel modifications are critical to the functioning of the overall project. Operation of the dual inlet tunnel system is technically complex and will require a sophisticated operations center. In recognition of the regional nature of the project and the overriding need for integrity of the functioning of the diversion tunnel works, the authorization provides that the Secretary shall perform specified work to ensure the integrity of the functioning of the tunnels. This requirement may result in a cost savings to the United States and the State of New Jersey and

will serve to minimize the risks associated with the coordination of regional project operations. The conferees note that other elements of the project would be operated and maintained by the non Federal sponsor.

The Conferees remain firmly committed to the successful implementation of the environmental policies contained in the 1986 Water Resources Development Act. In this regard the conference report has adopted language contained in the House bill which authorizes streambank restoration measures, and the establishment, use, and the acquisition of lands for a wetlands bank. In including such language the Conferees have attempted to maximize the environmental attributes of the project by emphasizing the regions need for open space, greenbelt recreation areas and wetlands in balance with environmentally sustainable growth. The Conferees believe that the environmental quality benefits attributed to such provisions as streambank restoration along the West bank of the Passaic River in Newark, New Jersey, and the establishment, use and acquisition of additional transition, buffer and watershed lands for the wetlands bank, significantly exceed the cost of these measures, and in fact, fully meet the requirements of Section 907 of the 1986 Water Resources Development Act. Accordingly, the Conferees recognize that these provisions are clearly justified based on the foregoing, and do not require further analysis by the Secretary as any such attempt at quantification of such benefits would be demeaning to the environmental significance of the intent of the provisions.

The project includes features which are also responsive to the environmental needs of the project area. Such innovation features include the nonstructural measure of acquiring and preserving Central Basin natural flood storage acreage, the underground construction of the tunnel diversion which greatly limits both surface disruption and impacts to natural resources, and other environmental design and operation features integral to the tunnel which insure the project will not adversely impact on public groundwater supplies or aquifer recharge, and greatly minimize adverse impacts to wetlands. The Conferees are aware that the Corps of Engineers has entered into a Memorandum of Agreement with the United States Environmental Protection Agency to insure that all unavoidable project impacts to wetlands are fully compensated for. The Conferees also recognize the Secretary's commitments under the Fish and Wildlife Coordination Act and other Federal laws to fully mitigate adverse fish and wildlife impacts. In addition to the foregoing the Secretary is directed to go beyond these initiatives in order for the project to be fully responsive to the environmental policies intended by the Conferees.

For example, the establishment, use and acquisition of additional lands for the wetlands bank is intended to provide a mechanism for encouraging the protection of open space and wetlands beyond those lands included in the project a preservation of natural storage area, while also minimizing increases in future flood damages. The Conferees recognize that the Passaic River Basin lies within the most urbanized and densely populated area in the United States. As such, remaining open space and wetlands are subject to intense development pressure, notwithstanding Federal and State

legislation which regulate development in sensitive areas. The relative scarcity of such lands and the historical development and fragmentation of both private and publicly owned open space underscores the environmental value of the few large open space areas that remain in the basin. The Conferees, therefore, intend that lands in both private and public ownership may be acquired for the wetlands bank in order to encourage the protection for large contiguous tracts of open space. The Conferees intend for the wetlands bank to be not only comprised of lands which lie within the Passaic River Central Basin natural storage area, but also to include adjacent transition and buffer areas, and other Passaic River Basin areas which drain into the Central Basin, such as, for example, the Newark Paquannock watershed and the Sterling Forest area of the Wanaque watershed among others. The Conferees do not intend to require that all such lands acquired for the wetlands bank by the State of New Jersey be acquired in fee ownership. For lands made available by other non-Federal interests it is intended that the acquisition of an easement consistent with the needs of the wetlands bank will be sufficient. Nor must lands be existing wetlands to be included in the bank; to the contrary, the Conferees expect that the inclusion of lands with other habitat types in the bank will provide opportunities for creating additional wetlands and for further diversifying the ecological values of the project area. In directing that the fair market value of lands acquired by the State or other non-Federal interests, and the costs incurred in converting any such lands to wetlands shall be credited to the non-Federal share of the project. The Conferees recognize that some of these actions may be undertaken by the State or non-Federal interests on their own initiative; this is irrelevant to the determination of such credits because of the link and compatibility to the Main Stem Passaic River Project, as authorized in the Conference Report.

With regard to the authorization of credits towards the non-Federal share of the cost of the project, the Conferees recognize that the activities specified in the Conference Report are not inclusive, and intend that other items to be specifically identified by the State of New Jersey which are compatible with the project shall be credited by the Secretary. For example, the State's credit request for the cost of constructing levees and/or flood walls compatible with the project design is intended to include actions such as the construction of the Rockaway #3 levee by the Township of Parsippany-Troy Hills, New Jersey. One other specific example is the recommendation by the Secretary that the State of New Jersey protect additional natural flood storage areas by maintaining existing Central Basin floodways with the project. The State of New Jersey has agreed to this section in order to avoid inducing development in natural flood storage lands currently within floodway areas. The Conferees recognize the wisdom of this approach. Therefore, the Conferees intend for credits toward the non-Federal share of the project to include costs to the State of New Jersey or other non-Federal interests associated with maintaining such floodway boundaries, although these costs shall not be treated as a project cost for purposes of economic evaluation.

**LAKE PONTCHARTRAIN AND VICINITY, LOUISIANA**

The Lake Pontchartrain and Vicinity, Louisiana hurricane protection project provides hurricane protection to the metropolitan New Orleans area. As originally authorized by Section 204 of Public Law 89-298 the recommended plan included the construction of a large barrier structure to prevent storm water surges from entering Lake Pontchartrain and flooding developed areas during hurricanes. In 1977, as a result of environmental litigation, a plan for the construction of high level levees was substituted for the barrier plan.

It was not necessary for the original barrier plan to address the problems associated with outfall canals that provide drainage of storm waters into Lake Pontchartrain from the City of New Orleans. These problems must not be resolved in completing the high level plan. One option under consideration is the construction of structures which will close the outfall canals at London and Orleans Avenues during periods of hurricane conditions. Local authorities have raised legitimate concerns that this would result in flooding within the City because water discharged from drainage pumps would not flow into Lake Pontchartrain when the structures are closed.

The conferees do not believe it was the intent of Congress in authorizing this project to compound flooding or drainage problems in the City of New Orleans. Therefore, the conferees direct the Corps to treat the outfall canals as part of the overall hurricane protection project, and to favorably consider a plan that raises the levees along the entire lengths of the London Avenue and Orleans Avenue Canals to grades sufficient to confine a standard project hurricane with costs to be borne by both Federal and local assuring authorities.

**CROSS FLORIDA BARGE CANAL**

The conference agreement includes a provision deauthorizing the Cross Florida Barge Canal and transfers to the State of Florida, without consideration, all Federal lands acquired for the canal, and facilities completed for the project, for the purposes of combining them with State-acquired lands and creating a "greenway corridor." The deauthorization and land transfer are conditioned upon the State, through a resolution adopted by the Governor and State Cabinet, agreeing to several terms. The primary terms include the following:

First, the State must agree to create, preserve and maintain a greenway corridor along the original canal route (from the Gulf of Mexico to the Atlantic Ocean) to be used by the public only for compatible recreation and conservation activities as defined in a management plan to be developed by the State. The management plan must describe the actual boundaries for the corridor which must be at least 300 yards wide except for those areas where a) as of the date of enactment, the State owned no land or the land it did own was less than 300 yards wide, or b) a road or bridge crosses the corridor. It is the conferees' intention that the State management plan describe in a comprehensive fashion how the State will create, manage and improve the greenway.



Second, the State must agree to designate the eastern portion of the corridor (from the southwest boundary of the Oklawaha River Basin to the Atlantic Ocean) a State park, conservation area and/or recreation area.

Third, the State must agree to preserve, enhance, interpret and manage the western portion of the corridor (from the Gulf of Mexico to the southwest boundary of the Oklawaha River) for the public interest in perpetuity, subject to the designation and sale of non-environmentally sensitive parcels of property as surplus lands pursuant to the State management plan. It is the conferees' intention that the public interest be defined as the conservation of environmental, recreational and cultural values of the greenway.

Fourth, the State must agree to pay six counties—Citrus, Clay, Duval, Levy, Marion and Putnam—at least \$32 million as reimbursement for taxes they collected earlier to help build the canal. Cash payments may be derived only from assets of the State Canal Authority, the Cross Florida Navigation District or from the sale of former canal lands designated surplus by the State. In lieu of cash, the counties may choose to accept former canal lands designated surplus by the State.

Fifth, the State must agree that it may use any funds remaining after the sale of such surplus lands to acquire additional land for the corridor as prescribed in its management plan. Any and all such funds not used for land acquisition must be used only for improving and managing the greenway.

While the Secretary must transfer all Federal lands to the State immediately upon the passage of the State's resolution, he must retain title to the locks and other constructed portions of the canal lying between the Atlantic Ocean and the Eureka Lock and Dam, inclusive, and the Gulf of Mexico and the Inglis Lock and Dam, for 24 months after the date of enactment. During the time, he must carry out all programmed maintenance on these portions of the canal project.

#### WETLANDS

The House-passed bill included language authorizing the Corps to establish a program to demonstrate the effectiveness of wetlands mitigation banking to address problems of wetlands mitigation and restoration in connection with the Corps' regulatory program and the operation of their civil works program. Because of the controversy surrounding wetlands mitigation banks, the Conferees have modified the provision to authorize the Corps to demonstrate restoration and enhancement of wetlands in order to achieve the interim goal of no net loss and a long term goal of net gain of wetlands. In undertaking this demonstration program, the Corps should consider evaluation techniques which could be useful in assessing wetlands mitigation banking for further consideration by the Congress.

#### BUY AMERICAN

Section 419 of the conference agreement directs the Secretary of the Army to conduct a study of the requirements of the use of materials and products produced in the United States as they apply to water resources projects carried out by the Secretary for the pur-

pose of determining whether or not such requirements are meeting the objectives for which they are being proposed. The House bill, in section 82, required that, with certain exceptions, materials and products used in the projects authorized in the bill must be produced in the United States. The conferees have determined that it would be appropriate to have the benefit of a study to determine what problems might exist with current Buy American laws before adopting any legislative changes. Section 419 has therefore been included to direct such a study.

#### MIAMI RIVER

The Conferees note that section 1162 of the Water Resources Development Act of 1986 authorized and directed the Secretary to remove polluted bottom sediments from the Miami River and Seybold Canal in Miami, Florida. The non-federal sponsor for this project is anxious to begin the removal of these polluted sediments. The Conferees encourage the Secretary to budget for and promptly proceed with the cleanup of these polluted sediments to improve the water quality of the Miami River and Seybold Canal. The Conferees emphasize the language in section 1162 providing that the maximum non-Federal share for the work authorized in that section is capped at 25 percent of the work undertaken, including the costs for the contribution for lands, easements, rights-of-way, relocations and alterations necessary for initial dredging and subsequent maintenance.

#### MONONGAHELA RIVER LOCKS AND DAMS 2, 3, AND 4

The Managers of the bill note that the final conference report does not include contingent authorization for navigation improvements on the lower Monongahela River Locks and Dams 2, 3, and 4. During public hearings before both the House and Senate authorizing committees, witnesses argued that the existing navigation structures are in such a serious state of disrepair and structural instability that there is a substantial risk of catastrophic failure in the near future. More than 48,000 jobs in the region are directly dependent on the commerce of this river with thousands more in the coal, utility, steel, chemical, and manufacturing industries indirectly dependent.

Consequently, both the House and Senate versions of the bill contained provisions for authorization to improve the project pending a final report of the Chief of Engineers. While this is not the preferred method of authorizing navigation projects, the committees felt that the near-emergency conditions warranted such action. Unfortunately this project could not be included in the final report.

The managers direct that the Corps of Engineers expedite the feasibility study leading to a final report of the Chief of Engineers with all sense of urgency so that Congress may authorize the improvements on this stretch of the river during the next Congress.

From the Committee on Public Works and Transportation, for consideration of the Senate bill, and the House amendment, and modifications committed to conference:

GLENN M. ANDERSON,  
ROBERT A. ROE

HQ AR001928

(except for consideration of  
section 309 of the Senate  
bill),

NORMAN Y. MINETA

(except for consideration of  
section 309 of the Senate  
bill),

JAMES L. OBERSTAR,

HENRY J. NOWAK,

JOHN PAUL HAMMERSCHMIDT,

BUD SHUSTER,

ARLAN STANGELAND.

Solely for consideration of section 309 of the Senate bill:

NICK RAHALL,

DOUG APPELEGATE.

From the Committee on Merchant Marine and Fisheries,  
for consideration of matters within jurisdiction of that  
committee contained in the Senate bill, and the House  
amendment, and modifications committed to conference:

WALTER B. JONES,

BOB DAVIS,

DON YOUNG.

From the Committee on Energy and Commerce, for consid-  
eration of section 309 of the Senate bill, and modifications  
committed to conference:

JOHN D. DINGELL,

TOM LUKEN,

AL SWIFT,

JIM SLATTERY,

DOUG WALGREN,

NORMAN F. LENT,

BOB WHITTAKER,

MATT RINALDO.

From the Committee on Science, Space, and Technology,  
for consideration of section 309 of the Senate bill, and sec-  
tion 13 the House amendment, and modifications commit-  
ted to conference:

ROBERT A. ROE,

NORMAN Y. MINETA,

ROBERT G. TORRICELLI,

TIM VALENTINE,

JIMMY HAYES,

*Managers on the Part of the House.*

DANIEL PATRICK MOYNIHAN,

FRANK R. LAUTENBERG,

HARRY REID,

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HQ AR001930-HQ AR002044

## WATER RESOURCES DEVELOPMENT ACT OF 1990

SEPTEMBER 14, 1990.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. ANDERSON, from the Committee on Public Works and Transportation, submitted the following

## REPORT

together with

## SUPPLEMENTAL VIEWS

[To accompany H.R. 5314]

[Including cost estimate of the Congressional Budget Office]

The Committee on Public Works and Transportation, to whom was referred the bill (H.R. 5314) to provide for the conservation and development of water and related resources, to authorize the United States Army Corps of Engineers civil works program to construct various projects for improvements to the Nation's infrastructure, and for other purposes, having considered the same, report favorably thereon with an amendment and recommend that the bill as amended do pass.

The amendment strikes out all after the enacting clause of the bill and inserts a new text which appears in italic type in the reported bill.

## INTRODUCTION

The Water Resources Development Act of 1990 demonstrates the continuing commitment of the Committee on Public Works and Transportation to a regular authorization schedule for the Water Resources Program of the Department of the Army. It follows the enactment of the Water Resources Development Act of 1988 (P.L. 100-676) which followed the enactment of the Water Resources Development Act of 1986 (P.L. 99-662).

The Committee conducted hearings on possible authorizations for the U.S. Army Corps of Water Resources Program on March 1,



1990, March 7, 1990, and March 14, 1990 receiving testimony from the Agency, numerous Members of Congress, and public witnesses. H.R. 5314 was introduced following the hearing and ordered reported by the Subcommittee on Water Resources on July 26, 1990, and ordered reported by the Committee on Public Works and Transportation on August 1, 1990.

The bill would authorize the construction of water resources development projects by the U.S. Army Corps of Engineers for flood control, navigation, beach erosion control and related purposes. The bill also contains deauthorizations of previously authorized projects, authorizations for studies of water resources problems, modifications to previously authorized projects, and provisions related generally to the Water Resources Development Program of the Corps of Engineers. The project authorizations adhere to the cost-sharing reforms contained in the Water Resources Development Act of 1986.

H.R. 5314 is an effort to balance the water resources needs of our nation and the need to make the program of the Corps of Engineers more responsible for and responsible to environmental concerns.

The bill contains many provisions designed to improve the environmental mission of the Corps of Engineers. Section 18, Environmental Dredging, authorizes the Secretary to remove contaminated sediments outside the traditional boundaries of a navigation channel. If the dredging is necessary as part of operation and maintenance it is a Federal expense as are other operation and maintenance costs. In other instances, the Corps will enter into a 50-50 partnership with state and local interests for the removal of this serious environmental hazard facing our Nation's waters. Section 12, Environmental Protection Mission, adds environmental protection as a primary mission of the Corps of Engineers. Section 13, Wetlands, establishes as part of the Corps of Engineers' Water Resources Development Program an interim goal of non-overall net loss of the Nation's remaining wetlands base, as defined by acreage and function, and a long-term goal to increase the quality and quantity of the Nation's wetlands, as defined acreage and function. The bill also requires the Secretary to transmit to Congress a list which specifically identifies opportunities for enhancing wetlands in connection with construction and operation of water resources projects. The Subcommittee on Water Resources conducted numerous hearings in the 101st Congress concerning wetlands issues, and the Committee believes that the Corps of Engineers can play a major role in preserving, protecting, and enhancing, our Nation's wetlands resources.

The Water Resources Development Act of 1986 included a demonstration program for the modification of existing Corps of Engineers' projects for improvement of the environment. The Water Resources Development Act of 1988 extended the demonstration program. Now, because of enthusiasm for the program, the Water Resources Development Act of 1990 would make the program permanent and allow up to \$15 million annually to be used to carryout the program. This provision will allow the Corps to make both minor and substantial alterations to existing Corps projects for the purpose of environmental enhancement.

The provisions mentioned above, and other provisions of the bill, serve to enhance the environmental mission of the Corps and will result in improved quality of life for today and tomorrow.

There are numerous other provisions in the bill which are of great value to the construction and reconstruction of our Nation's water resources infrastructure. The Committee is deeply concerned about the continuing deterioration of our Nation's infrastructure, but is optimistic that legislation such as the Water Resources Development Act of 1990 will allow our Nation to move forward in the improvement of its infrastructure and to improve its competitive position in world markets.

The Committee notes that costs stated in the bill are at October, 1989, price levels.

During the consideration of H.R. 5314 by the Committee, a unanimous consent request was made and agreed to which authorized the Chairman, prior to filing the report on H.R. 5314 and after consultation with the Ranking Minority Member and the affected Member, to delete from the bill any provision which the Parliamentarian has identified as triggering a sequential referral and which has not been resolved with the appropriate committee.

The following sections or portions of sections have been deleted from the reported bill pursuant to the authority of the unanimous consent request: 4(o); 4(u); 4(mm); 13; 27; 36; 40; 45; 62; 66(b); 66(e); 68; 69.

#### CREDIT FOR NON-FEDERAL WORK PERFORMED ON FLOOD CONTROL PROJECTS

Section 104 of the Water Resources Development Act of 1986 provides that non-federal interests may receive credit against their non-federal share of an authorized flood control project for work which is carried out by them which is determined by the Secretary to be compatible with the project. At the hearings on the Water Resources Development Act of 1990, the Subcommittee received testimony expressing concern that this provision would allow non-federal interests to receive credit against their non-federal share of an authorized project for work they perform on a non-federal project which is associated with, or will operate in conjunction with, the authorized project, with the result that federal assistance would be indirectly provided to a non-federal project which had not been authorized by federal law.

The Committee points out that this is not the case. The credit provisions of section 104 apply only to work performed which is within the scope of the authorized project. The purpose of section 104 is to enable non-federal interests to commence work on a project in advance of federal action in order to realize the benefits of the project at an earlier date. If the project is not authorized under federal law, and the work is not part of the project, the credit provision does not apply.

SECTION-BY-SECTION ANALYSIS OF H.R. 5314, THE WATER RESOURCES  
DEVELOPMENT ACT OF 1990

*Section 1. Short title*

Section 1 contains the short title of the bill and the table of contents. The bill may be cited as the "Water Resources Development Act of 1990".

*Section 2. Secretary defined*

The term "Secretary" is defined for purposes of the bill as the Secretary of the Army.

*Section 3. Project authorizations*

Subsection (a) of section 3 authorizes the construction of 25 water resources projects substantially in accordance with the plans, and subject to the conditions, recommended by the Chief of Engineers. Descriptions of the projects and the Corps of Engineers feasibility reports follow:

BAYOU LA BATRE, ALABAMA

*Location.*—Bayou La Batre is located in south Mobile County, approximately 30 miles southwest of the City of Mobile, Alabama.

*Authority for Report.*—Resolution dated October 10, 1974 by the Committee on Public Works of the United States House of Representatives requesting a review of the Federal navigation project at Bayou La Batre.

*Description of Recommended Plan.*—The problems with the existing 12-foot deep channel are depth-related operational and production inefficiencies for the commercial fishing fleet, shipbuilding industry, and other marine related industries. The shipbuilding industry is experiencing a demand for construction and repair of larger vessels by domestic and foreign interests which cannot be accommodated by existing channel depths. Large vessel construction or repair work currently being performed by either foreign or domestic shipbuilders at greater costs than could be obtained at Bayou La Batre are oil supply vessels, crew vessels, U.S. military and Coast Guard vessels, and large research vessels. Also, due to the substantial increase in oil and natural gas exploration and production activity in Mobile Bay and the adjacent Gulf of Mexico, it is expected that split operations for the servicing and repair of vessels used in these operations will increase significantly under the future without-project condition. Diversification of commercial fishing is also occurring, as evidenced by the developing butterfish fishing and processing market, which require larger vessels for operational efficiency.

The recommended plan for the project provides for:

Deepening the existing Federal channel within Bayou La Batre to a navigation depth of 18 feet by 100 feet wide from the mouth of Bayou La Batre (130+00) to and including the existing turning basin (30+00).

Deepening the existing Federal channel within Bayou La Batre to a navigation depth of 14 feet by 75 feet wide from the turning basin (30+00) to the Highway 188 bridge crossing (0+00).

Extending the 14-foot by 75-foot channel from the Highway 188 bridge crossing within Bayou La Batre to Sta. -15+10 above the bridge.

Extending a 14-foot by 50-foot channel from the turning basin into Snake Bayou to Sta. 5+33, then a 12-foot by 50-foot channel within Snake Bayou to Sta. 13+47.

Extending and widening the existing 12-foot by 100-foot Federal channel within Mississippi Sound to connect with the Gulf Intracoastal Waterway (GIWW) alignment (536+00), then westward along the GIWW alignment to connect with the existing Pascagoula Ship Channel (1185+45). The recommended dimensions of this channel are 18 feet in depth by 120 feet in width.

Disposal of construction and maintenance dredged material from the channels within the bayou will be into upland disposal sites. Within Mississippi Sound a portion of the construction dredged material will be used for shoreline stabilization and marsh creation at Isle aux Herbes while the remainder of construction material will be disposed into open water at depths greater than 12 feet within Mississippi Sound. Maintenance material from the channel within Mississippi Sound will be disposed in open waters greater than 12 feet in depth.

A deepened navigation channel at Bayou La Batre will eliminate vessel damages and delays for the existing commercial fishing and shipbuilding interests at the project and allow future expansion and diversification of commercial fishing and shipbuilding activities.

*Views of States and Non-Federal Interests.*—The non-Federal interests are generally in support of the recommended plan for the project. The State of Mississippi has expressed a desire for the beneficial use of the construction dredged material from the deepened channel in the construction of fishery habitat. Letters of intent to provide the non-Federal share of the project costs have been received from the State of Alabama (18 April 1989), Mobile County (18 September 1989) and the Bayou La Batre Port Authority (18 September 1989).

*Views of Federal and Regional Agencies.*—There are no unresolved issues associated with the Reporting Officer's recommendations.

*Status of Final Environmental Impact Statements.*—The final EIS was filed with the Environmental Protection Agency on November 21, 1988.

*Estimated Implementation Costs.*—October 1989 Price Level:

Federal:	
Corps/General Navigation Features .....	\$4,451,000
Coast Guard/Navigation Aids .....	41,000
Subtotal .....	4,492,000
Non-Federal: State of Alabama .....	11,733,000
Total .....	16,225,000

*Benefit/Cost Ratio.*—2.7.

*Description of Non-Federal Responsibilities.*—The non-Federal implementation costs, expressed in thousands, consist of cash contributions (\$495.0), lands and damages (\$541.0), utility relocations

and bulkhead replacements (\$9,191.0), upland disposal area diking (\$418.0), design and administrative costs (\$1,088).

The non-Federal sponsor would be responsible for the management and diking costs associated with the upland disposal areas for the project.

*Remarks.*—The states affected by construction of the recommended plan for the Bayou La Batre project include Alabama and Mississippi. No significant adverse environmental impacts have been identified for the project. Beneficial uses of construction dredged material for shoreline stabilization and fishery habitat have been identified and included as part of the plan.

Significant increases in employment within the shipbuilding and repair industries are expected to result from the project. The estimated average annual income streams generated by the project due to increase income, revenue, sales and property taxes total \$1,760,000.

Major direct beneficiaries are approximately five shipbuilding and repair industries and ten commercial fishing/seafood processing interests.

#### CLIFTON, ARIZONA

*Location.*—Clifton is located in southeastern Arizona. Clifton is approximately 170 miles northeast of Tucson, Arizona, along the San Francisco River, a tributary of the Gila River.

*Authority for Report.*—Section 6 of the Flood Control Act of 1938.

*Description of Recommended Plan.*—Problems identified in the study are the physical, economic, and social impacts resulting from recurrent severe flooding of the San Francisco River; lack of economic diversification; and inadequate recreational opportunity. These problems were highlighted by the conditions that existed following the most severe flood of record which struck the town on October 1, 1983. Opportunities were identified to reduce flood damages from the San Francisco River, develop related recreational facilities, and facilitate future economic development.

The recommended plan includes a structural element consisting primarily of a levee to provide 125-year frequency flood protection to homes and businesses in south Clifton; and a nonstructural element consisting of evacuation and relocation of households from floodplain areas into flood free replacement housing, floodproofing of business establishments and historically significant commercial buildings, and redevelopment of evacuated floodplain areas for recreational and open space uses. The recommended plan will entirely eliminate residential damages and significantly reduce commercial damages resulting from a 125-year flood of the San Francisco River.

##### a. Structural:

(1) Trapezoidal compacted earth-fill levee, 2,500 feet long, average of 8½ feet high, offset 100 feet from the river bank; includes swing-type floodgate for railroad, overhead roller-type floodgate for U.S. Highway 666. Will provide 125-year level of flood protection to 212 homes and businesses in south Clifton.

(2) The required rights-of-way consist of an 8-acre strip about 300 feet wide along with the length of the levee.



(3) Minor structural modification of railroad bridge, consisting of strengthening bearings to prevent failure during SPF.

b. Nonstructural:

(1) Evacuation and relocation of 108 households from floodplain areas of north Clifton, east Clifton, and the Patterson Addition into flood free replacement housing; lack of existing housing resources requires acquisition of 28 acres of flood free land for relocation site.

(2) Floodproofing of 14 business establishments and four historically significant commercial buildings.

(3) Redevelopment of evacuated areas of north Clifton and the Patterson Addition for recreational use (camping).

*Views of States and Non-Federal Interests.*—A letter of intent to provide all local cooperation requirements including costs based on current cost-sharing requirements was received from the Office of the Governor of Arizona, dated January 26, 1987. The Mayor and the Town Council of Clifton adopted Resolution 86-16, dated August 14, 1986, to support the recommended plan. Letters of support for the recommended plan were received from the Mayor of Clifton, dated December 17, 1985, and from the Greenlee County Board of Supervisors, dated November 5, 1985.

*Views of Federal and Regional Agencies.*—The Survey Report and Environmental Impact Statement for Flood Control and Related Purposes was reviewed by the Environmental Protection Agency, Department of the Interior, Arizona Game and Fish Department, Arizona State Parks, Arizona State Historic Preservation Officer, Fish and Wildlife Service, and Department of Agriculture. There are no outstanding significant issues, questions, or concerns at this time.

*Status of Final Environmental Impact Statement.*—The Final Environmental Impact Statement was filed with the Environmental Protection Agency on July 1, 1988.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal: Flood Control, Corps of Engineers.....	\$9,150,000
Non-Federal: Flood Control State of Arizona.....	3,360,000
Total.....	12,510,000

*Benefit/Cost Ratio.*—1.2.

*Description of Non-Federal Responsibilities.*—The non-Federal interest shall provide 5 percent of the cost of the structural portion of the project; all lands, easements, rights-of-way, and relocations (LERRD) assigned to flood control; and any additional amount necessary for the total non-Federal contribution to equal 25 percent of the cost of the structural portion of the project assigned to flood control. Of the nonstructural flood control measures, the non-Federal requirements include provision of LERRD necessary for the project, and any additional amount necessary for the total non-Federal contribution to equal but not exceed 25 percent of the cost. Total LERRD for the nonstructural portion exceeds 25 percent of the cost, therefore the Federal contribution will include provision of some lands, easements, rights-of-way and relocations for this portion. The non-Federal interest shall provide 50 percent of the cost of the recreation features.

In accordance with policy outlined in the Water Resources Development Act of 1986, non-Federal interests are required to pay 100

percent of the annual operation and maintenance costs of the project.

*Remarks.*—Although the recommended plan does not include any elements specifically for environmental enhancement, some benefits to the quality of the environment are expected. Relocation of residents from floodplain areas and converting them to recreation and open space will enhance the quality of the local environment. In addition, floodproofing of historic buildings will provide these resources with a viable future, where otherwise the buildings would further deteriorate as a result of disuse, neglect, and future floods.

*Regional Economic Development Effects.*—In addition to national economic development benefits realized at the regional scale, the recommended plan is expected to develop substantial unquantified regional economic development benefits by encouraging local development and business activity through utilization of its historic resources, development of its recreational resources, and development of public infrastructure at the relocation site. In 1986, the Town of Clifton completed a comprehensive plan, which includes all elements of the recommended plan, to guide further development in the community.

Projected long term social effects include a substantial reduction of anxiety, stress and other traumatic effects associated with recurrent severe flooding; an increase in population through development of the relocation site; an increase in secondary employment through development of the relocation site and through floodproofing of historic commercial structures; and reduction of transportation delays due to prevention of failure of the railroad bridge and elimination of deposition of silt and debris on Coronado Boulevard. Adverse effects consist of an increase in driving time between neighborhoods from about 6 minutes to about 12 minutes and walking time from about 50 minutes to about 80 minutes, as a result of the relocation of households from floodplain areas.

The flood protection provided by the project would directly benefit approximately 300 households (roughly 1,000 residents) and approximately 25 business establishments within the flood plain.

#### NOGALES WASH AND TRIBUTARIES, ARIZONA

*Location.*—The study area is located on both sides of the United States/Mexico International Boundary. It includes the 94-square mile drainage area of Nogales Wash and Potrero Creek to its confluence with Santa Cruz River.

*Authority for Report.*—Flood Control Act of 1938 (Public Law 75-761) as amended by the Water Resources Development Act of 1986 (Public Law 99-662).

*Description of Recommended Plan.*—Nogales Wash has frequently been the source of flooding in the City of Nogales, Arizona and neighboring communities in Santa Cruz County. In part, this problem occurs when sheet flow originating in Nogales, Sonora, Mexico crosses the border and inundates the downtown community. In 1930, flooding resulted in five deaths and property damage of \$200,000 (\$6.0 million at October 1989 price levels). This and other floods resulted in construction of two covered flood control channels by the International Boundary and Water Commission (IBWC)

in the 1930s. In recent years, urban development (primarily in Mexico) has made the IBWC channels less effective. Frequent flooding occurs when the two existing flood control channels are not filled to their design capacity. Business, government, traffic and other community activities are typically affected several times a year. In October 1977, three additional lives were lost and the community suffered \$1.1 million in damages.

Frequent flood damages also occur at Chula Vista, a residential community just north of Nogales. Flooding results from limited channel capacity and subsequent breakouts from both Nogales Wash and Potrero Creek. Flooding in 1977 inundated over 40 residences and eroded several acres of land in the area. The Nogales community has been included in three Presidential Disaster Areas as a result of flooding.

The recommended plan consists of two separable flood control elements, a flood warning system and a small recreation component.

Lateral collector channels would be located along the U.S. side of the International Boundary. This system would be constructed perpendicular to the direction of overland flow coming from Mexico and would extend from valley wall to valley wall. The channels would collect flow coming from Mexico and convey these flows into two existing covered flood control channels. The east portion of the collector would be an entrenched open concrete channel. The west portion of the collector would also be entrenched, but would be covered with a structural steel grate to allow for vehicular traffic across the border. The channels would also balance flows in the two covered channels to make optimal use of available capacity. The lateral collector channels would reduce flooding in the downtown Nogales community and provide 33-year future level of protection.

Chula Vista channels would capture breakout flows from Nogales Wash and Potrero Creek and convey them around the Chula Vista/Pete Kitchen community. These channels would provide 100-year future level of protection to this community. Recreation facilities and mitigation lands are recommended in the Chula Vista area. A flood warning system would provide the entire Nogales community with approximately six hours advanced warning of impending floods.

a. Structural: The east lateral collector channel would be 484 feet long, 4 feet wide and vary in depth from 2.17 to 5.5 feet deep. Collected flood flows would be discharged into the Nogales Wash covered channel through a 59-foot long, 48 inch diameter pipe and flap gate. The west lateral collector channel would be 132 feet long, approximately 27 inches wide and varies in depth. Collected flows would be discharged into the Arroyo Boulevard channel through five concrete pipes varying from 66 to 72 inches in diameter, and five flap gates. A 72-inch diameter pipe would balance flows between the two existing covered channels.

The Chula Vista interceptor channel/levee would be 692 feet long trapezoidally shaped, grouted stone structure. The integrated levee varies in height between 5.1 and 12.1 feet above existing grade and would have a 10 foot deep toe on the downstream side. Captured floor flow would be transitioned into a 1,428-foot long, 65-

foot wide, rectangular concrete channel that varies in depth between 11 and 21.5 feet. A grouted stone outlet structure/energy dissipator would release flows into the natural streambed. Incorporated into the plan is a 250-foot long, 36 inch diameter pipe with a grated inlet sized to restrict the flow to a maximum of 25 cubic feet per second (cfs). This structure would allow the dry season flows of Potrero Creek to flow through the existing incised channel. This feature is for aesthetic treatment purposes. One existing bridge would have to be replaced and another new bridge would have to be constructed for the Chula Vista channels.

b. Nonstructural: A flood warning system is proposed as a feature of the recommended plan. This system would consist of seven self reporting rain gages, six self reporting stream gages, one fully equipped repeater, and related communication and data processing hardware. Of the 13 gages, five are located in Mexico. A flood preparedness plan would be developed prior to installation of the warning system; the warning system would provide about 6 hour advance notice.

c. Recreation: A recreation plan would be integrated into the Chula Vista Channel system. The plan would consist of three picnic sites and make use of a 1,580-foot long paved maintenance road for bicycling/hiking. Each of the picnic sites would include a picnic table, barbecue and shelter structure.

d. Water use and control: The design discharge of the lateral collector channels are 7600 cfs. This would provide a 33-year future level of protection. These figures for the Chula Vista channels are 23,000 cfs and 100-year respectively.

e. Environmental Features: Mitigation measures for loss of riparian habitat associated with the Chula Vista channels include the 2.7 acres of planting along the concrete channel right-of-way. Perpetual easements on 8.2 acres along Potrero Creek and in a densely vegetated depression area would also be included for preservation of riparian habitat.

*Views of States and Non-Federal Interests.*—The State of Arizona, by letter dated December 9, 1988, expressed full support for the proposed project. The local sponsor, the Santa Cruz County Flood Control District, provided a letter of intent (dated August 25, 1987) to participate in the recommended plan and also provided a letter (dated February 12, 1988), indicating their financial capability and their plan to cost share in the construction phase. The sponsor also provided a letter (dated May 26, 1988) assuring their intent to participate in and support the recommended plan.

*Views of Federal and Regional Agencies.*—In a letter of support (dated May 26, 1988), the U.S. Commissioner, U.S. and Mexico Section, International Boundary and Water Commission, (IBWC), committed to continued efforts to coordinate the recommended plan (placement of flood warning gauges in Mexico) with his Mexican counterpart. To date, government authorities in Mexico have made no commitments in regard to the flood warning system components designed to be placed in Mexico. The Corps, in consultation with the Department of State, will work with the IBWC, regarding installation of the flood warning gauges.

*Status of Final Environmental Impact Statement.*—A finding of no significant impact was signed by the reporting officer on April  
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1, 1988, and included in the combined feasibility report and final environmental assessment document. The combined report was coordinated with state and Federal agencies. The U.S. Environmental Protection Agency commented that the environmental assessment, for the most part, adequately assesses the environmental impacts of the proposed actions.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal:

Corps of Engineers (Flood Damage Reduction):

Lateral Collector Channels.....	\$1,011,000
Chula Vista Channels.....	4,310,000
Flood Warning System.....	96,000
Recreation Plan.....	18,000

Subtotal .....	5,435,000
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Non-Federal:

Santa Cruz County Flood Control District:

Lateral Collector Channels.....	337,000
Chula Vista Channels.....	1,437,000
Flood Warning System.....	32,000
Recreation Plan.....	19,000

Subtotal .....	1,825,000
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Total.....	7,260,000
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*Benefit/cost ratio.*—2.0

*Description of Non-Federal Responsibilities.*—Non-Federal costs identified above include lands, easements, rights-of-way and relocations required for the project, minimal up-front cash contribution of 5 percent of total project costs, and additional cash for a minimum of 25 percent of the total project costs.

Non-Federal sponsor would maintain, operate, and repair or replace project facilities in the United States. The Corps of Engineers, in coordination with the International Boundary and Water Commission, will be responsible for the maintenance, repair or replacement of flood warning system components in Mexico, but the local sponsor will pay for these costs.

*Remarks.*—The recommended plan for Chula Vista would mitigate for the adverse impacts to riparian habitat caused by the proposed construction of the Chula Vista channels. There would be no net effect on endangered species which may be present in the region. No known cultural resources would be effected by the proposed plan. If such resources are found, adverse impacts would be mitigated, based upon coordination with the appropriate State and Federal agencies. Aesthetic treatment in the Chula Vista project area will be credited to the mitigation plan.

The recommended plan is expected to provide beneficial effects for business and industrial activity, desired growth, local government finance and man made resources. The Chula Vista project would also remove approximately 16 acres of undeveloped land from the existing floodway.

The recommended plan would have long-term beneficial effects on public facilities and services, the public fear of flooding, and the existing unmet demand for recreation facilities. The plan would also provide a temporary, but positive impact on the local employment and labor force.



The recommended plan would prevent flooding from the 33-year future flood in the downtown Nogales, Arizona community; would prevent flooding from the 100-year future floods of Nogales Wash and Potrero Creek in the Chula Vista community; would increase the flood warning time and hence reduce the potential for loss of life and flood damage throughout the study area; and would reduce the unmet demand for recreation facilities in the vicinity.

#### COYOTE CREEK AND BERRYESSA CREEK, CALIFORNIA

*Location.*—The study area is the central California and includes the cities of San Jose and Milpitas. The area includes the lower reaches of Coyote and Berryessa Creeks in Santa Clara County.

*Authority for Report.*—Section 4 of the Flood Control Act of 1941. The act authorized surveys for flood control for several tributaries to the Guadalupe River, including Coyote and Berryessa Creeks.

#### *Description of Recommended Plan.*—

##### *Coyote Creek*

Coyote Creek has frequently been the source of flooding in northern San Jose, including the community of Alviso, as well as sections of Milpitas. The most recent major flooding along Coyote Creek occurred between February and March 1983, inundating approximately 4000 acres and causing damages of over \$6 million. This flood event resulted in evacuation of people from Alviso and the surrounding area and, ultimately, left as many as 5000 people homeless. Development of the flood plain adjacent to the Coyote Creek project area with business/industrial parks is occurring at a rapid rate. There is also demand for recreation facilities along the creek, including a trail system and opportunities for non-contact water activities.

##### *Berryessa Creek*

Berryessa Creek is the source of flooding in residential neighborhoods of Milpitas. This area experienced major street flooding in January 1983, although no damage value was recorded.

The recommended plan for Coyote Creek consists of earthen overflow channels and offset levees between the old Milpitas sewage treatment plant downstream and Montague Expressway at the upper end. The location of the overflow channel would alternate between the east and west sides of the creek, requiring crossovers of the existing channel. The overflow channel crossovers, as well as transition features at two bridge crossings, would be rock-lined. The plan also includes a concrete trapezoidal channel under State Highway 237 and a concrete floodwall to replace a section of levee. The Coyote Creek mitigation plan would revegetate approximately 27 acres of project lands to compensate for permanent loss of riparian habitat. The Santa Clara Valley Water District, the project sponsor, constructed levees downstream of the Federal plan recommended in the feasibility report, that form a bypass channel off Coyote Creek to direct flood flows concentrated in the Federal channel to San Francisco Bay. This local work consists of design and construction of flood control structures, relocations, and fish and wildlife mitigation measures having an estimated value of

\$9,347,000. The local elements of work have been evaluated and it has been determined that \$8,633,000 worth of the locally funded improvements qualify for credit under section 104 of P.L. 99-662 towards the local share of the cost for constructing the Coyote Creek portion of the recommended project. In addition to the local work discussed above, the Santa Clara Valley Water District is currently constructing portions of the Federally-recommended Coyote Creek plan under Section 26 of P.L. 100-676.

The recommended plan for Berryessa Creek consists of a trapezoidal concrete channel along two unmodified sections of the existing stream for a combined distance of approximately one mile. A greenbelt-park zone exists between these two sections, along which offset levees would be constructed without stream modification. The existing trapezoidal earthen channel along the remainder of the creek would be lined with reinforced concrete. Additional features include a concrete-lined sedimentation basin with earthen bottom at the upstream end of the project and improvement to an existing debris basin. The recommended plan contains features to minimize impacts to wildlife habitat.

a. Structural:

(1) Canals, locks, channelization, levees, jetties, drainage systems and other facilities.

*Coyote Creek*

The Coyote Creek plan includes approximately 29,000 linear feet of channel excavation adjacent to and through the existing stream channel, creating an overflow channel. The plan would also feature offset levees approximately 400 to 900 feet apart. The levees would vary between 4 and 9 feet in height with a top width of 18 feet, and side slopes of 1V on 3H (waterside) and 1V and 2H (landside). An all-weather patrol road would be constructed on the crown of the project levee. The width of the overflow channel would vary with geological and hydrological conditions. The total distance of the rock-lining of transition zones and overflow channel crossovers would be approximately 3400 feet. A section of concrete floodwall, which is needed in place of a levee section due to right-of-way constraints, would measure approximately 850 feet in length. The stream channel under State Highway 237 would require a trapezoidal concrete channel for a distance of about 700 feet. This channel would vary in width between approximately 110 and 150 feet. Local elements of work which qualify for credit under Section 104 towards the local share of the cost of constructing the Coyote Creek portion of the recommended project include: design and construction of 18,300 feet of earth levee, bypass, and outlet channel along lower Coyote Creek; design and construction of 600 feet of concrete floodwall along the Coyote Creek low channel at the Coyote and lower Penitencia Creeks confluence; construction of 500 feet of rock-lined section on lower Penitencia Creek; removal of portions of the Milpitas Sewage Treatment Plant; construction of an earth pad to serve the City of San Jose new bomb disposal facility; and construction of a haul road to replace an existing haul road and removal of a sludge pond.

### *Berryessa Creek*

The Berryessa Creek plan includes approximately 5400 linear feet of channel excavation to accommodate the two sections of trapezoidal concrete-lined channel where there is presently natural channel. The bottom width of this channel would be 8 feet, with side slopes of 1V on 2H, and would include a single service road on one side of the creek. The plan would also feature a 160-foot by 500-foot reinforced concrete-walled sedimentation basin with earth bottom at the upstream project limit. An existing debris basin at the upstream end of the greenbelt-park zone would be improved with concrete walls and enlarge to approximately 80 feet by 140 feet. The greenbelt/park zone, extending for a distance of about 42000 feet, has existing low-lying earthen berms which would be augmented to bring them to design grade. The width of the levee crown would be 12 feet on one side of the creek, and as narrow as 6 feet on the opposite side. The current earthen trapezoidal channel, which extends downstream of the greenbelt-park zone to the end of the project for approximately 12,000 feet, would be lined with concrete. The existing channel has a 12- to 18-foot bottom width, with side slopes on 1V on 1.5H.

(2) Lands, easements, rights-of-way and relocations.

### *Coyote Creek*

The Coyote Creek plan necessitates the non-Federal acquisition of flood control easements over approximately 260 acres of land. Required project relocations include: one bridge (demolition), two wells, one water distribution aqueduct (Hetch-Hetchy), and several buildings.

### *Berryessa Creek*

The Berryessa Creek plan necessitates the non-Federal acquisition of flood control easements over approximately 2.5 acres of land for the sedimentation basin upstream of Old Piedmont Road. The remainder of the right-of-way is currently in flood control use in existing improved and unimproved channels. Required project relocations include: one railroad bridge (including a temporary shoo-fly), one gaging station, one concrete footbridge, and road modifications.

c. Recreation: Recreation is not currently a project purpose. However, recreation features for the Coyote Creek plan could be incorporated into the project at a later date should interest be expressed by locals and justification for Federal participation be demonstrated.

d. Water Use and Control (Design Flows):

### *Coyote Creek*

The design discharge (100-year event) is 14,500 cfs.

### *Berryessa Creek*

The design discharge (100-year event) is 1600 cfs and 4800 cfs, upstream project limit and downstream project limit, respectively.

e. Environmental Features (Mitigation on Project Lands).

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### *Coyote Creek*

The Coyote Creek plan includes full mitigation for riparian habitat losses. This plan consists of planting and management of 27 acres of native riparian vegetation beyond the 5 acres to be planted for beautification. Additional mitigation will be undertaken by the local sponsor for non-Federal work accomplished under Section 104, and as conditioned in a regulatory permit issued by the Corps for impacts to the fish resources identified in the environmental review process for the local work to be accomplished under Section 26 of P.L. 100-676. These measures include: development of a 16-acre brackish water pond for waterfowl and shorebirds, replanting levees with saltmarsh vegetation and establishment and management of a 55-acre seasonal wetland area to protect habitat for the Federally-listed endangered species, the salt marsh harvest mouse, relocation of a flashboard dam and revegetation of the banks along the seasonal lake created by the dam, construction of a fish passage baffle system in the low flow channel, creation of rocky riffle habitat in new channels, improvement of spawning habitat, replacement of fish hiding cover by use of large riprap, planting of riparian trees on sparsely vegetated banks in the upstream reaches of the project, and improvement of tidal action in the lower channel.

### *Berryessa Creek*

The Berryessa Creek plan includes protection of existing trees and shrubs wherever possible, and the two-for-one replacement for beautification of those trees lost as a result of the project. During final design of the project, consideration will be given to preservation of right-of-way areas for planting outside the greenbelt on Berryessa Creek to create a more continuous riparian corridor.

*Views of States and Non-Federal Interests.*—The State of California, by letter dated August 24 1988, expressed concern with regard to the project's impacts to fish resources in Coyote Creek, and requested that any work performed in the vicinity of Route 237 and McCarthy Boulevard be closely coordinated with the State Department of Transportation. The response provided advised that during the course of preconstruction engineering and design studies, the Sacramento District would be coordinating with the Department of Fish and Game and Santa Clara Valley Water District to ensure that all fishery impacts for the lower Coyote Creek are identified and appropriate mitigation measures are implemented. In addition, the Sacramento District would coordinate with the Department of Transportation concerning any work performed in the vicinity of Route 237 and McCarthy Boulevard. Assurances of intent to participate in the proposed flood control improvements were provided by the Santa Clara Valley Water District, by letter dated March 25, 1988.

*Views of Federal and Regional Agencies.*—EPA, by letter dated September 2, 1988, expressed concern that the recommended plan for Coyote Creek does not appear to comply with Section 404 of the Clean Water Act. The response provided advised the Corps is required to select the alternative that has the greatest net benefit to the national economy, referred to as the National Economic Development

opment (NED) plan, provided the plan is consistent with protecting the Nation's environment. The recommended plan is the NED plan and protecting the environment will be accomplished through implementation of appropriate measures to mitigate adverse environmental effects. Department of Interior, by letter dated August 17, 1988, stated that it would be appropriate to require a report on mitigation monitoring results at project year 105 and between project years 55 and 105, and that the cost estimate for Berryessa Creek include funding for the riparian mitigation plantings. The response provided advised that since the monitoring report at year 55 would, as currently planned, document the results of four monitoring intervals over a 30-year period at 10-year intervals, one additional report at year 105 would be adequate. Also costs of riparian mitigation plantings are itemized as project beautification in the cost estimate of the Berryessa Creek improvements.

*Status of Final Environmental Impact Statement.*—Notice appeared in the Federal Register on July 8, 1988. Signing of the record of decision will complete the NEPA process.

*Estimated Implementation Costs.*—October 1989 Price Levels:

Federal:

Corps of Engineers/Flood Damage Reduction:	
Coyote Creek .....	\$31,287,000
Berryessa Creek .....	7,763,000
Subtotal .....	39,050,000

Non-Federal:

Santa Clara Valley Water District:	
Coyote Creek .....	14,663,000
Berryessa Creek .....	2,587,000
Subtotal .....	17,250,000
Total .....	56,300,000

*Benefit/Cost Ratio.*—Coyote Creek 1.04; Berryessa Creek 1.3.

*Description of Non-Federal Responsibilities.*—Non-Federal costs include lands, easements, rights-of-way and relocations required for the projects, minimum cash contribution of 5 percent of total project costs, additional cash for a minimum of 25 percent of total project costs, and take into account the approved credit for compatible work performed on Coyote Creek by the Santa Clara Valley Water District.

Non-Federal interests will maintain and operate the flood control facilities and monitor the revegetation programs for both Coyote Creek and Berryessa Creek.

*Remarks.*—The Coyote Creek plan would mitigate for adverse impacts to fish and wildlife caused by the removal of riparian vegetation and degradation of fish and aquatic habitats, resulting in no net loss of fish and wildlife habitat. There would be no effect on endangered species which are present in the region. There would be beneficial effects to stream benthos. Potentially significant cultural resources exist within the project right-of-way. Adverse impacts would be mitigated, based upon coordination with appropriate State and Federal agencies. Aesthetic treatment of the project areas is included to offset adverse social effects.



The Berryessa Creek Plan is expected to have short-lived, adverse impacts on the project area's biological resources; however, there would be no net loss of habitat with implementation of the mitigation program. Landscape plantings at street crossings would be implemented to reduce adverse visual impacts.

The Coyote Creek plan is expected to provide beneficial effects for business and industrial activity, desirable growth, local government finance and man-made resources.

The Berryessa Creek plan would have beneficial effects on business and industrial activity, local government finance and man-made resources.

The Coyote Creek plan would have long-term beneficial effects on public facilities and services and recreational opportunities, and temporary positive impacts on the local employment and labor force.

The Berryessa Creek plan would cause minor adverse effects on existing recreational activities, but long-term beneficial effects on public facilities and services and temporary positive impacts on the local employment and labor force.

The recommended plans for Coyote and Berryessa Creeks would prevent flooding from the 100-year flood event, and all lesser events, over an area approximately 4500 acres in extent. The following number of structures are situated within this area:

Coyote Creek flood plain: 277 residential structures, 197 commercial/industrial and public buildings, and 99 mobile homes.

Berryessa Creek flood plain: 1250 residential structures and 223 commercial/industrial and public buildings.

#### OCEANSIDE HARBOR, CALIFORNIA

*Location.*—Oceanside Harbor is located in the City of Oceanside and within the boundary of San Diego County, about 30 miles north of downtown San Diego. Camp Pendleton Marine Base is immediately north of the harbor and shares the entrance channel with the small craft harbor.

*Authority for Report.*—United States Environmental and Public Works Committee resolution adopted on February 9, 1967 and House of Representatives Public Works and Transportation Committee resolution adopted on December 11, 1969.

*Description of Recommended Plan.*—Due to the configuration of the harbor entrance, waves from the south and southwest penetrate relatively uninterrupted through the main channel entrance and towards the inner harbor. Estimated average annual losses from the frequent repair and replacement of floats, piles, and revetment, and damages to commercial and recreational craft in the harbor are \$560,000.

Waves also frequently break at the harbor entrance due to a combination of shoaling and high waves and results in hazardous navigation in the channel. This results in lost income to harbor operations of \$88,000 annually and vessel damages in the entrance of \$51,000 annually. Since 1963, eleven persons have died at Oceanside Harbor attempting to navigate in the entrance channel.

The recommended plan includes construction of a 300-foot dogleg extension on the north breakwater and a 180-foot groin on the

north side of the south jetty for storm damage protection, and a modified dredging program to provide a safer entrance channel.

a. Structural:

(1) Construct a 300-foot dogleg extension on the north breakwater. This construction will require 58,000 tons or 36,000 cubic yards of rock.

(2) Construct a 180-foot groin on the north side of the south jetty. This construction will require 35,000 tons or 22,000 cubic yards of rock.

(3) Modify the existing dredging program to better maintain the authorized depth of the existing harbor entrance. This would be done by dredging approximately 5 feet below the project depth of minus 20 feet MLLW, and extending the channel approximately 300 feet east and 300 feet west of the existing 750 foot wide channel. This would require two dredging episodes per year, during the winter season in October–November and in February–March (320,000 cubic yards total).

b. Recreation: The calm water environment created by the project would allow the local sponsor to construct 100 additional slips in the existing small craft harbor. This would be done after completion of project construction and would bring the total number of slips from 956 to 1,056.

c. Environmental Features:

(1) Mitigation on separable lands. It is anticipated that up to 10,000 cubic yards of sand would be impounded by the North Breakwater extension, preventing the sand from continuing downcoast. This would be mitigated for by the additional 83,000 cubic yards estimated to be dredged and placed downcoast annually as part of the recommended plan.

(2) Mitigation on project lands. Dredging and pile driving would take place outside of the California least tern nesting season (April 1 to September 15), as they have in the past. The alignment and lengths of the North Breakwater extension and the South Jetty stub groin would be adjusted, if necessary, to avoid significant impacts to the recreational surfing at Harbor Beach (located immediately downcoast of the harbor). Finally, a six foot high chain link fence would be erected approximately 600 feet from the terminus of the North Breakwater during construction to protect the California brown pelican.

*View of States and Non-Federal Interests.*—The State of California, by letter dated October 4, 1989, expressed concern with regard to the project's impacts on soft bottom habitat in the project area and the project's potential effect on recreational use of downcoast beaches. The Corps position is that the need for habitat compensation was fully considered, however, it was determined the magnitude of habitat losses to be minimal on an absolute basis and in comparison to the quantity of soft bottom habitat in the project area. In addition, it was determined the mitigation was not justified based upon the high cost of mitigating the potential losses. Further Corps studies to date indicate that the project would have no adverse impact on surfing and other recreational activities. However, as part of preconstruction engineering and design studies, hydraulic model studies will be performed to assure that the project will not adversely effect recreational use of downcoast

beaches. The local sponsor, the Oceanside Small Craft Harbor District, strongly supports the recommended plan. Their intent on cost sharing is stated in a letter dated March 21, 1989.

*Views of Federal and Regional Agencies.*—There are no unresolved environmental issues on this project.

The Department of the Interior, by letter dated November 7, 1989, expressed concern over the projects potential impacts to endangered species in the Santa Margarita Estuary which may result from sand accretion at the mouth of the Santa Margarita River and impacts to the soft bottom habitat in the project area. The Corps has determined that the proposed project would not perceptibly change erosion or accretion at the mouth of the Santa Margarita River, therefore, the project does not include consideration for monitoring the river's mouth and the removal of any blockage that may occur. Further the need for habitat compensation was fully considered, however, Corps studies determined the magnitude of habitat losses to be minimal on an absolute basis and in comparison to the quantity of soft bottom habitat in the project area. In addition, the requested mitigation was not justified based upon the high cost of mitigating the potential losses.

*Status of Final Environmental Assessment.*—Finding of No Significant Impacts was signed by the Los Angeles District Engineer on March 10, 1989.

*Estimated Implementation Cost.*—October 1989 Price Levels:

Federal:

Corps of Engineers:

Storm Damage .....	\$3,148,000
Navigation .....	202,000

Non-Federal:

Oceanside Harbor District:

Storm Damage .....	1,700,000
Navigation .....	50,000

Total.....	5,100,000
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*Benefit/Cost Ratio.*—1.4.

*Description of Non-Federal Responsibilities.*—Non-Federal costs included lands, easements, rights-of-way and relocations required for the project. The non-Federal sponsor is required to contribute 35 percent of all cost attributable to storm damage reduction and 10 percent of the cost of construction attributable to the navigation improvement initially, plus an additional ten (10) percent over a period not to exceed 30 years.

Non-Federal interests would be responsible for the maintenance of the north breakwater extension and stub groin on the south jetty.

*Remarks.*—Corps studies have determined that the proposed project would not have any significant negative impacts upon the existing environment or the quality of the human environment. The project would not jeopardize the continued existence or habitats of threatened or endangered species. Other impacts related to water quality, noise, and air quality are considered to be temporary and insignificant.

The recommended plan would have a positive affect on the regional economy. The majority of the National Economic Development benefits of approximately \$870,000 will be realized as damage

reduction to the Oceanside Harbor facilities and boats, and as increased income to area commercial fishermen and business.

Implementation of the recommended plan will provide improved conditions within the small craft harbor, and a safer entrance channel, decreasing the chance of injuries and fatalities while providing increased recreational opportunities.

The principal beneficiaries would be the Oceanside Harbor District, and commercial and private boaters who use Oceanside Harbor. The Harbor District would save approximately \$345,000 annually in damages to their facilities, as well as realize increased revenues from being able to add 100 more slips. Commercial and private boat owners would not suffer the damage to their vessels, and will enjoy increased fishing and recreational opportunities. Commercial fishermen would also gain increased income since the harbor would be navigable more of the time. Commercial operations in the harbor such as the bait and fuel sales would also directly benefit.

#### VENTURA HARBOR, CALIFORNIA

*Location.*—Proposed project is located about 70 miles northwest of Los Angeles-Long Beach Harbors and 6 miles northwest of Channel Islands Harbor. The Ventura Port District is in Ventura County and adjacent and south of the city of San Buenaventura.

*Authority for Report.*—United States Senate Environment and Public Works Committee resolution adopted June 6, 1973.

*Description of Recommended Plan.*—The problems associated with present Ventura Harbor are the hazardous entrance conditions and frequency of maintenance dredging due to shoaling in the entrance channel.

The harbor entrance is also not completely sheltered from ocean waves. During periods of steep wind waves whose height exceeds three feet, vessel traffic begins to become restricted. An opportunity exists to provide better shelter from the prevailing westerly sea and swells and thereby permit increased use of the harbor entrance.

The harbor entrance channel accumulates a large amount of littoral sediment, which ultimately develops hazardous navigational conditions. Due to the excess littoral sediment accumulation, the entrance channel is dredged frequently to maintain a project depth of -20 feet MLLW. The consequences of this shoaling are periods of dangerous passage to vessels, periods of entrance closure, attendant economic losses as traffic is discouraged from using the entrance, and additional cost of maintenance dredging to remove shoaled sands. As a result of the problem at Ventura Harbor, an opportunity exists to improve navigation by reducing the frequency of entrance channel shoaling.

Project features include the North Jetty Spur Groin, the South Beach Groin, extension and deepening of the sand traps, deepening of the entrance channel, and extension of the detached breakwater.

a. Structural: North Jetty Spur Groin, rubblemound construction, 250 feet long, crest elevation of +10 feet MLLW; South Beach Groin, rubblemound construction, 650 feet long, crest elevation of +12 feet MLLW at the root and +8 feet MLLW at the head; deep-

ening portions of the entrance channel and sand trap to -40 feet MLLW and extending sand trap A to Station 26+50; and extension to detached breakwater, rubblemound construction, 300 feet to the southwest, crest elevation of +14 feet MLLW.

b. *Environmental Features:* Various alignments and lengths of the South Beach Groin will be examined during preconstruction engineering and design physical model studies. The design of the groin will be optimized to trap material moving upcoast into Ventura Harbor entrance channel, to avoid adverse impacts, and to enhance surfing conditions.

*Views of States and Non-Federal Interests.*—The local sponsor, the Ventura Port District, strongly supports the recommended plan. Their intent on cost sharing is stated in a letter dated June 22, 1989.

The State of California, by letter dated December 1, 1989, concurred in the recommended Ventura Harbor navigation improvement project. The California Coastal Commission concurred on September 14, 1989, that the proposed project was consistent with the State's Coastal Management Program. Concern was expressed by the Department of Parks and Recreation, in a letter dated November 29, 1989, that the project would impede littoral drift causing erosion of the downcoast McGrath State Beach. The Corps has determined that the McGrath State Beach is relatively stable and will likely remain stable with the proposed project. The current Ventura Harbor maintenance dredging practice of disposing dredged material downcoast is expected to continue with the proposed project. The downcoast deposited sediment acts as a feeder beach for the McGrath State Beach.

Support from the local public is strong from commercial fishermen, recreational boat owners, and harbor related businesses. Concern was raised by those fearful of negative impacts to the surfing at South Beach. Proposed action for this concern is stated above.

*Views of Federal and Regional Agencies.*—There are no unresolved environmental issues on this project.

A view expressed by the Department of the Interior and National Marine Fisheries Service relates to the need to mitigate potential project impacts to marine organisms in sandy bottom habitat. The Department of the Interior, in a letter dated January 16, 1990, expressed concern over the potential net project loss of 0.4 acres of sandy bottom habitat. The Corps has determined that the magnitude of sandy bottom habitat losses would be minimal on an absolute basis and in comparison to the quantity of sandy bottom habitat in the project area. The loss of sandy bottom habitat has been very small in southern California and there is no reason to believe that the cumulative loss will be significant in the future. In addition, it was determined that mitigation was not justified.

*Status of Final Environmental Assessment.*—Finding of No Significant Impacts was signed by the Los Angeles District Engineer on July 7, 1989.

*Estimated Implementation Cost.*—October 1989 price levels:

Federal: Corps of Engineers: Navigation.....	\$5,180,000
Non-Federal: Ventura Port District: Navigation.....	1,280,000
Total.....	6,460,000



*Benefit/Cost Ratio.*—1.8.

*Description of Non-Federal Responsibilities.*—Non-Federal costs include lands, easements, rights-of-way and relocations required for the project. The non-Federal sponsor is required to pay ten (10) percent of the cost of construction attributable to the navigation improvement initially, plus an additional ten (10) percent over a period not to exceed 30 years.

*Remarks.*—The Corps studies have determined that the proposed project would not have any significant negative impacts upon the existing environment or the quality of the human environment. The project will not jeopardize the continued existence or habitats of threatened or endangered species. Other impacts related to water quality, noise, and air quality are considered to be temporary and insignificant.

The recommended plan will have a positive affect on the regional economy. The majority of the National Economic Development benefits of approximately \$1,133,000 will be realized as increased income to area commerical fishermen and businesses.

Implementation of the recommended plan will provide improved conditions within the harbor, and a safer entrance channel, decreasing the chance of injuries and fatalities while providing increased recreational opportunities.

The principle beneficiaries will be the Ventura Port District, and commercial and private boaters who use Ventura Harbor. Commercial and private boat owners will not suffer the damage to their vessels, and will enjoy increased fishing and recreational opportunities. Commercial fishermen will also gain increased income when the harbor is navigable more of the time.

#### MARTIN COUNTY, FLORIDA

*Location.*—The study area encompasses the 22 miles of ocean shorefront of Martin County which is located about 225 miles south of Jacksonville.

*Authority for Report.*—United States Senate Committee on Public Works Resolution dated May 18, 1973.

*Description of Recommended Plan.*—The study area has experienced erosion and shoreline recession since at least 1882. Northeasters, and especially the Thanksgiving Day storm of 1984, have caused significant erosion of the dune, which has left the shorefront susceptible to damage from frequent storms. Martin County has had sustained growth and development and the erosion problem has reduced the shorefront's capacity to meet long term recreational needs.

The plan includes restoration of about 4 miles of the primary dune system to an elevation of 12.5 feet above mean-sea-level (m.s.l) with a top width of 20 feet. A protective beach with a 35-foot-wide berm at elevation 8 feet m.s.l would protect the dune system during less than design storm conditions. Periodic nourishment would be provided as needed.

a. Structural: The beach fill design incorporates a restored fore-dune with a 20-foot crest width that enhances the level of damage prevention afforded to upland development. A level berm, 35 feet

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wide, is included in the beach fill cross section to provide storm protection and recreational space.

b. Nonstructural: None.

c. Recreation: Martin County, the local sponsor, has large scale development plans for the massive amounts of public shorefront along the project area. Plans included enhanced parking, restrooms, nature trails, picnic areas, dune cross walks, and life guard stations.

d. Environmental Features: The local sponsor has development plans that will enhance use of the shorefront parks while maintaining the quality of the environment. Martin County has designated separate mangrove areas in addition to an ongoing program of planting vegetation especially along the foredune.

*Views of State and Non-Federal interests.*—The Governor of the State of Florida, by letter dated October 11, 1985, indicated support for the project. The Martin County Board of Commissioners by letter dated September 13, 1985, indicated their support for the project.

*Views of Federal and Regional Agencies.*—No Objections.

*Status of Final Environmental Impact Statement.*—Environmental Impact Statement coordinated with South Atlantic Division and Board of Engineers for Rivers and Harbors as part of the feasibility report.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal: Corps of Engineers.....	\$3,876,000
Non-Federal: State of Florida and Martin County.....	5,617,000
Total.....	9,493,000

*Benefit/Cost Ratio.*—1.5

*Description of Non-Federal Responsibilities.*—The additional non-Federal costs would be; for establishing an Erosion Control Line (ECL); fill landward of the ECL; lands, easements, and rights of way; and, the contingencies and engineering and design supervision and administration costs associated with these non-Federal costs.

The non-Federal sponsor is also responsible for periodic nourishment of the beach fill anticipated at 8 year intervals.

*Remarks.*—The recommended plan will provide storm protection to shorefront development while supplying recreational opportunities.

Regional economic development effects include enhanced business and growth trends as project area continues to develop.

The project would reduce the susceptibility of public and private shorefront development to storm damages and increase recreational opportunities.

The major direct beneficiaries are the general public which would have enhanced recreational opportunities along the shorefront and adjacent private property owners whose property would be protected as part of protecting the county and state owned shorefront in the project area.

## MIAMI HARBOR CHANNEL, FLORIDA

*Location.*—Miami Harbor is in the northern part of Biscayne Bay, on the southeast coast of Florida about 23 miles south of Port Everglades Harbor.

*Authority for Report.*—House Public Works and Transportation Committee Resolution dated November 18, 1980.

*Description of Recommended Plan.*—Current problems involve difficulties in vessel handling in the entrance channel, the turn from main channel into the south channel, and turning in the Lummus/Dodge Island turning basin.

The proposed plan is to provide additional width in the dogleg turn of the Bar Cut; deepen the outer channel to 44 feet; deepen the interior channels (Government Cut and South Lummus Island Channel) to 42 feet; deepen to 42 feet and enlarge to 1,600 feet in diameter the Lummus/Dodge Island turning basin; and widen Government Cut to 500 feet for 3,300 feet.

a. Structural: Provides deeper and wider channels, larger and deeper turning basin, and enlarged turn widener to reduce transportation cost and provide safer navigation for large container ship movements.

b. Nonstructural: Local requirements for coordinating vessel drafts with varying water depths at different tides to insure safe access.

*Views of States and Non-Federal Interests:* No specific problems were indicated based on responses received from coordination efforts, except for state concerns over the location of the ocean disposal site. To answer the State's concerns, site testing is underway to determine littoral movement and impacts of material.

*Views of Federal and Regional Agencies:* Comments received indicated no specific problems associated with the proposed work.

*Status of Final Environmental Impact Statement:* The Environmental Impact Statement is included with the Final feasibility report.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal:	
Corps of Engineers .....	\$41,804,000
Coast Guard .....	\$115,000
Non-Federal: Miami Port Authority .....	23,776,000
Total .....	65,695,000

*Benefit/Cost Ratio.*—1.5.

*Description of Non-Federal Responsibilities.*—Excavation of berthing areas.

*Remarks.*—Adverse environmental impacts are anticipated with dredging of 42 acres of seagrass, but mitigation is included in the recommended Federal project.

The project will help sustain the diversified labor force in transportation, wholesale, and retail sectors of the tributary area economy. Regional stability will be enhanced through maintenance of tax base and income flow generating revenue for local and state governments.

The project will lessen port problems with vessel movement and loading. As a result, more cohesive working conditions will exist among port entities to lessen pressures and anxieties.

Shipping lines, terminal operators and workers, and freight forwarders handling cargoes are direct project beneficiaries.

The Committee also notes that section 1162 of the Water Resources Development Act of 1986 authorized and directed the Secretary to remove polluted bottom sediments from the Miami River and Seybold Canal in Miami, Florida. The non-Federal sponsor for this project is anxious to begin the removal of these polluted sediments. The Committee encourages the Secretary to budget for and promptly proceed with the cleanup of these polluted sediments to improve the water quality of the Miami River and Seybold Canal. The Committee emphasizes the language in section 1162 providing that the maximum non-Federal share for the work authorized in that section is capped at 25 percent of the work undertaken, including the costs for the contribution for lands, easements, rights-of-way, relocations and alterations necessary for initial dredging and subsequent maintenance.

#### FORT WAYNE, ST. MARY'S AND MAUMEE RIVERS, INDIANA

*Location.*—Fort Wayne, is located in northeastern Indiana in Allen County. In the City of Fort Wayne, the St. Joseph and St. Marys Rivers join to form the headwaters of the Maumee River. From this point, the Maumee flows northeasterly and empties into Lake Erie at Toledo, Ohio.

*Study Authority.*—This study was authorized by Resolution of the Committee on Public Works, House of Representatives, Congress of the United States, dated October 12, 1972.

*Description of Recommended Plan.*—General flooding occurs in the Fort Wayne area as a result of headwater flooding in either the St. Marys or St. Joseph River basins. The major floods occur when high flows are experienced in both rivers at the same time. Flooding has been intensified by encroachment upon stream channels from both natural obstructions and man-made infringements. The area is participating in the Federal Flood Insurance Program.

The recommended plan provides for upgrading of approximately 35,000 feet of levee, floodwall and steel sheet pile crib along the St. Marys, St. Joseph and Maumee Rivers and Spy Run Creek, with new levees and floodwalls constructed only where necessary to tie the system into high ground and where setback levees would be incorporated to minimize environmental impacts. The project would provide a 100-year level of protection, and would include a recreational development plan of hiking/biking trails and additional incidental facilities. The recommended plan would reduce average annual damages in the area by 46%.

The 9,000 feet of existing earth levee along the north side of the Maumee River would be increased in height to provide 100-year level of protection. 1,600 feet of tieback levee would be required. 6,750 feet of existing earth levees and 4,500 feet of existing concrete retaining walls along the St. Joseph River would be increased in height to provide 100-year level of protection. 6,500 feet of new levees and floodwalls would also be required. Existing flood protec-

tion on the St. Marys River, including 1,150 feet of concrete retaining wall, 1,750 feet of earth-filled steel sheet pile crib, 5,440 feet of earth levee and 2,350 feet of earth levee with a steel sheet pile retaining wall would be increased in height to provide 100-year level of protection. 2,100 feet of levee/floodwall tieback would also be required. On Spy Run Creek, the 1,350 feet of earth levee and the 1,850 feet of earth-filled steel sheet pile cribs would be raised to provide 100-year level of protection. 2,000 feet of tieback would be required.

For the St. Marys River, three new outlets with backwater gates and 2,200 feet of storm sewer would be installed. Drainage on the Maumee River would be provided by a 15,000 gallon per minute pumping station, a gravity outlet with backwater gate and 200 feet of storm sewer. The St. Joseph River would require three new outlets and 300 feet of storm sewer. 13 of the 24 bridge approaches that the levee/floodwall system cross would require a stoplog structure to maintain the integrity of the level of flood protection provided. Four of these approaches would also require road ramp alterations.

The recreational plan developed within the limits of the levee and floodwall project calls for the improvement of levee crests to expand the existing 1.3 miles of hiking/biking trails to 4.8 miles. Mitigation for tree and riparian habitat removal at the levee rehabilitation areas would be accomplished through the use of setback levees, protection of existing trees in areas where the levees are presently setback and tree and shrub plantings.

*Views of States and Non-Federal Interests.*—The local sponsors, the City of Fort Wayne and Allen County, have been closely coordinated with during all aspects of this study. They remain enthusiastic advocates of this project and have indicated so in an April 18, 1988 letter. Coordination has been maintained with the Indiana Department of Natural Resources (IDNR) throughout the course of the Study, and it supports the recommended plan.

*Views of Federal and Regional Agencies.*—There are no known unresolved issues.

*Status of Final Environmental Impact Statement.*—The final environmental impact statement was filed on September 9, 1988.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal:

Army Corps of Engineers:	
Flood Damage Reduction .....	\$11,843,000
Recreation .....	257,000
Subtotal .....	12,100,000

Non-Federal:

City of Fort Wayne and Allen County:	
Flood Damage Reduction .....	3,943,000
Recreation .....	257,000
Subtotal .....	4,200,000
Total .....	16,300,000

*Benefit/Cost Ratio.*—2.7.

*Description of Non-Federal Responsibilities.*—The local interests would be required to provide for lands, easements, right of way and



utility and facility alterations and relocations; pay a cash contribution for flood control; and pay a cash contribution for recreation.

Costs are included for operation and maintenance of the interior flood control facilities, the levees and retaining walls and the recreational facilities.

*Remarks.*—The recommended plan is a modification of the NED plan. The only difference between the NED plan and the recommended plan is that the NED plan provides a 200-year level of protection and the recommended plan provides 100-year level of protection. The recommended plan provides net benefits only 3% (\$80,000) below those of the NED plan and costs about \$3,800,000 less. This deviation was recommended after discussions with Fort Wayne and Allen County and is consistent with the non-Federal sponsors' long term plans.

The recommended plan would create a variety of temporary environmental impacts due to construction. Long-term impacts are primarily related to changes in riparian habitat and aesthetics due to rehabilitation and raising of existing flood control structures. Avoidance and mitigation measures have been included in the project plan to minimize losses. The elimination of flood effects is the positive long-term environmental impact associated with this project.

Slight increase in regional economic benefits would be expected during actual construction. Other beneficial effects would include reduction in flood insurance costs and increased property values.

Some disruption of transportation would be expected during construction. A four to five foot increase in the heights of existing flood protection will no longer allow many residents a view of the river.

The direct beneficiaries would be the residents of the City of Fort Wayne and Allen County.

#### MC ALPINE LOCK AND DAM, INDIANA AND KENTUCKY

*Location.*—The existing McAlpine Locks and Dam are located on the Ohio River, 604.5 miles downstream from Pittsburgh, Pennsylvania. The Locks are located on the south bank of the Ohio River at Louisville, Kentucky, in Jefferson County. The dam connects to the Indiana shoreline in Clark County, Indiana.

*Authority for Report.*—Resolutions of the Committee on Environment and Public Works of the United States Senate, adopted May 16, 1955, and the Committee on Public Works and Transportation of the House of Representatives, adopted March 11, 1982.

*Description of Recommended Plan.*—While major features of the project, including the dam and the 110 × 1200-foot main chamber, are in good physical condition, other critical features are not in good physical condition and lack capacity to meet the growing demand for service at McAlpine. Paramount on this list is the 110 × 600-foot auxiliary lock which will approach 80 years of age by the year 2000. Lock walls for the 600-foot lock are some 18 feet lower than walls for the 1200-foot main chamber, causing unavailability of the 600-foot auxiliary an average of 45 days per year, or 12.3 percent of the time, due to high water. The 600 foot lock has an estimated annual capacity of 35.7 million tons per year, compared to current

demand of 53.9 million tons per year at the project. Lower capacity of the 600-foot lock is further restricted by a filling and emptying cycle of 30 minutes as compared to 8 minutes for the 1200-foot lock. The 600-foot auxiliary lock lacks sufficient capacity is inefficient and undependable when needed during outages of the main chamber. It can be expected to cause major delays as traffic demands at the project increases. A typical example of these delays is a total of 36 days closure of the 1200 foot lock, forcing sustained use of the auxiliary 600 foot lock at McAlpine in June and October 1987. A total of 723 tows were delayed an average of 30 hours per tow at a cost to industry of \$4.4 million. Increasing traffic demands and scheduled and unscheduled closures of the main chamber are estimated to result in delays at McAlpine that will cost industry an estimated \$126.3 million per year by the 2040 to 2050 decade.

The recommended plan provides for construction of a modern 110 by 1,200 foot lock to be built at the location of the present 110 × 600 foot lock. A new bascule (lift) bridge spanning the upstream end of the new lock and a fixed weir across the upstream end of the old 360 foot lock, with a two lane roadway on top, would replace the existing swing bridge. The canal approach just upstream of the lock entrance would be widened. Rip-rap bank protection will be placed at Sand Island. Spoil disposal areas designated on Shippingport Island will be restored and reseeded after construction is complete.

*Views of States and Non-Federal Interests.*—The Governor of Indiana wholeheartedly endorses the project and pledges full support. The Indiana Port Commission endorses the project and pledged full support. Governor's Office for Coal and Energy Policy (Kentucky) supports the project. Both Indiana and Kentucky state government departments support the plan but did request clarifying information be added to the report and environmental impact statement. The Mayor of Louisville and the Waterfront Development Corporation, while supporting the plan, desire additional studies to address safety and competing uses along the downtown Louisville waterfront area. These studies will be conducted as soon as funds are available.

*Views of Federal and Regional Agencies.*—U.S. Environmental Protection Agency comments requested more specific characterizations of spoil disposal areas habitat and techniques to be used for minimizing adverse water quality impacts. Information was added to the report and environmental impact statement. They advise that this action does not appear to have any specific characteristics that are environmentally objectionable. The draft environmental impact statement document was rated EC-2: review has disclosed a number of potential environmental impacts which could pose significant or long term environmental concerns if measures are not taken to avoid them.

U.S. Fish and Wildlife Service. The USFWS final report, in fulfillment of its responsibilities under the Fish and Wildlife Coordination Act, also complies with consultation requirements of Section 7(c) of the Endangered Species Act of 1973. The Service does not anticipate significant adverse impacts would occur. The Service continues support for system impact studies as a part of planning, engineering and design.

*Status of Final Environmental Impact Statement.*—The Draft Environmental Impact Statement was sent to EPA, Office of Federal Activities on October 27, 1989. Notice of availability of the DEIS was published in the Federal Register on November 9, 1989. The final EIS is contained in the report.

*Estimated Implementation Costs.*—October 1989 price levels:

Corps of Engineers:	
Federal (Navigation).....	\$109,800,000
Non-Federal (Navigation) .....	109,800,000
<hr/>	
Total.....	219,600,000

*Benefit/Cost Ratio.*—1.6.

*Description of Non-Federal Responsibilities.*—One-half of construction costs are to be paid from amounts appropriated from the general fund of the U.S. Treasury, and one-half from the Inland Waterway Trust Fund. Operation and maintenance costs are 100 percent Federal.

*Remarks.*—Plan B (new 1200 foot lock in location of the existing 600) or Plan D (new 1200 foot lock in location of the existing 360) can be considered as the national economic development plan. The less than 1 percent differential in net benefits between Plan B and D is not considered significant enough at this stage of study to warrant selection based on computed net benefits alone. The selection of Plan B, as the recommended plan is based on the planning team and industry placing a greater weight on the long term beneficial aspects of Plan B's more desirable separation from the existing 1,200-foot main chamber and therefore less interference between tows. Plan B's better long term performance was given higher weight than benefits accruing to Plan D over the short-term, as a result of increased separation during the construction period. Because of the negligible difference in net benefits between Plan B and Plan D, and in order to allow flexibility in subsequent PED studies, the final report recommendation calls for authorization of a new 1,200 foot lock in the vicinity of the existing auxiliary locks.

Short term adverse effects are expected on air, noise, and water quality (turbidity) during 6 year construction period, but not an adverse impact to aquatic or terrestrial resources. Limited mitigation is required for historic resources of old lock construction. Nineteen acre disposal area is of low habitat value. Vegetation will be restored following construction.

A reduction in regional transportation costs will be beneficial to the region's coal and energy industries.

No families will be displaced. Improved conditions result from reduced delays and queues by commercial tows in highly urbanized Metropolitan Louisville area.

#### ALOHA-RIGOLETTE, LOUISIANA

*Location.*—The study area is located in north-central Louisiana just above the cities of Alexandria/Pineville, Louisiana. The study basin is a rural area which extends from Alexandria/Pineville north to Winnfield and includes portions of Rapides, Grant, and Winn Parishes.

*Authority for Report.*—The study was conducted in response to a Resolution of the United States Senate Committee on Public Works and Environment adopted May 22, 1974.

*Description of Recommended Plan.*—Flooding in the basin results from interior rainfall runoff. The major area experiencing flooding is in the alluvial flat lands in the southern portion of the basin. Factors that contribute to the flood problem are increased runoff from recently cleared forested land and decreased bayou carrying capacity due to unchecked channel vegetation. Local interests attribute flooding in the area to the size of the Bayou Rigolette floodgate openings and state that additional outlet capacity is necessary.

The recommended plan consists of a three barrel floodgate structure installed at the mouth of Bayou Darrow to reopen it to the Red River, 7.6 miles of clearing and snagging of Bayou Darrow from its mouth upstream, the construction of a low-flow structure on Bayou Rigolette just below its junction with Bayou Darrow, the construction of a closure on the existing Bayou Saline diversion canal, and removal of the closure that now exists between Bayou Darrow and Bayou Rigolette. Mitigation includes acquisition, reforestation, and management of agricultural lands and woodlands and the construction of a rock weir.

a. Structural: The structure recommended would consist of three floodgates installed at the mouth of Bayou Darrow. The three gates would each be 10 feet high by 10 feet wide and 242 feet long and would be constructed of reinforced concrete. An electrically operated vertical lift gate would control the flow through each boxed opening. Both inflow and outflow channels will be sloped 1 vertical on 3 horizontal.

b. Environmental Features: Mitigation includes the acquisition of a tract in Grant Parish located between Iatt Lake and U.S. Highway 71. Of the proposed 208-acre tract, 8 acres would be developed into stream channels and 200 acres would be reforested with woody plant species valuable to wildlife. The areas to be reforested would be adjacent to relic stream channels that would be re-established with the project. Also included is the facilitation of the drawdown of Iatt Lake for enhancement of its fishery resources. To compensate for loss of woodland and field flooding which is valuable to waterfowl, a rock weir would be constructed on Bayou Rigolette above Highway 71 to impound water on the mitigation area. Flowage easements would be acquired over the lands subject to flooding by the drawdown process, approximately 100 acres of woodlands and 30 acres of agricultural fields. The tract would be managed to benefit various wildlife groups, specifically terrestrial wildlife, waterfowl, and wading birds.

*Views of States and Non-Federal Interests.*—

By resolution dated March 10, 1988, and letter dated March 11, 1988, the Grant Parish Police Jury advised of their intent to serve as local sponsor for the recommended plan for flood control for the Aloha-Rigolette basin.

On February 29, 1988, the Louisiana Department of Transportation and Development offered assistance to the sponsor for the possible funding of 70 percent of the non-Federal contribution through the State-wide Flood Control Program. On March 31, 1988, Grant Parish and the state began the preliminary application process re-

quired for receiving state funding under the State-wide Flood Control Program. The state selected the project for future funding through the State-wide Flood Control Program on April 12, 1989.

The Red River, Atchafalaya, and Bayou Boeuf Levee District, the Red River Waterway Commission, the Rapides Parish Police Jury, and town of Colfax totally support the recommended plan and have agreed to assist the Grant Parish Police Jury in obtaining the balance of the local contribution.

The 19th Louisiana Levee District indicated concern that Red River stages will be higher than Bayou Darrow stages which would cause closing of the proposed structure on Bayou Darrow. They feel that this closing would induce flooding along Bayou Darrow. The low-flow structure on Bayou Rigolette is designed to avoid induced flooding along Bayou Darrow when the Darrow structure is closed.

Area residents expressed overwhelming support for the recommended plan during the public meeting in Colfax, Louisiana, on April 12, 1989, and during a briefing with Congressman Jerry Huckaby in Tioga, Louisiana, on August 18, 1989.

*Views of Federal and Regional Agencies.—*

The U.S. Environmental Protection Agency was not opposed to project implementation, however, they recommend that clearing and snagging operations be limited to that which is absolutely necessary for adequate stream flow.

The U.S. Department of the Interior, Office of Environmental Project Review, suggested measures be included to fully mitigate for habitat losses. The recommended plan mitigates habitat losses completely.

The U.S. Department of Agriculture indicated that National Forest land is not adversely affected by the recommended plan.

The Federal Emergency Management Agency indicated that the proposed project would encourage wise floodplain development.

The U.S. Department of Housing and Urban Development reviewed the report and expressed no comments.

*Status of Final Environmental Impact Statement.—*The final environmental impact statement was submitted to the Lower Mississippi Valley Division in July 1989.

*Estimated Implementation Costs.—*October 1989 price levels:

Federal: U.S. Army Corps of Engineers Flood Control .....	\$5,981,250
Non-Federal:	
Louisiana .....	1,395,625
	598,125
Grant Parish Police Jury .....	
Total.....	7,975,000

*Benefit/Cost Ratio.—*1.29.

*Description of Non-Federal Responsibilities.—*Of the \$1,993,750 total non-Federal costs, \$287,000 will be used for the acquisition of lands, easements, rights-of-way, and relocations for the project. The remaining \$1,706,750 will be used for planning, engineering and design, and construction.

The operation and maintenance cost of the floodgate structure is estimated at \$26,000 annually. Operation and maintenance for the mitigation measure consists of 1) operation of the Iatt Lake weir to allow a drawdown of the lake once every three years, 2) monitoring



environmental conditions on the mitigation lands every year. The mitigation operations and maintenance is estimated at \$16,900 annually.

*Remarks.*—The project will cause short-term water quality impacts during construction confined to vicinity of floodgate and temporary increases in turbidity and decreases in dissolved oxygen. There may also be increased application of pesticides, herbicides, and fertilizers due to possible increased cropping.

The region would experience minor gains in employment, income, agriculture related business, farm property values and farm products through increased production and project implementation.

The risk of flooding is significantly reduced for more frequent floods. Adverse visual impacts and noise would be experienced during construction. Reduced flood damages and increased productivity would improve the quality of life for farmers.

The direct beneficiaries would be the families who reside in the protected area and the businessmen who purchase their produce and provide service.

#### BOSTON HARBOR, MASSACHUSETTS

*Location.*—The Port of Boston is located on the eastern coast of Massachusetts on Massachusetts Bay.

*Authority for Report.*—United States Senate resolutions, Committee on Environment and Public Works, March 1, 1968 and September 11, 1969.

*Description of Recommended Plan.*—While Boston's principal entrance and main access channels are 40 feet deep, the 3 major tributaries, along which the majority of port terminals are located, are 35 feet deep. The resulting tidal delays and limits on vessel size and loading place significant restrictions on shippers. An opportunity exists to substantially reduce the cost of transporting bulk commodities through the Port of Boston by eliminating or reducing tidal delays for larger vessels.

The recommended plan includes:

*South Boston Reserved Channel.*—Narrow the 35-foot channel from 430 to 400 feet wide, widen the channel at its confluence with the Main Ship Channel, relocate Harbor lines at the confluence and deepen the channel to 40 feet, except for its upper 1,340 feet which would remain at 35 feet. Local dredging of widened berthing areas along the southern limit to 40 feet or greater.

*President Roads Ship Channel.*—Nonstructural designation and remarking of specific Federal channel limits along the southern reach of the Roads connecting the outer confluence of the 3 entrance channels with the Inner Harbor Main Ship Channel, resulting in a 20% enlargement of the deepwater anchorage to about 420 acres.

*Inner Confluence Area.*—Widen the 35-foot confluence of the Mystic and Chelsea Rivers and deepen to 40 feet to enable deepening of the 2 river channels.

*Chelsea River Channel.*—Deepening the existing 35-foot channel to 38 feet. Local dredging of berthing areas at the major petroleum

terminals to 38 feet or greater and local relocation and alteration of utility crossings beneath the channel.

**Mystic River Project.**—Deepen the existing 35-foot channel to 40 feet, except for an area at the upstream limit along the southern shoreline where the waterfront has been converted to non-navigation dependant uses and where existing users do not require depths greater than 35 feet. Local dredging of major terminal berthing areas to 40 feet or greater.

a. Structural:

(1) Channel Dredging (to 40 feet): Reserved Channel—438,000 cy and 40,000 cy rock; Mystic River Channel and Inner confluence—1,145,000 cy plus 54,000 cy rock; Chelsea River Channel—455,000 cy (no rock); Total—2,038,000 cy plus 94,000 cy rock.

(2) Berthing Area Dredging by non-Federal interests (to — 40 feet): Reserved Channel—16,000 cy; Mystic River Channel—140,000 cy; Chelsea River Channel—112,000 cy.

(3) Utility Relocations—Chelsea River Channel only—lower Boston Edison and MBTA electric cables, and remove abandoned MRWA water tunnel. Provide increased protection to Boston Gas siphon.

b. Nonstructural:

(1) Channel Limit Designation/Realignment—President; Roads Ship Channel—Designate specific Federal channel limits through the Roads to jurisdictionally connect entrance channels with the Main Ship Channel and enlarge the anchorage area by 70 acres in deepwater.

**Views of States and Non-Federal Interests.**—The Massachusetts Port Authority has indicated its willingness and capability to act as project sponsor as stated in their letter of March 14, 1989. Harbor users, local chambers of commerce, etc., are supportive of the project.

Meetings with State Coastal Zone Management Office and Massachusetts Port Authority have resulted in a letter of strong support for this project from the Secretary of Environmental Affairs dated December 14, 1989. State agencies condition their support for continued study on the testing and suitability of dredging and ocean disposal of the material planned to be accomplished during FY 1990.

**View of Federal and Regional Agencies.**—Federal agencies condition their approval of the project on the suitability of the dredged material for ocean disposal to be proven in later testing.

The U.S. Coast Guard expressed concern for navigational safety in the Chelsea River Channel in the vicinity of the Chelsea Street Bridge. The City of Boston plans to replace the dilapidated fender system over the next two years in response to USCG concerns.

**Status of Final Environmental Impact Statement.**—Environmental Assessment and finding of no significant impact are included with the Final feasibility report.

**Estimated Implementation Costs.**—October 1989:

Federal (Commercial Navigation):

Corps—65 percent .....

\$17,940,000

U.S. Coast Guard—Relocation Navigation Aids .....	15,000
Total .....	17,955,000
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Non-Federal (Massport):	
25 percent Cash .....	3,591,000
10 percent Reimbursement .....	2,394,000
Berthing Area Deepening .....	1,600,000
Utility relocation—Chelsea River Only .....	660,000
Total .....	8,245,000
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Total project cost .....	26,200,000

*Benefit/Cost Ratio.*—1.5.

*Description of Non-Federal Responsibilities.*—Deepening of berthing areas to 40 feet or greater. Also, relocation of utilities, and increased maintenance dredging of deepened berthing areas.

*Remarks.*—Construction of the recommended plan will be scheduled in such a way as to avoid adverse impacts on aquatic life. Use of the recommended ocean disposal site entails the least environmental impact of any site considered, and will be further confirmed by additional testing as requested by resource agencies.

As the New England Regions largest and most active port, shipping over 20 million tons of cargo annually, improvements to Boston Harbor will enhance the regional economy through lowering transportation costs for bulk and containerized cargo. The deepening of existing channels using a waterborne plant will not result in adverse social impacts.

#### ECORSE CREEK, WAYNE COUNTY, MICHIGAN

*Location.*—The Ecorse Creek Drainage Basin is located in the south central portion of Wayne County in southeastern Michigan, south of the City of Detroit.

*Authority for Report.*—Section 206 of the Flood Control Act of 1965 (Public Law 89-298) and Section 102 of the River and Harbor Act of 1966 (Public Law 89-789).

*Description of Recommended Plan.*—The study authority directed the Corps to conduct surveys in connection with water supply, pollution abatement, navigation, flood control, hydroelectric power and related water resources development and control. The Ecorse Creek interim study was conducted to investigate flood control problems. These problems are caused by the severely limited hydraulic capacity of the North Branch Ecorse Creek and of the Sexton-Kilfoil Drain west of Allen Road in the City of Taylor. This results in overbank flooding with a storm of approximately a one-year frequency. The area is participating in the Federal Flood Insurance Program.

In addition to flooding, water quality deterioration has been identified as a major concern. Factors contributing to this include overflow of untreated sewage during flood periods, the effects of accumulated benthic sludge, non-point source nutrient and coliform inputs, and the loading of nutrients and toxic materials from industrial, commercial and municipal point sources.

One stormwater retention basin would be constructed in the Ecorse Creek Drainage Basin. This basin would collect and store floodwaters in excess of the bankful capacities of the North Branch

Ecorse Creek. Following the flood event, the retention basin would be pumped dry in order to prepare for the next event.

The retention basin is off-line and designed to be filled by gravity and dewatered by pumping. It would be about 275 acre-feet in size. The pumps are sized to dewater the basin in a 4 to 7 day period. Sideslopes are held to 1 foot vertical to 3 feet horizontal with the maximum water depth being 30 feet. The surface area of the basin would be about 10 acres. Permanent easements would be acquired. The project would reduce average annual damages 18% in the basin and 47% between the reservoir site and Beech Daly Road, a distance of about  $\frac{3}{4}$  of a mile. The project would provide protection against the two to seven year flood event.

*Views of States and Non-Federal Interests.*—Coordination has been maintained with the Michigan Department of Natural Resources (MDNR) throughout the course of the study, and it supports the selected plan. The director of the Wayne County Department of Public Works has expressed their willingness to act as the project sponsor by letter dated August 23, 1988.

*Views of Federal and Regional Agencies.*—There are no known unresolved issues.

*Status of Final Environmental Impact Statement.*—Filed on November 18, 1988.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal: U.S. Army Corps of Engineers .....	\$4,560,000
Non-Federal Wayne County Public Works Department.....	2,720,000
Total.....	7,280,000

*Benefit/Cost Ratio.*—1.3.

*Description of Non-Federal Responsibilities.*—The local sponsor would be required to provide for lands, easements, right of way and utility and facility alterations and relocations; and pay a cash contribution for flood control.

Non-Federal interests will also pay costs to cover the Operation and Maintenance associated with inlet and outlet gates, pumping facilities, sediment and debris cleanup and incidental repairs.

*Remarks.*—Some degradation or losses of habitat for fish and wildlife are expected at the proposed site. Retention of the floodwaters could result in significant settling out of polluted material, but also could result in reduced dissolved oxygen levels.

Slight increases in regional economic development would be expected in income during actual construction. Other beneficial effects would include reduction in flood insurance costs and increase in property values. Some tax income would be lost through the acquisition of taxable property.

The direct beneficiaries would primarily be residents of the cities of Allen Park, Dearborn Heights, Lincoln Park and Taylor, all in Wayne County, Michigan. The cities of Detroit, Ecorse, Melvindale, Romulus and Westland would also be direct beneficiaries, although to a lesser extent.

## GREAT LAKES CONNECTING CHANNEL AND HARBORS, MICHIGAN AND MINNESOTA

*Location.*—The Great Lakes Connecting Channels and Harbors study area includes the waterways between Lakes Superior and Huron, Lakes Huron and Michigan, and Lakes Huron and Erie, which provide deep-draft commercial navigation between the upper four Great Lakes and the deep-draft harbors upstream of the Welland Canal. The Connecting Channels include the St. Marys River and the Soo Locks, the Straits of Mackinac, the St. Clair River, Lake St. Clair, the Detroit River and the channels in Lake Erie. The 1980 population in the study area was approximately 29.8 million persons.

*Authority for Report.*—Resolution of Senate Committee on Environment and Public Works, adopted June 2, 1969, and resolution adopted April 30, 1976.

*Description of Recommended Plan.*—The navigation problems and needs identified in the final report are: (1) reducing the number of annual delay hours encountered in the safe transit of present and prospective waterborne commerce through the upper four Great Lakes and the Connecting Channels; (2) optimizing the use of vessels serving the iron ore trade in southern Lake Michigan harbors on transits from Escanaba Harbor, Michigan; (3) maximizing the efficient use of the locks at the St. Marys Falls Canal by improved service to Class 10 vessels at receiving harbors for iron ore and western coal shipped from Lake Superior harbors; and (4) to optimize utilization of existing vessels on transits from Lake Superior harbors to the lower lakes to take advantage of long term mean lake levels which are more above low water datum on the lower lakes.

The recommended plan provides for deepening areas along the upper St. Marys River and in Duluth Harbor.

The recommended plan contains the following measures: (a) deepening areas along the upper St. Marys River and the entrance and lower harbor channels at the Duluth portion of the Duluth-Superior Harbor, as necessary, to permit a maximum safe draft for downbound vessels of 26½ feet at LWD; (b) disposal of the estimated 267,600 cubic yards of dredged materials from the upper St. Marys River in an environmentally desirable manner creating an island in Izaak Walton Bay to provide habitat enhancement for a Federally endangered species—the Piping Plover; and (c) 286,500 cubic yards of dredged materials from the Cross and South Channels, West Gate Basin, East Gate Basin, Duluth Harbor Basin (Northern and Southern Sections) and the Duluth Ship Canal would be placed in the Lakehead upland site. The recommended plan provides for disposal of the dredged and excavated sediments in the least costly, environmentally acceptable manner.

*Views of States and non-Federal Interests.*—A January 8, 1988, favorable expression of willingness to furnish the necessary items of local cooperation to enable project completion was provided by the city of Duluth. Since the upper St. Marys River is the outlet for Lake Superior, improvements in this reach are necessary before the recommended harbor improvements can be effective. The State of Michigan provided a May 6, 1888, letter of intent to act as a



local sponsor for the upper St. Marys River. This letter was co-signed by the President, Lake Carrier's Association. Improvements for the Superior portion of the Duluth-Superior Harbor were also found to be economically justified, however, a non-Federal sponsor did not come forward.

*Views of Federal and Regional Agencies.*—There are no known unresolved issues.

*Status of Final Environmental Impact Statement.*—The Final Environmental Impact Statement was filed with the Environmental Protection Agency on September 8, 1988.

*Estimated Implementation Costs.*—October 1989 price levels:

**Federal:**

Corps of Engineers (Commercial Navigation).....	\$4,896,500
U.S. Coast Guard (Navigation Aids).....	141,000
Subtotal.....	5,037,500

**Non-Federal:**

State of Michigan.....	1,267,900
City of Duluth, MN.....	1,183,700
Subtotal.....	2,451,600
Total.....	7,489,100

*Benefit/Cost Ratio.*—23.0.

*Description of non-Federal Responsibilities.*—The non-Federal costs provide for disposal site preparation and related lands, easements and rights-of-way for dredge sediment, and cost sharing of the required project dredging, the total of which is equivalent to 35 percent of the total project cost consistent with the cost sharing provisions of the Water Resources Development Act of 1986 (Public Law 99-662).

*Description of non-Federal O&M Cost.*—The non-Federal sponsor would provide for the habitat management on the island created from dredge sediments in the Izaak Walton Bay of the upper St. Marys River.

*Remarks.*—Implementation of the recommended plan would provide habitat enhancement for the Federally endangered species—the Piping Plover. Implementation would result in local increases in noise, and minor degradation of air and water quality during construction. Minor increases in suspended solids and turbidity may result in some areas from vessels taking advantage of additional draft during initial years of operation. No significant fish or wildlife impacts are expected. Long term impacts would be limited to the dredging and disposal sites in the upper St. Marys River and Duluth Harbor where alteration of the terrain and the species composition of the biota may occur. These impacts are judged to be not significant. The areas have limited fish and wildlife value.

Dredging the navigation channels in the identified areas would provide temporary short-term construction related employment. There would also be a possible long-term positive effect on regional growth.

The recommended plan would have minor adverse impacts during construction on the aesthetics of the areas. Also, recreation in the areas would withstand minor adverse impacts during construction and filling at the disposal sites.

Commercial navigation savings will benefit the U.S. Great Lakes shipping industry, the steel industry, and public utilities.

#### COLDWATER CREEK, MISSOURI

*Location.*—Coldwater Creek is in the northern part of highly urban St. Louis County, about six miles north and west of the City of St. Louis.

*Authority for Report.*—United States Senate Environment and Public Works Committee Resolutions dated October 4, 1966; July 15, 1970; House of Representatives Public Works and Transportation Committee Resolution dated July 29, 1971; Senate Environment and Public Works Committee Resolution dated October 2, 1972; and House Public Works and Transportation Committee Resolution dated October 12, 1972.

*Description of Recommended Plan.*—The problems and opportunities addressed in the study included flooding, streambank erosion, recreation needs, and environmental concerns. The most severe flooding problems are along the main channel of Coldwater Creek in unincorporated St. Louis County and in the cities of Florissant, Hazelwood, St. Ann, and Breckenridge Hills. The flooding problems result from intense rainfall within the drainage basin. Essentially no flood damages result from the Missouri River backing into the stream. Recent damaging floods occurred in 1957, 1970, 1978, 1979, 1980, 1981, 1982, and 1986. Potential flood damages were determined by comparing future conditions flood heights along the stream to buildings in the flood plain. Damages are low on tributary streams, many of which have been channelized by local interests. On the main channel of Coldwater Creek approximately 563 units would be damaged by a 10-year flood, 1,390 by a 100-year flood, and 2,960 by a Standard Project Flood.

Streambank erosion is a problem at many locations along Coldwater Creek. Much of the watershed is covered by thick layers of wind-blown loess soils, which are highly erodible when disturbed. The recommended Corps of Engineers projects will reduce streambank erosion in stream segments where the channel is widened. There are unmet needs for certain recreation facilities in the Coldwater Creek area. The recommended Corps of Engineers project will include a recreation trail and two picnic sites on flood control project lands.

The most significant environmental concerns in the study area include two radioactive materials storage sites adjacent to Coldwater Creek; poor water quality and degraded aquatic communities in Coldwater Creek; general depletion of terrestrial communities in the watershed due to urbanization; the flooding of Old St. Ferdinand's Shrine, which is on the National Register of Historic Places; and litter and debris along the stream.

The two radioactive materials storage sites adjacent to the creek are included in a Department of Energy (DEO) Remedial action Program. Radioactive material has worked into the creek. The DOE plans to clean up a segment of the creek by removing radioactive material that exceeds their cleanup criteria, to clean up other areas where the radioactive materials were displaced over the years (such as along haul roads), to store their material temporarily

ly at an existing interim site (Hazelwood Interior Storage Site), and to either create an engineered permanent storage facility at the existing site just north of Lambert Airport (St. Louis Airport Storage Site), or to create storage facility at some other location and move all the radioactive material there.

The recommended plan includes widening 10 miles of the main channel of Coldwater Creek, enlarging the opening through a downstream railroad embankment, two small levees, a flood forecasting and warning system, a recreation trail along most segments where the channel is widened, and two picnic areas.

a. Structural: The dominant feature of the project is the widening of certain segments of the main channel of Coldwater Creek. A total of 10 miles of the channel would be widened. No channel widening is proposed from the mouth of Coldwater Creek to Old Halls Ferry Road (Mile 5.86). The channel would be widened between Old Ferry Road (Mile 5.86) and New Halls Ferry Road (Mile 7.83) to essentially eliminate induced flood damages in this area. Nearly all structures along this segment are at or above the 100-year flood level, so the project provides about a 100-year level of protection in this area. The project includes channel widening in the highly developed area between New Halls Ferry Road (Mile 7.83) and McDonnell Boulevard (Mile 13.70). In this area the project provides about a 10-year level of protection. The project also includes intermittent segments of channel widening upstream of Lambert Airport, located between I-70 (Mile 15.58) and Breckenridge Avenue (Mile 18.30). These segments provide about a 10-year level of protection in St. Ann and about a 5-year level of protection in Breckenridge Hills. Nearly all the channel segments are earth channels with a wider bottom and 2 on 1 side slopes covered with grass and/or riprap. One 960-foot segment has vertical concrete walls halfway up the sides of the channel.

The project includes enlarging the opening through a railroad embankment at Mile 1.63 with five 8-foot diameter tunnels. These tunnels alleviate induced flooding upstream from the embankment. Nearly all structures in this area are at or above the 100-year flood level, so this feature provides about a 100-year level of protection.

The project also includes two small levees with maximum heights of 5 feet. One levee provides additional protection for four historic buildings in the Old St. Ferdinand's Shrine complex plus a Knights of Columbus building, and the other provides additional protection for the basements of seven homes on Foxtree Drive.

b. Nonstructural: The project includes a simple flood forecasting and warning system that would include installation of about three staff gauges in the creek and one rainfall station in addition to the U.S. Weather Service station at Lambert Airport. Charts would be developed to relate rainfall data and staff gauge readings to flood frequency profiles and area flooded maps. Coordination and education programs would be undertaken.

c. Recreation: A hiking and biking recreation trail would be on one side of all channel widening segments except the segments in St. Ann Park and upstream of St. Charles Rock Road. The project also includes two picnic areas. The recreation trail is expected to be utilized on about 117,000 visitor occasions annually and the picnic sites on about 6,000 occasions annually.

d. **Environmental Features:** The project includes monitoring for radioactivity during construction of part of the channel widening project, and planting trees in the outer edge of the right-of-way in appropriate segments of the channel project. The cost of these features is included in structural flood control costs.

*Views of States and Non-Federal Interests.*—In a letter dated February 2, 1987, the Missouri Department of Natural Resources (MODNR) concurred with the selection of Plan 2 as the recommended plan. This agency expressed concern about radioactive contamination in the project area and recommended close coordination between the Corps and the Department of Energy. MODNR also recommended that in the final project the channel widening be limited to one side of Coldwater Creek wherever possible. In a letter dated January 15, 1987, the Missouri Department of Conservation indicated that the Department had worked with the Corps and the report reflects many of the features and concerns discussed.

Letters from regional and local agencies expressed no general opposition to the proposed project, although some concerns were raised about isolated features or effects of the project. Some concerns will appropriately be addressed by the Corps during preconstruction engineering and design of the project. In a letter dated June 25, 1987, the Metropolitan St. Louis Sewer District stated their support for the project and their intent to be the local sponsor and take overall responsibility for fulfilling or arranging the non-Federal cooperation needed.

Several individuals and environmental organizations expressed concern about the radioactive contamination in the project area, and recommend that the Corps cautiously and carefully coordinate with the Department of Energy.

*Views of Federal and Regional Agencies.*—In a letter dated February 6, 1987, the Department of the Interior noted that the Fish and Wildlife Service's concerns were resolved and that the Service concurs with the recommended plan. The Department of Energy (DOE) has been very cooperative with the Corps of Engineers. DOE made presentations at the two Corps of Engineers public meetings. In a letter dated January 20, 1987, DOE indicated that they had no comments on the draft feasibility report, and that they intend to work closely with the Corps to assure proper coordination of the Corps flood control project and the DOE remedial action project. In a letter dated February 2, 1987, the Environmental Protection Agency indicated that they have no significant objections to the proposed project.

*Status of Final Environmental Impact Statement.*—The revised December 1987 Coldwater Creek, Missouri feasibility report contains the final environmental impact statement. The final EIS was coordinated with other Federal and State agencies for a 90-day period that began on March 2, 1988. The notice for a 30-day public comment period was published in the Federal Register on April 29, 1988.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal (Agency/Purpose):

Corps of Engineers/Flood Control .....	\$15,053,000
Corps of Engineers/Recreation .....	447,000

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Non-Federal: Metropolitan St. Louis Sewer District .....	6,880,000
Total .....	22,380,000

*Benefit/Cost Ratio.—1.6.*

*Description of Non-Federal Responsibilities.*—Non-Federal costs include lands and damages, relocations of utilities and footbridges, a cash payment (5% of structural flood control costs not including radiological monitoring costs), 25% of nonstructural flood control costs, and 50% of recreation costs.

The primary operation and maintenance consideration for the recommended plan is to keep the channel functioning as designed. Debris and silt will be removed as necessary. Debris will also be removed from the tunnels through the railroad embankment at the downstream end of the project. For hydraulic purposes, trees and shrubs cannot be allowed to grow in the channel. The upper channel slopes will be covered by grasses or some other suitable ground cover. The grass will be cut annually, and special four wheel drive mowers or equipment with telescoping boom mowers may be needed for the relatively steep 1 vertical to 2 horizontal slope. In the riprap area of the channel, saplings and brush will be removed on a five-year cycle. Replacement or repair of riprap, bedding and concrete works will also be needed at long term intervals.

The channel project includes ten feet of land on each side of the stream on the flat areas adjacent to the channel slopes. These 10-foot-wide right-of-way strips will be used for the access of maintenance equipment. The hiking and biking trail located on one of the strips will require maintenance. The two picnic areas also require regular maintenance and longer term repairs.

The two low levees in the recommended plan will have to be mowed several times per year. Levee embankment repairs will be needed on an infrequent basis. In addition, the flood forecasting and warning system requires maintenance of rainfall and stream gages as well as some annual coordination efforts.

*Remarks.*—The environmental effects of the recommended plan include effects on the ecology and effects on historic properties. The project has adverse effects on the terrestrial habitat along the stream corridor. In several segments this existing habitat is poor in quality. Trees planted along the channel right-of-way return some of the terrestrial habitat lost through project construction. The project also has some adverse effect on the potential for future good aquatic habitat in the stream, although aquatic habitat is unlikely to improve in the future due to projected poor water quality. The project has a positive effect on historic properties because it provides flood protection for the Old St. Ferdinand's Shrine which is on the National Register of Historic Places.

The major social effects of the recommended plan include (1) reductions in the personal suffering and community losses that result from flooding along Coldwater Creek and (2) improved community life resulting from the creation features of the plan.

Direct beneficiaries of the Coldwater Creek, Missouri, project include the people living, working, and shopping in the floodprone area; the people who own property that is subject to flooding; and the residents and workers who will use the recreation facilities.



## RIVER DES PERES, MISSOURI

*Location.*—The study area consists of 111 square miles located in west central St. Louis County and St. Louis City, Missouri. River des Peres enters the Mississippi River at mile 172.1.

*Authority for Report.*—United States Senate Environment and Public Works Committee Resolutions October 4, 1966; July 15, 1970; October 2, 1972, House of Representatives Public Works and Transportation Committee Resolutions, July 29, 1971; and October 12, 1972.

*Description of Recommended Plan.*—The problems and opportunities addressed in the study include flooding, streambank erosion, recreation, and the environment. The principal flood problems occur within the Deer Creek, University City Branch of Upper River des Peres, and lower River des Peres areas. The flooding is caused by intense rainfall in Deer Creek and the University City Branch and by Mississippi River backwater in the lower River des Peres. Recent damaging floods occurred in 1957, 1970, 1973, 1978, 1979, 1980, 1981, 1982 and 1986. The highest flash flooding occurred in 1957 and 1979. The highest backwater flooding occurred in 1973. Throughout the study area, a total of 1,136 structures would be damaged by a 10 year flood, 3,103 by a 100 year flood, and 8,022 by a Standard Project Flood.

Streambank erosion is a problem due to the highly erodible nature of the soils and the close proximity of development to the streambanks. The outdoor recreation problems are defined in relation to unmet facility needs. The environmental problems include poor water quality, degraded aquatic communities, loss of streambank habitat, litter and debris in and along the streams, and poor aesthetic conditions.

The recommended plan is the national economic development plan and consists of about 5.02 miles of channel modification, selected floodproofing, a flood forecasting and warning system, a recreational trail within the channel modification reaches, a small park area, and selected environmental measures.

a. Structural Components: The channel modification includes 2.49 miles within the Deer Creek sub-basin between river miles 1.38 and 4.06 and 2.53 miles within the University City Branch of Upper River des Peres between river miles 0.97 and 3.5. The recommended plan in Deer Creek excludes modification from river miles 2.39 to 2.78 because of local action already taken. It does include 0.2 miles of streambank protection from river miles 1.18 to 1.38. The work will consist of widening the channel and lining the streambank with either riprap or gabions depending upon the amount of top-width available. Riprap will be used where development is not too much of a constraint while gabions will be used where it is. Within the project area, about 234 structures would no longer be damaged from the 10-year flood, 173 for the 100-year flood, and 143 from the Standard Project flood. In terms of damage reduction, the plan would be most effective against 2, 5, and 10 year flood events. It would not be very effective against the rarer floods.

b. Nonstructural Components: The nonstructural components are a basin-wide flood forecasting and warning system and selected

floodproofing within the Kirkwood Branch of Gravois Creek. The flood forecasting and warning system would include the installation of 3 staff gauges in the creek and one rainfall station in addition to the one at Lambert-St. Louis International Airport. Charts would be developed to assist local officials in relating rainfall data and staff gauge readings to flood frequency profiles and area flooded maps. The officials would be responsible for preparing a flood preparedness plan and alerting local residents about impending danger. The floodproofing would occur to 5 structures within the Watson Road Industrial Park and would consist of door and window closures in addition to very small levees.

c. Recreation: A hiking and biking trail would occupy one side of the channel modification project right-of-way. In addition, one picnic area would be created. A total of 7.5 acres would be added to existing recreational lands. The trail would generate 65,000 annual visitor occasions and the picnic area about 20,600. The picnic area would be a local responsibility.

d. Environment: Existing scour holes disturbed during construction would be replaced; litter and debris would be cleaned up and cultural resources monitored during construction; and vegetation would be planted along the flood control right-of-way where possible.

*Views of States and Non-Federal Interests.*—There are no controversial or unresolved issues. Specific review comments have centered on coordination matters and text corrections. The Metropolitan St. Louis Sewer District expressed their intent to be the local sponsor in a letter to the District Engineer dated July 22, 1988. Their letter clearly indicates an understanding about, and their intent to assume, local cost sharing responsibilities.

*Views of Federal and Regional Agencies.*—There are no controversial or unresolved issues.

*Status of Final Environmental Impact Statement.*—The February 1988/R-June 1988 River des Peres, Missouri report incorporates a final Environmental Assessment and Finding of No Significant Impact.

*Estimated Implementation Costs.*—October 1989 Price Level:

Federal (Agency/Purpose):	
Corps of Engineers/Flood Control .....	\$15,063,000
Corps of Engineers/Recreation.....	207,000
Non-Federal: Metropolitan St. Louis Sewer District .....	5,280,000
Total.....	20,550,000

*Benefit/Cost Ratio.*—1.4.

*Description of Non-Federal Responsibilities.*—Non-Federal costs include: Lands; damages; easements; relocations; replacements; rehabilitation; a cash payment of 5 percent of the structural flood control features share; a cash contribution (if necessary) to bring the non-Federal share of the structural flood control costs at least to 25 percent; 25 percent of the nonstructural flood control costs; 50 percent of the recreational trail costs; and 100 percent of the picnic area costs.

The principal operation and maintenance function for the recommended plan will be to keep the channel functioning as designed while keeping it as environmentally compatible as possible. Trees

and shrubs will not be permitted to grow in the riprap or gabions. Herbicides may have to be applied annually to control the undesirable vegetation. Grasses along the bank top will have to be cut annually. Replacement or repair of riprap or gabion baskets will be needed at long-term intervals. The recreation trail and picnic area will require periodic inspection and maintenance as necessary. The floodproofing measures will require at least annual inspection. The flood forecasting and warning system will require gauge maintenance and annual coordination effort.

*Remarks.*—The recommended plan's environmental effects will be primarily ecological. Adverse effects occur to the terrestrial and aquatic habitats within the channel modification reaches particularly during construction. The existing conditions are poor and the future without the project condition depicts continuing degradation. The plan will have positive effects through the restoration of existing scour holes, replanting along the stream corridor, and reductions in the amount of erosion and sedimentation.

The recommended plan is expected to improve community life through the implementation of the outdoor recreation measures. It also is expected to reduce personal losses and suffering from flooding as well as improve community cohesion.

The direct beneficiaries of this project will be: People living, working and shopping within the area positively affected by the project; those who own protected property; and those who use the proposed outdoor recreation facilities.

#### PASSAIC RIVER MAIN STEM, NEW JERSEY AND NEW YORK

*Location.*—The Passaic River Basin is a 935 square mile watershed in northeastern New Jersey and southeastern New York and is located in the Greater New York City Metropolitan Area. The basin includes portions of Hudson, Bergen, Essex, Passaic, Morris, Sussex, Union and Somerset Counties in New Jersey and Orange and Rockland Counties in New York.

*Authority for Report.*—Section 101 of the Water Resources Development Act of 1976, P.L. 94-587.

*Description of Recommended Plan.*—The plan recommended by the Corps of Engineers, called the Dual Inlet Tunnel Diversion Plan, consists of large diversion tunnels, channel modifications, levees, floodwalls, preserving natural flood storage areas and fish and wildlife mitigation measures. Flood control measures would provide protection against floods ranging from a 100-year to a 500-year event, to the Passaic River's major flood damage areas.

Structural features include:

Two tunnels, one 39-foot diameter diverting flood flows from the upper Pompton River to the Newark Bay, and a 22-foot diameter spur tunnel diverting flood flows from the Central Passaic River, near Two Bridges, to the main tunnel.

A total of 5.9 miles of tunnel modifications for directing flood flows into the tunnel inlets. Of this channel work, 4.8 miles would lie upstream of the Pompton River Inlet along the Ramapo, Pequannock and Wanaque Rivers. The remaining channel work would consist of 0.8 mile on the Passaic River and 0.3 mile on the Pompton River upstream of the Passaic River Inlet.

HQ AR001973

About 23.3 miles of levees and 14 miles of floodwalls, along with accompanying interior flood control facilities along the Passaic River and its tributaries.

Non-structural features include preservation of about 5,350 acres of natural flood storage areas to prevent filling and development activities in those areas that could result in increased flood flows.

Recreation features include hiking and biking paths, park benches, overlooks, drinking fountains and park areas.

Environmental features include placement of aquatic habitat structures, restoration or improvement of degraded wetlands (including the use of weirs and other structural as well as non-structural methods), placement of nesting boxes, vegetation plans, operating rules for the tunnels for environmental purposes, erosion control during construction, and related measures.

*Views of States and Non-Federal Interests.*—The State of New Jersey, through its Department of Environmental Protection, has agreed to act as the Non-Federal sponsor for the project. Letters of support were sent by the State in 1987 and 1988.

*Views of Federal and Regional Agencies.*—Coordination with the Department of the Interior, the Environmental Protection Agency, and other interests has been extensive. Several issues will be resolved during detailed planning, including the exact amount and location of channel modifications, exact project alignment, and the details of requirements to mitigate impacts on wetlands and aquatic habitat.

*Status of Environmental Impact Statement.*—Notice of availability of the FEIS was published on December 16, 1988. No significant new issues were raised during the comment period.

*Project Costs.*—Estimated at October 1989 price levels:

Federal .....	\$890,000,000
Non-Federal .....	310,000,000

*Benefit/Cost Ratio.*—1.1.

*Description of Non-Federal Responsibilities.*—The Non-Federal share of the estimated total first cost is \$310,000,000, including lands, easements, rights-of-way, relocations and dredged material disposal areas and including a cash contribution. Non-Federal interests will also be responsible for the annual cost of operating and maintaining the project.

*Remarks.*—The Committee recognizes this project as one of the largest, most complicated and diverse flood control projects in the nation. The complex hydrology, densely populated protected areas, and extensive but threatened wetland habitat make the project a unique opportunity for a cost shared flood control project that is responsive to a broad range of public needs.

Rather than require the tunnel plan to discharge into the Passaic River near the Third River confluence, the project will discharge into the Newark Bay. This change to the plan recommended by the Corps of Engineers is necessary to prevent increased flooding in the lower valley which would have occurred with the recommended plan and to preclude the necessity of additional levees and floodwalls to prevent such flooding. While this modification will increase the total project cost, the project is still economically justified and cost sharing rules will apply. This plan was studied by the

Corps and is referred to as the Newark Bay tunnel outlet alternative in the project's General Design Memorandum.

Normal project operation and maintenance will be a non-Federal responsibility in accordance with existing laws; however, operation and maintenance of the diversion tunnels, including inlet and outlet works, will be a Corps responsibility. This is necessary because of the regional nature of the project and takes into consideration the complex and continuing operational control which will be required to make the tunnel components function properly. The total project will directly impact five counties and forty municipalities. Its operation will encompass the monitoring of rainfall and streamflows over the entire 935-square-mile watershed, including parts of two states (ten counties and 132 municipalities). Operation and maintenance of the diversion tunnels is critical to the functioning of the overall project and is technically complex, requiring a sophisticated operations center with fulltime staff dedicated to that project. In recognition of this and the overriding need for timely and accurate project operation and maintenance of the tunnels and inlet/outlet works, such operation and maintenance must be a Federal responsibility. Operation and maintenance of other local protection elements of the overall project will remain a non-Federal responsibility.

Recognizing the persistent flood threat in the Passaic River Basin, the State of New Jersey has already taken steps to reduce damage due to flooding. On June 28, 1984, the State officially selected this flood control plan for further development. Therefore, the Committee concludes that compatible and complimentary work that is accomplished by the State or other non-Federal interests subsequent to that date shall become a part of the project and the actual cost of such work is to be credited toward the non-Federal share of the project cost. Such work may include the State's travel and administrative costs directly associated with this project; the cost of a recently completed flood warning system; the cost of flood models prepared by the State for use in evaluating this project; the actual cost of lands acquired for the project by non-Federal entities; costs associated with measures to provide immediate flood damage reduction prior to implementation of the project; the cost of levees and floodwalls that are compatible with the project's design; and the costs associated with the reconstruction of dams and other in-stream structures prior to project implementation. In determining costs associated with non-Federal works that are to be included as project costs for purposes of economic evaluation, only the portion of non-Federal work that meets the guidelines established under section 104 of the Water Resources Development Act of 1986 will be considered. In addition to the crediting of non-Federal costs as described above, the Secretary shall credit other non-Federal work occurring after June 28, 1984, and before the date of this Act that satisfies the provisions of section 104.

The project authorization includes a directive to include stream-bank restoration and environmental restoration measures on the west bank of the Passaic River in Newark, New Jersey, at a total cost of \$6,000,000. Non-Federal interests shall provide all lands, easements, right-of-way relocations and dredged material disposal areas (LERRD) necessary for such work and the non-Federal share



shall be at least 25%. In the event that LERRD amount to less than 25% of the total cost of such work, non-Federal interests shall provide the balance in cash. In order to take immediate advantage of this authority, the Secretary may proceed with implementation of streambank and environmental measures prior to implementation of the main project.

Wetlands and related habitat are being lost or degraded at an alarming rate in the Passaic River basin. Furthermore, necessary economic development is being discouraged by the lack of a suitable mitigation policy in the process of issuing Federal and States regulatory permits. To address this, the Committee has added a provision establishing a Wetlands Bank in the Passaic River Central Basin. Under this provision, the State of New Jersey shall establish a wetlands bank to include lands acquired in the basin by non-Federal entities that lie within the natural storage area that is described in Corps reports. Such lands included in the bank are available for use in mitigating regulatory permit actions under Federal or State laws. Permittees may make payments to the State for making lands in the bank available for mitigation. The State will own lands that are a part of the bank and must operate the bank lands in a manner that is consistent with the project authorized herein. Non-Federal entities are authorized to acquire additional lands for the bank provided such lands lie within or adjacent to the natural storage area or that are tributary to the natural storage area. In acquiring such additional lands, the State may accept funds from other non-State, non-Federal sources. The fair market value of any lands acquired located within the natural storage area by the State or other non-Federal interest and the fair market value of any lands acquired for the wetlands bank, whether acquired on, before, or after the date of this Act, shall be credited toward the non-Federal share of the basic flood control authorized by this section. For purposes of the economic evaluation and justification of such project, lands acquired for the wetlands bank shall not be treated as a project cost.

#### RIO DE LA PLATA, PUERTO RICO

*Location.*—North Central Puerto Rico, Town of Toa Baja.

*Authority for Report.*—Resolution Adopted by the Committee on Public Works and Transportation of the House of Representatives on May 5, 1966.

*Description of Recommended Plan.*—Flooding in the study area affected some 12,000 families, 300 industrial and commercial establishments, over 150 kilometers of streets and roads and numerous public buildings and facilities. The whole town of Toa Baja, and portions of the towns of Dorado, Ingenio, Toa Ville and Campanillas are subject to frequent flooding. Quantifiable average annual damages are \$7.5 million.

The recommended plan, Revised Plan E, provides standard project flood level of protection for all the developments downstream of Highway 2 and provides 100-year incidental level of protection for the Toa Alta/San Jose areas. The Plan consists of a levee on the east side of the river, adjacent to Highway 165, and another levee on the west side of the river adjacent to Highway

693. This plan also proposes widening and straightening about 13.6 Kms. of the main river channel with a bottom section of 70 meters. Interior drainage is addressed in the recommended plan by including several ponding areas, six flap gate culverts and a pump station.

a. Levee Adjacent to Highway 165: The proposed earthen levee alongside Highway 165 starts south of Highway 2 near its intersection with Highway 165. From this point the levee continues in a generally westerly direction for approximately 500 meters and then takes a generally northerly direction to end at the shoreline some 800 meters from the mouth of the river. Total length of the levee is 8.4 kilometers. The height for the proposed levee varies from 1.5 meters to 7.0 meters from ground level.

b. Levee Adjacent to Highway 693: The starting point of this earthen levee is located at a hill adjacent to Highway 2. From this point the levee continues in a generally northerly direction and ends at the shoreline some 400 meters from the mouth of the river. The height for this levee varies from 3.0 meters to 11.0 meters above ground level. In the vicinity of the Town of Dorado, gabion mattress armoring is recommended for the levee because of potential erosion velocities due to proximity of levee to the proposed channel.

c. Channel Improvements: Widening and straightening of the existing river channel is proposed from the mouth of Rio de la Plata to south of the town of Toa Alta for a length of 13.6 kilometers. The bottom width will be 70 meters and the bottom elevation will vary from 4.5 meters below msl to 5.5 meters above msl. Localized channel riprap is included for those sections of the improved channel in close proximity to the levees. Three bridges will have to be replaced. There are the bridges on P.R. Highway 693, 2, and 165.

The channel excavation under the recommended plan of improvements would involve 4,580,00 cubic meters of materials, while excavation for the interior drainage canals would generate 55,000 cubic meters. Some 2,905,000 cubic meters would be used for levee fill while the rest (1,730,000 cubic meters) is unsuitable materials for levee construction that would be deposited at two currently vacant upland sites. These sites cover 145 acres of isolated wetlands with no important functions according to Section 404 guidelines.

d. Culverts and Pumps: The recommended plan also involves construction of 6 flap gate culverts of 96 inches (1 in the vicinity of Mameyal, 2 in the vicinity of the town of Dorado, 1 in the vicinity of Higuilar, and 2 in the vicinity of the town of Toa Baja). A 34 cfs pump station is also recommended for the town of Toa Baja. Two additional slide gate culverts along the levee section north of the town of Toa Baja are included in the recommended plan to allow for fresh water from Rio de la Plata to flow into Rio Cocal and mangrove areas to the east of Rio de la Plata.

e. Ponding Areas: Four ponding areas in currently vacant or agricultural lands are included in the recommended plan to hold up to the 100-year flood. These ponding areas will cover about 695 acres of land.

f. Bridges: New bridges on highways 693, 2, and 165 will insure acceptable flow characteristics in terms of net velocities, flow stability, and flow depth. Minimum low chord is established to be 0.5

meters above the 100-year flood in concurrence with standards set by the Commonwealth of Puerto Rico Department of Transportation and Public Works.

**g. Cut-Off Wall:** The recommended plan also includes at the upper end of the channel improvement a gabion cut-off wall to ensure a stable transition from the improved channel to natural conditions.

The recommended plan would require 265 acres for construction of levees, 435 acres for construction of channel, 1,456 acres for floodway between the levees, and 695 acres for ponding areas, and 145 acres for disposal areas. A section of the Mameyal levee will result in a loss of 5 acres of mangroves. An equal acreage of mangroves will be replanted. The recommended plan would also provide about 1,238 acres for urban development and over 5,000 acres for agricultural uses. Location of about 10,000 new families in the detailed study area will require considerable public and social infrastructure that will significantly impact the public budget for capital improvements.

The designation of the floodway between the levees and construction of the levees and channel improvement would require relocation of 68 residences, 22 commercial and industrial establishments, and 21 agricultural buildings, most of them associated with the dairy farms. There are no major relocations of public utilities.

*Views of States and Non-Federal Interests.*—Local interest expressed their support for the project while at the same time stressing the urgency of its implementation.

*Views of Federal and Regional Agencies.*—Federal agencies initially had some environmental concerns, additional coordination with EPA and F&WS produced acceptable solutions to environmental concerns.

*Status of Final Environmental Impact Statement.*—Final environmental impact statement filed with the Environmental Protection Agency and noticed in the Federal Register on September 12, 1988.

**Estimated Implementation Costs.**—October 1989 price levels:

Federal Army Corps of Engineers .....	\$34,780,000
Non-Federal: Puerto Rico/DNR .....	22,205,000

*Benefit/Cost Ratio*—1.7.

*Description of Non-Federal Responsibilities.*—Lands, easements, and right-of-ways for the project including spoil disposal areas and required diking. Replacement of three highway bridges and other necessary infrastructure. Contributing 5% cash of the total first cost of the project. Operation and maintenance of levees, channels, ponding areas, and pumping stations.

*Remarks.*—No significant adverse environmental impacts expected. Five cultural sites might be impacted. Detailed surveys of these sites are recommended previous to construction.

The project is expected to strengthen the economic base of basin and of the towns of Toa Baja, Toa Alta, and Dorado. Efficient utilization of existing infrastructure will result. Increased regional income in the order of \$63,000,000.

About 50,000 persons will be protected. Replacement of three main highway bridges. Significant urbanization of western part of

river will provide for location in the areas of about 10,000 new families.

The beneficiaries are residents of the flood plain area, daily commuters to the area and to the San Juan Metropolitan Area, users of public facilities in the flood plain, and commercial, industrial, and tourist establishments that operate in the area.

#### MYRTLE BEACH AND VICINITY, SOUTH CAROLINA

*Location.*—The study area extends from Little River Inlet at the North Carolina/South Carolina state line southerly to the vicinity of Murrells Inlet inclusive of the Municipalities of North Myrtle Beach, Atlantic Beach, Myrtle Beach, Surfside Beach and Garden City, South Carolina.

*Authority for Report.*—Resolution by the Committee on Public Works and Transportation of the House of Representatives, United States, adopted November 17, 1981.

*Description of Recommended Plan.*—The Study area, often referred to as the Grant Strand, has become a major recreational and economic resource of the state. The value of front row coastal development for the 37 mile study reach is estimated to be in excess of \$1.4 billion. Based on without project conditions and historical shoreline erosion rates, the average annual equivalent damage to 1,400 structures is estimated to be \$21,549,000. Construction of a project to reduce the damage potential would also have an impact on recreational opportunities within the study area. The damage potential of the study area has recently been demonstrated as a result of the winter storms of 1986/1987 and Hurricane Hugo in 1989. The storm of December 1st and 2nd, 1986 caused an estimated \$2.0 million in structural damage. This storm was followed by second storm on January 1, 1987 which caused damages of \$13.3 million. Hurricane Hugo, which occurred on September 21, 1989, caused an estimated \$940,000,000 damage in Horry County.

The plan recommended in the report provides the maximum net benefits of all plans considered. It consists of the placement of a protective beach in three separable areas designed to provide protection from a 5-year storm surge. Collectively, the plan would place about 5 million cubic yards of sand over a total project reach of 22.6 miles.

##### a. Structural:

The overall recommended (NED) plan calls for the placement of 4,957,000 cubic yards of sand from inland sources for the construction of a 5-year protection level beach along 22.6 miles of coastline. The plan consists of three separable construction reaches including an 8.1 mile in North Myrtle Beach; an 8.8 mile reach in Myrtle Beach, and 5.7 mile reach in the Surfside Beach/Garden City area. The plan calls for construction of a berm with a top elevation of 9.0 feet (NGVD) and a 15-foot top width and a beach slope of 20 H to 1 V. The project will result in the placement of an average of 41.5 cubic yards of sand per linear foot of beach.

##### b. Recreation:

Recreation benefits resulting from project construction were determined by multiplying the project increase in visitation, as determined by demand and beach capacity, by the computed value per

visit of \$2.88. These values were then discounted to present worth based on the prevailing Federal interest rate. Recreational benefits attributable to project construction are estimated to be about \$5.5 million annually.

*Views of States and Non-Federal Interests.*—Five non-Federal governing bodies have indicated their understanding of the local cooperation and cost sharing requirements for project sponsorship. Letters of intent have been received from the City of North Myrtle Beach (November 1987); the City of Myrtle Beach (3 September 1987) the City of Surfside Beach and Georgetown County (23 October 1987). Draft LCA's were furnished to each local sponsor on May 5, 1988.

The South Carolina Coastal Council has also indicated strong support for the recommended plan of improvement.

*Views of Federal and Regional Agencies.*—During the coordination of the report, most Federal agencies generally offered no significant comments. The U.S. Fish and Wildlife Service, however, recommended preparation of an environmental impact statement instead of an environment assessment; and that the agency be further involved in the final delineation of sand borrow areas. The plan was revised to exclude borrow areas in contention and reviewed by the Environmental Protection Agency and the Fish and Wildlife Service. The proposed borrow sites are previously used upland disposal areas along the AIWW and will not have significant environmental impacts.

*Status of Final Environmental Impact Statement.*—Environmental assessment finding of no significant impact signed by District Engineer on November 3, 1987.

*Estimated Implementation Costs.*—Updated October 1989 price levels:

<i>Project Beach</i>	
North Myrtle Beach:	
Federal .....	\$14,853,000
Non-Federal .....	7,998,000
Myrtle Beach:	
Federal .....	14,461,000
Non-Federal .....	7,787,000
Garden City/Surfside:	
Federal .....	9,508,000
Non-Federal .....	2,325,000
Do .....	1,669,000
Do .....	1,126,000
Subtotal .....	5,120,000
Total project:	
Federal .....	38,822,000
Non-Federal .....	20,905,000
Total project cost .....	59,727,000

#### *Benefit/Cost Ratio.—3.4.*

*Description of Non-Federal Responsibilities.*—Cost identified as non-Federal project cost represents 35% of the total project cost. In addition to cash payments, project sponsors provide all lands, easements, and rights-of-way, including borrow areas and disposal



areas, as well as any relocations required for construction of the project.

The project is expected to be renourished on an average of once every eight years. This renourishment is considered as construction cost and the local sponsor will provide the same items described above. The quantities and costs of renourishment are based on long-term erosion rates and an estimated eight-year periodic renourishment period. Actual renourishment quantities and time intervals may vary with the frequency and severity of coastal storms and other natural forces affecting the project area.

*Remarks.*—The recommended plan creates additional recreational beaches and protects structures from damage up to 5-year storm level. Some temporary increase in noise level and increased traffic disruption will occur during construction.

Tourism is a major economic industry of the study area and is primarily related to beach use. Project construction would permit continued growth of this industry resulting in a continued growth of the tourism trade and tourism related employment.

Project construction would result in increased leisure opportunity; additional employment during construction; and, enhanced beachfront property values.

Direct beneficiaries include adjacent property owners due to an increased level of protection from storm damage; local government due to reduced emergency cost and a reduction in future nourishment cost; and the State of South Carolina as a result of increased tax revenues.

#### BUFFALO BAYOU AND TRIBUTARIES, TEXAS

*Location.*—The study area is located in Harris County in southeast Texas and encompasses most of the Houston metropolitan area. The urban population of the study area is nearly two million.

*Authority for Report.*—House of Representatives Public Works and Transportation Committee Resolution, dated April 20, 1948.

*Description of Recommended Plan.*—The 1,034 square mile drainage basin is subject to overbank stream flooding, resulting in frequent inundation of urban and suburban properties. A 100-year frequency flood would inundate about 96,000 acres and over 98,000 structures, valued at over \$9.1 billion. On an average annual basis, stream flooding could cause over \$204 million in damages per year to existing properties, and unless corrective measures are taken, this amount could exceed \$340 million per year by the year 2045. The study provides opportunity to assist local government reduce the adverse impact of urban flooding. It also provides opportunities to consider other related water resources problems and needs, including recreational development, environmental preservation, water quality, and municipal water supply.

Six flood damage reduction plans have been formulated and are recommended for implementation. Feasible national economic development (NED) plans were developed separately for the tributaries of Carpenters, Greens, Halls, Hunting, Little White Oak and Brays Bayous. Neighborhood type recreation plans are also recommended on flood control lands in these six tributary drainage basins. Vegetative screening is included to improve environmental

quality. Mitigation is also included for the total combined flood control plan to compensate for fish and wildlife habitat losses. The plan features are summarized as follows:

*Carpenters Bayou.*—The NED flood damage reduction plan consists of stream enlargements for the urbanized reaches of the stream, providing 10-year frequency flood protection. The proposed project would reduce potential average annual damages by about 81.5 percent. Recreational trails and picnic facilities would be constructed on flood control lands. Vegetative screening would be placed at stream crossing and other public access areas. Revegetation to compensate for habitat losses would be located in the general vicinity;

*Greens Bayou.*—The flood damage reduction plan includes selective stream clearing, stream enlargements, and flood detention basins. The flood protection features would provide approximately 25-year frequency flood protection for existing and future development and would reduce average annual damages by about 91.2 percent. The recommended project is the most cost effective NED plan. Recreation features include hike and bike trails, picnic facilities, group pavilions, playgrounds, open areas, restrooms, and access and parking areas. Vegetative screening would be included to make the project compatible with the predominant urban surrounds. Portions of the proposed detention basins would be used for revegetation mitigation for this proposed project, as well as adjacent proposed projects;

*Halls Bayou.*—The proposed NED plan consists of streams enlargements, providing about 10-year frequency flood protection to existing and future properties. Average annual potential flood damages would be reduced by nearly 95 percent. Additional recreation features include multipurpose trails, picnic facilities, exercise areas, restrooms, and access and parking areas. Aesthetic plantings are included with the proposed plan. Additional revegetation would also be required for fish and wildlife habitat losses;

*Hunting Bayou.*—The proposed flood damage reduction plan consists of stream enlargements to provide 25-year frequency flood protection. This NED plan would reduce potential average annual damages by about 96.9 percent. The proposed recreational development plan includes trails along the bayou rights-of-way, together with picnic facilities, rest areas, and exercise stations. Vegetative screening is included for aesthetic compatibility. Mitigation measures in the form of revegetation, are also included to compensate for habitat losses;

*Little White Oak Bayou.*—The proposed project consists of stream enlargements for a reach of the bayou upstream from existing park areas to provide 25-year flood protection. A short reach of the stream would be left in its natural state to avoid vegetation destruction. The proposed NED plan would reduce average annual damages by about 87.0 percent. recreation facilities, including trails and picnic areas, are proposed. Aesthetic vegetation is also included as part of the project; and,

*Brays Bayou.*—The proposed flood protection project includes channel improvements, flood detention basins, diversion structures, and new interconnecting channels. The project would upgrade the level of flood protection along Brays Bayou to about 100 years and

would substantially reduce flooding along its tributary of Willow Waterhold Bayou by diverting a portion of its flood flows from the basin. The proposed project represents the MED plan for both streams. Flood damages along Brays Bayou would be reduced by about 95 percent. The plan includes multipurpose trails, picnic facilities, rest areas, pavilions, restrooms, open sportsfields, playgrounds, and parking areas. Aesthetic vegetative screening is included as part of the flood control feature. No mitigation would be required for this element; however, portions of the proposed flood detention basins in this tributary watershed would be used for re-vegetation to compensate for habitat losses in other tributary basins.

Stream/plan	Stream length (miles)	Type improvements	Project size
Carpenters Bayou—Plan CA—3AR .....	9.7 .....	Trapezoidal Grass-Lined Channel Improve- ments.	15 to 20 foot Bottom Width Channel.
Greens Bayou—Plan GR—4A .....	14.0 .....	Selective Bank Clearing and Grubbing .....	Existing.
	22.3 .....	Trapezoidal Grass-Lined Channel Improve- ments.	20 by 60 foot Bottom Width Channel.
	2.9 .....	Trapezoidal Grass-Lined Channel .....	10 foot Bottom Width Channel.
		Detention Basin A—29 acres .....	500 acre-feet.
		Detention Basin B—36 acres .....	1,000 acre-feet.
		Detention Basin C—20 acres .....	2,000 acre-feet.
		Detention Basin D—53 acres .....	750 acre-feet.
Halls Bayou—Plan HA—3A .....	15.3 .....	Trapezoidal Grass-Lined Channel with Stone Riprap.	40 to 70 foot Bottom Width Channel.
	2.7 .....	Trapezoidal Grass-Lined Channel .....	20 foot Bottom Width Channel.
Hunting Bayou—Plan HU—1A .....	5.1 .....	Trapezoidal Grass-Lined Channel with Stone Riprap.	80 to 100 foot Bottom Width Channel.
	9.2 .....	Trapezoidal Grass-Lined Channel .....	50 feet to 1.
Little White Oak Bayou—Plan LWO— 3A .....	2.3 .....	No stream improvements .....	Existing.
	3.5 .....	Trapezoidal Grass-Lined Channel .....	15 to 20 foot Bottom Width Channel
	2.5 .....	Concrete Lined Channel .....	20 foot Bottom Width Channel.
Brays Bayou—Plan BR—4A .....	3.0 .....	Trapezoidal Grass-Lined Channels .....	80 to 140 foot Bottom Width Channel.
		Upper Brays Detention Basin—350 Acres ..	6,200 acre-feet.
		Midsection Brays Detention Basin—200 Acres.	4,000 acre-feet.
	3.2 .....	Keegans Bayou—Diversion Channel to Sims Bayou.	70 foot Bottom Width Channel.
	2.1 .....	Willow Waterhole Bayou Channel to Sims Bayou.	25 foot Bottom Width Channel.
		Upper Sims Bayou Detention Basin—297 Acres.	4,000 acre-feet.

*Views of State and Non-Federal Interests.*—Agencies of the State of Texas were generally supportive of the proposed project. The Texas Parks and Wildlife Department was an active participant in accessing fish and wildlife habitat damages and developing mitigation measures to compensate for losses. The Harris County Flood Control District and its governing body, the Harris County Commissioners Court, supports the flood control and recreation features of the project and has agreed to act as local sponsor for flood con-

trol and the portion of recreation within their jurisdiction. The City of Houston has agreed to act as local sponsor for the recreation features to be located within the City of Houston.

*Views of Federal and Regional Agencies.*—No objections to the recommended plan features in the Final Report were received. The U.S. Fish and Wildlife Service questioned the density of replacement habitat vegetation as proposed in the Draft Report. Discussions were held with this agency and a compromise was reached. The U.S. Fish and Wildlife Service is satisfied with the density for mitigation of losses.

*Status of Final Environmental Impact Statement.*—The Draft Environmental Impact Statement was filed with the Environmental Protection Agency and circulated for field level agency review in September 1987.

*Estimated Implementation Costs.*—October 1989:

Federal:	
Flood Control Features .....	\$302,948,000
Recreation Features.....	4,009,000
Mitigation Features.....	2,356,000
Total Federal First Cost.....	309,313,000
Non-Federal:	
Flood Control Features .....	229,955,000
Recreation Features.....	4,009,000
Mitigation Features.....	1,327,000
Total Non-Federal First Cost.....	235,291,000
Total Project First Cost.....	544,604,000

*Benefit/Cost Ratio.*—3.7.

*Description of Non-Federal Responsibilities.*—The non-Federal first costs for flood control features includes all lands, easements, rights-of-way, and relocations and a cash contribution of 5 percent of the total first costs assigned to flood control. For recreation, the non-Federal costs involve contributing 50 percent of the initial construction cost. Mitigation is apportioned at the same percentage as the flood control features.

The local sponsors will be responsible for all operation and maintenance of the completed project. For the flood control features this would include mowing and fertilizing of turfed slopes, periodic cleanout of channels, basins, and inlet structures and repairing erosion damage. For mitigation, the sponsor will be responsible for managing and maintenance of vegetation. Sponsors for recreation will be responsible for policing and facility replacement cost as well as routine maintenance and operations.

*Remarks.*—Local residents and owners of commercial businesses would be the primary beneficiaries of flood protection improvements. Residents would also benefit from recreational development.

RAY ROBERTS LAKE GREENBELT, TEXAS

*Location.*—The study area is the Dallas, Denton, Fort Worth metropolitan area in north central Texas.

*Authority for Report.*—The Rivers and Harbors Act of 1965, Section 301 (Public Law 89-298) contains authority for construction of both Ray Roberts and Lewisville Lakes. The Post Authorization

HQ AR001984

Change Notification Report for the Greenbelt Corridor was prepared pursuant to the provisions of Corps Engineering Regulation 1105-2-10, Changes to Uncompleted Authorized Projects.

*Description of Recommended Plan.*—Problems include the need for traditional lake-type recreation facilities and for stream oriented open-space recreation areas in a rapidly urbanizing area. The Texas Outdoor Recreation Plan identifies three stream oriented or linear recreation activities (canoeing, stream fishing, and horse-back riding) as the highest priorities within the region. The project sponsors, Dallas and Denton, under the current (1980) Ray Roberts Lake recreation contracts, are obligated to cost share in new lake-type facilities at Lewisville Lake. Opportunities to meet stream oriented recreation demands are created by the construction of the two lake system operating in tandem for the purposes of water supply, flood control, recreation, and fish and wildlife.

The recommended plan consists of acquisition and management of 660 acres in fee, 440 acres converted from flowage easement to fee, and 500 acres in conservation easement along the 14 river mile stretch of the Elm Fork of the Trinity River between Ray Roberts Dam and Lewisville Lake for recreation purposes.

Recreation features include:

- (1) three canoe launch/takeout (access) points with parking and sanitary facilities;
- (2) 10 primitive camp sites;
- (3) 12 miles of hiking trails; and
- (4) 12 miles of equestrian trails.

*Views of States and Non-Federal Interests.*—The recommended plan has the full support of the State of Texas and all other concerned non-Federal interests. By letters dated March 4, 1983, and February 28, 1985, the Texas Parks and Wildlife Department expressed its desire to share in 25 percent of the first cost of the Greenbelt Corridor and to assume responsibility for all operations, maintenance, and replacement. By letters dated November 30, 1984, and January 17, 1985, the cities of Dallas and Denton expressed their support for the plan and for the proposed cost sharing arrangements. Support of these entities was reiterated during the Chief of Engineer's agency review in August 1987.

*Views of Federal and Regional Agencies.*—In response to the Chief of Engineers Agency review, support for the proposal was expressed by the U.S. Environmental Protection Agency, U.S. Department of the Interior, and the North Central Texas Council of Governments. No opposition was expressed during that review.

*Status of the Final Environmental Impact Statement.*—A Finding of No Significant Impact was signed by the District Engineer on January 10, 1985, after extensive public involvement.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal/Recreation: Corps of Engineers .....	\$1,732,000
Non-Federal/Recreation:	
Dallas.....	1,282,050
Denton.....	450,450



Texas Parks and Wildlife .....	1,155,000
	<hr/>
	2,887,500
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Total.....	4,620,000

*Benefit/Cost Ratios.—3.1.*

*Description of Non-Federal Responsibilities.*—Non-Federal costs for implementation would include 62.5 percent of all lands, facilities, engineering and design, and construction. With traditional cost sharing, without the State of Texas as an additional non-Federal sponsor, the non-Federal share would be only 50 percent.

Non-Federal operational and maintenance costs will include all operation, maintenance, and replacement costs for recreation facilities developed as part of the recommended Greenbelt plan.

*Remarks.*—Environmental Quality: The recommended plan is considered to be the environmental quality plan in that it does more than the Facilities only plan to preserve, maintain, and enhance the natural environment.

The recommended plan maximize the Regional Economic Development Account due to the unique nature of benefits provided. Travel distance to the opportunity created is greater than for additional lake park facilities which are already in greater abundance in the study area. This will result in a net influx to regional economies.

The recommended Greenbelt plan will provide for recreation opportunities which are a higher priority and which are in very short supply in the study area.

Direct beneficiaries will include all residents of the Dallas, Denton, Fort Worth metropolitan area and the state of Texas as a whole, with emphasis on those residents desiring to participate in the stream-oriented open-space type recreation provided.

UPPER JORDAN RIVER, UTAH

*Location.*—The study area is located in the Jordan River Basin in north-central Utah. The basin includes all of Salt Lake and Utah Counties and portions of Wasatch, Carbon, Sanpete, and Juab Counties. The Upper Jordan River Basin encompasses the western slope drainages of the Wasatch Mountains and bench and valley lands tributary to Mill Creek, Big and Little Cottonwood Creeks and a 25-mile reach of the Jordan River extending from the Jordan Narrows to 2100 South Street in Salt Lake City.

*Authority for Report.*—Section 6 of the Flood Control Act of 1938.

*Description of Recommended Plan.*—Jordan River and tributary streams have a long history of flooding, most commonly associated with snowmelt but also from summer thunderstorms, general rainstorms, and a combination of snowmelt and rainfall. The most recent flooding occurred in September 1982, June 1983 and June 1984. Flood control improvements have lagged behind growth and development, with flood problems intensifying because of encroachment of flood plain area and increased runoff from urban and suburban development.

The selected plan would provide about 100-year flood protection on Mill Creek above State Street. Flood control features include a diversion structure of Mill Creek and a 7,440-foot-long, 84-inch-di-

ameter diversion conduit to an enlarged Hillview Detention Basin. The diversion structure would pass flow up to 200 cfs to the Mill Creek channel and divert up to 750 cfs into the conduit for conveyance to the Hillview Detention Basin for regulation and subsequent release to Big Cottonwood Creek through a storm drainage system. Also, as part of the plan the Salt Lake County Hillview Detention Basin will be enlarged from 26 to 100 acre-feet.

a. Structural:

(1) The Salt Lake County Hillview Detention Basin would be enlarged from 16 to 100 acre-feet. Enlargement would be accomplished by raising and extending levees in the basin and excavating 15,500 cubic yards of unsuitable material from the upper portion of the basin. Also, 7,450 cubic yards of material from the basin would be excavated and used to build the new levees.

(2) A diversion structure, incorporating a small sediment debris trap, would be constructed about 200 feet above Highland Drive.

(3) A 7,440-foot-long, 84-inch-diameter reinforced concrete diversion conduit would be built connecting Mill Creek with the enlarged Hillview Detention Basin.

(4) Rights-of-way would be required, in fee, for the diversion structure and the initial section of the pipeline. A construction and access easement would be adequate for the pipeline reach located along streets, which are presently public rights-of-way. About 26 acres of land, valued at about \$4,040,000, is currently in Salt Lake County ownership and is associated with the local interest detention basin. A variety of utility crossings would need to be relocated.

This plan would provide about a 100-year level of protection from rain floods from Highland Drive to State Street and would permit passage of snowmelt floods well above the 500-year flood. Below State Street the project reduces the 100-year floodflow by about 360 cfs. Although the project would prevent flooding from all events up to nearly a 100-year flood, benefits would accrue from floods of greater magnitude because of the reduction in flood stage.

b. Environmental Features. About 0.3 acres of vegetation displaced at the diversion site would be mitigated by revegetating unstabilized banks associated with the construction. Revegetation plantings (trees, shrubs, grasses, and forbs) would be provided in the detention basin and areas of disturbed and exposed soil.

*Views of States and Non-Federal Interests.*—A letter of intent dated August 10, 1987 has been received from Salt Lake County acknowledging the county's willingness and ability to accept cost-sharing responsibilities under current Federal policy. By letter dated February 29, 1988, Salt Lake County provided a financing plan and reiterated its capability to meet cost-sharing obligations. The Department of Community and Economic Development, Division of State History, stated that some effort should be made to identify as many of the existing cultural resources as possible in the flood zones. The response provided in the final feasibility report and environmental impact statement stated the historical and archaeological research would be undertaken to locate additional properties if project construction is authorized and funded by Congress.

*Views of Federal and Regional Agencies.*—The Department of the Interior, Office of Environmental Project Review, noted that the proposed project would not significantly impact mineral resources.

The Department of Commerce, National Oceanic and Atmospheric Administration noted that geodetic survey monuments may be located in the proposed project area. In response the Corps of Engineers advised that coordination would be conducted with the Director, Charting and Geodetic Services, to avoid disturbing or destroying survey control monuments.

*Status of Final Environmental Impact Statement.*—Final environmental impact statement has been filed with EPA.

*Estimated Implementation Costs.*—October 1989 Price Levels:

Federal: Corps of Engineers Flood Control.....	5,200,000
Non-Federal: Salt Lake County.....	2,700,000
Total.....	7,900,000

*Benefit/Cost Ratio.*—1.4.

*Description of Non-Federal Responsibilities.*—Cost-sharing requirements for the project complies with Section 103 of the Water Resources Development Act of 1986, which requires local interests to pay 5 percent of the cost of the project during construction and provide all lands, easements, and rights-of-way and perform all related necessary relocations. The non-Federal share is limited to 50 percent of the total cost of the project.

Non-Federal interests will operate and maintain the diversion structure and conduit, and all detention basin features of the project.

*Remarks.*—Riparian vegetation disturbed during construction will be replaced. Floodflow diversion would reduce silting and debris in a 5-mile reach of Mill Creek and would reduce the high flows. Erosion, debris, and turbidity would be lessened.

Emergency flood fighting costs would be reduced. Damages to public facilities and interruption of public services would be reduced. Flood threat and safety hazards would be reduced.

Quality of life would be enhanced in the urban area because of the reduced frequency of flooding.

The flood protection provided by the project would directly benefit over 14,000 people and approximately 430 commercial/industrial establishments within the flood plain.

#### BUENA VISTA, VIRGINIA

*Location.*—The City of Buena Vista is located in the western part of Virginia near Rockbridge County. It is situated along a bend of the Maury River about 10 miles upstream of the confluence of the Maury and James Rivers.

*Authority for Report.*—Water Resources Development Act of 1974.

*Description of Recommended Plan.*—Flooding is a significant problem at Buena Vista, Virginia with major floods occurring in 1936, 1969, and 1985. Flood waters flowing down the Maury River have caused millions of dollars in damages to the city's industrial, commercial, residential, public, and railroad developments. The 1936 flood caused about \$4 million in present dollar damages to the city. The flood of August 1969 would have caused damages in excess of \$48 million in current dollars. The November 1985 flood left the city with \$44 million in damages.

The recommended plan consists of a combination of earthen levee, floodwall, ringwall, and channel modification project along the east bank of the Maury River which would protect a major portion of the city from the recurrence of the Flood of Record, a 115-year event. Other features included are an emergency preparedness program, continued participation by the city of Buena Vista in the National Flood Insurance Program, and continued implementation of applicable flood plain regulations.

a. Structural:

(1) Levee, floodwall, ringwall, interior drainage canal, and channel modification: 10,900 linear feet of earthen levee; 990 linear feet of reinforced concrete T-wall; 2,270 linear feet of reinforced concrete ringwall; 5,700 linear feet of interior drainage canal; river channel widening for 4,150 linear feet; seven closures; and new drainage pipe, culverts, and gates.

(2) Lands, easements, rights-of-way, and relocation.

(a) Lands: Thirty-seven parcels of land would be required for construction of the selected plan. Two parcels are owned by the city of Buena Vista, two represent city street rights-of-way, and the remaining thirty-one parcels are under private ownership.

(b) Acquisition: Three houses in Rockbridge that would receive induced flooding as a result of the selected plan would be acquired.

(c) Relocations: Relocations of affected water, gas, power, and telephone lines; minor modifications to the existing storm and sanitary sewer system; a new pumping station and relocation of pipes at the wastewater treatment plant; construction of a 70-foot-long bridge span over the proposed interior drainage canal at 10th Street; relocation of the railway bridge across Indian Gap Run; abandonment of 3,600 feet of mainline railway track; construction of a 600-foot railway crossover; construction of a new 800-foot spur track; removal of an old spur track; and miscellaneous modifications to railroad bridges and approaches.

b. Nonstructural:

(1) Flood plain zoning.—Local sponsor must publicize flood plain information in the area and provide this information to zoning and other regulatory agencies for their guidance and leadership in preventing unwise future development in the flood plain.

(2) Flood Insurance Program.—Local sponsor must continue participation in the National Flood Insurance Program.

(3) Emergency preparedness program.—Development of an emergency warning and response program centered around the existing Integrated Flood Observing and Warning System (IFLOWS) which will soon be operational in the city of Buena Vista.

c. Environmental Features.—The project contains several features which will compensate for losses and will provide net environmental enhancement to aquatic and terrestrial resources. In consultation with natural resource agencies, cobble and boulders will be worked to form riffle and pool complexes and deflectors, boulders, etc. will be placed in the river to improve fish habitat. Riparian habitat on the west side of the river at Glen Maury Park will be enlarged and improved in cooperation with the city of Buena Vista. Levees and areas surrounding levees will be vegetated naturally and artificially with plant species offering aesthetic and wildlife values. Where engineeringly feasible, levees will be

constructed so as to provide recreational use, i.e., walkways and trails. Interior drainage and ponding areas will be naturally and artificially planted with vegetation having aesthetic and wildlife values.

*Views of States and Non-Federal Interests.*—High levels of support at all levels including the Commonwealth of Virginia and the city of Buena Vista. The city of Buena Vista stated their intent to be the non-Federal sponsor for the project by letter of March 18, 1990. The city also submitted its financial plan for the non-Federal share of the project cost on March 18, 1990. The plan has been assessed and found to be adequate to fund the non-Federal share of the project cost.

*Views of Federal and Regional Agencies.*—In general, the agencies concur with the report findings and there are no major unresolved issues.

*Status of Final Environmental Impact Statement.*—An Environmental Assessment was included in the Phase I General Design Memorandum.

*Estimated Implementation Costs.*—October 1989 price levels:

Federal: Corps of Engineers.....	\$41,300,000
Non-Federal: City of Buena Vista .....	13,800,000
Total.....	\$55,100,000

*Benefit/Cost Ratios.*—1.12.

*Description of Non-Federal Responsibilities.*—In accordance with Public Law 99-662, the non-Federal share of the implementation cost will be 25 percent. This includes a cash payment equal to 5 percent of the total cost, which will be paid during construction, and the non-Federal sponsor must provide all lands, easements, rights-of-way, and relocation costs. As the combined cost for these two items is less than 25 percent of the total, the sponsor must provide a cash contribution to raise their share of the project to the 25 percent level.

The non-federal sponsor must also provide turf care for levees and surrounding areas; routine maintenance of pumps, gate closures, and sewer control gates; annual debris cleanup, including de-vegetation and brush removal; minor replacement of riprap; painting of metal structures; and minor concrete repairs.

*Remarks.*—There will be some loss of riparian habitat with the levee construction (15 acres), and some loss of scrub/shrub vegetation with the interior drainage canal (9.6 acres). Construction of the ringwall will result in the loss of aquatic habitat (0.6 acre). Channel modification will result in modification of the river bank and some possible lowering of normal water levels in the river. This, combined with loss of riparian shade trees, will cause some water temperature elevations. Prehistoric archaeological sites will be destroyed, as will one lift lock and two adequate remains of the North River Canal (c. 1862). The project contains several features, developed in coordination with natural resource agencies, which will compensate for these losses and will provide net environmental enhancement to aquatic and terrestrial resources. These features are described in Item 10.c.

With the selected plan in place, Buena Vista will be able to attract new businesses and industries and retain existing businesses



and industries. The local economy will be enhanced, tax revenues, employment/labor force, and business/industrial activity would be increased.

Threats to health and safety, home damage, cleanup tasks, and psychological stress will be significantly reduced. Property values would be enhanced. Employment opportunities would increase and the overall standard of living would rise.

Direct benefits will accrue to industrial, commercial, residential, and public entities located within the 115-year flood plain.

#### PETERSBURG, WEST VIRGINIA

*Location.*—The study area consisted of both banks of a six mile reach of the South Branch Potomac River through the City of Petersburg, in eastern Grant County, West Virginia, about 115 miles due west of Washington, D.C.

*Authority for Report.*—Resolutions by the Committee on Environmental Public Works, United States Senate, adopted January 26, 1956 and July 6, 1959 (amended April 27, 1960).

*Description of Recommended Plan.*—Serious flooding in the area has occurred periodically through the years, resulting in costly damages to homes and businesses. The most recent flood, and the largest on record, occurred in November 1985, inundating large sections of the City both north and south of the river, and causing about \$33 million in damages (October 1989 price levels). Preventing this frequent flooding would enhance the local economic and social well being. Additional businesses and industries would likely locate/expand facilities in the area and help to ease the long term persistent unemployment in the area.

The recommended plan includes a system of earthen levees and short sections of concrete floodwall and sheetpile wall to provide 100-year flood protection to North and South Petersburg and the Grant County Airport Industrial Park. Other project features include a new Main Street (Rt. 220) bridge that is higher and longer than the existing bridge, channel excavation near the Main Street bridge, environmental mitigation, ramps, closures, riprap for erosion protection, utility relocations, ponding areas for interior runoff, and necessary land acquisition.

##### a. Structural:

(1) Levees, channelization and floodwall—19,370 linear feet (LF) of levee; 400 LF of concrete floodwall; 500 LF of sheetpile wall; channel improvement with 35,430 cubic yards of earth excavation.

(2) Lands, easements rights-of-way, and relocation;

(a) lands—26 acres would be acquired for project construction;

(b) easements—36 acres of land would require permanent flowage easements to function as interior runoff ponding areas; temporary easements would be required along the project to facilitate construction;

(c) rights-of-way—acquisition of several farm buildings, 13 mobile homes, 8 houses, a public building and a portion of a recreation area would be required to provide the project right-of-way; and

(d) relocations—includes the two water treatment sedimentation ponds; a new pump and relocated pipes at the sewage treatment plant; a larger pump at the existing Lunice Creek LFP pump station; utilities along the project (water, sewer, telephone and electric); miscellaneous items such as signs, fences, and billboards; and a new Main St. (Rt. 220) bridge.

**b. Nonstructural:**

(1) Floodplain zoning—Local sponsor must publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their guidance and leadership in preventing unwise future development in the floodplain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the project;

(2) Floodplain insurance—Local sponsor must participate in and comply with applicable Federal floodplain management and flood insurance programs; and

(3) Flood warning system—Improvements to the existing flood warning system will be made to ensure effective and timely implementations of project closure structures; the improvements consist of automatic reporting equipment at four stream gage locations, a hydrologic model to improve forecasts, and use of a weather/river forecasting service to provide flood forecasts specifically for Petersburg.

**c. Water Use and Control:**

**Design Flow**—the design flow for the project is the 100-year flood which has a discharge of 78,000 cfs at the gage just upstream of Petersburg.

**d. Environmental Features:**

(1) Mitigation of separable lands—Off-project purchase of 25 acres of land to plant fruiting trees and shrubs to mitigate the loss of 47.5 habitat units of upland habitat displaced by levee;

(2) Mitigation on project lands—None at this time, but will be considered further during PED;

**Views of States and Non-Federal Interests.**—High level of support at all levels including the State of West Virginia, Grant County and the City of Petersburg. Grant County stated their intent to be the non-Federal sponsor for the project by letter of December 8, 1989. The county submitted their financing plan for the non-Federal share of the project cost by letter of January 17, 1990. The plan has been assessed and found to be adequate to fund the non-Federal share of the project cost.

**Views of Federal and Regional Agencies.**—The agencies concur in the report findings and there are no major unresolved issues.

**Status of Final Environmental Impact Statement.**—Final integrated feasibility report and environmental impact statement submitted Feb. 28, 1990.

**Estimated Implementation Costs.**—October 1989 price:

Federal: Army Corps of Engineers .....	\$10,136,000
Non-Federal: Grant County, West Virginia.....	7,768,000
Total.....	17,904,000

**Benefit/Cost Ratio.**—1.4.

HQ AR001992

*Description of Non-Federal Responsibilities.*—Mow levees, repair levee damage, operate and maintain closure structures, maintain the Soil Conservation Service Lunice Creek Flood Control Project, do periodic channel maintenance to maintain the prescribed cross-sectional area in the South Branch Potomac River to ensure that the design level of protection is not jeopardized.

*Remarks.*—On a long-term basis, the selected plan level would adversely affect about one acre of bottomland hardwood habitat just downstream of the Main Street (U.S. Route 220) bridge along the right bank due to channel excavation. Excavation on the left bank in the vicinity of the Main Street bridge would have little, if any, impact due to its low habitat value.

Levee construction would permanently occupy about 26 acres of land consisting primarily of abandoned farmland, cultivated fields, pastures, and urban land. This acreage would be replaced with about 30 acres of grasscovered earth levee. To compensate for the net losses in habitat, environmental mitigation is proposed which would include planting of high habitat value trees and shrubs on off-project lands. Select fill borrow areas may be used if they are determined to be suitable. With mitigation, the long-term adverse environmental impacts of the proposed project would be overcome and the high quality habitat which presently exists would be preserved.

On a short-term basis, construction of the selected plan may cause turbidity in the river during channel excavation and bridge modifications. Fish and wildlife resources would avoid the area during the construction period, but would be expected to return upon completion of the project. No impacts on the Petersburg water supply intake are anticipated. Noise and dust would occur along the levee alignments, the haul routes, and the borrow areas during construction. Good construction management practices would minimize most of the adverse impacts. Wildlife may avoid the areas during construction, but would return after project completion. Adverse construction-related impacts would be expected to be localized, minor, and temporary.

The selected plan will generally maintain and enhance long-term economic productivity by decreasing flooding and associated flood damages in Petersburg. No long-term effects on environmental productivity are anticipated; aquatic and terrestrial habitats in the Petersburg area will continue to be of high quality.

With the recommended plan in place, Grant County will be able to attract and retain new businesses and industries for the Grant County Airport Industrial Park as well as the downtown areas in North and South Petersburg. Development of the industrial park and associated employment opportunities are a key to economic recovery from the November 1985 flood and long term persistent area unemployment. Also, the actual construction of the recommended plan will enhance the local economy as shown by the estimated \$211,000 in area employment benefits which would occur due to the use of a currently unemployed labor force.

The major long-term beneficial social effect associated with the selected plan would be the reduction in the potential for loss of life human suffering that result from flooding along the South Branch Potomac River. With flood protection, additional businesses and in-

dustries would likely locate in Petersburg because of the reduced flood threat. Employment opportunities would increase, and the overall standard of living would rise.

Short-term adverse social impacts would include community and traffic disruption during project construction, but these would extend only for the 2½-year construction period. Long-term adverse social impacts would include a decreased view of the South Branch Potomac River but this is not judged to be significant. The most significant adverse social impact would involve the relocation of residents occupying the houses and mobile homes along the levee alignment.

Subsection (b) of Section 3 authorizes 5 water resources projects to be constructed by the Secretary of the Army. Because there are not final reports by the Chief of Engineers for these projects, they are authorized subject to a final report of the Chief of Engineers and with such modifications as are recommended by the Secretary. No construction of any of these projects may be initiated until there is a report of the Chief of Engineers for the project. Descriptions of the projects to follow:

#### LOS ANGELES COUNTY DRAINAGE AREA, CALIFORNIA

*Location.*—The Los Angeles Drainage Area is located in Southern California and includes drainage of the Los Angeles and Rio Hondo Rivers.

*Authority for Report.*—U.S. House of Representatives Committee on Public Works and Transportation resolution adopted June 11, 1969.

*Description of Recommended Plan.*—The population in the Los Angeles County Drainage Area basin has tripled since 1940, exceeding the ability of the existing urban flood control system to provide an adequate level of protection. Previously undeveloped areas of the basin have undergone tremendous urbanization. This greatly increased areas of impervious cover in the watershed, causing increased surface runoff, loss of groundwater percolation, and increased flow from additional storm drains. These conditions all contribute to increased floodflows, especially on the downstream reaches of the channel. The existing project no longer provides the degree of protection that it once did.

The Corps of Engineers analyzed an array of alternative elements. Modifications in any area can affect the responses of the whole system. Methods to increase existing channel capacity or provide new channel capacity were compared. Floodwater detention basins, recharge areas, and the potential for trading current flood control space for water conservation space were all investigated. Costs and benefits for individual elements were assessed to determine the relative effectiveness of the elements as a solution. The alternatives were narrowed down to those that are the most economically feasible.

The proposed plan offers between 100 and 133-year levels of protection and would raise channel walls from two to eight feet on the Rio Hondo down stream from Whittier Narrows Dam and on the lower Los Angeles River from the confluence with the Rio Hondo to the Pacific Ocean, a total project length of 23 miles. The channel

height would be raised with concrete parapet walls. Twenty-seven bridges would need raising or modification along the project length. The Los Angeles River Channel would be widened in a 1.5 mile reach below the confluence with the Rio Hondo. The landward side of the levees would be armored in selected locations. The existing bike and equestrian trails will be retained in the new plan. The cost of the plan is approximately \$327 million.

#### MORRO BAY, CALIFORNIA

*Location.*—City of Morro Bay, San Luis Obispo County, California.

*Authority for Report.*—U.S. House of Representatives Committee on Public Works and Transportation resolution adopted June 19, 1963.

*Description of Recommended Plan.*—Steep and breaking waves at the Morro Bay Harbor entrance effectively close the Harbor some 50 days a year. Entrance-related marine accidents since 1963 have caused 20 deaths, more than 70 injuries, and more than \$600,000 in vessel damages and losses. The Harbor closures have had an adverse impact on a productive commercial fishery, growing recreational boating activities, and a healthy tourist industry. The feasibility study indicated a Federal interest in remedying this hazardous entrance condition. Feasibility investigations have shown that the problem can be lessened by modifying the existing Federal project with a wider and deeper entrance channel extension through the breakwater line into the ocean.

An existing Federal project consists of two permeable rubble-mound breakwaters. The north breakwater is 1884 feet long and has an average crest elevation of +18 feet above mean lower low water (MLLW). The south breakwater is 1859 feet long with a crest elevation ranging +14 and +18 feet MLLW. The two breakwaters form an opening of approximately 900 feet, with entrance channel dimensions of 350 feet in width and a length of over 2.6 miles. The channel itself is maintained to a depth of -16 feet MLLW.

A draft feasibility report, with a feasibility and economically-justified recommendation plan, was completed in January 1990. The tentative recommended plan has an estimated first cost of \$1,854,000, with a benefit-to-cost ratio of 1.2-to-1.

#### NORCO BLUFFS, CALIFORNIA

*Location.*—The project area includes the Santa Ana River along the northern border of the City of Norco. Norco is located approximately 10 miles southwest of Riverside and is situated on a bluff that forms the left bank of the river.

*Authority for Report.*—A prior study was conducted under authority of section 205 of the Flood Control Act of 1948.

*Description.*—The problem affecting Norco Bluffs is caused by flood induced migration of the Santa Ana Channel out of its low-flow channel during large storm events. Migration of the main channel bed to the toe of the bank results in undercutting and subsequent destabilization of the bluff, which placed local residences situated on the bluff in danger. A Draft Reconnaissance Assessment Report was completed in October, 1988, which recommended

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a levee with buttress backfill to provide a 100-year level of protection to the bluff. No detailed studies have been completed.

*Remarks.*—The Committee believes that this serious problem caused by floodwaters on the Santa Ana, which threatens the public welfare, is in the Federal interest it resolve. While the type of flood flows experienced are non-traditional in nature, that is, the flood induced migration of the Santa Ana River breaks through the banks undercutting the bluffs, it results in the same amount of damages to residents and millions of dollars in public and private property—as over the bank flooding. This specific authorization is necessary to enable the Corps to alleviate the severe and costly bank erosion and flooding problems along the Santa Ana River in the vicinity of Norco. Due to the serious threat of both public and private properties, as well as the number of people endangered, the unique nature of the flood damage problem and the project's contribution to public welfare, the Secretary is directed to complete the study on an expedited schedule and to construct the project.

#### LOCKS AND DAMS 2 AND 3, MONONGAHELA RIVER, PENNSYLVANIA

*Location.*—The project for the Monongahela River provides for improvement throughout its 129-mile length, from Pittsburgh, Pennsylvania to Fairmont, West Virginia. Present locks and dams 2 and 3 are located at river miles 11.2 and 23.8, respectively.

*Description.*—Locks and Dams 2 and 3 on the Monongahela River became operational in 1906 and 1907 respectively. While severe deterioration and structural instability have been identified at Dam 2 and the facilities at Locks and Dam 3, the condition has not yet deteriorated to a immediate failure status. However, given the lead time required for authorization and implementation, it is anticipated that major components of the existing project could be in an imminent failure status during the completion phase of a modernization plan.

Early study results indicate that replacing existing narrow 56-foot wide chambers with wither 84-foot of 110-foot wide locks and rehabilitation or replacement of the existing dams is feasible at an estimated cost of approximately \$450 million.

#### MARMET LOCK AND DAM, KANAWHA RIVER, WEST VIRGINIA

*Location.*—Marmet Locks and Dam is located a short distance above Charleston, West Virginia on the Kanawah River.

*Authority for Report.*—U.S. Senate Committee on Environment and Public Works resolution adopted October 1, 1979.

*Description.*—The existing Kanawha River navigation system was constructed between 1931 and 1937, consisting of four units, the London, Marmet, and Winfield Locks and Dams on the Kanawha River and the Gallipolis Locks and Dams on the Ohio River below the mouth of the Kanawha. All of the Kanawha River projects have two lock chambers, each 56 feet wide and 360 feet long at the navigation dams. Marmet Locks and Dam, located at river mile 67.7, was built in 1934 and now is over 50 years old.

The primary problem at Marmet is the small lock chambers compared to the number of tows and size of barges that travel on the Kanawha River. An average of over 4 hours is required for a com-

mercial tow to lock through Marmet, and the average tow requires nearly four lockages.

The traffic at Marmet presently totals about 11 million tons 92 percent of which is coal produced in south central West Virginia. The estimated capacity of Marmet Locks is about 20 million tons annually, and if traffic forecasts are reasonably accurate, capacity could be reached by the year 2000. Future traffic delays will increase dramatically as tonnage approaches capacity of the existing locks, resulting in traffic delays and increased transportation costs.

Preliminary assessments indicate that replacing one of the chambers with a larger lock is feasible at a cost of \$300 million. Hydraulic model tests are currently underway to determine the optimum size of the proposed new lock.

#### *Section 4. Project Modifications*

Section 4 of the bill contains a number of modifications to previously authorized projects.

Subsection (a) modifies the flood control project for Village Creek, Alabama, to authorize the Secretary to acquire private, vacant lands within the definite project boundaries established in the real estate design memorandum, dated March 4, 1988, as a non-structural element of the project.

Subsection (b) modifies the navigation project for Los Angeles and Long Beach Harbors, San Pedro Bay, California, to clarify that work performed by the non-Federal sponsor following the date of the issuance of the Chief of Engineers report will be eligible for credit or reimbursement from the Federal government for the Federal share of such work. Subsection (c) modifies the navigation project for Oakland Inner Harbor, California, to provide the maximum amount reimbursable to non-Federal interests under Section 215 of the Flood Control Act of 1968 shall be \$10 million. Section 215 of the Flood Control Act of 1968 allows a non-Federal sponsor to be reimbursed for the Federal share of non-Federal expenditures on the Federal project. The subsection also directs the Secretary to enforce the navigation servitude with respect to construction of the project if requested by the non-Federal sponsor and the sponsor reimburses the Secretary for the transaction costs. The Secretary would exercise the navigation servitude in the same manner as if the Secretary were constructing the project. This provision is intended to resolve an issue concerning compensation to the holder of certain property interests which infringe upon the project boundaries. It does not alter any other requirements of law with respect to construction of the project. The Committee is aware that determining a proper disposal site for dredged material has been highly controversial. The Committee urges the Corps of Engineers and the local interests to work together in choosing a mutually agreeable disposal site which is sensitive to both economic and environmental concerns and which would be eligible for cost sharing the same as the least costly alternative.

Subsection (d) modifies the navigation project for the Sacramento Deep Water Ship Channel to direct the Secretary, if requested by a non-Federal sponsor, to enforce the terms of any permit issued by the Secretary under Section 10 of the Act of March 3, 1899, to compel the relocation of any utility necessitated by the construc-

tion of an authorized navigation project. The Secretary is to be reimbursed by the non-Federal Sponsor for expenses incurred in enforcing such a permit.

The Port of Sacramento has no independent authority to enforce necessary utility relocations. The Committee has required the Secretary to exercise existing authority in this instance to accomplish necessary relocations to construct the project consistent with the non-Federal responsibilities required by the Water Resources Development Act of 1986.

Both subsections (c) and (d) are necessitated by the reluctance of the Corps of Engineers to exercise federal authority to assist local interests in developing federally authorized navigation projects. In the Oakland instance, the Corps of Engineers would be able to acquire the necessary interest in the lands by virtue of the navigation servitude, without compensation to the holder of the property interest. That property interest is subservient to the federal interest, and therefore, no taking issue under the Fifth Amendment of the Constitution are involved. In the Sacramento instance, the Corps of Engineers has refused to enforce the terms of a Federal permit granted to the utility for the crossing of navigable waters. The terms of the permit require the utility to relocate the facilities in the navigation channel, if necessary in the interests of navigation. The Committee encourages the Corps of Engineers to cooperate with local navigation project sponsors in constructing these projects.

Subsection (e) modifies the flood control project for the Santa Ana Mainstem, including Santiago Creek, California, to authorize the Secretary to develop recreational trails and facilities on lands between Seven Oaks Dam and Prado Dam, including flood plain management areas.

Subsection (f) modifies the Santa Fe Dam project, a part of the flood control project for the Los Angeles and San Gabriel Rivers, California, to authorize the Secretary to contract for the removal and sale of dredged material from the flood control basin from Santa Fe Dam, Los Angeles County, California, for the purposes of facilitating flood control, recreation, and water conservation. Funds received by the Secretary for the removal and sale of such material are to be deposited in the general fund of the treasury. An amount equal to the proceeds is authorized to be appropriated to the Secretary to construct, operate, and maintain recreational facilities at the project and to facilitate water conservation and groundwater recharge measures at the project.

Subsection (g) modifies the flood control project for Santa Paula Creek Channel and Debris Basin, Santa Clara River Basin, California, to direct the construction of the debris basin feature of the project at the Mupu Site in accordance with General Design Memorandum Number 4, Supplemental Design for Santa Paula Creek Channel, March 1972.

Subsection (h) modifies the navigation project for the Inland Waterway from the Delaware River to the Chesapeake Bay, Delaware and Maryland to direct the Secretary to replace the highway bridge on United States Route 13 in the vicinity of St. Georges, Delaware, to meet current and projected traffic needs. The bridge is currently owned and operated by U.S. Army Corps of Engineers

and a new bridge is necessitated because of vastly increased highway demand. The new bridge authority by this subsection has been planned and designed by Delaware and is to be an integral part of the State's U.S. Route 13 Relief Route project. If the state chooses to carry out the bridge replacement the Secretary may reimburse the state for costs incurred in such replacement.

The Canal cuts completely across the State of Delaware through previously fast land, severing all north-south surface transportation routes in the State. The legal obligation to provide public highway bridges across the Canal at no cost to the State was assumed from the Chesapeake and Delaware Canal Company in 1919 when the United States acquired the property, rights, and obligations of the company, chartered by Delaware law in 1801. Those obligations include building and maintaining "good and sufficient" crossings over the Canal.

On repeated occasions during the past 71 years, the United States has reaffirmed its legal obligation to provide good and sufficient crossings. All public highway bridges, including approaches, built since 1919 have been provided by the Corps of Engineers. The Committee believes that continuing to provide such bridges is a normal legitimate cost to the United States of the operation and maintenance of the canal for navigation purposes.

Subsection (i) modifies the navigation project for Tampa Harbor, Florida, to authorize the Secretary to maintain the Alafia Channel at a depth of 34 feet should local interests deepen the channel to that level.

Subsection (j) modifies the navigation project for Fernandina Harbor, Florida, to redesignate the location of the turning basin until the ongoing study of the harbor under section 107 of the River and Harbor Act of 1960 is completed and the resulting project is constructed.

Subsection (k) modifies the flood control project for Central and Southern Florida to provide for the restoration of the Kissimmee River for environmental purposes. The restoration can include the filling of canal C-38, removal of spill waste structures and locks, and increasing the storage in the Upper Kissimmee Basin. The environmental restoration is to minimize to the fullest extent possible any effect on the project's flood control and navigation purposes.

Subsection (l) modifies the navigation project at Manatee Harbor, Florida, to direct the Secretary to construct the project in accordance with the post-authorization change report, dated April 1990, which reflects costs in excess of those originally estimated. Legislative changes to the cost estimate of this and other projects are required because of the limitation on cost increases contained in Section 902 of Public Law 99-662.

Subsection (m) modifies the project for beach erosion control, Nassau County (Ameilia Island), Florida to direct the Secretary to renourish the Southern Beaches of Fernandina (South Ameilia Island), Florida from Florida Department of Natural Resources Monument number 62, to monument number 74.

Subsection (n) modifies the navigation project for the Port Sutton Channel, Florida, to remove the requirement that additional project beneficiaries be determined prior to construction of the project.

Subsection (o) modifies the Des Moines River and Greenbelt, Iowa, project to modify the boundaries of the project by both adding and deleting certain parcels of property.

Subsection (p) modifies the project for the disposition of Kentucky River, Kentucky, Locks and Dams 5-14, to provide that the Secretary may not proceed with disposition until the Secretary has performed major maintenance on the lock and dam structures. Until such maintenance is performed, the Secretary is to perform routine maintenance that is necessary to prevent permanent failure of the project components and to maintain operational capability.

Subsection (q) modifies the project for protection of Lake Pontchartrain, Louisiana, to make construction, operation, and maintenance of the project a Federal responsibility. This modification shall be effective as of January 1, 1966. This modification is warranted because non-Federal sponsors had anticipated paying for the non-Federal share from expected development of protected lands. However, the subsequent enactment of the Water Pollution Control Act Amendments of 1972 and in particular Section 404 of that Act, has made the lands unavailable for development. Therefore, no economic benefit has inured to the non-Federal sponsors.

Subsection (r) modifies the flood control project Buffumville Lake, Massachusetts, to authorize the Secretary to undertake low flow augmentation measures for improving water quality on the French River. It is expected that this modification would provide up to 500 acre feet of storage to maintain a minimum flow of 22 cubic feet per second in the river at all times.

Subsection (s) modifies the the navigation project for replacement of Locks and Dam 26 Mississippi River, Alton, Illinois and Missouri, to authorize project related recreation development in the state of Illinois that would require no separable project lands and which could include site preparation and infrastructure for a marina and docking facilities, access roads and parking, a boat launching ramp, hiking trails, and picnicking facilities. The Federal construction costs cannot increase the overall project cost estimate for recreation development and will be subject to cost sharing with Illinois.

Subsection (t) modifies the multi-purpose project at Rouge River, Michigan, to direct the Secretary to conduct a one-year comprehensive study of the Rouge River stream flow enhancement project at the Rouge River, Heron River, and Belleville Lake for the purpose of identifying measures that will optimize the achievement of the project's purposes while preserving and enhancing the quality of the water. The Secretary is to undertake a demonstration to determine the effectiveness of measures identified in the study.

Subsection (u) modifies the flood control project for the Redwood River at Marshall, Minnesota, to increase the cost estimate above that previously authorized.

Subsection (v) modifies the flood control project for the Mississippi River at St. Paul, Minnesota, to increase the cost estimate above that previously authorized.

Subsection (w) modifies the flood control project for the South Fork Zumbro River Watershed at Rochester, Minnesota, to increase the cost estimate above that previously authorized.



Subsection (x) modifies the floor control project for the Pearl River Basin, Mississippi, to require the Secretary to review measures to provide flood protection to the areas both upstream and downstream of Jackson, Mississippi. The Secretary is required to consult with non-federal public interests in carrying out any project or measures for flood control protection.

Subsection (y) modifies the irrigation system project for Acequias System, New Mexico, to increase the cost estimate for the project above that previously authorized.

Subsection (z) modifies the New York Harbor Collection and Removal of Drift project, to authorize the collection and removal of floating material in addition to debris which is an obstruction to navigation. The Secretary is directed to continue engineering, design, and construction of the project, including construction of the second phase on the Jersey City North Reach which includes remaining piers and debris in the Harsimus Cove area, construction of the Brooklyn II Reach, and engineering and design for the remaining unconstructed reaches. Finally, the Secretary is directed to expedite necessary engineering, design, and removal of seven abandoned barges from the Passaic River in Kearny, Nutley, and Passaic, New Jersey.

Subsection (aa) modifies the navigation project for Irondequoit Bay, New York, to authorize the Secretary to construct a highway bridge across the new navigation channel constructed as part of such project if non-Federal interests agree to be responsible for operation and maintenance of the bridge, agree to pay 50% of the cost of the bridge, and agree that title to such bridge will be held by non-Federal interest.

Subsection (bb) modifies the the navigation project at Cleveland Harbor, Ohio, to direct the Secretary to reimburse the non-Federal sponsor for the Federal share of amounts expended by the non-Federal sponsor for improvements to Pier 34 of such project.

Subsection (cc) modifies the flood control project for the Scioto River, West Columbus, Ohio, to increase the cost estimate for the project above that previously authorized.

Subsection (dd) modifies the flood control project at Canton Lake, Oklahoma, to reassign current water supply storage from Enid, Oklahoma to Oklahoma City, Oklahoma.

Subsection (ee) modifies the navigation project for the Delaware River, Pennsylvania, New Jersey, and Delaware, Philadelphia to the Sea, to authorize the Secretary to make improvements to the Tioga Marine Terminal, including piling replacement, a new pier fendering system, paving, deck replacement, lighting and fencing.

Subsection (ff) modifies the navigation project for replacement for lock and dam 7, Monongahela River, Pennsylvania, to provide that the dam structure will be gated instead of fixed crest and to increase the total cost of the project accordingly. Additional costs will be cost-shared as under existing law.

Subsection (gg) modifies the navigation project for the Ohio River at Rochester, Pennsylvania, to authorize the Secretary to construct safety facilities of a floating dock, a river access ramp, and roadway and parking areas.

Subsection (hh) modifies the project for McNary Lock and Dam, Second Powerhouse, Columbia River, Washington, and Oregon, to

direct the Secretary to construct the levee beautification portion of the project described in the phase I General Design Memorandum: Report of the Chief of Engineers dated June 24, 1981. In determining the new levee heights, the Secretary is to complete the feasibility study underway for the Tri Cities levees, Washington, giving full consideration to the impact that present upstream reservoir storage has had in lowering water surface elevations during major floods.

Subsection (ii) modifies the project for flood control at Bluestone Lake, Ohio River Basin, West Virginia, to direct the Secretary to take such measures as are technologically feasible to minimize the release of drift and debris into waters downstream of the project, including measures to prevent the accumulation of drift and debris at the project, the collection and removal of drift and debris on the segment of the New River upstream of the project, and the removal and disposal of accumulated drift and debris at the dam. This subsection shall not effect the authority of the Secretary to carry out other authorized purposes of the project except that no policy or priority established by the Secretary is to be used to defer or impede the implementation of the debris removal measures.

Subsection (jj) modifies the flood control project at Matewan, West Virginia, to provide that the project for Hatfield Bottom, West Virginia, shall be treated as an inseparable element of the Matewan project for purposes of Section 103 of the Water Resources Development Act of 1986.

#### *Section 5. Private Sector Development of Infrastructure*

This section authorizes the Secretary to conduct a market feasibility program for the purpose of determining what opportunities exist for private sector development of facilities for water, waste management, and energy generation and other critical support facilities. The Secretary is authorized to enter into cooperative agreements with non-Federal entities to carry out such a program. The program is to be conducted within three years from the date of enactment. The Secretary is to report to Congress on implementation of the program including any recommendations of the Secretary concerning modifications and extension of the program. \$5 million is authorized to be appropriated for the program.

#### *Section 6. Planning and Engineering*

Section 6 modifies subsection 105(b) of the Water Resources Development Act of 1986, which requires non-Federal interests to agree to contribute 50% of the costs of planning and engineering prior to initiation of planning and engineering for a project to provide that the requirement does not apply in those instances where a non-Federal sponsor has already contributed 50% of the cost of the feasibility study. The remaining planning and engineering costs will be cost shared as a part of the construction of the project.

#### *Section 7. Funding of Costs Assigned to Commercial Navigation*

Section 7 amends Subsection 210(a) of the Water Resources Development Act of 1986 relating to the authorization of appropriations from the Harbor Maintenance Trust Fund to authorize expenditures from the Fund of up to 100% of the eligible operation

and maintenance costs assigned to commercial navigation of all harbors and inland harbors within the United States. This is an increase over the currently authorized 40% of such eligible operation and maintenance costs.

#### *Section 8. Emergency Response*

This section amends the Corps of Engineers authority for flood emergency preparation and emergency response as contained in 33 U.S.C. 701n(a)(1) to expand the authority from flood emergency preparation to preparation for emergency response to any natural disaster and by including authority for emergency dredging for restoration of authorized project depths for federal navigable channels and waterways made necessary by flood, drought, earthquake, or other natural disaster.

#### *Section 9. Construction of Navigation Projects by Non-Federal Interests*

This section amends Section 204 of the Water Resources Development Act of 1986, relating to the construction of navigation projects by non-Federal interests, to authorize the Secretary to transmit any study for improvement initiated under Section 107 of the River and Harbor Act of 1960 (small navigation projects) to a non-Federal interest upon request. Section 204 is also amended to authorize reimbursement to a non-Federal sponsor of the Federal share of the non-Federal expenditure in those instances where such a sponsor builds a portion of a project approved pursuant to Section 107 of the River and Harbor Act of 1960.

#### *Section 10. Project Modifications for Improvement of Environment*

Section 10 amends Section 1135 of the Water Resources Development Act of 1986, which authorizes project modifications to existing Corps projects for improvement of the environment, by changing the program from a five year demonstration program to make it a permanent program and authorizing an annual \$15 million appropriation to carry out the program.

#### *Section 11. Ability to Pay*

This section modifies subsection 103(m) of the Water Resources Development Act of 1986, regarding reduction in a non-Federal sponsor's responsibility for cost sharing based on an ability-to-pay, and to make such ability-to-pay procedures applicable to municipal and industrial water supply as well as flood control and agricultural water supply. The subsection is rewritten to more specifically direct the types of considerations in determining the ability to pay. The procedures must not prescribe a minimum non-Federal share and must allow for situations in which no cash contribution is required from a non-Federal interest. The ability to pay regulations cannot abrogate the requirement to provide lands, easements, rights-of-way, dredged material disposal areas, and relocations. Reductions in the required cash contributions are to be made on the basis of local, not state-wide, economic data, and consideration of reductions in non-Federal cash contributions are to be made without regard to project benefit-to-cost ratios. The new regulations are to be issued within 180 days of enactment.

### *Section 12. Environmental Protection Mission*

This section provides that the Secretary is to include environmental protection as one of the primary missions of the Corps of Engineers in planning, designing, constructing, operating, and maintaining water resources projects. This does not affect existing Corps of Engineers authorities including navigation and flood control. Neither does it affect pending Corps of Engineers permit applications or lawsuits or the application of public interest review procedures for Corps of Engineers permits. The Secretary is required beginning January 1, 1992 and biennially thereafter, to report on specific measures taken to carry out the section, obstacles encountered or anticipated in carrying out the section, and recommendations for administrative and legislative measures to further the purposes of the section.

### *Section 13. Flood Plain Management*

This section prohibits the Secretary from including in the benefit base for justifying a Federal flood damage reduction project any new or substantially reconstructed structure built in the 100 year flood plain after July 1, 1991 and any structure that becomes located in the 100 year flood plain by virtue of constrictions placed in the flood plain after July 1, 1991. Not later than July 1, 1992, the Secretary is to transmit to Congress a report on the feasibility and advisability of increasing the non-Federal share of the cost for new projects in areas where new or substantially reconstructed structures and other constrictions are built or placed in the 100 year flood plain after the initial date of the affected governmental unit's entry into the regular program of the National Flood Insurance Program of the National Flood Insurance Act of 1968. This section applies to any project, or any separable element thereof, for which a final report of the Chief of Engineers has not been forwarded to the Secretary on or before July 1, 1995.

### *Section 14. Shoreline Protection*

Within one year of enactment the Secretary is to transmit to Congress a report on the advisability of not participating in the planning, implementation, or maintenance of any beach stabilization or renourishment project involving Federal funds unless the state in which the proposed project will be located has established or committed to establish a beach front management program. Such a program must include restrictions on new development seaward of an erosion setback line of at least 50 times the annual erosion rate, restrictions on construction of new structural stabilization projects and their reconstruction if damaged by 50% or more, provisions for the relocation of structures in erosion prone areas, provisions to assure public access to beaches stabilize or renourished with Federal funds after January 1, 1991, and such other provisions as the Secretary may prescribe by regulation to prevent hazardous or environmentally damaging shoreline development.

### *Section 15. Reservoir Management*

This section requires the Secretary, within two years of enactment, to establish a technical advisory committee for each major

reservoir (including reservoirs of greater than 200,000 acre feet of gross storage) to provide to the Secretary recommendations on reservoir monitoring and options for reservoir management. Members of the committee are to be determined by the Secretary who shall ensure a predominance of members with appropriate academic, technical, and scientific qualifications. In developing or revising reservoir operating manuals, the Secretary must provide significant opportunities for public participation, including opportunities for public hearings. The Secretary is authorized to manage any existing dam or reservoir project of the Corps of Engineers for recreation and fish and wildlife purposes to the extent such management does not impair any other authorized project purpose.

#### *Section 16. Changes in Reservoir Project Operations*

This section requires the Secretary to conduct a review of the operations of reservoir projects under his jurisdiction to determine whether the projects are being operated in accordance with their authorized purposes, to identify deficiencies in the operations of such projects which prohibit the realization of project benefits, and to determine inconsistencies in the operations of projects which have the same authorized project purposes. A report of this review is due within 12 months of the date of enactment.

Within 270 days after the date of enactment, the Secretary is to develop a preliminary draft of a water control manual for each water reservoir project under his jurisdiction. The draft is to be available for review by the public for a period of not less than 90 days and a final draft must be published not later than 15 months after enactment. Each manual so developed must be consistent with the authorized purposes of the project for which the manual is developed, and each reservoir must be operated in accordance with the final water control manual developed under this section.

Prior to making any significant change in the water control manual developed under this section, the Secretary must make the proposed change available for review by the public for a period of not less than 60 days, prepare a comprehensive assessment of the need for the proposed change and the effects of the change and transmit a copy of the proposed change to Congress together with an assessment of the change so that the proposed change will be available to Congress for a period of not less than 60 days before the proposed change becomes effective.

This provision is a preliminary response to issues which a number of Members have raised with this Committee regarding the failure of the Corps to engage in an open and public decisionmaking process, and to comply with Congressional authorization in water resources project operation.

Over the past several years, the Corps of Engineers has been faced with increasingly difficult management decisions in its project operations. Growing population, extended periods of drought in several areas of the country, development of major urban and suburban areas, and changes in project uses and expectations have placed tremendous pressure on the Corps to alter the management of water resources projects to accommodate new uses not considered in the congressional authorization of the projects. The Corps' decisional processes have frequently been perceived to



discourage or preclude public participation; ignore public comments; ignore economic analysis of various management options; disregard Congressional project authorization; and depart from principles of fairness.

Several examples illustrate this trend. In Pennsylvania, at the Raystown Reservoir, the Corps is considering a reallocation of reservoir storage from recreation to water supply, despite strong local opposition. Similar problems have been encountered at other projects around the country, including projects in the White River and the Missouri River basins and the southeastern United States, generally.

The Committee believes that these recurring issues, which cut across a number of project uses, require Congress to intercede with a legislative solution. Section 17 of this bill is intended to address these problems by requiring the Corps to implement decisional procedures which permit public participation; recognize Congressional authority and the importance of the economic justification of projects; and ensures the preservation of Congressional jurisdiction over federal water resource programs.

#### *Section 17. Environmental Dredging*

This section authorizes the Secretary, in consultation with the Administrator of the Environmental Protection Agency, to remove as part of operation and maintenance of a navigation project, contaminated sediments outside the boundaries of and adjacent to the navigation channel whenever necessary to meet the requirements of the Federal Water Pollution Control Act. Because the removal of the sediments is necessary to permit the maintenance dredging to be performed, the removal is cost-shared the same as the maintenance dredging. In instances where water is not meeting applicable water quality standards, the Secretary may remove contaminated sediments outside the boundaries of and adjacent to the navigation channel if the removal is necessary to enable the area to meet such standards and a non-Federal sponsor agrees to pay 50% of the cost of such a removal. Finally, the Secretary is given general authority to remove contaminated sediments from the navigable waters of the United States for the purpose of environmental enhancement and water quality improvement if such a removal is requested by a non-Federal sponsor and the sponsor agrees to pay 50% of the cost of such a removal.

Other than dredging performed as part of operation and maintenance, such dredging may occur only in accordance with a joint plan developed by the Secretary and interested Federal, state, and local government officials. The plan must include an opportunity for public comment, a description of the work to be undertaken, the methods to be used for dredged material disposal, the roles and responsibilities of the Secretary and non-Federal sponsors, and identification of sources of funding. The costs of disposal of contaminated sediments to be removed under this section shall be a non-Federal responsibility. The Committee notes that removal of contaminated sediments is not a mandatory requirement in connection with the operation and maintenance of a Corps project, unless necessary to meet applicable requirements of the Federal Water Pollution Control Act. The Committee also notes that in many in-

stances the costs of disposal could be prohibitively high for a small community. Therefore, it is expected that in the development of the joint plan for removal of contaminated sediments, the plan may include a mixture of non-Federal funding sources, from both state and local government sources. Finally, the non-Federal sponsor for the environmental dredging does not need to be the same non-Federal sponsor as for the navigation project.

#### *Section 18. Protection of Recreational and Commercial Uses*

This section provides that in planning any water resources project, the Secretary is to consider the impact of the project on existing and future recreational and commercial uses in the area surrounding the project. If maintenance, repair, rehabilitation, or reconstruction of a water resources project results in an adverse effect on recreation, the Secretary, to the maximum extent practicable, is to mitigate for the loss of such use. Costs are to be shared in accordance with applicable cost allocation procedures and shall be paid or reimburse as appropriate. This cost allocation approach is modeled after Section 906(c) of the Water Resources Development Act of 1986 which specifies cost sharing requirements for fish and wildlife mitigation, and assigns them to the basic project purposes requiring the mitigation.

#### *Section 19. Multi-Purpose Water Resources Projects*

This section provides that activities currently performed by personnel under direction of the Secretary in connection with the operation and maintenance of hydroelectric power generating facilities at Corps of Engineers multipurpose water resources projects are to be considered as inherently governmental functions and not commercial activities. This section does not prohibit contracting out major maintenance or other functions which are currently contracted out or studying services not directly connected with project maintenance and operations.

#### *Section 20. Great Lakes Remedial Action Plans*

This section authorizes the Secretary to provide technical, planning, and engineering assistance to states and local governments in the development and implementation of remedial action plans for areas of concern in the Great Lakes which have been identified under the Great Lakes Water Quality Agreement of 1978. Non-Federal interests must contribute 50% of the costs of such development and implementation efforts performed by the Secretary.

#### *Section 21. Matters To Be Addressed in Planning*

Section 21 amends Section 904 of the Water Resources Development Act of 1986 by specifying that preservation and enhancement of the environment are specific factors to be addressed in planning water resources projects under the general requirement that projects enhance the quality of the total environment.

#### *Section 22. Cross Florida Barge Canal*

Section 22 rewrites Section 1114 of the Water Resources Development Act of 1986, which addresses the deauthorization and disposition of the Cross Florida Barge Canal. New Section 1114 would pro-

vide that the Barge Canal project between the Gulf of Mexico and the Atlantic Ocean would be deauthorized immediately upon the Governor and cabinet of the State of Florida adopting a resolution specifically agreeing on behalf of the State of Florida to all of the terms consistent with the transfer of project lands. The transfer of project lands by the Secretary would be of all lands and interests in lands acquired by the Secretary and facilities completed for the barge canal project if the state agrees to: hold the United States harmless from all claims arising from or through operation of the lands or facilities; preserve and maintain a greenway corridor which shall be open to the public for compatible recreation and conservation activities of not less than 300 yards wide (except where no lands are currently owned, where it is currently less than 300 yards wide, or where a road or bridge crosses the project corridor); create a state park or conservation/recreation area in the lands and interests in land acquired for the project; preserve, enhance, interpret, and manage the water and related land resources of the area containing cultural, fish and wildlife, scenic, and recreational values in the remaining lands and interests in lands; agree to pay from the assets of the state canal authority and the Cross Florida Canal Navigation District, a minimum aggregate sum of \$32 million to the counties of Citrus, Clay, Duval, Levy, Marion, and Putnam; and, after repayment of all sums due to the counties, obtain fee title to lands along the project where a lesser title was previously obtained or to purchase privately owned lands within the proposed project route.

This section requires the United States to vigorously enforce the agreements between the United States and the State of Florida in the courts of the United States. The United States is entitled to any remedies in equity or law, including, without limitation, injunctive relief for enforcement purposes. Florida would also be entitled to the same remedies in the courts of Florida or the United States.

The actual transfer of lands and responsibilities will not occur on the constructed portions of the project for 24 months following enactment. During that period, the Secretary is to carry out any and all programmed maintenance on the constructed portions of the project.

The exact acreage and legal description of the property are to be determined by a survey which is satisfactory to the Secretary and to Florida. The cost of the survey shall be borne by Florida.

### *Section 23. Small Navigation Projects*

This section authorizes several small navigation projects to be pursued under Section 107 of the River and Harbor Act of 1960, which authorizes the construction of small navigation projects with a statutory limit on Federal cost of \$4 million per project.

Subsection (a) authorizes a navigation project south of the existing diked disposal area in Buffalo, New York, consisting of construction of a breakwater, fishing pier, and floating docks.

Subsection (b) authorizes a navigation project for the mouth of the Genesee River in Rochester, New York, consisting of development and implementation of wave surge control measures.

Subsection (c) authorizes a navigation project at the mouth of the LaPlasance Creek, Bolles Harbor, Michigan, consisting of construction of an offshore barrier.

Subsection (d) authorizes a navigation project at the Fort Peck Reservoir, Montana, consisting of construction of a breakwater.

#### *Section 24. Onondaga Lake, New York*

This section authorizes the Secretary and the Administrator of the Environmental Protection Agency and the Governor of the State of New York, acting jointly, to convene a management conference for the restoration, conservation, and management of Onondaga Lake, New York. The conference is to develop, within one year, a comprehensive restoration, conservation, and management plan that recommends priority corrective actions and compliance schedules for the cleanup of Onondaga Lake; and, coordinate implementation of the plan by the State of New York, the Corps of Engineers, the Environmental Protection Agency and all local agencies, governments, and other groups participating in the conference. The members of the management conference must include the Secretary, the Administrator, the Governor of New York, a representative of the Attorney General of New York, a representative of Onondaga County, and a representative of Syracuse. The United States Senators from New York and the Members of the House of Representatives within whose Congressional District Onondaga Lake lies are ex-officio members of the conference.

The management conference, with the approval of the Secretary, the Administrator and the Governor, is authorized to make grants to New York and public or non-profit private, agencies, institutions, organizations, and individuals. These grants may be made for research, surveys, and studies necessary for the development of the plan for the restoration of Onondaga Lake, and conducting activities identified in the plan. A grant may not exceed 70% of the cost of these types of effort. The grants also may be made for gathering data and retaining expert consultants in support of litigation undertaken to compel cleanup or obtain cleanup and damage costs from parties responsible for the pollution of Onondaga Lake. \$15 million per fiscal year for fiscal years 1992 through 1998 are authorized to be appropriated to the Secretary and the Administrator for this section.

#### *Section 25. Sauk Lake, Minnesota*

Section 25 directs the Secretary to complete the project for removal of silt and aquatic weeds, Sauk Lake, Minnesota, including the acquisition of weed harvesting equipment, using funds appropriated by Congress for such purpose.

The Committee's intent in section 26 is to give further guidance to the Corps in carrying out the comprehensive project authorized in section 602 of the Water Resources Development Act of 1986. This includes the immediate use of funds previously appropriated but not yet obligated.

The St. Paul District Alternatives Report contemplates a multi-million dollar project including weed harvesting and areawide land treatment/nonpoint source management components. The committee directs the Corps to expedite its consideration of this vital

project which will provide a national model on lake cleanup and watershed pollution prevention measures. The Committee also notes that all components of the project contained in the Alternatives Report are part of the authorization in the 1986 Act.

#### *Section 26. Wappingers Lake, New York*

Section 26 adds Wappingers Lake, New York, for removal of silt and aquatic growth, to the Clean Lakes Program established in Section 602(a) of the Water Resources Development Act of 1986.

#### *Section 27. Small Flood Control Projects*

This section authorizes several small flood control projects to be prosecuted under Section 205 of the Flood Control Act of 1948. Section 205 of the Flood Control Act of 1948 authorizes the construction of small flood control projects with a maximum Federal cost of \$5 million per project.

Subsection (a) authorizes a project for flood control, Dry Jordan and Crooked Creeks, Harrison, Arkansas.

Subsection (b) authorizes a project for flood control, East Fork of the Blue River and Brock Creek, Salem, Indiana.

Subsection (c) authorizes a project for flood control, Old Sulfur Creek, Orleans, Indiana.

Subsection (d) authorizes a project for flood control, White River, Hazelton, Gibson County, Indiana.

Subsection (e) authorizes, on an expedited basis, a non-structural project for flood control, Farmers Branch Creek, White Settlement, Texas, consisting of relocation and purchase of residential structures located within the flood plain.

Subsection (f) authorizes a project for flood control, Valley View Branch, Hurst, Texas, except that the maximum amount which may be allotted for this project shall be \$7,500,000.

Subsection (g) provides that the maximum amount which may be allotted under section 205 of the Flood Control Act of 1948 for the project for flood control, Savan Gut, Virgin Islands, shall be \$10 million instead of \$5 million, and nothing is to be construed as affecting any cost sharing requirements applicable to such project.

Subsection (h) authorizes a project for flood control, Krouts Creek in the vicinity of Huntington, West Virginia, including deepening and widening of the channel and culvert replacement.

#### *Section 28. Bay City, Michigan*

This section authorizes the Secretary to undertake a project for shoreline protection along the Saganaw River in Bay City, Michigan.

#### *Section 29. Delaware River and Tributaries, Pennsylvania*

This section authorizes the Secretary to carry out a project for shoreline protection for the Glen Foerd Historic Property in Philadelphia, Pennsylvania, along the Delaware River and tributaries, including restoration of seawalls.

#### *Section 30. Continuation of Authorization of Certain Projects*

This section continues the authorization of certain projects notwithstanding the provisions of Section 1001(b)(1) of the Water Re-



sources Development Act of 1986. These projects include: the modification for sealing the east jetty of the project for Santa Cruz, California; the project for flood control Pajaro River and tributaries, Santa Cruz, California; dredging of Hillsboro Inlet, Florida; the flood control project for the Little Calumet River Basin (Cady Marsh Ditch), Indiana; the project for navigation at Ontonagon Harbor, Michigan; the navigation projects for the Ottawa River Harbor, Michigan and Ohio; the second lock for Sault Sainte Marie, Michigan; the small boat harbor project for Conneaut, Ohio; the small boat harbor project for Fairport, Ohio; the project for navigation, Memphis Harbor, Memphis, Tennessee; and, the project for the deepening of three navigation anchorages at Norfolk Harbor, Virginia. In relation to the second lock at Sault Sainte Marie, the Secretary is required to allocate the non-Federal share of the cost of such lock to Canada and the 8 Great Lakes States, using current traffic statistics, based on the total tonnage of commercial cargo which will be delivered to or from ports in Canada and each of the states. The non-Federal share shall not include any costs allocated to Canada, and the amount of the non-Federal share shall be reduced by an amount equal to any contribution made by the government of Canada toward construction of the lock.

The projects which are reauthorized will not be authorized for construction after the last day of the 5 year period that begins on the date of enactment of this Act unless funds have been obligated for the construction of the project.

This section also continues the authorization for the flood control project for Freeport, Illinois which was deauthorized by Section 1002 of the Water Resources Development Act of 1986.

### *Section 31. Erosion Prevention Projects, Louisiana*

This section authorizes the Secretary to carry out erosion prevention projects in Vermilion Parish and Calcasieu Parish, Louisiana at a total cost of \$200,000. The projects are to include revetment work and reconstruction of spoiled banks with dredged material.

### *Section 32. Hazard, Kentucky*

This section directs the Secretary to design and construct flood control measures at or in the vicinity of Hazard, Kentucky, as the Secretary determines necessary and appropriate to provide Hazard and its immediate environs a level of protection against flooding at least sufficient to prevent any future losses to the city from the likelihood of flooding such as occurred in January, 1957. The benefits of the project attributable to the flood control measures are deemed to exceed the costs of such measures.

### *Section 33. Demonstration of Construction of Federal Project by Non-Federal Interests*

Section 33 authorizes a demonstration of benefits and economic efficiencies from Construction of Federal projects by non-Federal interests. The Secretary is required to enter into agreements with two non-Federal interests where non-Federal interests would undertake part or all the harbor project authorized by law, if the proposals for such an undertaking meet the criteria of Section 204 of the Water Resources Development Act of 1986. The purpose of the

demonstration is to determine whether navigation projects could be built more expeditiously and more cheaply, while enhancing safety, if constructed by non-Federal interests. At least one of the projects must pertain to improvements to a major ship channel which carries a substantial volume of both passenger and cargo traffic.

#### *Section 34. Modification of Reversionary Interest*

This section directs the Secretary to modify the reversionary interest of the United States in approximately 50 acres of land reserved in a deed of October 22, 1963 for the purpose of allowing the United Methodist Church to construct and operate a retirement village on land previously conveyed to Clay County, Georgia.

#### *Section 35. Upper Mississippi River Plan*

This section extends the Upper Mississippi River Management Act of 1986, as authorized by Section 1103 of the Water Resources Development Act of 1986, for an additional 5 years.

#### *Section 36. Section 221 Agreements*

This section amends Section 221(a) of the Flood Control Act of 1970 relating to local cooperation agreements to allow local cooperation agreements to reflect the inability of local governments to incur unfunded obligations.

#### *Section 37. Cabin Site Leases*

Section 37 amends Section 1134(d) of the Water Resources Development Act of 1986 concerning the protection of certain private property interests at Corps of Engineers reservoirs to add cabins to the property interests protected from lease cancellation at Corps reservoirs.

#### *Section 38. San Luis Rey, California*

This section increases the cost ceiling for the construction of the flood control project at San Luis Rey, California being carried out under Section 201 of the Flood Control Act of 1965, to \$60 million.

#### *Section 39. Construction of Virgin Island Projects by Secretary of the Army*

This section provides that upon request of the Governor of the Virgin Islands and with respect to a construction project in the Virgin Islands for which Federal financial assistance is available, the Federal official administering such assistance may make such assistance available to the Secretary instead of the Virgin Islands to carry out the project in accordance with applicable provisions of law. This section does not relieve the Virgin Islands from complying with any requirements for non-Federal cooperation with respect to a construction project carried out with Federal financial assistance. This authority terminates 3 years following the date of enactment, except that the Secretary may complete any project initiated before such 3 year period.

#### *Section 40. Protection of Recreation Project Purposes*

This section provides that Section 1 of the Act of September 6, 1960, related to development of reservoir areas for future resources

of timber, shall not apply to the projects at Beach Fork Lake, Bluestone Lake, East Lynn Lake, R.D. Bailey Lake, Summersville Lake, Sutton Lake, and Stonewall Jackson Lake, all in West Virginia.

*Section 41. Liberty, Ohio*

This section authorizes a study of the water supply needs of Liberty, Ohio, and directs the conducting of a technology demonstration of methods to meet the water supply needs of Liberty, Ohio.

*Section 42. Washingtonville, Ohio*

This section directs the Secretary to conduct a study of the water supply needs of Washingtonville, Ohio, and to conduct a technology demonstration of methods to meet the water supply needs of Washingtonville, Ohio.

*Section 43. Albermarle Sound-Roanoke River Basin, North Carolina*

This section provides that no construction may be carried out with respect to the permit granted by the Corps of Engineers for a water supply pipeline at Lake Gaston, Virginia and North Carolina until submission of the report mandated by Section 5 of Public Law 100-589 and a review of the report and determination by the Corps of Engineers of the impact of the project in light of the report. The purpose of the report is to study the effects of the proposed water supply pipeline on fisheries in the region.

*Section 44. Cranston, Rhode Island*

This section authorizes the Secretary, in consultation with the Administrator of the Environmental Protection Agency, to conduct a feasibility study of waste water treatment options for transporting contamination from the central landfill site and other sources of pollution in Rhode Island to a waste water treatment facility in Cranston, Rhode Island, through the use of a regional connector system. Following completion of the feasibility study, which is to be no later than 1 year from enactment, the Secretary is to conduct a technology demonstration of the connector system to determine the capability of the system design to operate properly.

*Section 45. Santa Rosa, California*

This section authorizes the Secretary to assist the City of Santa Rosa, California, in the development and construction of storage facilities associated with waste water reclamation.

*Section 46. Generation Facilities*

This section prohibits the Secretary from authorizing, approving, or recommending any activity referred to in Section 10 of the Rivers and Harbors Act of 1899 in connection with the construction of generation facilities at the project on the Savage River at the Savage River Dam, Maryland or at any location on the Savage River downstream of the project and upstream of the confluence of the Savage River and the North Branch of the Potomac River. This section also prohibits permits under the Federal Water Pollution Control Act which would authorize any discharge in connection with the construction or operation of any such facilities and prohib-

its the issuance or waiver of any certification under that Act for any discharge resulting from such construction or operation. These prohibitions are also made applicable to Summersville Lake, West Virginia.

*Section 47. Flat Rock, Michigan*

This section directs the Secretary to provide assistance to non-Federal interests in the design and construction of repairs to the dam at Flat Rock, Michigan.

*Section 48. Warroad Harbor, Minnesota*

This section directs the Secretary to carry out a navigation project to dredge the navigation channel and adjacent basin—not just the Federally authorized channel and basin—at Warroad Harbor, Minnesota, in order to provide safe boating access and egress and to upgrade existing retaining walls.

The section directs the Corps to undertake several measures related to Warroad Harbor, the navigation channel and the existing retaining (revetment) wall. The Committee's intent is to direct the Corps to dredge beyond existing authorized navigation channel and basin; therefore the term "adjacent basin" encompasses the entire channel and the revetment wall. The Committee also directs the Corps to maintain and repair the existing retaining wall and take any other necessary measures so as to fulfill the United States' obligations under the 1925 Treaty between the U.S. and Great Britain (relating to Canada). Finally, the Committee believes the Corps should take measures to address concerns about navigation hazards created by disposal of dredged material.

*Section 49. Rondout Creek and Wallkill River, New York and New Jersey*

This section provides that the non-Federal share of correcting the design deficiency of the North Ellenville portion of the project for flood control, Rondout Creek and Wallkill River and their tributaries, New York and New Jersey authorized by Section 203 of the Flood Control Act of 1962 shall be the same as the non-Federal share of the project as originally authorized and constructed. The Committee believes that design deficiencies should be corrected in accordance with the cost sharing applicable to the original construction of the project.

*Section 50. Struthers, Ohio*

This section authorizes the Secretary to carry out planning, engineering, and design for replacement of the Bridge Street Bridge in Struthers, Ohio.

*Section 51. Virginia Beach, Virginia*

This section directs the Secretary, pursuant to Section 156 of the Water Resources Development Act of 1976, to enter into a local cooperation agreement with the City of Virginia Beach, Virginia, for nourishment of the project for beach erosion, Virginia Beach, Virginia, and such agreement is deemed to have taken effect as of February 6, 1987.

### *Section 52. Youngstown, Ohio*

This section authorizes the Secretary to carry out planning, engineering, and design of the Center Street Bridge new alignment for Youngstown, Ohio.

### *Section 53. Southwest Region Flood Response Commission*

This section establishes a commission to be known as the Southwest Region Flood Response Evaluation Commission to evaluate existing flood control measures in the Arkansas, Red and Ouachita River Basins; the effectiveness of Federal emergency response capabilities related to flooding; and, the effectiveness of Federal disaster assistance programs in providing adequate and prompt compensation to flood victims.

The Commission is to be composed of the following individuals or their delegate: the Secretary of the Army, the Secretary of Agriculture, the Director of the Federal Emergency Management Agency, the Governor of Arkansas, the Governor of Oklahoma, and the Governor of Texas. The Commission is required to transmit a report to the President and Congress not later than one year after the date of enactment and the Commission terminates 30 days after submitting its final report.

### *Section 54. Rehabilitation of Federal Flood Control Levees*

This section directs the Secretary to undertake projects for rehabilitation and reconstruction of Federal flood control levees on the Arkansas river, Arkansas and Oklahoma, substantially in accordance with the Little Rock District Engineer's Arkansas River Basin, Arkansas and Oklahoma Draft Feasibility Report, dated March 1990, and the Tulsa District Engineer's Keystone To Tulsa Reconnaissance Report, dated September 1989. The Secretary is also directed to undertake projects for rehabilitation and reconstruction of Federal flood control levees on the Red River, Oklahoma and Arkansas below Denison Dam. These projects will make the levees comply with current Federal design standards and are to include repairs of design deficiencies and replacement of deteriorated drainage structures and other appurtenances.

### *Section 55. Flood Warning System*

This section authorizes the Secretary to develop and install a flood warning system for the Santa Clara River and its tributaries (including Santa Paula Creek), Ventura and Los Angeles Counties, California. This system must provide as a minimum, base stations in both Ventura and Santa Paula, California. Non-Federal interests must agree to operate and maintain such system and to develop, maintain, and implement such emergency preparedness plans for flooding along the Santa Clara River and its tributaries in Ventura and Los Angeles Counties, as are satisfactory to the Secretary.

### *Section 56. Rend Lake Water Storage Contract Extension*

This section amends Section 1137 of the Water Resources Development Act of 1986, which modified the water supply contract for Rend Lake, Illinois to provide that non-Federal sponsors would pay only for costs allocated to the storage space actually used, by ex-



tending the period of contract modification from 5 years to 10 years.

*Section 57. Declaration of Non-Navigability for Portions of Lake Erie*

This section declares a certain portion of Lake Erie to be non-navigable waters of the United States, unless the Secretary finds that the proposed projects to be undertaken are not in the public interest. Any work to be undertaken remains subject to all applicable Federal statutes and regulations including Sections 9 and 10 of the Act of March 3, 1899, Section 404 of the Federal Water Pollution Control Act, and the National Environmental Policy Act of 1969. If, 20 years from the date of enactment, any area or part thereof is not bulkheaded or filled or occupied by permanent structures, or if the work in connection with any activity permitted is not commenced within 5 years after the issuance of the Permits, then the declaration of non-navigability shall expire.

*Section 58. Wetlands Enhancement Opportunities*

This section requires the Secretary to transmit to Congress a list which specifically identifies opportunities for enhancing wetlands in connection with construction and operation of water resources projects. This list is to be submitted no later than January 20, 1991. The Committee intends that this submission coincide with the President's budget submission for fiscal year 1992.

*Section 59. Radium Removal Demonstration Program*

This section authorizes the Secretary, in cooperation with state public authorities, to assist local governments in demonstrating methods of mitigation of radium contamination in groundwater. Grant assistance provided under this section is to be used for financing the acquisition and installation of groundwater treatment technologies needed to remove radium from groundwater used as a source of public drinking water for residents of small communities. These grants may be used to provide insurance or prepaying interest for local obligations to finance the acquisition and installation of treatment technologies, and to pay the cost of administration for establishment and operation of a program to provide financing for such acquisition and installation. A small community is defined as a political subdivision of a state which does not exceed 20,000 individuals.

*Section 60. Studies*

This section authorizes or make modifications to 17 studies related to water resources.

Subsection (a) provides that the non-Federal costs for a feasibility study for a flood control project for Hot Springs, Arkansas, is to be reduced by the same percentage as the percentage of the total benefits of the project which are attributable to protection of lands owned by the United States.

Subsection (b) directs the Secretary to conduct a feasibility study for a flood control project on the lower Calleguas Creek, California, and to determine the full benefits of increased agricultural production which are likely to result from the project.

Subsection (c) directs the Secretary, in consultation with the Director of the Federal Emergency Management Agency, to conduct a feasibility study in the Southern California region of the problems and alternative solutions of restoring the region's public works infrastructure to full service following earthquakes which caused substantial damage to the infrastructure.

Subsection (d) directs the Secretary to complete a reconnaissance investigation and feasibility study for the breakwater project, Santa Monica, California, and to ensure that reestablishment of past charter fishing vessel accommodation activities which existed in the area from the 1930's until prior to damage of the breakwater structure are counted the same as commercial benefits for purposes of Section 119 or the 1970 River and Harbor Act.

The Committee wishes to clarify the situation concerning Disaster Relief funds awarded to the City of Santa Monica for pier and breakwater construction following 1982 and 1983 storms. While funds for the pier have been released by FEMA to the local sponsor, funds for reconstruction of the breakwater have been withheld pending the completion of the feasibility study.

The Committee understands that the previously awarded disaster relief funds for the breakwater will be placed in the city's general fund. The City's general fund may then be used as the non-Federal share of the cost of construction of the breakwater. Therefore, the Committee directs the Director of FEMA to release the disaster relief funds for the breakwater to the City of Santa Monica.

Subsection (e) directs the Secretary, in cooperation with the Administrator of the Environmental Protection Agency and the Atlanta Regional Commission, to review the completed study and supporting documentation for the Metropolitan Atlanta Area Water Resources Management Study for the purpose of providing plans for the improvement of water quality of major streams in the Metropolitan Atlanta Region.

The review is to include review of the effectiveness of existing treatment facilities and the need for additional or improved treatment of municipal and industrial waste water, combined sewer overflows, and other significant point or nonpoint pollution sources.

Subsection (f) requires the Secretary to complete the feasibility study authorized by Section 1152 of the Water Resources Development Act of 1986, for Thurman to Hamburg, Iowa including the completion of planning and specifications, not later than August 1, 1991, and commence construction of the project authorized not later than October 1, 1991.

Subsection (g) directs the Secretary to conduct a study of methods of improving water quality of Rock Creek, Maryland.

Subsection (h) extends the deadline for submission of a feasibility study concerning navigation improvements at Saginaw Bay and Saginaw River, Michigan from December 31, 1989 to December 31, 1992. For purposes of Section 710 of the Water Resources Development Act of 1986, relating to the automatic deauthorization of studies not funded for five years, the study of Saginaw Bay is to be treated as being authorized on the date of enactment of the Water Resources Development Act of 1990.

Subsection (i) directs the Secretary to conduct a study with the States of Minnesota and North Dakota, to determine and recommend alternative plans to augment flows in the Red River of the North, Minnesota and North Dakota. The study is to include methods to supplement flows on the river from municipal, industrial, agricultural, and fish and wildlife purposes and recognize the need for continued flow into Canada. The Secretary is to coordinate with the Bureau of Reclamation on actions being undertaken by the Bureau with respect to the Garrison Diversion Unit.

Subsection (j) directs the Comptroller General to conduct a study of the facts and circumstances concerning the claims of the Highfield Water Company, New Jersey, against the United States Army Corps of Engineers for the purpose of making recommendations for an appropriate settlement of such claims.

Subsection (k) directs the Secretary to conduct a study of the feasibility of implementing flood control measures on the Manasquan River to alleviate flooding in Freehold, Howell, and other affected townships in New Jersey.

Subsection (l) directs the Secretary to conduct a review and evaluation of the plan prepared by the city of Buffalo, New York, on flooding and associated water quality problems (including those associated with combined sewer overflows, sewer backups, and river-side outfalls) in the Buffalo metropolitan area. The review and evaluation is to develop recommendations for Federal and State participation in solving the problems described above and to identify flood control benefits for implementing the plan.

Subsection (m) provides that the study for the inland navigation project, Lake Erie to the Ohio River Canal, Ohio, is to be considered to be a water resources study primarily designed for the purposes of navigation improvements in the nature of dams, locks, and channels on the Nation's system of inland waterways, and not as a flood control project.

Subsection (n) directs the Secretary to study the feasibility of non-dam options to alleviate flooding along Mill Creek and Seven Mile Creek in Tennessee.

Subsection (o) directs the Secretary, in consultation with the Director of the Federal Emergency Management Agency, to conduct a feasibility study in the regions surrounding the New Madrid Fault of the problems and alternative solutions of restoring the region's public works infrastructure to full service following earthquakes which caused substantial damage to such infrastructure.

The Committee notes that the Corps is currently nearing completion of a comprehensive report on the water resources needs of the Arkansas River Basin in Arkansas and Oklahoma. The report was authorized pursuant to a Committee Resolution approved by the Committee on Public Works and Transportation on March 11, 1982, and has involved a two-State evaluation of navigation, flood control, water supply, hydroelectric power, recreation and fish and wildlife needs in the basin.

Recent flooding in April and May of this year indicates that there is a need to reevaluate the adequacy of existing water resources project features to effectively respond to a significant flood event. Accordingly, the Committee directs the Corps to submit the results of the on-going Arkansas basin study as an interim study as

expeditiously as possible and to undertake a second phase study which would review the adequacy of existing facilities in light of recent flood experiences. As a component of that study, the Corps should evaluate the feasibility of improving existing levees along the Arkansas River in order to facilitate a more rapid release of upstream storage which would not only improve flood protection but would also enhance navigation by allowing a more rapid return to commercial traffic on the McClellan-Kerr Waterway. In accordance with existing cost sharing requirements, study of levee modification work which would produce navigation benefits would be funded entirely by the Federal Government.

*Section 61. Lake of Woods, Minnesota*

This section authorizes the Secretary to undertake an investigation of the lands bordering on the Lake of the Woods, Minnesota, to determine whether the lands and improvements thereon currently meet applicable requirements of international agreements concerning regulation of the levels of the Lake of the Woods. The Secretary is authorized to acquire lands and provide protective works and measures when necessary to satisfy the requirements of the international agreements. The Secretary is to report to Congress within one year of the date of enactment on the progress made in carrying out this section and the need, if any, for further legislation to resolve any outstanding claims for damages caused by the need for additional protective works and measures.

The purpose of this section is to address concerns about shoreline erosion throughout the Lake of the Woods and to direct the Federal Government to respond to those concerns so as to meet its obligations under the 1925 Treaty between the U.S. and Great Britain (with regard to Canada).

*Section 62. Project Deauthorizations*

This section modifies the automatic project deauthorization provision contained in section 1001 of the Water Resources Development Act of 1986, to require that before submission of a list of proposed deauthorized projects to the Congress, the Secretary must notify each Senator in whose State, and each Member of the House of Representatives in whose district a project on such a list is located. This section also repeals the outdated deauthorization provision contained in section 12 of the Water Resources Development Act of 1974.

This section specifically deauthorizes three projects or portions of projects as follows: A portion of the channel at Greenwich Harbor, Connecticut; a portion of the channel at Conneaut Harbor, Ohio; and the Big River Reservoir water supply project at Providence, Rhode Island.

*Section 63. Half Moon Bay Harbor*

This section renames the harbor commonly known as Half Moon Bay Harbor located in El Granada, California, as Pillar Point Harbor.

COMPLIANCE WITH CLAUSE 2(1) OF RULE XI OF THE RULES OF THE  
HOUSE OF REPRESENTATIVES

(1) With reference to clause 2(1)(3)(A) of rule XI of the Rules of the House of Representatives, the Subcommittee on Investigations and Oversight did not hold hearings on the specific subject matter of the legislation. The Subcommittee on Water Resources held hearings on the subject matter on March 1, 1990, March 7, 1990, and March 14, 1990.

(2) With respect to clause 2(1)(3)(B) of rule XI of the Rules of the House of Representatives, H.R. 5314, as reported, does not provide new budget authority or increased tax expenditures. Accordingly, a statement pursuant to section 308(a) of the Congressional Budget Act is not required.

(3) With reference to clause 2(1)(3)(C) of rule XI of the Rules of the House of Representatives, the Committee has received a report prepared by the Congressional Budget Office under section 403 of the Congressional Budget Act. That report is as follows:

U.S. CONGRESS,  
CONGRESSIONAL BUDGET OFFICE,  
*Washington, DC, September 14, 1990.*

Hon. GLENN M. ANDERSON,  
*Chairman, Committee on Public Works and Transportation,  
House of Representatives, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the attached cost estimate for H.R. 5314, the Water Resources Development Act of 1990.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

ROBERT D. REISCHAUER,  
*Director.*

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: H.R. 5314.
2. Bill title: The Water Resources Development Act of 1990.
3. Bill status: As ordered reported by the House Committee on Public Works and Transportation on August 9, 1990.
4. Bill purpose: The Water Resources Development Act of 1990 (WRDA) would authorize the Secretary of the Army, acting through the Corps of Engineers (Corps), to construct 25 projects for flood control, port development, storm damage reduction, and miscellaneous other purposes. The Corps estimates that these projects have a total Federal cost of approximately \$1.7 billion in 1990 dollars.

Five additional projects for navigation and flood control also would be authorized, contingent upon the issuance of final engineering reports by the Corps. The Federal cost of these projects is estimated to total \$0.9 billion in 1990 dollars.

The bill also contains provisions that modify 39 existing Corps projects, authorize new programs and studies to be carried out by the Corps and other Federal agencies, and make changes in certain Corps operating and financial procedures.

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5. Estimated cost to the Federal Government: The estimated budget impact of the projects and activities authorized or mandated in this bill, assuming the necessary appropriations, is shown in the following table for fiscal years 1991 through 1995:

(By fiscal year, in millions of dollars)					
	1991	1992	1993	1994	1995
Estimated authorization level .....	72	183	235	239	248
Estimated outlays .....	33	146	216	238	237

In addition, it is estimated that the Corps would spend approximately \$2.6 billion after 1995 to complete construction of these projects.

The costs of this bill fall primarily in budget function 300.

Basis of estimate. The Water Resources Development Act of 1986 (Public Law 99-662) set an obligation ceiling for Corps construction activities of \$1.8 billion for 1991. Information from the Corps indicates that for that year, obligations for currently authorized projects are likely to meet these targets, leaving no money in that year for funding the new projects authorized in this bill. It is possible that, if appropriations were provided for newly authorized projects in 1991, spending for these new projects would displace spending on some already authorized projects. In either case, total spending for Corps construction activities will remain constrained by the obligation ceiling. Consequently, we have assumed that enactment of this bill would result in no additional spending in 1991 for activities covered by the obligation ceiling. Outlays for some non-construction activities are projected to occur in 1991.

Project authorizations. Section 3 of the WRDA authorizes the construction of a total of 30 projects: 15 flood control, 5 port development, 4 storm damage reduction, 4 inland navigation, and 2 miscellaneous projects. In most cases, the WRDA specifies estimated total costs for each project in fiscal year 1990 dollars. Where costs are not specified, CBO has obtained estimates from the Corps to reflect prices in 1990 dollars.

This estimate assumes that the bill will be enacted by October 1990 and that the full amounts authorized will be appropriated to keep all projects on a normal planning, design, and construction schedule beginning in fiscal year 1992. Some of the projects authorized in this bill are still in the study or design phase and will not be ready to begin construction for a number of years. Annual spending needs were provided to us by the Corps. These annual outlay estimates were then adjusted for inflation and authorization levels sufficient to cover them were calculated. We assumed that all projects authorized will be constructed.

The budget impact of the project authorizations in section 3 is shown in the following table:

[By fiscal year, in millions of dollars]

	1991	1992	1993	1994	1995
Estimated authorization level .....		45	97	90	140
Estimated outlays .....		29	77	88	116

In addition, it is estimated that outlays of approximately \$2.2 billion would be incurred by the Federal Government after 1995 to complete construction of these projects.

**Modifications.** Section 4 would modify 39 existing Corps projects. Based on information from the Corps, CBO estimates that these modifications would increase Federal costs by \$34 million in 1992 and by about \$227 million over the 1992-1995 period, assuming appropriation of the necessary funds.

Subsequent additional costs totaling about \$450 million would be incurred to complete authorized modifications.

**Miscellaneous provisions.** Sections 5 through 69 contain a number of provisions that would: Change certain Corps procedures and activities; extend the Corps' authority to carry out certain emergency and environmental restoration activities; provide authority for the Corps to carry out a number of small flood control and erosion projects; and authorize the Corps to conduct a number of studies and to establish a program for the control of zebra mussels in and around infrastructure facilities. We estimate that these changes would increase Federal outlays by \$33 million in 1991 and by \$278 million over the 1991-1995 period.

Section 5 would establish a management conference for Onondaga Lake in New York. The conference would be authorized to develop a restoration plan for the lake, and to make grants for research, studies, and plan implementation. The section authorizes the appropriation of \$15 million annually from 1991 through 1995 for the Corps and the Environmental Protection Agency (EPA) to carry out the program. We estimate that enactment of this section would result in Federal outlays totaling about \$11 million in 1991 and \$15 million annually thereafter, assuming appropriation of the authorized sums. Information from EPA and the State of New York indicates that restoration costs could total between \$500 million and \$1 billion.

6. Estimated cost to State and local governments: The estimated total State and local share of the projects and activities authorized in this bill is shown in the following table:

[By fiscal year, in millions of dollars]

	1991	1992	1993	1994	1995
Estimated outlays .....		17	32	39	62

In addition, it is estimated that nonfederal units of government would spend approximately \$800 million after 1995 for their share of project costs.

7. Estimate comparison: None.

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8. Previous CBO estimate: On June 12, 1990, CBO prepared a cost estimate for the Water Resources Development Act of 1990, as ordered reported by the Senate Committee on Environment and Public Works. The projects and activities authorized by that bill were estimated to result in outlays of \$667 million over the 1991-1995 period.

9. Estimate prepared by: Theresa Gullo.

10. Estimate approved by: C.G. Nuckols (for James L. Blum, Assistant Director for Budget Analysis).

(4) With reference to clause 2(1)(3)(D) of rule XI of the Rules of the House of Representatives, the Committee has not received a report from the Committee on Government Operations pertaining to this subject matter.

(5) With reference to clause 2(1)(4) of rule XI of the Rules of the House of Representatives, the following information is provided: The effect of carrying out H.R. 5314, as reported, should be minimal with respect to inflationary impacts on prices and costs in the operation of the national economy.

#### COST OF LEGISLATION

Clause 7(a) of rule XIII of the Rules of the House of Representatives requires a statement of the estimated cost to the United States which would be incurred in carrying out H.R. 5314, as reported, in fiscal year 1990 and each of the following five years. However, under paragraph (d) of clause 7 its provisions do not apply when the Committee has received a timely report from the Congressional Budget Office.

#### COMMITTEE ACTION AND VOTE

The Committee, in compliance with rule XI, clause 2(1)(2)(A) of the Rules of the House of Representatives, reports favorably the bill H.R. 5314, as amended. The Committee ordered the bill reported by voice vote.

#### CHANGES IN EXISTING LAW MADE BY THE BILL, AS REPORTED

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italic, existing law in which no change is proposed is shown in roman):

#### WATER RESOURCES DEVELOPMENT ACT OF 1988

\* \* \* \* \*

#### SEC. 3. PROJECT AUTHORIZATIONS.

(a) AUTHORIZATION OF CONSTRUCTION.—Except as otherwise provided in this subsection, the following projects for water resources development and conservation and other purposes are authorized to be carried out by the Secretary substantially in accordance with the plans and subject to the conditions recommended in the respective reports designated in this subsection:

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(1) \* \* \*

\* \* \* \* \*

(4) **PORT SUTTON CHANNEL, FLORIDA.**—The project for navigation, Port Sutton Channel, Florida: Report of the Chief of Engineers dated March 28, 1988, at a total cost of \$2,670,000, with an estimated first Federal cost of \$1,155,000, and an estimated first non-Federal cost of \$1,515,000 [; except that construction of such project may not be initiated until the Secretary determines that such project serves more than one beneficiary].

\* \* \* \* \*

#### SEC. 4. PROJECT MODIFICATIONS.

(a) \* \* \*

\* \* \* \* \*

(d) **LOS ANGELES AND LONG BEACH HARBORS, SAN PEDRO BAY, CALIFORNIA.** The navigation project for Los Angeles and Long Beach Harbors, San Pedro Bay, California, authorized by section 201 of the Water Resources Development Act of 1986 (100 Stat. 4091), is modified to provide that, if non-Federal interests carry out any work associated with such project which is later recommended by the Chief of Engineers and approved by the Secretary *or which, after the date of issuance of a report of the Chief of Engineers for such project, is included in such report*, the Secretary may credit such non-Federal interests an amount equal to the Federal share of the cost of such work, without interest. In analyzing costs and benefits of such project, the Secretary shall consider the costs and benefits produced by any work which is carried out under the preceding sentence by non-Federal interests and which the Secretary determines is compatible with such project. The feasibility report for such project shall include consideration and evaluation of the following proposed project features: Long Beach Main Channel, Channel to Los Angeles Pier 300, Channels to Los Angeles Pier 400, Long Beach Pier “K” Channel, and Los Angeles Crude Transshipment Terminal Channel.

\* \* \* \* \*

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### WATER RESOURCES DEVELOPMENT ACT OF 1986

\* \* \* \* \*

#### TITLE I—COST SHARING

##### SEC. 103. FLOOD CONTROL AND OTHER PURPOSES.

(a) \* \* \*

\* \* \* \* \*

[(m) **ABILITY TO PAY.**—Any cost-sharing agreement under this section for flood control or agricultural water supply shall be subject to the ability of a non-Federal interest to pay. The ability of any non-Federal interest to pay shall be determined by the Secretary in accordance with procedures established by the Secretary.]

(m) *ABILITY To PAY.*—

(1) *GENERAL RULE.*—Any cost-sharing agreement under this section for flood control or water supply shall be subject to the ability of a non-Federal interest to pay.

(2) *PROCEDURES.*—

(A) *IN GENERAL.*—The ability of any non-Federal interest to pay shall be determined by the Secretary in accordance with procedures established by the Secretary.

(B) *LIMITATION.*—The procedures established pursuant to this subsection shall not prescribe a minimum non-Federal share and shall allow for situations in which no cash contribution is required from the non-Federal interest; except that nothing in this subsection shall affect the requirements of a non-Federal interest to provide all lands, easements, rights-of-way, dredged material disposal areas, and relocations pursuant to this section. In addition, such procedures shall provide for determination of the eligibility of the non-Federal interest for a reduction in the required cash contribution on the basis of local, not statewide, economic data and for consideration of reductions in non-Federal cash contributions without regard to project benefit-to-cost ratio.

(C) *REGULATIONS.*—Not later than the 180th day following the date of the enactment of this subparagraph, the Secretary shall issue regulations establishing the procedures required by this paragraph.

\* \* \* \* \*

#### SEC. 105. FEASIBILITY STUDIES; PLANNING, ENGINEERING, AND DESIGN.

(a) \* \* \*

(b) *PLANNING AND ENGINEERING.*—The Secretary shall not initiate any planning or engineering authorized by this Act for a water resources project until appropriate non-Federal interests agree, by contract, to contribute 50 percent of the cost of the planning and engineering during the period of the planning and engineering. *This subsection shall not apply to planning and engineering of projects for which non-Federal interests contributed 50 percent of the cost of the feasibility study.*

\* \* \* \* \*

### TITLE II—HARBOR DEVELOPMENT

\* \* \* \* \*

#### SEC. 204. CONSTRUCTION OF PROJECTS BY NON-FEDERAL INTERESTS.

(a) \* \* \*

\* \* \* \* \*

(c) *COMPLETION OF STUDIES.*—The Secretary is authorized to complete and transmit to the appropriate non-Federal interest any study for improvements to harbors or inland harbors of the United States which were initiated prior to the date of enactment of this Act, or, upon the request of such non-Federal interest, to terminate such study and transmit such partially completed study to the non-Federal interest. *The Secretary is further authorized to complete and transmit to the appropriate non-Federal interest any study for improvement to harbors or inland harbors of the United States that*



*is initiated pursuant to section 107 of the River and Harbor Act of 1960 or, upon request of such non-Federal interest, to terminate such study and transmit such partially completed study to the non-Federal interest. Studies under this subsection shall be completed without regard to the requirements of subsection (b) of this section.*

\* \* \* \* \*

**(e) REIMBURSEMENT.—**

(1) **GENERAL RULE.**—Subject to the enactment of appropriation Acts, the Secretary is authorized to reimburse any non-Federal interest an amount equal to the estimate of Federal share, without interest, of the cost of any authorized harbor or inland harbor improvement, or separable element thereof, *including any small navigation project approved pursuant to section 107 of the River and Harbor Act of 1960*, constructed under the terms of this section if—

(A) after authorization of the project *(or, in the case of a small navigation project, after completion of a favorable project report by the Corps of Engineers)* and before initiation of construction of the project or separable element—

(i) the Secretary approves the plans of construction of such project by such non-Federal interest, and

(ii) such non-Federal interest enters into an agreement to pay the non-Federal share, if any, of the cost of operation and maintenance of such project; and

(B) the Secretary finds before approval of the plans of construction of the project that the project, or separable element, is economically justified and environmentally acceptable.

\* \* \* \* \*

**[(e)] (f) OPERATION AND MAINTENANCE.**—Whenever a non-Federal interest constructs improvements to any harbor or inland harbor, the Secretary shall be responsible for maintenance in accordance with section 101(b) if—

(1) the Secretary determines, before construction, that the improvements, or separable elements thereof, are economically justified, environmentally acceptable, and consistent with the purposes of this title;

(2) the Secretary certifies that the project is constructed in accordance with applicable permits and the appropriate engineering and design standards; and

(3) the Secretary does not find that the project, or separable element thereof, is no longer economically justified or environmentally acceptable.

**[(f)] (g) DEMONSTRATION OF NON-FEDERAL INTERESTS ACTING AS AGENT OF SECRETARY.**—For the purpose of demonstrating the potential advantages and efficiencies of non-Federal management of projects, the Secretary may approve as many as two proposals pursuant to which the non-Federal interests will undertake part or all of a harbor project authorized by Congress as the agent of the Secretary by utilizing its own personnel or by procuring outside serv-

ices, so long as the cost of doing so will not exceed the cost of the Secretary undertaking the project.

\* \* \* \* \*

#### SEC. 210. AUTHORIZATION OF APPROPRIATIONS.

(a) **TRUST FUND.**—There are authorized to be appropriated out of the Harbor Maintenance Trust Fund, established by section 9505 of the Internal Revenue Code of 1954, for each fiscal year such sums as may be necessary to pay—

(1) \* \* \*

[(2) not more than 40 percent of the eligible operations and maintenance costs assigned to commercial navigation of all harbors and inland harbors within the United States.]

*(2) not more than 100 percent of the eligible operation and maintenance costs assigned to commercial navigation of all harbors and inland harbors within the United States.*

\* \* \* \* \*

#### [SEC. 211. ALTERNATIVES TO MUD DUMP FOR DISPOSAL OF DREDGED MATERIAL.

[(a) **DESIGNATION OF ALTERNATIVE SITES.**—Not later than three years after the date of enactment of this Act, the Administrator of the Environmental Protection Agency shall designate one or more sites in accordance with the Marine Protection, Research, and Sanctuaries Act of 1972 for the disposal of dredged material which, without such designation, would be disposed of at the Mud Dump (as defined in subsection (g)). The designated site or sites shall be located not less than 20 miles from the shoreline. The Administrator, in determining sites for possible designation under this subsection, shall consult with the Secretary and appropriate Federal, State, interstate, and local agencies.

[(b) **USE OF NEWLY DESIGNATED SITE.**—Beginning on the 30th day following the date on which the Administrator of the Environmental Protection Agency makes the designation required by subsection (a), any ocean disposal of dredged material (other than acceptable dredged material) by any person or governmental entity authorized pursuant to the Marine Protection, Research, and Sanctuaries Act of 1972 to dispose of dredged material at the Mud Dump on or before the date of such designation shall take place at the newly designated ocean disposal site or sites under subsection (a) in lieu of the Mud Dump.

[(c) **INTERIM AVAILABILITY OF LAWFUL SITES.**—Until the 30th day following the date on which the Administrator of the Environmental Protection Agency makes the designation required by subsection (a), there shall be available a lawful site for the ocean disposal of dredged material by any person or governmental entity authorized pursuant to the Marine Protection, Research, and Sanctuaries Act of 1972 to dispose of dredged material at the Mud Dump on or before the date of such designation.

[(d) **DESIGNATION PLAN.**—Not later than 120 days after the date of the enactment of the Water Resources Development Act of 1988, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Public Works and Transportation of the House of Representatives his plan

for designating one or more sites under subsection (a). The plan shall specify the actions necessary to comply with subsection (a), the funding requirements associated with these actions, and the dates by which the Administrator expects to complete each of these actions. The plan also shall specify actions which the Administrator may be able to take to expedite the designation of any sites under subsection (a).

**[(e) DESIGNATION PLAN.—**Not later than 120 days after the date of the enactment of the Water Resources Development Act of 1988, the Administrator shall submit to the Committee on Environment and Public Works of the Senate and the Committee on Public Works and Transportation of the House of Representatives his plan for designating one or more sites under subsection (a). The plan shall specify the actions necessary to comply with subsection (a), the funding requirements associated with these actions, and the dates by which the Administrator expects to complete each of these actions. The plan also shall specify actions which the Administrator may be able to take to expedite the designation of any sites under subsection (a).

**[(f) STATUS REPORTS.—**Not later than one year after the date of enactment of this Act and annually thereafter until the designation of one or more sites under subsection (a), the Administrator of the Environmental Protection Agency shall submit a report to the Committee on Public Works and Transportation of the House of Representatives and the Committee on Environment and Public Works of the Senate describing the status of such designation.

**[(g) FUTURE USE OF MUD DUMP RESTRICTED TO ACCEPTABLE DREDGED MATERIAL.—**Notwithstanding any other provision of law, including any regulation, the Secretary shall ensure that, not later than the 30th day following the date on which the Administrator of the Environmental Protection Agency makes the designation required by subsection (a), all existing and future Department of the Army permits and authorizations for disposal of dredged material at the Mud Dump shall be modified, revoked, and issued (as appropriate) to ensure that only acceptable dredged material will be disposed of at such site and that all other dredged material determined to be suitable for ocean disposal will be disposed of at the site or sites designated pursuant to subsection (a) of this section.

**[(h) DEFINITION OF ACCEPTABLE DREDGED MATERIAL.—**For purposes of this section, the term “acceptable dredged material” means rock, beach quality sand, material excluded from testing under the ocean dumping regulations promulgated by the Administrator of the Environmental Protection Agency pursuant to the Marine Protection, Research, and Sanctuaries Act of 1972, and any other dredged material (including that from new work) determined by the Secretary, in consultation with the Administrator, to be substantially free of pollutants.

**[(h) DEFINITION OF MUD DUMP.—**For purposes of this section, the term “Mud Dump” means the area located approximately 5¾ miles east of Sandy Hook, New Jersey, with boundary coordinates of 40 degrees 23 minutes 48 seconds N, 73 degrees 51 minutes 28 seconds W; 40 degrees 21 minutes 48 seconds N, 73 degrees 50 minutes 00 seconds W; 40 degrees 21 minutes 48 seconds N, 73 degrees

51 minutes 28 seconds W; and 40 degrees 23 minutes 48 seconds N,  
73 degrees 50 minutes 00 seconds W.】

\* \* \* \* \*

#### TITLE IV—FLOOD CONTROL

##### SEC. 401. AUTHORIZATION OF PROJECTS.

(a) \* \* \*

\* \* \* \* \*

(e) ADDITIONAL AUTHORIZED PROJECTS.—

(1) \* \* \*

\* \* \* \* \*

(3) PEARL RIVER BASIN, INCLUDING SHOCOE, MISSISSIPPI.—The Secretary is authorized to construct a project for the purpose of providing flood control for the Pearl River Basin in Mississippi, including, but not limited to, Carthage, Jackson, Monticello, and Columbia, Mississippi, consisting of—

(A) the project for flood control, Pearl River Basin, Mississippi: Report of the Chief of Engineers, dated March 17, 1986, at a total cost of \$80,100,000, with an estimated first Federal cost of \$56,070,000 and an estimated first non-Federal cost of \$24,030,000; [and]

(B) for the purpose of providing flood control for the upstream areas of the Pearl River Basin in Mississippi—

(i) a combination roadway crossing of the Pearl River and floodwater detention and storage facility in east central Leake County, Mississippi;

(ii) a levee system in the south part of Carthage, Mississippi, which will upgrade, extend, and improve the protective levee system on the south side of Highway 16 in Leake County and the city of Carthage;

(iii) appropriate drainage structure and bridge modifications to expand and improve the stormwater conduits under Mississippi Highway 35, south of Carthage, Mississippi, for the purposes of reducing backwater influence for areas upstream of such highway;

(iv) upstream reservoirs on the Pearl River;

(v) such other structures as may be necessary to alleviate unforeseen flooding in the Leake County area as a result of the construction of the Shoccoe Dry Dam; and

(vi) channel improvements on the upstream Pearl River【.】; and

(C) *for measures to provide flood protection for the Jackson metropolitan area, Mississippi, and all areas affected by flooding of the Pearl River downstream of the areas covered by subparagraph (B) in the State of Mississippi, including the counties of Rankin, Hinds, Simpson, Lawrence, Marion, and Madison, Mississippi.*

For purposes of analyzing the costs and benefits of those portions of the project described in subparagraph (B), the Secretary shall take into account the costs and benefits of that por-

tion of the project described in subparagraph (A). *In carrying out the projects and measures described in subparagraphs (A), (B), and (C), the Secretary shall consult with local governmental entities affected by such projects.*

\* \* \* \* \*

## TITLE VI—WATER RESOURCES CONSERVATION AND DEVELOPMENT

\* \* \* \* \*

### SEC. 602. LAKES PROGRAM.

(a) Subject to section 903(a) of this Act, the Secretary shall carry out programs for the removal of silt, aquatic growth, and other material in the following lakes:

(1) \* \* \*

\* \* \* \* \*

(8) Lake Herman, Lake County, South Dakota, removal of excess silt; [and]

(9) Gorton's Pond, Warwick, Rhode Island, mitigation activities recommended in the 1982 Environmental Protection Agency diagnostic feasibility study, including the installation of retention basins, the dredging of inlets and outlets in recommended areas and the disposal of dredge material, and weed harvesting and nutrient inactivation[.]; and

(10) *Wappingers Lake, New York, for removal of silt and aquatic growth.*

\* \* \* \* \*

### [SEC. 604. DES MOINES RIVER GREENBELT.

[The project for the Des Moines Recreational River and Greenbelt, Iowa, authorized by Public Law 99-88, shall include the area described in the Des Moines Recreational River and Greenbelt Map, which description is printed in Committee Print 99-53 of the Committee on Public Works and Transportation of the House of Representatives (dated September 1986).]

\* \* \* \* \*

## TITLE VII—WATER RESOURCES STUDIES

\* \* \* \* \*

### SEC. 711. SAGINAW BAY, MICHIGAN

The Secretary is authorized and directed to undertake a study of the feasibility of navigation improvements at Saginaw Bay and Saginaw River, Michigan, including channel widening and deepening. The Secretary shall submit the feasibility report on such study to the Congress not later than December 31, [1989] 1992.

\* \* \* \* \*

## TITLE IX—GENERAL PROVISIONS

\* \* \* \* \*



## SEC. 904. MATTERS TO BE ADDRESSED IN PLANNING.

Enhancing national economic development (including benefits to particular regions of the Nation not involving the transfer of economic activity to such regions from other regions), the quality of the total environment (*including preservation and enhancement of the environment*), the well-being of the people of the United States, the prevention of loss of life, and the preservation of cultural and historical values shall be addressed in the formulation and evaluation of water resources projects to be carried out by the Secretary, and the associated benefits and costs, both quantifiable and unquantifiable, shall be displayed in the benefits and costs of such projects.

\* \* \* \* \*

## TITLE X—PROJECT DEAUTHORIZATIONS

SEC. 1001. (a) \* \* \*

(b)(1) \* \* \*

(2) Every two years after the transmittal of the list under paragraph (1), the Secretary shall transmit to Congress a list of projects or separable elements of projects which have been authorized, but have received no obligations during the 10 full fiscal years preceding the transmittal of such list. *Before submission of such list to Congress, the Secretary shall notify each Senator in whose State, and each Member of the House of Representatives in whose district, a project (including any part thereof) on such list would be located.* A project or separable element included in such list is not authorized after the date which is 30 months after the date the list is so transmitted if funds have not been obligated for construction of such project or element during such 30-month period.

\* \* \* \* \*

## TITLE XI—MISCELLANEOUS PROGRAMS AND PROJECTS

\* \* \* \* \*

## SEC. 1103. UPPER MISSISSIPPI RIVER PLAN.

(a) \* \* \*

\* \* \* \* \*

(e)(1) \* \* \*

(2) Each program referred to in paragraph (1) shall be carried out for **ten years** *15 years*. Before the last day of such **ten-year** *15-year* period, the Secretary, in consultation with the Secretary of the Interior and the States of Illinois, Iowa, Minnesota, Missouri, and Wisconsin, shall conduct an evaluation of such programs and submit a report on the results of such evaluation to Congress. Such evaluation shall determine each such program's effectiveness, strengths, and weaknesses and contain recommendations for the modification and continuance or termination of such program.

(3) For purposes of carrying out paragraph (1)(A) of this subsection, there is authorized to be appropriated to the Secretary not to exceed \$8,200,000 for the first first year beginning after the date of enactment of this Act, not to exceed \$12,400,000 for the second fiscal year beginning after the date of enactment of this Act, and

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not to exceed \$13,000,000 per fiscal year for each of the succeeding **[eight]** 13 fiscal years.

(4) For purposes of carrying out paragraph (1)(B) of this subsection, there is authorized to be appropriated to the Secretary not to exceed \$7,680,000 for the first fiscal year beginning after the date of enactment of this Act and not to exceed \$5,080,000 per fiscal year for each of the succeeding **[nine]** 14 fiscal years.

(5) For purposes of carrying out paragraph (1)(C) of this subsection, there is authorized to be appropriated to the Secretary not to exceed \$40,000 for the first fiscal year beginning after the date of enactment of this Act, not to exceed \$280,000 for the second fiscal year beginning after the date of enactment of this Act, not to exceed \$1,220,000 for the third fiscal year beginning after the date of enactment of this Act, and not to exceed \$875,000 per fiscal year for each of the succeeding **[seven]** 12 fiscal years.

\* \* \* \* \*

(f)(1) \* \* \*

(2)(A) For purposes of carrying out the program of recreational projects authorized in paragraph (1) of this subsection, there is authorized to be appropriated to the Secretary not to exceed \$500,000 per fiscal year for each of the first **[ten]** 15 fiscal years beginning after the effective date of this section.

\* \* \* \* \*

#### SEC. 1114. CROSS FLORIDA BARGE CANAL.

[(a)(1) For the multiple purposes of preserving, enhancing, interpreting, and managing the water and related land resources of an area containing unique cultural, fish and wildlife, scenic, and recreational values and for the benefit and enjoyment of present and future generations and the development of outdoor recreation, there is hereby established the Cross Florida National Conservation Area (hereinafter in this section referred to as the "Conservation Area").

[(2) The Conservation Area shall consist of all lands and interests in lands held by the Secretary for the high-level barge canal project from the Saint Johns River across the State of Florida to the Gulf of Mexico, authorized by the Act of July 23, 1942 (56 Stat. 703) (hereinafter in this section referred to as the "barge canal project"), all lands and interests in lands held by the State of Florida or the Canal Authority of such State for such project, and all lands and interests in lands held by such State or such Canal Authority and acquired pursuant to section 104 of the River and Harbor Act of 1960.

[(3) Within the Conservation Area there is hereby designated the Conservation Management Area which shall consist of all lands and interests in lands held by the Secretary within that portion of the barge canal project that is located between the Eureka Lock and Dam and the Inglis Lock and Dam (exclusive of such structures), plus all lands and interests in lands held by the Canal Authority of the State of Florida between such structures and all lands and interests in lands held by such State or Canal Authority and acquired pursuant to section 104 of the River and Harbor Act of 1960.

[(b) Those portions of the barge canal project located between the Gulf of Mexico and the Inglis project structures and located between the Atlantic Ocean and the Eureka Lock and Dam, inclusive, shall be operated and maintained by the Secretary for the purposes of navigation, recreation, and fish and wildlife enhancement and for the benefit of the economy of the region.

[(c) In order to further the purposes set forth in paragraph (a)(1) of this section, that portion of the barge canal project located between the Eureka Lock and Dam and the Inglis Lock and Dam (exclusive of such structures) is not authorized for the purposes described in the Act of July 23, 1942 (56 Stat. 703) after the date this subsection becomes effective.

[(d) The State of Florida shall retain jurisdiction and responsibility over water resources planning, development, and control of the surface and ground waters pertaining to lands cited in subsections (b) and (c) of this section, except to the extent that any uses of such water resources would be inconsistent with the purposes of this section.

[(e)(1) Not later than one year after the date of the enactment of this Act, the Secretary, in consultation with the United States Forest Service, the United States Fish and Wildlife Service, and the State of Florida, shall develop and transmit to Congress a comprehensive management plan for lands (including water areas) located within the Conservation Management Area.

[(2) Such plan shall, at a minimum, provide for—

[(A) enhancement of the environment;

[(B) conservation and development of natural resources;

[(C) conservation and preservation of fish and wildlife;

[(D) preservation of scenic and enhancing recreational values;

[(E) a procedure for the prompt consideration of applications for easements across Conservation Management Area lands, when such easements are requested by local or State governmental jurisdictions or by a regulated public utility for a public purpose; and

[(F) preservation and enhancement of water resources and water quality, including groundwater.

[(3) Such plan shall establish, among the Secretary, the Forest Service, the Fish and Wildlife Service, and the State of Florida, the responsibilities for implementation of such plan.

[(4) Until transmittal of such plan to Congress, the Secretary shall operate, maintain, and manage the lands and facilities held by the Secretary under the terms of subsection (c).

[(5) Upon submission of such plan to Congress, the Secretary and other agencies, pursuant to the agreement under paragraph (3) of this subsection, are authorized to implement such plan.

[(6) The Secretary shall transmit recommendations for protecting and enhancing the values of the Conservation Area to Congress together with such plan.

[(7) The Secretary shall consult and cooperate with other department and agencies of the United States and the State of Florida in the development of measures and programs to protect and enhance water resources and water quality with the Conservation Area.

[(f) The Secretary shall operate the Rodman Dam, authorized by the Act of July 23, 1942 (56 Stat. 703), in a manner which will assure the continuation of the reservoir known as Lake Ocklawaha. The Secretary shall not operate the Eureka Lock and Dam in a manner which would create a reservoir on lands not flooded on January 1, 1984.

[(g)(1) As soon as possible, the Secretary shall acquire, for the sum of \$32,000,000, all lands and interests in lands held on the date of the enactment of this Act by the Canal Authority of the State of Florida for the purposes of the barge canal project. In the event the sums available to the Secretary in any fiscal year are insufficient to purchase all such lands and interests, the State of Florida shall transfer to the Secretary that percentage of the total number of acres to be transferred that is proportionate to the sums received by the State compared with \$32,000,000.

[(2) From amounts received under paragraph (1) of this subsection, the Canal Authority shall forthwith make payments to the Florida counties of Duval, Clay, Putnam, Marion, Levy, and Citrus. Such payments shall, in the aggregate, be equal to \$32,000,000. The amount of payment under this paragraph to each such county shall be determined by multiplying such aggregate amount by the amount of ad valorem taxes paid to the Cross Florida Canal Navigation District by such county and dividing such product by the amount of such taxes paid by all such counties.

[(3) As soon as possible, the State of Florida shall transfer to the Secretary all lands and interests in lands held by the State of Florida or the Canal Authority of such State and acquired pursuant to section 104 of the River and Harbor Act of 1960.

[(h) Subsection (c) shall become effective—

[(1) 90 days after the Governor of Florida has certified to the Secretary that the State has met the conditions set out in subsection (i) of this section, unless the Secretary determines within such period that the State has failed to comply with such conditions; or

[(2) on the date of the final order in a declaratory judgment action, brought by the State of Florida in a Federal District Court within Florida, finding that the State has met the conditions.

[(i) Subsection (c) shall not become effective until the State of Florida enacts a law or laws which assure that—

[(1) on and after the date on which construction of the portion of the barge canal project referred to in subsection (c) is no longer authorized, and lands and interests in lands held for the project by the State of Florida or the Canal Authority of such State will continue to be held by such State or canal authority pending transfer to the Secretary, as provided in this section; and

[(2) on and after such date, all lands and interests in lands held by the State of Florida or the Canal Authority of such State and acquired pursuant to section 104 of the River and Harbor Act of 1960 will continue to be held by such State or Canal Authority, pending transfer to the Secretary as provided in this section;

[(3) on and after such date, the State of Florida will never transfer to any person (except the Federal Government) any lands owned by such State or the Canal Authority of such State (except existing State roads, highways, and bridges and related rights-of-way, which may be transferred to a county or other local government) and contained within the expanded boundary of the Ocala National Forest as proposed and shown on the map dated July 1978, on file with the Chief of the Forest Service, Department of Agriculture, Washington, District of Columbia; and

[(4) the State of Florida enacts a law which assures that, on and after such date, the interests in the land described in paragraph (1) held by the State of Florida are sufficient to carry out the purposes of this section.]

**SEC. 1114. CROSS FLORIDA BARGE CANAL.**

(a) *DEAUTHORIZATION.*—The barge canal project located between the Gulf of Mexico and the Atlantic Ocean (hereinafter in this section referred to as the “project”), as described in the Act of July 23, 1942 (56 Stat. 703), shall be deauthorized by operation of law immediately upon the Governor and Cabinet of the State of Florida adopting a resolution specifically agreeing on behalf of the State of Florida (hereinafter in this section referred to as the “State”) to all of the terms of the agreement prescribed in subsection (b).

(b) *TRANSFER OF PROJECT LANDS.*—Notwithstanding any other provision of law, the Secretary is, subject to the provisions of subsection (d) and (e), directed to transfer to the State all lands and interests in lands acquired by the Secretary and facilities completed for the project in subsection (a), without consideration, if the State agrees to each of the following:

(1) *The State shall agree to hold the United States harmless from all claims arising from or through the operations of the lands and facilities conveyed by the United States.*

(2) *The State shall agree to preserve and maintain a greenway corridor which shall be open to the public for compatible recreation and conservation activities and which shall be continuous, except for areas referred to in subparagraphs (A) and (C) of this paragraph, along the project route over lands acquired by the Secretary or by the State or State Canal Authority, or lands acquired along the project route in the future by the State or State Canal Authority, to the maximum width possible, as determined in the management plan to be developed by the State for former project lands. Such greenway corridor shall not be less than 300 yards wide, except for the following areas:*

(A) *Any area of the project corridor where, as of the date of the enactment of this subparagraph, no land is owned by the State or State Canal Authority.*

(B) *Any area of the project corridor where, as of the date of the enactment of this subparagraph, the land owned by the State or State Canal Authority is less than 300 yards wide.*

(C) *Any area of the project corridor where a road or bridge crosses the project corridor.*



(3) Consistent with paragraph (2) of this subsection, the State shall create a State Park or conservation/recreation areas in the lands and interests in lands acquired for the project lying between the Atlantic Ocean and the western boundaries of sections 20 and 29, township 15 south, range 23 east.

(4) The State shall agree, consistent with paragraphs (2), (5) and (6) of this subsection, to preserve, enhance, interpret, and manage the water and related land resources of the area containing cultural, fish and wildlife, scenic, and recreational values in the remaining lands and interests in land acquired for the project, lying west of sections 20 and 29, township 15 south, range 23 east, as determined by the State, for the benefit and enjoyment of present and future generations of people and the development of outdoor recreation.

(5) The State shall agree to pay, from the assets of the State Canal Authority and the Cross Florida Canal Navigation District, including revenues from the sale of former project lands declare surplus by the State management plan, to the counties of Citrus, Clay, Duval, Levy, Marion, and Putnam a minimum aggregate sum of \$32,000,000 in cash or, at the option of the counties, payment to be made by conveyance of surplus former project lands selected by the State at current appraised values.

(6) The State shall agree to provide that, after repayment of all sums due to the counties of Citrus, Clay, Duval, Levy, Marion, and Putnam, the State may use any remaining funds generated from the sale of former project lands declared surplus by the State to acquire the fee title to lands along the project route as to which less than fee title was obtained, or to purchase privately owned lands, or easements over such privately owned lands, lying within the proposed project route, consistent with paragraphs (2), (3), and (4) of this subsection, according to such priorities as are determined in the management plan to be developed by the State for former project lands. Any remaining funds generated from the sale of former project lands declared surplus by the State shall be used for the improvement and management of the greenway corridor consistent with paragraphs (2), (3), and (4) of this subsection.

**(c) ENFORCEMENT.—**

(1) **REMEDIES AND JURISDICTION.**—The United States is directed to vigorously enforce the agreement referred to in subsections (a) and (b) in the courts if the United States and shall be entitled to any remedies in equity or law, including, without limitation, injunctive relief. The court, in issuing any final order in any suit brought pursuant to this subsection, may, in its discretion, award costs of litigation (including reasonable attorney and expert witness fees) to any prevailing party. The United States district courts shall have original and exclusive jurisdiction of any action under this subsection.

(2) **STATE REMEDIES.**—The State shall be entitled to the same remedies listed in paragraph (1) of this subsection in the courts of the State or of the United States.

(d) **TIME OF TRANSFER.**—Actual transfer of lands and management responsibilities under this section shall not occur on the constructed portions of the project lying between the Atlantic Ocean

and the Eureka Lock and Dam, inclusive, and between the Gulf of Mexico and the Inglis Lock and Dam, inclusive, until the last day of the 24-month period beginning on the date of the enactment of the Water Resources Development Act of 1990.

(e) *MANAGEMENT PENDING TRANSFER.*—In the 24-month period following the date of the enactment of the Water Resources Development Act of 1990, the Secretary shall carry out any and all programmed maintenance on the portions of the project outlined in subsection (d).

(f) *SURVEY.*—The exact acreage and legal description of the real property to be transferred pursuant to this section shall be determined by a survey which is satisfactory to the Secretary and to the State. The cost of such survey shall be borne by the State.

\* \* \* \* \*

#### SEC. 1134. CABIN SITE LEASES.

(a) \* \* \*

\* \* \* \* \*

(d) On and after December 31, 1989, no houseboat, boathouse, floating cabin, sleeping facilities at marinas, or lawfully installed dock or *cabin and* appurtenant structures shall be required to be removed from any Federal water resources reservoir or lake project administered by the Secretary on which it was located on the date of enactment of this Act, if (1) such property is maintained in usable and safe condition, (2) such property does not occasion a threat to life or property, and (3) the holder of the lease, permit, or license is in substantial compliance with the existing lease or license, except where necessary for immediate use for public purposes or other higher public use or for a navigation or flood control project.

\* \* \* \* \*

#### SEC. 1135. PROJECT MODIFICATIONS FOR IMPROVEMENT OF ENVIRONMENT.

(a) The Secretary is authorized to review the operation of water resources projects constructed by the Secretary [before the date of enactment of this Act] to determine the need for modifications in the structures and operations of such projects for the purpose of improving the quality of the environment in the public interest.

(b) The Secretary is authorized to carry out a [demonstration program in the 5-year period beginning on the date of enactment of this Act] *program* for the purpose of making such modifications in the structures and operations of water resources projects constructed by the Secretary [before the date of enactment of this Act] which the Secretary determines (1) are feasible and consistent with the authorized project purposes, and (2) will improve the quality of the environment in the public interest. The non-Federal share of the cost of any modifications carried out under this section shall be 25 percent.

\* \* \* \* \*

[(d) Not later than 5 years after the date of enactment of this Act, the Secretary shall transmit to Congress a report on the results of the review conducted under subsection (a) and on the dem-

onstration program conducted under subsection (b). Such report shall contain any recommendations of the Secretary concerning modifications and extension of such program.】

(d) *BIENNIAL REPORT.*—*Beginning in 1992 and every 2 years thereafter, the Secretary shall transmit to Congress a report on the results of reviews conducted under subsection (a) and on the program conducted under subsection (b).*

(e) There is authorized to be appropriated not to exceed 【\$25,000,000 to carry out this section.】 *\$15,000,000 annually to carry out this section.*

\* \* \* \* \*

#### SEC. 1137. REND LAKE.

The Secretary shall amend the contract between the State of Illinois and the United States for use of storage space for water supply in Rend Lake on the Big Muddy River in Illinois to relieve the State of Illinois of the requirement to make annual payments for that portion of the maintenance and operation costs applicable to future water supply storage as is consistent with the Water Supply Act of 1958 (Public Law 85-500). The relief provided by the preceding sentence shall apply for 【5 years】 *10 years* after the date of enactment of this Act or until the storage space is used, whichever first occurs, and shall apply in such proportion as the storage is used for water supply purposes.

\* \* \* \* \*

#### SECTION 10 OF THE FLOOD CONTROL ACT OF 1946

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

#### DELAWARE RIVER BASIN

\* \* \* \* \*

HQ AR002038

## ARKANSAS RIVER BASIN

In addition to previous authorizations, there is hereby authorized to be appropriated the sum of \$40,000,000 for the prosecution of the comprehensive plan for the Arkansas River Basin, approved in the Act of June 28, 1938, as amended and supplemented by subsequent Act of Congress.

The Chief of Engineers is authorized to provide in the Canton Reservoir on the North Canadian River one hundred and seven thousand acre-feet of irrigation and water supply storage (including approximately sixty-nine thousand acre-feet for irrigation and thirty-eight thousand acre-feet for municipal water supply for [Enid, Oklahoma] *Oklahoma City, Oklahoma*, to be utilized in accordance with section 8 and section 6, respectively, of the Flood Control Act of December 22, 1944 (Public, 534, Seventy-eighth Congress)), upon the condition that when silation of the reservoir shall encroach upon the flood control allocation the irrigation and water supply storage will be reduced progressively unless provision is made to raise the height of the dam or otherwise provide compensatory storage for flood control on the basis of an equitable distribution of the costs among the water users and other beneficiaries of conservation storage, as determined at that time. *Not later than 180 days after the date of the enactment of the Water Resources Development Act of 1990, the Secretary of the Army is directed (subject to agreement between the city of Oklahoma City, Oklahoma, or the Oklahoma City Municipal Improvement Authority and the city of Enid, Oklahoma, providing for such reassignment) to reassign to the City of Oklahoma City all the municipal and industrial storage in the Canton Reservoir for the city of Enid and oil irrigation storage to municipal and industrial water supply storage (under the terms of the Water Supply Act of 1958 (72 Stat. 319-320)); except that if the city of Oklahoma City contracts for permanent municipal and industrial water supply storage under this Act, the city of Oklahoma City shall receive credit for amounts previously paid by it, or on its behalf, toward the principal investment cost for storage under prior term contracts and other payments. The principal amount to be paid by the city of Oklahoma City shall be the proportional amount of original project construction cost for which the city of Oklahoma City contracts for storage and at the original project interest rate over a 50-year payback amortization schedule beginning in 1955.*

The project for flood protection at Oklahoma City, Oklahoma, on North Canadian River, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 572, Seventy-ninth Congress, second session, at an estimated cost of \$2,037,000.

The project for local flood protection of Carden's Bottom Drainage District Number 2, Yell County, Arkansas, on Arkansas River, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in his report dated June 17, 1946, at an estimated cost of \$1,485,000.

The project for the Heyburn Reservoir on Polecat Creek and for channel improvement on Rock Creek and on Polecat Creek, Oklahoma, is hereby authorized substantially in accordance with the

recommendations of the Chief of Engineers in his report dated June 17, 1946, at an estimated cost of \$1,838,500.

\* \* \* \* \*

## SECTION 5 OF THE ACT OF AUGUST 18, 1941

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

SEC. 5. (a)(1) That there is hereby authorized an emergency fund to be expended in **[flood emergency preparation,]** *preparation for emergency response to any natural disaster*, in flood fighting and rescue operations, or in the repair or restoration of any flood control work threatened or destroyed by flood, including the strengthening, raising, extending, or other modification thereof as may be necessary in the discretion of the Chief of Engineers for the adequate functioning of the work for flood control; in the emergency protection of federally authorized hurricane or shore protection being threatened when in the discretion of the Chief of Engineers such protection is warranted to protect against imminent and substantial loss to life and property; in the repair and restoration of any federally authorized hurricane or shore protective structure damaged or destroyed by wind, wave, or water action of other than an ordinary nature when in the discretion of the Chief of Engineers such repair and restoration is warranted for the adequate functioning of the structure for hurricane or shore protection. ; *or for emergency dredging for restoration of authorized project depths for Federal navigable channels and waterways made necessary by flood, drought, earthquake, or other natural disaster.*

In any case in which the Chief of Engineers is otherwise performing work under this section in an area for which the Governor of the affected State has requested a determination that an emergency exists or a declaration that a major disaster exists under the Disaster Relief and Emergency Assistance Act, the Chief of Engineers is further authorized to perform on public and private lands and waters for a period of ten days following the Governor's request any emergency work made necessary by such emergency or disaster which is essential for the preservation of life and property, including, but not limited to, channel clearance, emergency shore protection, clearance and removal of debris and wreckage endangering public health and safety, and temporary restoration of essential public facilities and services. The Chief of Engineers, in the exercise of his discretion, is further authorized to provide emergency supplies of clean water, on such terms as he determines to be advisable, to any locality which he finds is confronted with a source of contaminated water causing or likely to cause a substantial threat to the public health and welfare of the inhabitants of the locality. The appropriation of such moneys for the initial establishment of this fund and for its replenishment on an annual basis, is hereby authorized: *Provided*, That pending the appropriation of sums to such emergency fund, the Secretary of the Army may allot, from existing flood control appropriations, such sums as may be necessary for the immediate prosecution of the work herein au-



thorized, such appropriations to be reimbursed from the appropriation herein authorized when made. The Chief of Engineers is authorized, in the prosecution of work in connection with rescue operations, or in conducting other flood emergency work, to acquire on a rental basis such motor vehicles, including passenger cars and buses, as in his discretion are deemed necessary.

\* \* \* \* \*

## WATER RESOURCES DEVELOPMENT ACT OF 1974

### TITLE I—WATER RESOURCES DEVELOPMENT

\* \* \* \* \*

**[SEC. 12. (a)** As soon as practicable after the date of enactment of this section and at least once each year thereafter, the Secretary of the Army, acting through the Chief of Engineers, shall review and submit to Congress a list of those authorized projects for works of improvement of rivers and harbors and other waterways for navigation, beach erosion, flood control, and other purposes which have been authorized for a period of at least eight years and which he determines, after appropriate review, should no longer be authorized. Each project so listed shall be accompanied by the recommendation of the Chief of Engineers together with his reasons for such recommendation. Prior to the submission of such list to the Congress, the Secretary of the Army, acting through the Chief of Engineers, shall obtain the views of interested Federal departments, agencies, and instrumentalities, and of the Governor of each State wherein such project would be located, which views shall be furnished within sixty days after being requested by the Secretary and which shall accompany the list submitted to Congress. Prior to the submission of such list to Congress the Secretary of the Army, acting through the Chief of Engineers, shall notify each Senator in whose State, and each Member of the House of Representatives in whose district, a project (including any part thereof) on such list would be located.

**[(b)** Such list shall be delivered to both Houses on the same day and to each House while it is in session. A project on such list shall not be authorized at the end of the first period of ninety calendar days of continuous session of Congress after the date such list is delivered to it unless between the date of delivery and the end of such ninety-day period, either the Committee on Public Works of the House of Representatives or the Committee on Public Works of the Senate adopts a resolution stating that such project shall continue to be an authorized project. For the purposes of this section continuity of session is broken only by an adjournment of Congress sine die, and the days on which either House is not in session, because of an adjournment of more than three days to a day certain are excluded in the computation of the ninety-day period. The provisions of this section shall not apply to any project contained in a list of projects submitted to the Congress within ninety days preceding the date of adjournment sine die of any session of Congress.

**[(c)** Nothing in this section shall be construed so as to preclude the Secretary from withdrawing any project or projects from such

list at any time prior to the final day of the period provided for in subsection (b).

[(d) This section shall not be applicable to any project which has been included in a resolution adopted pursuant to subsection (b).

[(e) The Secretary of the Army, acting through the Chief of Engineers, shall, on request by resolution of the Committee on Public Works of the Senate or the Committee on Public Works of the House of Representatives, review authorized projects for inclusion in the list of projects provided for in subsection (a) of this section. If any project so reviewed is not included in any of the first three lists submitted to the Congress after the date of the resolution directing the review of the project, a report on the review together with the reasons for not recommending deauthorization, shall be submitted to the Committees on Public Works of the Senate and House of Representatives not later than the date of the third list submitted to Congress after the date of such resolution.]

\* \* \* \* \*

#### SECTION 221 OF THE FLOOD CONTROL ACT OF 1970

SEC. 221. (a) After the date of enactment of this Act, the construction of any water resources project, or an acceptable separable element thereof by the Secretary of the Army, acting through the Chief of Engineers, or by a non-Federal interest where such interest will be reimbursed for such construction under the provisions of section 215 of the Flood Control Act of 1968 or under any other provision of law, shall not be commenced until each non-Federal interest has entered into a written agreement with the Secretary of the Army to furnish its required cooperation for the project or the appropriate element of the project, as the case may be. In any such agreement entered into by a State, or a body politic of the State which derives its powers from the State constitution, or a governmental entity created by the State legislature, the agreement may reflect that it does not obligate future [State legislative] appropriations for such performance and payment when obligating future appropriations would be inconsistent with State constitutional or statutory limitations.

\* \* \* \* \*

**SUPPLEMENTAL VIEWS OF HON. JOHN PAUL  
HAMMERSCHMIDT AND HON. ARLAN STANGELAND**

H.R. 5314 signals an important attempt to keep the Corps' water project authorization process on a regular, two-year schedule, which the Water Resources Development Act of 1988 recently reaffirmed. For this reason, we are willing to support this legislation even though we have concerns about its current size and scope. We recognize the bill cannot afford to grow in size or scope, and may, in fact, need to be scaled back, if we expect it to be the vehicle to reaffirm recently enacted reforms and maintain the two-year authorization process.

The water resources program of the U.S. Army Corps of Engineers provides invaluable service to communities around the country and to the nation as a whole. Over the last one hundred and fifty years, the civil works program of the Corps has helped develop, operate, and maintain a remarkable system of inland and coastal navigation that has been indispensable in the growth of our economy. Corps water projects also protect lives and property from the ravages of flood water. In fiscal year 1986 alone, Corps projects and flood fighting efforts prevented over \$27 billion in flood damages. In addition, Corps projects provide important hydroelectric energy; municipal, industrial, and agricultural water supplies; recreational opportunities; and protection and enhancement of fish and wildlife resources.

Traditionally, these projects are individually authorized on a biennial basis in accordance with an orderly planning process. The Corps undertakes a study of the problem and recommends proposed solutions to the Congress. The Committee on Public Works and Transportation evaluates the Corps recommendations, as well as the recommendations of other affected interests, and develops omnibus legislation authorizing meritorious projects and making other needed modifications and adjustments to existing Corps projects and programs.

For the past ten to fifteen years, disputes between the Congress and the Executive Branch concerning the appropriate sharing of costs between the Federal Government and project sponsors have resulted in a deadlock on project authorizations. There were no Corps authorization bills signed into law from 1976 until 1986. In that year, the Congress and the Administration working in a bipartisan spirit of cooperation, developed a series of compromises on cost sharing and on other policy concerns which culminated in the enactment of the Water Resources Development Act of 1986 (Public Law No. 99-662), one of the most sweeping and comprehensive Corps authorization bills.

Because major policy issues were resolved in the 99th Congress, the 100th Congress in cooperation with the Executive had the opportunity to return to the traditional biennial authorization proc-

ess. Realizing that opportunity and mindful of the importance of biennial authorization, the Administration proposed an authorization bill including four new water projects which had completed the Administration's review process, as well as a number of project modifications and policy initiatives. Congress also responded and passed comprehensive bills, S. 2100 and H.R. 5247.

Conferees then worked with the Administration to significantly modify the bills and produce legislation the President could sign. The effort paid off: The Water Resources Development Act of 1988 became public law (P.L. 100-676) and the two-year authorization process was officially reestablished.

This year the Committee on Public Works and Transportation hopes to do the same with the same results. The bill adopted in Committee represents a concerted effort to fashion a comprehensive authorization package founded on the two-year authorization cycle. In many respects, the bill goes further in authorizing new projects than some of us felt was needed. Nonetheless, we have supported the package because we view a return to and continuation of the biennial authorization process as imperative. Accordingly, we intend to continue to work with the Committee and others to develop a comprehensive yet responsible bill—one that can enjoy broad support in Congress and in the Executive Branch.

JOHN PAUL HAMMERSCHMIDT.  
ARLAN STANGELAND.



HQ AR002045-HQ AR002199





U.S. Army Corps  
of Engineers

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# **U.S. ARMY CORPS OF ENGINEERS RECREATION STUDY**

**A Plan Prepared for the  
Assistant Secretary of the Army (Civil Works)**

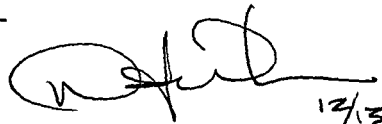
## **VOLUME I: MAIN REPORT**

**Headquarters, U.S. Army Corps of Engineers  
Washington, D.C.**

---

**September 1990**

**HQ AR002045**

Darrell  
Thank you for your  
support in this  
effort  
  
12/13/90

**U.S. ARMY CORPS OF ENGINEERS  
RECREATION STUDY**

A Plan Prepared for the  
Assistant Secretary of the Army (Civil Works)

by

U.S. Army Corps of Engineers Recreation Task Force

-----Headquarters, U.S. Army Corps of Engineers-----

Washington, D.C. 20314-1000



DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
WASHINGTON, DC 20310

3 OCT 1990

Honorable Richard G. Darman  
Director  
Office of Management and Budget  
Washington, D. C. 20503

Dear Mr. Darman:

A year ago, I chartered a Task Force in the Army Corps of Engineers to develop a plan to maintain and enhance public recreational opportunities at Corps projects while reducing Federal costs for development and operation of recreational facilities.

The report of the Task Force is enclosed. The recommendations are under consideration, and we expect from time to time to make specific budgetary and legislative proposals, as may be necessary.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. Page", is written over a large, stylized, handwritten "R".

Robert W. Page  
Assistant Secretary of the Army  
(Civil Works)

Enclosure



## DEPARTMENT OF THE ARMY

U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000REPLY TO  
ATTENTION OF:

03 OCT 1990

CECW-ZR

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Recreation Task Force - Final Report

1. As requested in your 31 August 1989 memorandum, I am providing you with the final report of the Recreation Task Force.
2. Printing of the report for general distribution to members of Congress, Corps of Engineers field offices, and the public will take about six weeks. The report will be sent to our field offices and to the public once copies have been furnished to the Office of Management and Budget and concerned committees of Congress.

Enclosure

A handwritten signature in dark ink, appearing to read "H. J. Hatch", is positioned above the typed name.

H. J. HATCH  
Lieutenant General, USA  
Chief of Engineers

## **PREFACE**

The Chairman of the Task Force was MG R. S. Kem, Deputy Commander, U. S. Army Corps of Engineers. Mr. David J. Wahus, Chief of the Recreation Programs Section of the Natural Resource Management Branch, Operations, Construction and Readiness Division was reassigned to the office of the Director of Civil Works to serve as the full-time Executive Director of the Recreation Study.

The Steering Committee was comprised of eight senior staff members: Mr. Dan Mauldin, Deputy Director of Civil Works and Vice-Chairman of the committee, Mr. Don B. Cluff, Chief, Programs Division, Mr. Lester Edelman, Chief Counsel, Mr. Barry J. Frankel, (later replaced by Mr. Terrence F. Wilmer), Director, Real Estate Directorate, Mr. Jimmy F. Bates, Chief Policy and Planning Division, Mr. John P. Elmore, Chief, Operations, Construction and Readiness Division, Mr. Kenneth Murdock, Director, Water Resource Support Center, and Mr. David J. Wahus. MG Kem officiated at Steering Committee meetings.

The Management Team consisted of Mr. Dan M. Mauldin, Chairman, Mr. Don B. Cluff, Vice-Chairman, Mr. Joseph H. Bittner, Programs Division, Mr. Charles T. Flachbarth, Office of the Chief Counsel, Mr. Monte Ferry, Real Estate Directorate, Mr. Howard Prante, Policy and Planning Division (later replaced by Mr. Brad Fowler), Mr. Darrell E. Lewis, Operations, Construction and Readiness Division, Mr. Michael R. Krouse, Institute for Water Resources, Mr. David Hewitt, Public Affairs Office and Mr. David J. Wahus.

Mr. William J. Hansen of the Institute for Water Resources was the Technical Study Manager. Mr. L. Leigh Skaggs of the Institute for Water Resources assisted in the development and execution of the study and writing of the final report. Mr. H. Roger Hamilton of the Waterways Experiment Station contributed to the historical perspective section. Ms. N. Theresa Hoagland of the Ohio River Division served as primary author for the study.



**CORPS OF ENGINEERS RECREATION STUDY  
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VOLUME II - APPENDICES**

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## CHAPTER I INTRODUCTION

### A. AUTHORITY

At the direction of the Assistant Secretary of the Army for Civil Works [ASA(CW)], the Chief of Engineers established a Task Force to study the subject of recreation at U.S. Army Corps of Engineers water resource development projects.

### B. PURPOSE AND SCOPE

The mission of the Corps of Engineers Recreation Task Force was to develop a plan to maintain and enhance public recreational opportunities at Corps projects while reducing the Federal costs for development and operation of recreational facilities. The plan was to focus on development, enhancement and operation of recreation facilities at Corps projects by non-Federal public agencies and the private sector to the maximum extent practicable.

Further, the ASA(CW) directed that the closure of existing facilities, deferral of maintenance, or development of operational efficiencies as a means of reducing Federal expenditures were not to be considered as part of the Task Force's mission; however, the Task Force received suggestions on management efficiencies as a method of reducing the Federal expenditures and these will be considered for implementation in the Corps day-to-day operations. Also, as directed by the ASA(CW), existing constraints in law, regulation, or policy were identified, but did not limit development of the plan.

The plan is the final product of the study. Almost one hundred options, grouped in four major categories, were investigated and approximately twenty options or related suggestions were included in the plan. The plan identifies and provides general implementation strategies, including data collection and analysis requirements, necessary changes in policy or law, a tentative schedule of resource and staffing requirements, likely impacts on public recreation, and anticipated Federal cost reductions. In addition to those included in the plan, nineteen options could be pursued locally (no change in law or Corps-wide policy or guidance is needed). Eighteen options should be given further consideration, but cannot be recommended at this time, because they require preliminary actions or additional data to assess their viability.

### C. BACKGROUND

According to the National Park Service Publication Federal Recreation Fee Report 1988, the Corps records the second largest visitation figure among all Federal agencies in terms of visitor hours (see Table 1 and Figure 1).<sup>1</sup> Corps projects provide over 30 percent of the recreational opportunities on Federal lands (2.29 billion visitor hours out of a total 7.49 billion for all Federal agencies), with only nine percent of the Federal funds expended for recreational

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<sup>1</sup> National Park Service, Federal Recreation Fee Report 1988, (Washington, DC: NPS, 1989).



resources (\$164 million out of a total Federal \$1.82 billion in 1989)<sup>1</sup>, and on less than two percent of the Federal land base (11.7 million acres of fee and easement land and water out of the 650 million-acre Federal estate). The Corps is the largest provider of water-based recreation, and, according to Corps estimates, 25 million individuals visit a Corps project at least once each year.

**Table 1**  
**1988 Visitation and Total Acreage for Recreation by**  
**Major Federal Land Management and State Park Agencies**

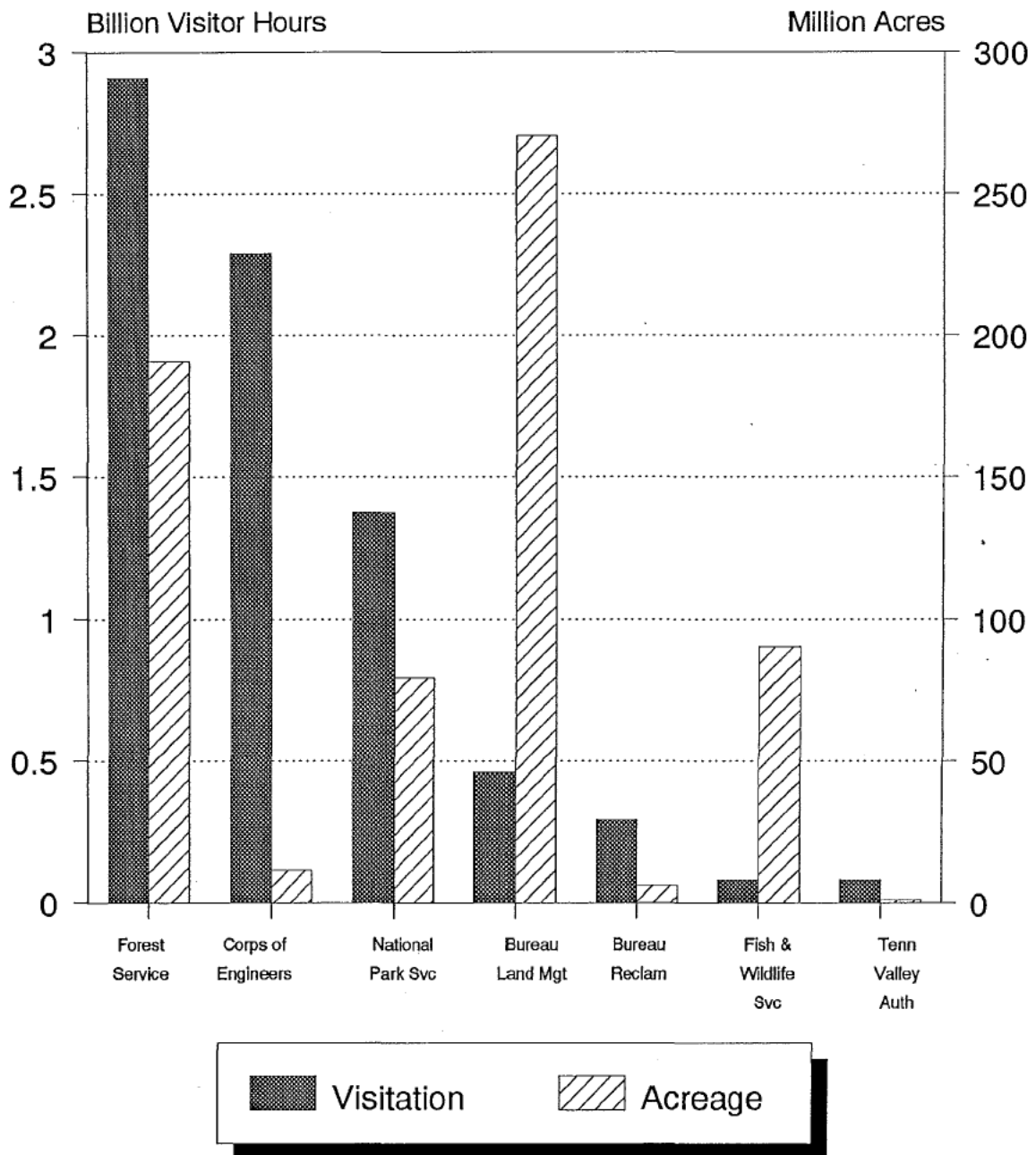
Agency	Visitation (million visitor hours)	Acres (millions)
Forest Service	2,908.0	190.8
Corps of Engineers	2,290.0	11.7
National Park Service	1,375.0	79.6
Bureau of Land Management	461.0	270.4
Bureau of Reclamation	293.0	6.4
Fish and Wildlife Service	81.0	90.4
Tennessee Valley Authority	81.0	1.0
Total, Federal Agencies	7,489.0	650.3
State Park Agencies	4,293.0	61.8

Sources: All Federal visitation is from the 1988 Federal Fee Report. Acres and Visitation for State Park Agencies are from National Association of State Park Directors Annual Report of 1988. Federal acres: Corps of Engineers from its Natural Resources Management System, National Park Service from its Index 1987, Bureau of Land Management from Public Land Statistics 1988, Bureau of Reclamation from its Recreation Section, remainder from 1987 Federal Fee Report.

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<sup>1</sup> Office of Management and Budget, Budget of the United States Government Fiscal Year 1991, (Washington, DC: U.S. Government Printing Office, 1990).

**Figure 1**  
**Recreation Visitation and Total Acreage**  
**by Federal Land Management Agency, 1988**



Source: See Table 1

To provide the setting for the subject study, the recreation management programs of the Corps, other Federal agencies, state and local governments, and the general recreation/tourism industry are briefly described in the following sections.

## 1. U.S. ARMY CORPS OF ENGINEERS

**a. History.** The U.S. Army Corps of Engineers had its genesis on 16 June 1775 when successfully engineered defenses were constructed under the direction of General George Washington's first Chief Engineer, Colonel Richard Gridley, at the Battle of Bunker Hill. The agency was officially established by the Congress on 11 March 1779.

Early Corps missions were, of course, military in nature. However, as the nation grew and the westward expansion progressed, water resources development requirements for the control of floods, provision of navigation and the provision of potable water supplies at the settlements that sprang up along the rivers and streams required engineering expertise. Thus evolved the Civil Works mission of the Corps. In 1824, Congress provided the first appropriation for work in navigable waters.

In 1872, the Corps was influential in the creation of Yellowstone, the nation's first national park. The Corps was charged with protection of its unique natural resources along with those of Yosemite National Park, until the creation of the National Park Service in 1916. At that time, the Park Service assumed jurisdiction over both of these units.

A tradition of accomplishing work by contract also began in those early days. Section 1 of the River and Harbor Act of 1875 directed the Secretary of the Army to accomplish his work by contract to the maximum extent practicable. The work was to be publicly advertised and awarded to the lowest responsible bidders.

On 10 February 1932, Public Law 16, 72nd Congress was enacted. This legislation, known as the Fletcher Act, broadened the scope of Federal interests in navigation to include the use of waterways by "seasonal passenger craft, yachts, houseboats, fishing boats, motorboats, and other similar watercraft, whether or not operated for hire" as "commerce".

Flood control activities were also added to the Corps agenda throughout the 1920's and 1930's. The Corps mission in flood control, with development of the major reservoirs and other works, set the stage for the water related recreation use that was to follow. Section 1 of the Flood Control Act of 1936 (Public Law 735, 74th Congress) declared flood control to be a proper Federal activity. It also set out the requirements for local cooperation in flood control projects that became known as the "a-b-c" requirements. They are:

(a) Local interests shall provide without cost to the United States all lands, easements and rights-of-way necessary for the construction of the project;

(b) Local interests shall hold and save the United States free from damages due to the construction works;

(c) Local interests shall maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army.

Reservoir development expanded the estate and the scope of public service of the Corps. Public Law 228, 77th Congress, passed in 1941, modified the 1936 and 1938 Flood Control Acts and required the a-b-c requirements be applied only to channel and local flood protection projects and not to reservoirs. Significantly, this same Act provided for payment of 75 percent of money obtained from leasing lands at reservoir projects to the state in which the lease is located for schools and roads.

People were attracted to water for recreational purposes. The development of Corps lakes nationwide for a variety of purposes soon attracted so many visitors that the Congress began to include recreation and fish and wildlife management as a project purpose. The Flood Control Act of 1944 gave the Corps specific authority to provide public outdoor recreation facilities at its projects. Section Four of the Act states in part:

The Chief of Engineers...is authorized to construct, maintain and operate public park and recreational facilities in reservoir areas under control of (the Department of the Army), and to permit the construction, maintenance and operation of such facilities.

Development of multipurpose reservoir projects during the decades of the 1940's and the 1950's occurred typically in rural settings. Suburban sprawl was in its infancy. Guidance for recreation planning at that time [Orders and Regulations, (O&R) dated 15 October 1952], directed District Engineers to develop a master plan for administration and development of project land and water areas. This guidance declared that the master plan "...should be broad in scope and evolutionary in principle to permit subsequent revisions necessary to fit changing conditions." The O&R also recognized the importance of forming partnerships with state and local agencies for management of both lands and the recreation function. Further, the wide variation in state and local agencies in assuming these responsibilities was pointed out, with a caution that full participation may not be possible in the immediate future.

Prior to 1953, the amount and character of land needed for a project was largely determined on a project-by-project basis. Usually, fee title to the land up to the project design flood line was acquired. Additional fee lands were acquired as a result of "blocking out" the real property lines in order to achieve a readily identifiable and easily surveyed boundary line.

In 1953, the first Joint Land Acquisition Policy of Army and Interior (Fed. Reg., Vol. 19, No. 14, 1/21/54, pp 38) was adopted. It provided for fee acquisition of a 300-foot block-out of the conservation pool or fee acquisition to the five-year flood frequency, at agency discretion. The Department of the Army chose to apply the five-year flood frequency criterion in all cases. Consequently, land acquisition was limited to a very narrow ribbon surrounding the lakes and public access was very limited. Provision of recreation facilities for the general public was limited to basic facilities, including roads and restrooms.

In 1957, the Corps implementation of the 1953 Joint Policy was criticized by the Committee on Government Operations for not permitting efficient or full protection and development of recreation, scenic, and fish and wildlife resources. It was viewed as leading to the public expenditure of funds which contributed mainly to the benefit of private landowners whose properties abutted project lands.

As a result of Congressional hearings and recommendations, the 1962 Joint Policy was developed, but later revised. The 1962 policy provided for the fee acquisition of an area measuring 300 feet horizontally from the top of the flood control pool or to the maximum flowage line, whichever was greater. In addition, lands needed to provide access to the maximum flowage line were acquired in fee. In 1971, the Army revised its implementation of the Joint Policy to provide that fee lands would be acquired to the greater of 300 feet horizontally from the top of the conservation pool or the top of the maximum flowage line.

Continued national growth, with its attendant increase in disposable income and leisure time, resulted in increased public pressures on these resources. Improved roads and automobiles came quickly, and the cities grew out to meet and surround the once rural projects. Currently, about 80 percent of Corps lakes are within 50 miles of major metropolitan areas; 94 percent are within a two hour drive.

As these dynamic phenomena were occurring somewhat simultaneously, many people purchased properties adjacent to Corps projects. Due to the narrow Federal estate that had been acquired around the pool under the 1953 Joint Acquisition Policy, the general public erroneously gained the perception of private ownership to the water's edge. Thus, a new and rather unique "public" benefitted by Corps projects evolved.

Facilities, including private boat houses, launching ramps, and picnic areas have been constructed on public lands by adjacent landowners for their own private use. Other activities on public lands have included gardening, mowing, and placing of lawn furniture, again for private use. During the 1950's and early 1960's, such use did not receive much opposition from the Corps. In fact, such activity was generally viewed as acceptable in that it provided additional use of the resources. Mounting public demands for these available resources resulted in a change of attitude, and guidance issued in 1971 (Engineer Regulation 1130-2-400) declared that, since ownership of adjacent land conveys no rights to Corps projects, private exclusive use of public lands is discouraged. Guidance contained in Engineer Regulation 1130-2-406 in 1974 required that any private docks or vegetation modifications previously developed on Corps projects be covered by a Lakeshore (now "Shoreline") Use Permit and that such development not be permitted on new projects or on existing projects where such facilities did not exist in 1974. Currently, about 50,000 private facilities and areas of vegetation modification are under permit at 100 Corps lakes.

For many years, policies have been directed toward providing high quality recreation services to the public, but pressures have steadily mounted to fund the recreation function from non-Corps sources. Attempts were made to transfer the function to other Federal agencies. Some land transfers have, in fact, occurred between the Departments of Army and Interior.

Other attempts have been less successful. In 1946, the National Park Service assumed management of Lake Texoma from the Corps. This was a trial effort at managing a water resource project. The plan was to shift management of all projects to that agency after completion of the trial period. After one year, the Park Service returned Lake Texoma to the Corps and refused assumption of further projects. The Service noted that management of multipurpose reservoirs requires some unique skills that they did not possess. Further, they were not inclined to develop those skills since the management of such projects did not fit the mission of preservation under which the Park Service operated.

Attempts have also been made to shift the financial responsibility of providing this service from the Federal sector to non-Federal agencies and to the private sector. Although the Corps has not been able to transfer the financial responsibility at all projects, it has been able to obtain substantial non-Federal assistance in operation and management of its recreation areas and programs.

As noted, the Corps of Engineers has a history of accomplishing work by contract that goes back to 1875. Since at least 1944, active involvement of state and local agencies in carrying out the recreation mission has been underway. Several specific plans have been implemented with the objective of obtaining maximum non-Federal involvement. Today, non-Federal interests manage 47 percent of the 4,290 recreation areas located at 459 Corps lakes.

Although state and local partnerships through leases and licenses under authority of the 1944 Act had been very successful, an accelerated program was initiated with implementation of the Code 712 Program. By memorandum dated 18 November 1966, the Special Assistant to the Secretary of the Army (Civil Functions) requested development of a specific plan to encourage local authorities to assume responsibility for recreation management at Corps projects. The program entailed construction of recreation facilities at 100 percent Federal expense with subsequent turnover to non-Federal public agencies for continued operation and maintenance. The objective was to achieve a turnover to state and local agencies of as many Corps recreation areas as possible in a five year period beginning 1 July 1967.

The program was initiated in 1969. A \$38 million, five-year program was developed in response to the request. The program was identified as Code 712 because it was a sub-class of the appropriations Code 902-710 Program of the Construction-General account, entitled "Recreation Facilities at Completed Projects." The program was premised with the requirement that letters of intent be furnished by non-Federal public agencies to assume operation and maintenance of the public recreation areas after completion before they could be included in the program. Nineteen state and local agencies provided the required letters of intent to the Corps to take over responsibility for 68 recreation areas located at 32 projects.

Unfortunately, the wide diversity of non-Federal capability created an unbalanced program since a few states had adequate funding to cooperate fully while others had virtually no capability to participate. Only eleven states had public agencies which cooperated with the Corps in this program. Of these, over 90 percent of the total development was requested by



agencies in eight states. About thirty-seven percent of the program was requested by one agency in one state.

The Code 712 Program was not successful. By 1971 several of the non-Federal sponsors began returning facilities to the Corps due to their own funding problems. Areas were returned in various stages of development, or sponsors withdrew their assurances prior to development. When the program was discontinued in 1976, a total of over \$22.7 million had been spent on it.

Several inadequacies contributed to the failure of the Code 712 Program. First, the financial and managerial capacities of non-Federal agencies varied significantly throughout the country. The geographic locations of local agencies that had the financial capability, expertise and willingness to assume recreation management responsibilities did not necessarily coincide with the locations of projects that had resources available to manage or with areas that had the greatest public demands for outdoor recreation facilities and services. Second, Corps timetables for implementation of recreation management did not always match the timetables of local sponsors or their capability or desire to assume the management role. Third, funding levels were inadequate for such an ambitious program. Finally, the only requirement from the local sponsor was a letter of intent. No firm commitments were required.

During this time frame, significant changes in the Corps recreation program were promulgated by Congress as a result of a report prepared by the Outdoor Recreation Resources Review Commission (ORRRC), established by PL 85-470 in 1958. ORRRC analyzed the role of construction agencies in recreation development and management and released a report in 1962 that led to the passage of PL 89-72, the Federal Water Project Recreation Act of 1965, and PL 88-578, the Land and Water Conservation Fund Act of 1965.

Public Law 89-72 mandated that full consideration be given to outdoor recreation and fish and wildlife enhancement as equal project purposes; that planning relative to the development of recreation potential be coordinated with existing and planned Federal, state and local public recreation developments; and that non-Federal public agencies be encouraged to provide not less than 50 percent of the recreation development costs and assume all operation, maintenance and replacement of recreation facilities after construction was completed. (The Act was amended with the passage of the 1974 Water Resource Development Act to change the non-Federal cost shared contribution for costs allocated to fish and wildlife enhancement from 50 to 25 percent.) Public Law 89-72 applies only to water resource development projects.

Although PL 89-72 was Congressionally applied to projects authorized during or after 1965, on August 5, 1965, an agreement was formulated between the Corps of Engineers and the Office of Management and Budget (then the Bureau of the Budget) applying the cost sharing principles of PL 89-72 retroactively to projects authorized prior to 1965. During preparation of the FY 1974 budget for recreation development at completed Corps projects, new Administration policy for this program was provided to the Corps by OMB. The policy stated:

1. Written agreements from locals to operate and maintain facilities prior to construction should be required.
2. As of July 1, 1973, all projects will require 50 percent local cost-sharing (same as in new projects).
3. Corps can proceed with recreation projects for Federal operation only if a system of user charges is put in place to recover all O&M costs.

The Land and Water Conservation Fund Act of 1965 (LWCF) provided the Corps and other Federal agencies with the authority to collect recreation fees from users of Federal recreation facilities. The rules for each agency, however, differ markedly. Initially, all agencies could collect entrance fees. The Corps charged entrance fees for a short period, but the program met with severe public opposition. The LWCF Act was modified in 1968 to prohibit all agencies from charging entrance fees. This amendment also repealed the portion of the Flood Control Act of 1944 that stated that Corps project waters would be available to the public without charge. (Section 210 of the Flood Control Act of 1968 (PL 90-483), passed shortly after the LWCF Act amendment, reiterated the prohibition against entrance fees; however, it prohibited certain other fees, including fees for access to, or use of, project water areas. The language of Section 210, codified as 16 USC 460d-3, remains in effect today). In 1972, the Land and Water Conservation Fund Act was amended to allow the U.S. Forest Service and National Park Service to charge entrance fees at certain units under their management. A 1974 amendment to the LWCF Act required the Corps to provide at least one free primitive campground at Corps projects where camping is permitted.

With regard to fee revenues, all Corps recreation use fees are deposited into a separate U.S. Treasury account. Appropriations from the account are made to the Corps based on its prior collections. Before Fiscal Year 1985, these funds were identified under a separate Corps of Engineers Civil appropriation entitled "Special Recreation Use Fees" (SRUF). Beginning in Fiscal Year 1985, the separate line item for SRUF was eliminated. Now, the Corps Operation and Maintenance, General appropriations includes an amount of SRUF funds to be derived from the separate Treasury account. As far as expenditure of these funds is concerned, until 1987, the Land and Water Conservation Fund Act specified that "revenues in the special account shall be available for appropriation, without prejudice to appropriations from other sources for the same purposes, for any authorized outdoor recreation function of the agency by which the fees were collected." Thus, user fees were above and beyond normal operation and maintenance funding and were typically used for enhancement of recreation. The 1987 amendment removed this language, so that revenues from recreation fee collection are now available for appropriation for any and all purposes authorized by the LWCF Act.

Other recent legislation affecting recreation at Corps projects includes the Water Resource Development Act of 1986 (PL 99-662). In addition to other payback requirements, this act prohibited the Secretary of the Army from requiring non-Federal interests to assume operation and maintenance of existing facilities as a condition to the construction of new recreation facilities under the Flood Control Act of 1944 or the Federal Water Project

Recreation Act (PL 89-72). This act also required that cabin leases and private floating facilities lawfully under permit as of December 31, 1989, would not be removed unless the site were needed for public purposes or the lease or permit holder was in substantial violation of the lease or permit. New or renewed cabin site leases after that time would be charged lease rentals based on a fair market value. Finally, the law permitted the development of senior citizen campgrounds and extended the up-front payback provision of cost sharing to non-recreation project purposes.

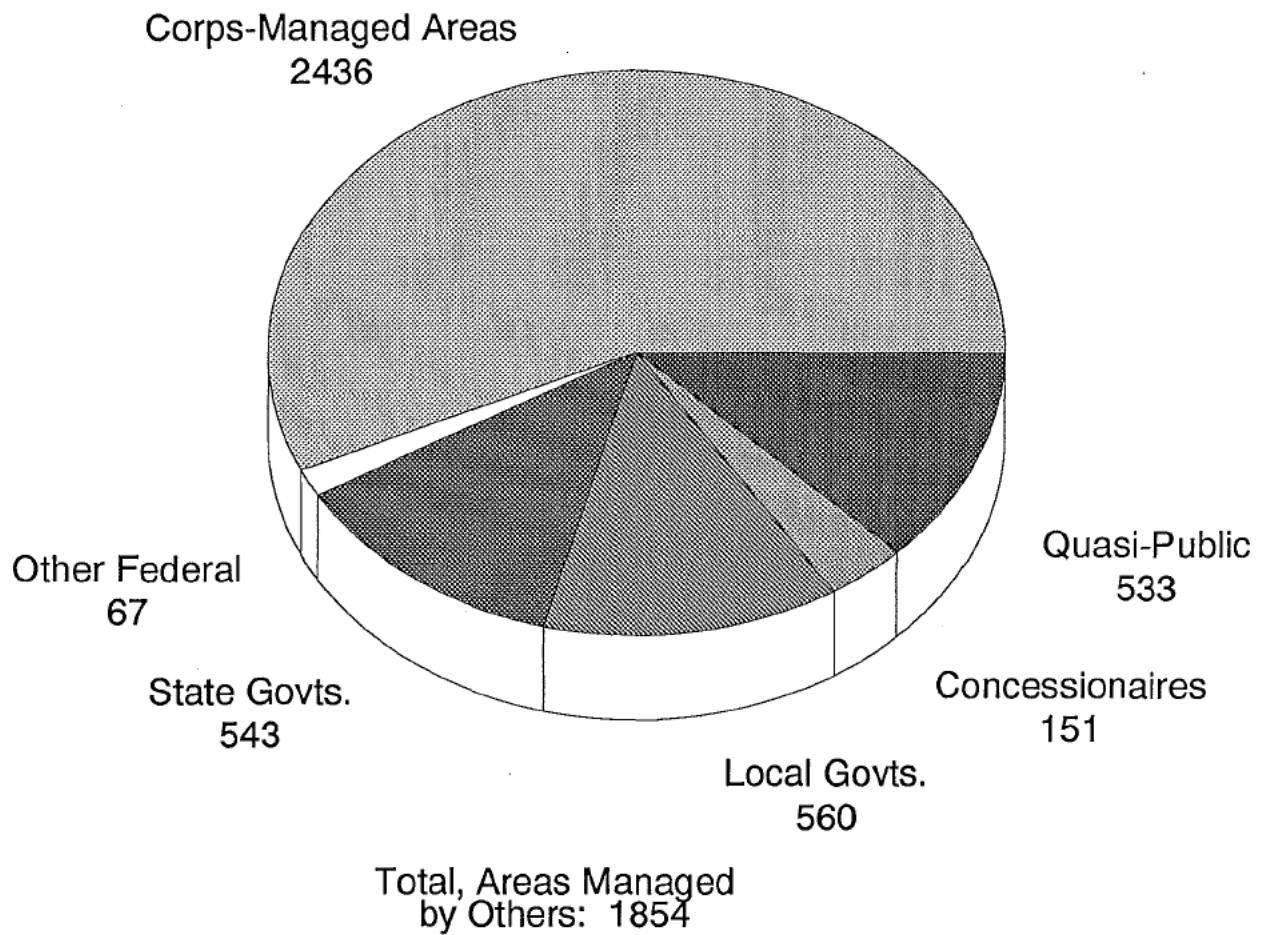
**b. Current Resource Base and Visitation.** The Corps currently administers approximately 11.7 million acres of land and water at 459 lakes and waterways reporting recreation use. In 1989, there were 4,290 recreation areas on these projects, 2,436 of which are managed directly by the Corps. Other Federal agencies managed 67 areas, states managed 543, local governments managed 560, concessionaires managed 151 and quasi-public agencies managed 533 recreation areas (see Figure 2). Corps projects having recreation facilities are located in all but seven states. The distribution of visitation, projects, and recreation areas by Corps Division is listed in Table 2.

The public use of water and water-related resources at Corps lakes has increased dramatically over the past three decades. Thirty million recreation days of use were recorded in 1952. By 1987, public use had grown to 501 million recreation days, a sixteen-fold increase. During the past ten years, recreation use at Corps lakes has increased about two percent annually. This growth rate parallels national trends in overall recreation use. In 1989, the Corps hosted over two billion visitor hours (not the same as a recreation day) of visitation.<sup>1</sup> Table 3 displays the distribution, by Division, of operating Corps and non-Corps recreation areas for various ranges of visitation levels.

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<sup>1</sup> Visitation units of measurement vary significantly among agencies and within the same agency over time. The Corps collected its visitation data in terms of "recreation days" until 1986, after which an effort was made to standardize reporting of all Federal agency visitation using "visitor hours." Since several visitation measurements are, by necessity, used throughout this report, definitions of the various terms are given here. A "recreation day" of use is a visit by one person for some or all of a 24-hour period. A "visitor hour" is an aggregate of use by one or more persons amounting to one hour (one person visiting for one hour or two persons visiting for one half hour each would be one visitor hour). A "visitor day" is 12 visitor hours. A "visit" consists of a person entering a recreation area for any length duration. A statement that "x individuals visit an area each year," indicates the actual number of different individuals visiting the area. Total visitation figures are greater than the actual number of individuals since one individual may visit the project several times per year and would be counted in the overall visitation figures each time he/she visited.

Figure 2  
Management Responsibility for Corps  
of Engineers Recreation Areas, 1989



Source: Natural Resources Management System, 1989

**Table 2**  
**Visitation, Projects, and Recreation Areas**  
**by Corps Division, 1989**

<b>Division</b>	<b>Visitation (million visitor hours)</b>	<b>Number of Projects</b>	<b>Number of Recreation Areas (Corps)</b>	<b>Number of Recreation Areas (Non- Corps)</b>
Lower Mississippi Valley (LMVD)	148.8	25	197	91
Missouri River (MRD)	163.5	44	221	184
New England (NED)	22.0	32	59	22
North Atlantic (NAD)	21.6	18	42	13
North Central (NCD)	115.6	29	130	120
North Pacific (NPD)	62.0	32	97	70
Ohio River (ORD)	512.0	122	457	366
South Atlantic (SAD)	535.4	33	469	341
South Pacific (SPD)	45.6	26	99	24
Southwestern (SWD)	669.4	98	665	623
<b>Total</b>	<b>2,295.9</b>	<b>459</b>	<b>2,436</b>	<b>1,854</b>

Source: U.S. Army Corps of Engineers Natural Resources Management System, 1989.

**Table 3**  
**Distribution of Visitation at Corps and Non-Corps Recreation Areas**  
**by Division, 1989**

**Number of Corps Recreation Areas**

Visitation Level (in visitor hours)	LMV	MRD	NED	NAD	NCD	NPD	ORD	SAD	SPD	SWD	Total
Under 5,000	1	21	4	1	7	0	28	7	19	14	102
5,000-99,999	48	78	29	22	60	41	146	153	33	166	776
100,000-499,999	90	74	23	13	40	39	182	203	25	253	942
500,000-1,000,000	30	34	1	3	15	13	58	47	15	114	330
Over 1,000,000	28	14	2	3	8	4	43	59	7	118	286
Total	197	221	59	42	130	97	457	469	99	665	2,436

**Number of Non-Corps Recreation Areas**

Visitation Level (in visitor hours)	LMV	MRD	NED	NAD	NCD	NPD	ORD	SAD	SPD	SWD	Total
Under 5,000	1	17	0	1	4	0	12	13	1	82	131
5,000-99,999	18	85	13	0	76	26	94	119	6	350	787
100,000-499,999	46	40	4	7	30	30	160	109	8	107	541
500,000-1,000,000	14	15	3	2	9	11	46	44	2	28	174
Over 1,000,000	12	27	2	3	1	3	54	56	7	56	221
Total	91	184	22	13	120	70	366	341	24	623	1,854

Source: U.S. Army Corps of Engineers Natural Resources Management System, 1989.



**c. Funding.** The budgeted Fiscal Year 1990 Corps expenditures for recreation are \$166 million. Recreation's share of the total Corps Operations and Maintenance budget has increased over the last decade from 8.3 percent in 1980 to 10.7 percent in 1988 and a projected 11.2 percent in 1990. A summary of Corps recreation appropriations is given in Table 4.

**Table 4**  
**Corps Recreation Operation and Maintenance**  
**Expenditures 1980-1990**  
**(In Millions)**

<b>Year</b>	<b>Current Dollars</b>	<b>Constant 1980 Dollars</b>
1980	82.8	82.8
1981	97.0	88.8
1982	97.9	82.9
1983	118.5	94.3
1984	140.1	109.4
1985	111.8	86.3
1986	160.4	120.9
1987	169.0	124.2
1988	190.7	136.6
1989	164.2	115.7
*1990	166.4	----

\* Budgeted

Source: U.S. Army Corps of Engineers

## **2. U.S. FOREST SERVICE**

**a. History.** The Forest Service was established in 1905. The agency's governing philosophy is multiple-use management, permitting the sustained yield of renewable resources while protecting the quality of the environment.

**b. Current Resource Base and Visitation.** Today, the Forest Service manages 156 national forests, 83 experimental forests and ranges, 19 grasslands, and 16 land utilization projects on 191 million acres of land and water<sup>1</sup>. The agency records the largest annual visitation of all Federal agencies, 2.91 billion visitor hours in 1988.

**c. Funding.** Appropriations for the Forest Service's recreation program increased by an average of 5.6 percent annually during the 1980's, reaching approximately \$170 million in Fiscal Year 1989. In the partnership arena, the Forest Service's Challenge Cost Share Program (formerly referred to as Challenge Grant) continues to be a successful example of stretching limited Federal dollars by attracting outside funding and support from potential partners. The contribution from the partners to the 1988 Recreation Challenge Cost Share Pilot was \$908,000, versus \$500,000 in Federal funds, nearly two matching dollars for every Federal dollar. This grew to three million Federal dollars matched by seven million non-Federal dollars in 1989. Federal appropriations in FY 1990 of approximately \$5.5 million are expected to generate \$12 million in non-Federal contributions for Challenge Cost Share projects.

**d. Future Management Strategies.** The 1974 Renewable Resources Planning Act (RPA) requires the Forest Service to prepare a long-term strategic planning document every five years that provides direction for Forest Service programs. In transmitting the recommended 1990 RPA Program to Congress, the President cited four high-priority themes that will receive special emphasis during the next five to 10 years: (1) recreation, wildlife, and fisheries resources will be enhanced; (2) commodity production will be environmentally acceptable; (3) scientific knowledge will be improved; and (4) global resource issues will be responded to in a responsible manner.<sup>2</sup>

### 3. NATIONAL PARK SERVICE

**a. History.** Since the establishment of Yellowstone National Park in 1872, the dual purpose of all national parks has been preservation and public enjoyment. The National Park Service (NPS) was officially created within the Department of the Interior in 1916.

**b. Current Resource Base and Visitation.** Today, the National Park Service manages 49 national parks, 90 historic sites, 24 battlefield and military parks, 77 national monuments, 10 national seashores, 12 wild and scenic rivers, 17 national recreation areas, and 62 other memorials, preserves, parkways, lakeshores, trails, and other properties on about 80 million acres of land and water.<sup>3</sup> The agency records the third highest annual visitation of all Federal agencies, about 1.4 billion visitor hours in 1988.

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<sup>1</sup> Forest Service, Draft 1990 Renewable Resources Planning Act Program, (Washington, DC: USDA, June 1989), p. 2.

<sup>2</sup> Ibid., pp. A-1 - A-29.

<sup>3</sup> National Park Service, The National Parks: Index 1987, (Washington, DC: NPS, 1987).

**c. Funding.** National Park Service spent approximately \$990 million for recreation in Fiscal Year 1989. Although the Park Service still accounts for more than half of all Federal spending for recreation, its budget has declined by an average annual two percent (in current dollars) and an annual 5.8 percent (in constant dollars) during the 1980's.

**d. Future Management Strategies.** The National Park Service formed a Twenty-First Century Task Force in 1988 to address the long-term planning needs of the agency. The Task Force presented three components of a strategic plan: (1) an organization statement, defining the purpose of the National Park Service; (2) a compendium of trends gathered mostly from the scientific and popular presses; and (3) some implications of those trends for the NPS. The trends identified included: accelerated changes in the earth's climate; worldwide reduction of biological and cultural diversity; increased pollution affecting the natural and cultural resources of the world; an older, more suburban population with strong ethnic and minority influences; a changing National Park Service work force; an explosion of technology; transition from a national to a global economy; and knowledge as a political and institutional influence. The Director of the National Park Service, in a special edition of their newsmagazine, Courier, has requested Park Service employees to review the Task Force's findings and to provide comments and suggestions as to the future directions the agency might take.<sup>1</sup>

#### 4. BUREAU OF LAND MANAGEMENT

**a. History.** The Bureau of Land Management (BLM) was established in 1946 within the Department of the Interior with management based on the principles of multiple-use and sustained yield.

**b. Current Resource Base and Visitation.** BLM lands are those lands in Federal ownership that are not part of an established national park or forest, wildlife refuge or military lands. Today, the BLM administers 270 million acres of land and water primarily in the western United States. Recreation management is focused on 150 areas comprising approximately five percent of BLM-administered lands. BLM makes recreational opportunities available to the public by issuing permits to private individuals, commercial operators, and concessionaires at 290 "special recreation areas." BLM lands record more than 57 million visits annually, equating to over 460 million recreation visitor hours in 1988.<sup>2</sup>

**c. Funding.** Appropriations for the Bureau of Land Management's recreation program increased by an average six percent annually during the 1980's, reaching almost \$31 million in Fiscal Year 1989.

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<sup>1</sup> National Park Service, "Preparing for the Twenty-first Century, A Call for Ideas," Courier, (Washington, DC: NPS, October 1989).

<sup>2</sup> Bureau of Land Management, Public Land Statistics 1988, (Washington DC: BLM, March 1989), pp. 46-49.

**d. Future Management Strategies.** BLM completed its Recreation 2000: A Strategic Plan in 1989 to provide direction to the agency in the next century, to "...provide a clear statement of BLM recreation management policies" and to make recreation "...an equal partner within the family of multiple-use management."<sup>1</sup> Recreation 2000 identifies nine major challenges critical to BLM's long-range policy objectives: budget/marketing strategies; visitor information and interpretation; resource protection; land ownership and access adjustments; partnerships; volunteers; tourism programs; facilities; and permits, fees, and concessions. The challenges are described in terms of goals, issues, and management objectives, with 100 agency "action items" designed to implement these goals.

## 5. BUREAU OF RECLAMATION

**a. History.** The Bureau of Reclamation was established by the 1902 Reclamation Act to develop water resources in 17 western states. Over the years, Reclamation moved away from the single-purpose development concept that had guided its early agricultural projects and embraced a multipurpose approach to water resources development. The recreational opportunities afforded by Reclamation reservoirs were initially incidental benefits, but the growing popularity of Reclamation's reservoirs soon resulted in project plans incorporating visitor facilities.

**b. Current Resource Base and Visitation.** Today the Bureau of Reclamation administers over six million acres of land and water at 298 developed recreation areas on water developments providing recreation opportunities in the 17 western states. Since the passage of PL 89-72 in 1965, Reclamation has cost shared in the development of recreation and fish and wildlife facilities with other state, local, and Federal agencies. In general, Reclamation has turned these facilities over to the other agencies for operation and maintenance after construction was completed. It retains some management responsibilities for recreation at 47 projects and has specific authority to plan, develop, operate, and maintain recreation at only one project: Lake Berryessa in California.<sup>2</sup> The agency recorded 77.8 million visitors at its 298 recreation areas in 1988. In the same year, 294 million recreation visitor hours were recorded at those recreation areas collecting user fees.

**c. Funding.** Appropriations for the Bureau of Reclamation's recreation program decreased by an average two percent annually during the 1980's, dropping to about \$10.5 million in Fiscal Year 1989. Estimates for 1990 show a significant turnaround to about \$17.5 million, as the agency's recreation budget again reaches levels comparable to those of the early 1980's (in current dollars).

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<sup>1</sup> Bureau of Land Management, Implementation Plan for Recreation 2000: A Strategic Plan, (Washington, DC: BLM, May 1989), p. 2.

<sup>2</sup> Richard A. Crysedale, "An Agency for All Recreation Seasons," National Society for Park Resources Newsletter, (Alexandria, VA: National Recreation and Park Association, August 1989), pp. 2-3.

**d. Future Management Strategies.** The Bureau of Reclamation has recently undergone a major reorganization. According to the Bureau's Recreation Planning Section, some of their current recreation-oriented management concerns include: recreation visitation at many projects exceeding original design capacities; "overflow" use adversely impacting adjacent undeveloped lands; and uncontrolled use by some off-road vehicles, campers, picnickers, and other users resulting in resource degradation. Under the reorganization, the Bureau is seeking greater land management authority and a greater commitment to implement resource management plans for all of their projects.

## **6. U.S. FISH AND WILDLIFE SERVICE**

**a. History.** Since 1903, the Department of the Interior's U.S. Fish and Wildlife Service (USFWS) primary mission has been to conserve, protect and enhance fish, wildlife, endangered species, and certain marine mammals and their respective habitats.

**b. Current Resource Base and Visitation.** USFWS areas encompass 443 national wildlife refuges on over 90 million acres of land and water. Currently, 327 refuges are open to some form of public use, although recreation is regarded as a secondary use of refuge lands.<sup>1</sup> The agency recorded 81 million recreation visitor hours in 1988.

**c. Funding.** USFWS analysts estimate that two percent of the agency's annual national wildlife refuge funding is spent on recreational programs. Using the agency's own "two percent estimate", appropriations for recreation increased by an average 3.5 percent annually from 1984 to 1990, reaching an estimated \$2.5 million in Fiscal Year 1990.

**d. Future Management Strategies.** The USFWS is involved in many public participation programs that lend financial and human support. These include volunteers, Challenge Cost share, Youth Conservation Corps, Cooperating Associations and Adopt-a-Refuge programs. The Volunteer program, initiated in 1978, today has 9,700 people contributing over 478,000 hours annually.

## **7. TENNESSEE VALLEY AUTHORITY**

**a. History.** The Tennessee Valley Authority (TVA) was created by an Act of Congress on May 18, 1933, to develop the Tennessee River valley. Since its inception, TVA's recreation policy has been to identify the recreation resources, to encourage development by other public agencies and private investors, to provide technical assistance where needed, and to provide basic facilities where necessary to assure safe access to the lakes and protect the shoreline from

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<sup>1</sup> Nancy A. Marx, "Public Use and Participation on Resource Management Areas: Issues for Interpretation from a Fish and Wildlife Perspective," (Washington, DC: U.S. Fish and Wildlife Service, 1989), pp. 1-3.

misuse. Beginning in 1937, TVA started leasing lands to non-Federal public agencies for recreation development. Outright transfer of lands to these agencies began in 1945.

**b. Current Resource Base and Visitation.** Today, TVA has regulatory control over development at 118 non-Federal public parks, 455 public access areas and roadside parks, 140 TVA-improved public recreation areas, 28 state wildlife management areas, 55 group camps and clubs, and 298 commercial recreation areas on over 600,000 acres of land and water.<sup>1</sup> Visitation to all TVA sites totalled 81 million visitor hours in 1988.

**c. Funding.** According to TVA's Recreation Program Office, the annual budget for operation and maintenance of all TVA recreation areas in the years 1987-1989 was approximately \$4.5 million, about a 50 percent reduction from pre-1980 levels.

**d. Future Management Strategies.** TVA's policy for facility management is presented in its Recreation Resources Ten Year Action Plan, implemented in 1979. The agency's long-standing goals are to encourage others, both private and public entities, to develop parks and recreation facilities wherever feasible and to improve management of its own areas. Agency assistance in the growth and enhancement of recreation development is illustrated by TVA's 1990 budget testimony. In response to questions from members of Congress, the Chairman of TVA stated they are considering changing their lake management policies to, in part, "support economic growth based on recreation and tourism by delaying summer drawdown on 10 tributary lakes until August 1."<sup>2</sup>

## 8. STATE AND LOCAL GOVERNMENTS

**a. Current Resource Base and Visitation.** State parks, recreation areas, forests and wildlife areas encompass over 60 million acres. Municipal, county and regional parks and forests account for an even larger number of recreation sites but a much smaller number of acres. According to the President's Commission on Americans Outdoors (PCAO), there are 67,685 municipal parks totalling almost three million acres. Counties administer more than 17,000 recreation areas of various types totalling over five million acres.<sup>3</sup> A total of 710

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<sup>1</sup> Tennessee Valley Authority, "Recreation Resources Development," TVA Handbook, (Knoxville, TN: TVA, 1987), pp. 184-193.

<sup>2</sup> Marvin Runyon, "Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, One Hundred First Congress, Second Session," Energy and Water Development Appropriations for 1991, (Washington, DC: U.S. Government Printing Office, 1990), pp. 169-170.

<sup>3</sup> President's Commission on Americans Outdoors, Report and Recommendations to the President of the United States, (Washington, DC: PCAO, December 1986), p. 41.



million visits were enumerated by the National Association of State Park Directors in 1988. The overwhelming majority of these recreationists (over 92 percent) were day-use visitors.<sup>1</sup>

**b. Funding.** The operating budget for all state parks totalled about \$900 million in 1988, with outlays for fixed capital investments totalling about \$350 million more. Outlays for recreation by individual states varied widely, with the proportion of state government operating budgets spent on state parks ranging from a low of 0.07 percent in Virginia to a high of 1.09 percent of the state budget in Arizona. Nationally, states dedicated an average 0.29 percent of their operating budgets to state park agencies.<sup>2</sup>

In 1985, a total of almost \$11 billion was spent specifically for recreation by Federal land management agencies, states, and local parks and recreation departments. Most of that was for operation and facilities maintenance; smaller portions were for acquisition, facilities development and rehabilitation.<sup>3</sup> The Federal government contributed \$1.62 billion, or approximately 15 percent of total spending for recreation; states and local governments contributed the remaining 85 percent. It is the Federal share, however, that provides most of the water-based recreation opportunities.

## 9. RECREATION/TOURISM INDUSTRY

Tourism is a powerful economic force, the third largest industry in the country. According to the PCAO, American consumers spent over \$260 billion on recreation in the United States in 1984. These expenditures generated almost five million jobs and Federal, state and local revenue of about \$14 billion, nine billion and three billion, respectively. By 1988, according to the U.S. Travel and Tourism Administration, tourism revenues had grown to \$330 billion, generating nearly six million jobs.<sup>4</sup> In 1989, The Washington Post reported that an estimated 38 million foreign tourists would spend over \$40 billion in the United States that year.<sup>5</sup> At the Federal level, one study projects that over the next 50 years, one national forest will produce just \$110 million from timber sales but almost six times that amount, \$640 million, from recreation expenditures. Government at all levels invested eight billion dollars in recreation and park programs in 1982, or slightly over \$100 for every American household, but

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<sup>1</sup> National Association of State Park Directors, Annual Information Exchange, (Washington, DC: National Association of State Park Directors, April, 1988), p. 10.

<sup>2</sup> Ibid., pp. 15-22.

<sup>3</sup> President's Commission on Americans Outdoors, p. 193.

<sup>4</sup> U.S. Travel and Tourism Administration, Report of the Federal Task Force on Rural Tourism to the Tourism Policy Council, (Washington, DC: Department of Commerce, August 1989), p. 6.

<sup>5</sup> John Burgess, "Foreign Tourists Nearly Outspend Americans," The Washington Post, (Washington, DC: Washington Post Co., Vol. 112, No. 363, December 28, 1989), p. E-1.

the users of these government programs received total benefits of \$25 billion, resulting in a benefit/cost ratio of better than three to one.<sup>1</sup>

As one of the nation's largest providers of outdoor recreation, the Corps of Engineers plays a significant role in the U.S. tourism industry. Recent studies undertaken by the Corps indicate that significant economic activity is generated by recreation opportunities provided at Corps projects. Visitors to Corps projects in 1988 spent more than \$10 billion for such non-durable goods and services as food, fuel, bait, restaurant meals and lodging. This trip spending generated an estimated eight billion dollars of income and over 265,000 jobs for local economies. Trip spending alone by visitors to Corps projects accounted for approximately three and a half percent of all tourism spending and resulted in about five percent of all tourism employment. This does not include the spending on such durable items as boats and camping equipment that also results from Corps recreation projects. In 1988, the economic impact performance indicator used by the Corps averaged \$33 of visitor spending per O&M dollar spent.

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<sup>1</sup> President's Commission on Americans Outdoors, p. 17.

## D. PRIOR STUDIES AND REPORTS

Since 1969, the Corps has taken an in-depth look at its recreation function through four major studies and reports. Two national reviews of outdoor recreation were also conducted during this period. A brief synopsis of these reports and some of their influences on the Corps follows.

### 1. RESOURCE MANAGERS

The report, Corps of Engineers Resource Managers,<sup>1</sup> was the product of a Corps task force comprised of representatives from Operations, Planning, Engineering and Real Estate functions. Multiple elements were represented to capture the interdisciplinary aspects of managing the recreation function. The report made some comparisons among the water resource agencies with respect to their recreation management functions.

The report identified the basic objectives of the Corps relative to encouragement of non-Federal participation in the recreation program. It stated that, by the end of 1968, the Corps had entered into 941 leases with state and local agencies. The report cited several reasons why all the recreation function had not been delegated to others. These reasons include: large lakes could not be readily managed as a public park; the fiscal, technical and management capacities of state and local agencies varied widely, were not uniformly adequate, and did not always match up with Corps areas that were available or where recreation demands were high; recreation was only one function of the overall management job of maintaining and protecting project resources; large projects attract users from across state and local institutional boundaries, and the job of accommodating heavy visitation could only be reasonably handled at the Federal level.

Private investors had been actively engaged in operating marina concessions for several years. The report recognized and encouraged the continuation of private investment in the Corps recreation program. However, it cautioned against requiring excessive investment from individual concessionaires. Some form of subsidy would likely be needed. The subsidy would probably be in the form of professional market research analyses or provision of some basic site attributes such as roads, parking, utilities or water supply.

The report also recognized the importance of recreation as a project purpose. Projects were cited where recreation benefits were required for economic justification (e.g., J. Percy Priest Lake). Other lakes, including Lake Texoma and John H. Kerr Dam and Reservoir, where recreation was not a specifically authorized purpose, but became a priority function, were also discussed.

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<sup>1</sup> Office, Chief of Engineers, Corps of Engineers Resource Managers, (Washington, DC: U.S. Army Corps of Engineers, July, 1969).

Several significant actions resulted from this study. The Corps leadership realized that it would not be possible to totally shift responsibility for recreation to others; however, the posture of encouraging state, local and private assistance would be continued. In order to cope with the responsibilities incumbent upon the Corps to provide stewardship for the natural resources and management of the recreation use of those resources in a professional manner, some organizational changes were made. Environmental Resources Sections were established in the Planning Branches of Engineering Divisions in districts and divisions. An Environmental Resources Branch was created in the Planning Division of the Civil Works Directorate at Headquarters. On the Operations side of the house, Recreation-Resource Management Branches (later, generally, renamed Natural Resources Management Branches) were established in the Civil Works Directorate at Headquarters and in the district and division offices.

Goals of the recreation-resource management program were established as follows: encourage maximum sustained public utilization of project resources; minimize conflicting resource uses; maximize public service coupled with prevention of privileged occupation of Corps owned lands; and, attentiveness to changing recreation technology and user preferences. These goals formed the nucleus for development of guidance to the field offices on several important aspects of recreation and natural resources planning and management. Several regulations and other key guidance were issued as a direct result of this study. In addition, budget accounts for Natural Resource Management and Outdoor Recreation were established in the Operation and Maintenance (O&M) Budget in September, 1973.

## 2. PUBLIC RECREATION NEEDS

Dr. Edward Crafts, formerly the Deputy Director of the U.S. Forest Service and Director of the Bureau of Outdoor Recreation, was contracted by the Corps to conduct an independent review of the recreation management function as a follow-on to the 1969 Corps study. Dr. Crafts' extensive experience and contacts enabled him to quickly analyze the Corps program and make some comparisons with similar programs of sister agencies.

Dr. Crafts' report, How to Meet Public Recreation Needs at Corps of Engineers Reservoirs,<sup>1</sup> generally coincided with, and supported, the findings of the 1969 Corps study. Dr. Crafts called for a reorganization of the Civil Works Directorate to give upgraded status to a "Division of Reservoir and Land Management." Failing such a reorganization, Dr. Crafts recommended transfer of recreation planning, site selection and design functions to the National Park Service and transfer of reservoir lands and management functions to the U.S. Forest Service. He concluded that the Corps is treated inequitably among most Federal agencies in terms of requiring non-Federal cost sharing for recreation projects. He also pointed out the wide range of expertise and financial capability among state and local agencies. He stated that the problem is compounded by the requirement to cost share on projects authorized before 1965, although such projects are legally exempt. He proposed transferring as many projects as

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<sup>1</sup> Edward C. Crafts, How to Meet Public Recreation Needs at Corps of Engineers Reservoirs, (Washington, DC: December, 1970).

practical to the U.S. Forest Service and grouping Corps lakes into National Recreation Areas for Corps administration.

### 3. LAND USE

The report, Study of Land Use for Recreation and Fish and Wildlife Enhancement,<sup>1</sup> was written to comply with a 1974 Congressional mandate that directed the Corps to study land use practices and recreational uses at its water resource development projects.

The report reached several conclusions. First, the Corps planning process did not consider changes in the character of recreation demand over time, regional distribution of use or facilities or competition between recreation suppliers. Second, privately owned land areas adjacent to Corps lands significantly affected recreation overuse and underuse at Corps lakes. Third, the decentralized nature of the Corps organization and the horizontal staff structure at the district level provided flexibility to meet a wide variety of conditions and workloads, but failed to provide a balanced overview of resource problems. However, decentralization over a long period of time encouraged distinctive engineer districts that interacted differently with common state agencies. Fourth, restrictive lease conditions discouraged private individuals from making large capital investments at Corps lakes. Finally, compared to the Corps, the six Federal land management agencies studied (National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, Bureau of Reclamation, and Tennessee Valley Authority) did not have a mission which was broad enough to encompass the wide-ranging water resource related duties of the Corps.

Four approaches to the management of Corps lands were evaluated: (1) lease or sale to the private sector; (2) transfer to other Federal agencies; (3) transfer to state or local governments; (4) retention under Corps management (with the Corps continuing to operate physical facilities for flood control, navigation, hydroelectric power, low-flow augmentation, and other purposes authorized by Congress). The chief advantage of private sector operations was the development of high density, capital-intensive recreation facilities and greater provision of amenities. The disadvantages, according to the report, included reduced opportunities for extensive recreation experiences, wildlife management, public hunting, and fishing, as well as the adverse effect on other Corps programs resulting from personnel being diverted to functions involving lakeshore management and private sector coordination.

According to the report, the transfer of the Corps recreation program to other Federal agencies would severely strain the recipient agency's budget and personnel capabilities (especially those with little experience with large-scale visitation). The authors considered most state and local governments as having inadequate resources to effectively meet the full range of recreation resources responsibilities associated with managing all Corps projects.

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<sup>1</sup> Coastal Zone Resources Corporation, Study of Land Use for Recreation and Fish and Wildlife Enhancement, (Wilmington, NC: Coastal Zone Resources Corporation, May, 1975).

In general, the report recommended Corps retention of its lands with continuation of its lease and partnership programs. On the legislative front, the report recommended that Congress formally direct the Corps to protect and manage the public lands of its projects to the maximum extent possible for recreational purposes in perpetuity. The Corps should be authorized to construct, operate, and maintain recreation facilities at any existing or future project or at facilities abandoned by lessees. Finally, PL 89-72 should be clarified to prohibit retroactive application of its cost sharing provisions.

#### **4. ARMY NATURAL RESOURCE MANAGEMENT**

The report, An Evaluation of U.S. Army Natural Resource Management Programs on Selected Military Installations and Civil Works Projects,<sup>1</sup> was authored by a three-member "blue ribbon" review team, invited by the U.S. Army in April 1984 to assess the status of natural resource management programs carried out on Army civil and military lands. The team visited eight military installations and eight civil works projects that represented a wide range of geographical, ecological, administrative, and program characteristics. The review team focused on the resources available at each project, the management decision process, programs being carried out, management constraints, and opportunities for improvement.

A summary of the team's recommendations to the Secretary of the Army that are germane to the Corps recreation program included the following. First, authorize the Corps to manage its lands and waters more intensively for public use purposes, as well as stated water/land management purposes. Second, reexamine and reconsider the May 1984 policy (enunciated in Engineer Circular 1130-2-183) of disposing of "excess" lands at Civil Works projects (because, according to the report, while these lands may not have been leased or used for park or recreational purposes, they do help ensure water quality in, and access to, reservoirs, as well as future recreational opportunities). Third, establish the principle of collecting entrance and user fees at water resource development projects and dedicating those funds to maintaining and managing the resources at those sites. Fourth, seek amendment to the 1965 Federal Water Project Recreation Act (PL 89-72) to remove the legal roadblock to managing Corps lands to meet public recreational demands. Fifth, evaluate thoroughly the law enforcement authorities and activities at Corps projects, with the view to strengthen efforts to handle current and anticipated increased natural resources and visitor needs more realistically. Finally, reduce, where possible, the frequent mowing of large open grassy areas at Corps projects to curtail maintenance costs.

#### **5. PRESIDENT'S COMMISSION AND DOMESTIC POLICY COUNCIL REPORTS**

The President's Commission on Americans Outdoors (PCAO) was appointed by Presidential Executive Order 12503, dated January 28, 1985, to reconsider and update the 1962

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<sup>1</sup> Laurence Jahn, C. Wayne Cook, and Jeff Hughes, An Evaluation of U.S. Army Natural Resource Management Programs on Selected Military Installations and Civil Works Projects, (Washington, DC: Report to the Secretary of the Army from the Review Team, October 1984).



report of the Outdoor Recreation Resources Review Commission. Its report, Report and Recommendations to the President of the United States<sup>1</sup>, was submitted to the President in 1986. The Interagency Task Force on Outdoor Recreation Resources and Opportunities was chartered in August 1987 by the Domestic Policy Council to prepare proposals for the President to further develop outdoor recreation opportunities. It was directed to study the Report and Recommendations of PCAO and to examine the Administration's recreation initiatives and accomplishments and current recreation activities administered by executive departments and agencies. The Council's report, Outdoor Recreation in a Nation of Communities - Action Plan for Americans Outdoors, was published in July 1988.<sup>2</sup>

As noted by Marion Clawson, a senior fellow emeritus of the Resources for the Future (an independent research organization), although the two reports differed substantially in tone, both studies reached many similar conclusions.<sup>3</sup> The President's Commission conveyed a sense of urgency and concern about deteriorating Federal funding for outdoor recreation, while the Domestic Council's Task Force was congratulatory, citing many recent accomplishments. Among other recommendations, both studies cited the need for improved coordination and the collection of comparable recreation data by Federal agencies, the importance of local organizations in the planning for and provision of recreation opportunities, the need for greater involvement by the private sector, the potential for greater use of volunteers, and the need for greater reliance on fees at Federal recreation sites.

**Conclusion.** It was against this background that the current Recreation Task Force proceeded with its study to develop a plan to maintain and enhance public recreational opportunities while reducing Federal costs for development and operation of recreational facilities. The following chapter describes the process used to accomplish this mission.

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<sup>1</sup> President's Commission on Americans Outdoors, Report and Recommendations to the President of the United States, (Washington, DC: PCAO, December 1986).

<sup>2</sup> Task Force on Outdoor Recreation Resources and Opportunities to the Domestic Policy Council, Outdoor Recreation in a Nation of Communities - Action Plan for Americans Outdoors, (Washington, DC: U.S. Government Printing Office, July 1988).

<sup>3</sup> Marion Clawson, "The Federal Role in Outdoor Recreation," Resources, (Washington, DC: Resources for the Future, Spring 1990), pp. 11-14.

## CHAPTER II ORGANIZATION AND PROCESS

### A. ORGANIZATION

To meet the objective of the study, the Recreation Task Force was organized as a tri-level management system. This insured the active participation of top echelon, middle management and technical level personnel in the development of the proposed plan. Members of the Corps of Engineers Recreation Study Team are listed in Volume II, Appendix A. The duties of key positions are given below.

#### 1. TASK FORCE

**a. Chairman.** The Task Force Chairman was responsible for applying the appropriate resources, establishing performance standards and milestones and a system of review conferences to assure that the Task Force objectives were met.

**b. Policy Steering Committee.** The Policy Steering Committee advised the Task Force Chairman on strategies and alternatives for achieving the study objective. This committee also reviewed study progress and made appropriate recommendations on practicable measures to assure compliance with the Recreation Task Force Charter.

**c. Management Team.** Each member of the Policy Steering Committee appointed a representative to serve on the Management Team. In addition, a member was assigned from the Public Affairs Office. Members of this team assisted the Executive Director in the day-to-day operations of the study effort related to their areas of expertise.

**d. Executive Director.** On behalf of the Task Force Chairman, the Executive Director had full-time responsibility for the administration and day-to-day operation of the overall study, including liaison with the Policy Steering Committee, the Management Team, technical resources and the non-Federal sector. He was also responsible for coordinating publication of the final report.

**e. Technical Study Manager.** The Technical Study Manager was responsible for the development and implementation of the Scope of Study and Detailed Study Plan. He established requirements for technical data acquisition, retrieval, analysis and coordination with in-house and outside sources as needed.

### B. STUDY PROCESS

An attempt was made throughout the study process to solicit information and views from a wide range of potentially interested parties, including recreation user groups, recreation providers (both public and private), suppliers of recreation equipment and services, the recreation/tourism industry, potential developers, conservation and environmental organizations, the academic community, and Corps employees.

## 1. INFORMATION COLLECTION

**a. Corps Information Collection Task Forces.** Five in-house information task forces were formed. The first task force developed initial strawman proposals for management strategies or programs that could possibly respond to the study objective. This strawman was used by the remaining task forces as the basis for their information collection efforts. The second task force reviewed existing laws, policies, and regulations governing development, enhancement, and operation of recreational facilities at Corps projects. The third task force identified potential opportunities for expanding revenue generation or for otherwise augmenting the Corps O&M budget. The fourth task force reviewed data and data base needs required to support analysis of recreation O&M policy options and to provide a basis for dialogue with non-Federal interests, both public and private. The fifth task force identified options for potentially increasing the interest of non-Federal entities in taking over the management of existing Corps recreation facilities. In all cases, the task forces did not make recommendations, but rather described a wide range of options and the potential impacts of each. Individual reports of each task force, describing their composition, task, approach, and findings, are included in Volume II as Appendices B through F, respectively.

**b. Telephone Survey.** To complement the in-house information task force efforts, a contracted telephone survey of organizations was also conducted. Questionnaires were developed and targeted for five groups (with the number of completed questionnaires by group noted in parentheses): non-Federal public agencies (123), Corps concessionaires (110), resort developers (37), other recreation service providers (34), and user and conservation groups (83). The contractor's final report, including a description of its process and findings, is included in Volume II as Appendix G.

**c. Poll of Governors and Directors of other Federal Land Management Agencies.** The Deputy Commander, U.S. Army Corps of Engineers, sent letters to all of the state governors and other Federal land management agencies, informing them of the study and its objective. The letter solicited their comments, especially about opportunities, constraints, and capabilities for expanding the role of non-Federal public and private entities in providing recreation opportunities at Corps projects. Responses were received from 37 states and two Federal agencies. Copies of this correspondence are included in Volume II as Appendix H.

**d. Personal Interviews.** As part of another contract effort, a series of detailed personal interviews were conducted. Individuals were selected for interview based on their involvement in known successful or unsuccessful recreation development situations or their recognized knowledge in the recreation/tourism area. A total of 44 detailed interviews were conducted, 15 of which were with individuals affiliated with designers, resort developers or development authorities; 16 were with individuals from state and local governments; 11 with Federal government agencies; and one each from academic and environmental/conservation backgrounds. A summary of the contractor's findings concerning these interviews is included as part of its final report in Volume II, Appendix I.

**e. Natural Resources Management Conference Workshop.** During the conduct of this study, the Corps biennial Natural Resources Management Conference was held in Nashville, Tennessee. The event was sponsored by the Natural Resources Management Branch, which is the Corps Headquarters element responsible for, among other duties, operating and maintaining Corps recreation areas. The Conference was attended by representatives from all organizational levels (i.e., project, district, division, and headquarters) of its Natural Resources Management Branch, as well as some other Corps functional elements, including Real Estate, Planning, and Research. As part of this conference, 144 of the attendees participated in workshops designed to further identify and evaluate management strategies and programs for this study. Over 100 options were rated in terms of their anticipated effect on both recreation opportunities at Corps projects and on the Federal budget burden. Employees were not asked whether the Corps should or should not pursue the options listed, but only if the options met both aspects of the study objective. They were, however, given the opportunity to comment on each option presented. Positive ratings equated to Federal expenditure reductions and maintenance or enhancement of recreation, while negative ratings corresponded to anticipated Federal budget increases and loss of recreation opportunity. The workshops were facilitated by the private contractor that conducted the detailed interviews noted above. Its summary of the Natural Resources Management Conference Workshop, including the process and findings, is included in its final report in Volume II, Appendix I.

**f. Regional Workshops.** A preliminary compilation and evaluation of suggested management programs and strategies was then conducted by a Working Group, consisting of Corps field personnel from various disciplines. The Working Group compiled all suggested options received, eliminated ideas that were duplicates or that could not meet the study objective, and categorized the remaining 93 options into four categories: (1) Revenue, (2) Resource Augmentation, (3) Non-Federal Public Involvement, and (4) Private Involvement. The Working Group's evaluation was further reviewed by a Field Review Group, again consisting of Corps field personnel from various disciplines. The membership of the Working Group and Field Review Group is identified in Volume II, Appendix A.

The resulting list of options was then packaged for use at six regional workshops and approved, with modification, by the Policy Steering Committee. Because individual questions on each of the 93 options would be too burdensome for workshop use, 51 questions summarizing several options or highlighting the most important or potentially controversial issues were included in a regional workshop questionnaire.

The six regional workshops (Table 5) were then held to further obtain input on the options being considered. The regional workshops were designed to elicit intensive review, in a small, facilitated workshop setting, by individuals representing diverse backgrounds and opinions. The compressed timeframe of the study, the tight schedule for each workshop, and the actual conduct of workshops in the early spring precluded a separate on-site survey of Corps visitors.

**Table 5**  
**Locations and Dates of Six**  
**Regional Workshops**

<b>Workshop Location</b>	<b>Workshop Date</b>
Portland, Oregon	March 28, 1990
Arlington, Texas	April 4, 1990
Omaha, Nebraska	April 12, 1990
Pittsburgh, Pennsylvania	April 17, 1990
Moline, Illinois	April 23, 1990
Atlanta, Georgia	April 26, 1990

In addition to general press releases inviting the public, announcements were sent to a number of individuals in each of the regions representing different backgrounds and affiliations. This action was taken to help assure a wide range of perspectives and affiliations were represented at the workshops. A total of 286 announcements were sent and 318 individuals participated in the workshops. The distribution (percentage) of announcements and attendees by affiliation is summarized in Table 6.

**Table 6**  
**Distribution of Regional Workshop**  
**Announcements and Attendees\***

<b>Affiliation</b>	<b>Announcements (percent)</b>	<b>Attendees (percent)</b>
Recreation users/lake association	12.6	23.5
Environmental/conservation groups	10.0	6.9
Concessionaires	12.9	11.4
Resort developers/realtors	10.0	3.9
Recreation business/industry	6.6	5.4
Chambers of commerce/tourism associations	6.6	6.3
City/county/regional government agencies	14.3	9.6
State government agencies	18.5	14.5
Federal government agencies	3.5	7.2
Academic institutions	4.2	3.0
Other	1.0	8.0
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

\*Percents may not add up to 100.0 due to rounding.

Breakout sessions, consisting of a mixture of affiliation representatives, were held at each workshop. This provided a forum for exchange of diverse ideas and opinions. Participants were also asked to rate the 51 options listed on the questionnaire in terms of whether the Corps should or should not pursue each option. To encourage an open exchange of information in the breakout sessions, the only Corps employee present was a recorder. (A Corps employee was needed to record the session since he/she would be most familiar with terms and concepts being presented.) The recorder did not participate in the discussion nor answer questions.

The contractor that participated in the Natural Resources Management Conference workshop facilitated the breakout sessions at the regional workshops. The contractor's final report, which includes a summary of the workshop process and detailed analysis of findings, is presented in Volume II as Appendix I.



## 2. REVIEW AND EVALUATION

After completion of the regional workshops, several members of the Working Group reconvened to compile and analyze the information received. For each option, related findings from the regional workshops, telephone survey, personal interviews, Natural Resources Management Conference workshop, general correspondence, Governors responses and the five in-house information collection task forces were compiled and analyzed. Each option was then evaluated based on the following criteria: (1) impact on the study objective, (2) compatibility with other project purposes, (3) law or policy change necessary, (4) controversial aspects, (5) pros and cons and (6) potential for success given all relevant factors. The Working Group's evaluation and recommendations were then reviewed by the Field Review Group and presented to the Recreation Task Force Management Team and Policy Steering Committee. This process formed the basis for the analysis and recommendations presented in Chapter IV.

## 3. NOTIFICATION OF OTHERS

To insure that all interested parties were informed of the study and its progress, a Congressional Contact and Public Affairs Plan was developed. The plan consisted of three phases: (1) the "getting started" phase included notifying Congress, advising the Corps work force, and making initial announcements to the public regarding the study purpose and process; (2) the "sustaining the effort" phase included periodic written updates and other presentations, together with a public involvement effort; (3) the "wrap-up phase" included providing a report to the ASA(CW) and notifying the Congress, the work force and the public of study results.

At the beginning of the study, the Chief of Engineers sent letters to the 33 Chairpersons and ranking minority members of the Senate and House Appropriations and Authorization Committees and their appropriate Subcommittees, informing them of the initiation and purpose of the study. Oral briefings were provided to the staff of the Office of Management and Budget (OMB) and the staffs of the Senate Environment and Public Works Committee, the Senate Subcommittee on Energy and Water Development of the Appropriations Committee, the House Appropriations Committee, and the House Subcommittee on Water Resources of the Committee on Public Works and Transportation. A memorandum was sent to all Division Commanders, informing them of the initiation of the study and requesting them to provide innovative ideas for accomplishing the study objective. An initial press release informed the public of the study and requested its input.

During the conduct of the study, bi-monthly progress reports were provided to the ASA(CW) and oral briefings were given to the staffs of the ASA(CW) and OMB. An official notification of the regional workshops was published in the Federal Register on March 7, 1990, and public news releases provided for additional public notification.

Throughout the study process, the Executive Director, Technical Study Manager, and other members of the Study Task Force made presentations on the study at such forums as regional and national conferences (e.g., Southeastern Recreation Research Conference),

professional meetings, and internal Corps workshops and conferences. They also provided interviews and information for reporters from various news media.

As a result of the official public news releases, regional workshop participation, various presentations, and follow-up news articles, a large amount of public correspondence was received concerning the study. Over 400 letters have been received from individuals, organizations, and public agencies.

## **CHAPTER III EVALUATION OF OPTIONS**

### **A. INTRODUCTION**

While no single solution was found for meeting the study objective, numerous options were evaluated. Many have potential for assisting the Corps in meeting the study objective in the future.

Options were evaluated on the basis of their meeting both aspects of the study objective: (1) maintaining or enhancing recreation while (2) reducing net Federal expenditures. Many options, standing alone, met only one of the two aspects. For example, increasing cost sharing could enhance recreation by encouraging more development. However, unless existing Corps O&M (exceeding the Federal cost share investment) is taken over as part of the cost sharing agreement, the net Federal expenditures would increase rather than decrease. By the same token, ideas aimed only at reducing net Federal expenditures, such as selling land, would not necessarily enhance or maintain public recreation opportunities. This disparity was taken into account by modifying the option or by noting the actions needed to meet the study objective.

The options considered are grouped under four main categories:

- (1) Revenue;
- (2) Resource Augmentation;
- (3) Non-Federal Public Involvement;
- (4) Private Involvement.

Within each of the four main categories are subdivisions under which related individual options are listed and discussed. Some options are discussed under more than one category because the options were considered from several standpoints. For example, several options under the Permit/Outgrant Revenue category are designed to increase lessee income. This results in increased rental payments, representing potential revenue for the Corps. Greater lessee income also serves as an incentive for non-Federal public or private entities to become involved in the Corps recreation program. Options addressing increased lessee income are, therefore, discussed under the Outgrant/Permit Revenue section from a Federal revenue standpoint and under the non-Federal Public or Private Involvement categories from an incentive standpoint.

### **B. REVENUE**

Included in the Revenue category are programs or activities that relate to revenues collected from several sources: the recreation visitor (recreation fees); outgranted Corps lands (such as lease rental payments); shoreline use permits; and the sale of land, merchandise, surplus equipment or impounded property. For analysis, this category was subdivided into:

- (1) Recreation Fee Revenue;
- (2) Outgrant/Permit Revenue;
- (3) Sales Revenue.

## 1. RECREATION FEE REVENUE

**a. Current Situation.** The Corps is allowed by law to charge for the public use of specialized recreation sites, facilities and services. The Corps may also charge special event permit fees. The Corps is prohibited by law from charging entrance fees and from charging for day use activities such as sightseeing and use of the water. The Corps is also the only Federal agency that must provide at least one free campground at each project where it provides camping facilities. Senior and handicapped citizens using the Golden Age/Access Passports receive a 50 percent reduction on Federal user fees and a 100 percent discount on Federal entrance fees. Recreational boaters may use navigation locks free of charge. All revenue from recreation fees is returned to the Corps for use in operating, maintaining and in some cases, enhancing existing recreation areas. While fees are technically returned to the districts in proportion to fees collected, in recent years O&M funding has been reduced by the amount of fees collected.

**b. Options Considered.** Options considered under this subcategory were:

- (1) expand the Corps authority to include charging for day use;
- (2) charge an entrance fee;
- (3) charge for hunting, fishing, or trapping;
- (4) issue Corps boat licenses;
- (5) issue parking permits for boat launch areas;
- (6) reduce or eliminate Golden Age/Access discounts;
- (7) implement a nationwide reservation system;
- (8) expand the charging of variable rates depending on time and location of use;
- (9) charge for recreational boats going through navigation locks;
- (10) eliminate the free camping requirement;
- (11) charge a one-time administrative processing fee for issuing Golden Age/Access Passports;
- (12) encourage special events and charge sponsors for permits;
- (13) charge aircraft for use of public lands and waters;
- (14) charge for special releases of water from the reservoir for enhanced downstream white water uses (such as rafting, kayaking, canoeing);
- (15) institute a 1-900 toll charge telephone number for campground information (a portion of the 1-900 charge would come back to the Corps);
- (16) establish Corps membership campgrounds;
- (17) relax 14-day camping limitation;
- (18) expand existing facilities and charge for their use.

**c. Evaluation of Options.**

A majority of the users surveyed were willing to pay higher recreation fees, rather than see facilities closed. Private sector recreation providers also favored increases in fees because, in some cases, they regard the Corps lower fee structure as creating unfair competition. Sixty-six percent of the regional workshop participants favored an increase in fees, but only if the

revenue were returned to the projects for operation and improvements at the site. The reaction from the general public was that fees are acceptable, but the Corps should not go so far as to price the areas out of reach of the average citizen. The President's Commission on Americans Outdoors and the President's Domestic Policy Council Task Force also found the consumer ready and willing to pay higher fees where the revenues are recycled to the areas in which they are collected. Most users see this as an investment rather than as a "tax." If the area they enjoy can be continually available or improved, they are willing to help defray the costs. There was, however, some opposition voiced to new fees or charging for facilities previously provided free of cost.

**Option 1: Expand the Corps authority to charge for day use.**

Day use fees are fees charged on a daily basis for use of a recreation area. The Corps has submitted legislative proposals authorizing charging day use fees in addition to fees now charged for specialized sites, facilities, equipment and services. In support of that legislation, a recent Corps study estimated that gross revenues of \$20 million per year could be generated from instituting day use fees at 840 of the Corps day use recreation areas. This figure was based on fees averaging \$1.50 per car per day. Assessing two dollars per car per day would generate \$27 million in gross revenue annually.

Another view of the day use revenue generating capacity was submitted by a national organization along with other comments on the study. The organization suggested that a charge of \$.50 for each recreation day of use received by Corps projects in 1987 (the last year visitation was compiled in recreation days), would have generated \$250 million (500 million recreation days of use x \$.50). However, this figure is gross revenue based on total project visitation. Considering collection costs, declines in visitation as a result of the fee and the fact that less than 50 percent of the total project visitation occurs within Corps managed recreation areas, a more realistic estimate of maximum Corps net revenue would be \$40-50 million per year.

While a specific question on day use fees was not asked at the regional workshops, 52 percent opposed charging for "all recreation use" (11 percent were neutral). Thus, these respondents thought some recreation opportunities should be provided free of charge. Charging fees for all day uses would require a change in law (16 USC 460d-3 and 460l).

**Option 2: Charge an entrance fee.**

An entrance fee differs from a day use fee in that day use fees would be required for use of certain day use areas or for certain day use facilities. An entrance fee, as proposed, would be for vehicular access to any Corps managed portion of the project.

To analyze the revenue potential from a Corps entrance fee, the estimated total number of individuals who visit Corps projects at least once each year (25 million) must be reduced by those visitors who, under current law or expected policy, would not be subject to the Corps entrance fee. Such visitors include those visiting areas of the project that are leased to others

for management, Golden Age/Access Passport holders (since they are exempt from Federal entrance fees), and those with a Golden Eagle Passport purchased from another Federal agency. (The Golden Eagle Passport is the \$25 Federal entrance fee pass now in use where entrance fees are authorized). If the fee is on a per vehicle basis, visitors who walk onto the project would be discounted, as well. At projects with private development adjacent to the lake, this "walk-in" visitation can be substantial.

It is assumed that if the Corps were permitted to institute an entrance fee program, it would participate in the existing Golden Eagle program; it would not attempt to charge a Federal fee for the use of leased lands; it would honor the Golden Age/Access Passports' 100 percent discount on Federal entrance fees; and it would not charge visitors walking onto project lands. Considering collection costs and the necessity for charging a reduced fee for sightseers or one-time visitors, the greatest probable net revenue from entrance fees is approximately \$40 million per year.

This figure is based on Corps estimates of 14 million individuals visiting Corps managed portions of the project at least once per year; approximately 20 percent of the 14 million having Golden Age or Access Passports; another 10 percent having a Golden Eagle Passport purchased from another Federal agency; and another 10 percent having walked onto the project, resulting in 5.5 million visitors subject to the entrance fee. The estimated revenue was also reduced by 40 percent to account for a reduced daily fee for infrequent users and possible decline in visitation due to the new fee. The annual fee used to compute this total is \$25 per vehicle with an assumption of three visitors per vehicle. Although collection costs are not known, for this purpose, an estimate of five million dollars per year was used.

This is a very rough estimate and does not take into account all possible problems associated with collection of entrance fees. As an example, many Corps projects are accessed by a large number of roads and entrances, making efficient and comprehensive fee collection difficult. Specific research and demand studies are necessary to determine the exact collection costs, reduction in income from Golden Eagle or Age or Access Passports, walk-in visitation, sightseers and the decline in visitation likely from any change in the fee structure.

While this option presents a high potential impact on the study objective, it has its drawbacks as well. An entrance fee permit as envisioned here would be required to enter any Corps managed portion of the project accessible by vehicle. The administrative aspect of assessing this fee can be handled with an annual permit sticker to be displayed on the car, but a greater problem exists. Many of the roads traversing Corps projects are state or local highways, adding to the problem of sightseers and how to determine who should be paying what fee. A related question on charging for "all recreation uses" was opposed by 52 percent of the regional workshop participants, indicating that a charge to enter the project might not be readily accepted.

In addition to an extensive public awareness effort needed to implement an entrance fee, this option would require a change in law. The Land and Water Conservation Fund Act, as amended, (16 USC 460l) and the Flood Control Act of 1968 (16 USC 460d-3) prohibits the



Corps from collecting entrance fees. While the Corps has repeatedly requested authority to collect day use fees, it has not specifically requested authority to collect entrance fees, except for its participation in an unsuccessful interagency legislative proposal in the early 1980's.

**Option 3: Charge for hunting, fishing and trapping.**

Hunting use accounts for only four percent of all Corps project visitation; however, an estimated 25 percent of all visitors participate in fishing. The percent of trapping use is unknown, but is presumed to be no greater than hunting.

The greatest potential gross revenue from charging a \$10 per year fee for fishing is \$40 million based on the following. Using the estimated figure of 14 million individuals visiting Corps managed recreation areas, it is estimated that almost four million visitors fish at Corps projects (14 million x .25). A \$10 per person fishing fee could generate \$40 million in gross revenue. Assuming a \$5 million per year collection cost, the greatest potential net revenue would be approximately \$35 million. This figure does not take into account the possible decline in visitation that could occur as a result of the fee.

Instituting separate hunting or fishing fees could be difficult due to potential opposition. The demise of the interagency proposal to charge entrance fees was due, in part, to the perception that it constituted "double charging" for hunters and anglers who already pay for state licenses. A question posed to the regional workshop participants on charging for hunting resulted in 53 percent opposed. Therefore, it appears that a fee required for hunting or fishing on Corps areas would generate some opposition.

To dissipate some of the argument against fees for hunting or fishing, the fee could be for vehicular access, rather than for hunting or fishing per se. Hunters or anglers could walk in at no cost, but once they enter with a vehicle, costs are incurred by the Corps to accommodate that vehicle. These costs are not associated with the hunting or fishing license the user purchased from the state. This is essentially an entrance fee, however, so the revenue described here would be part of the estimated \$40 million entrance fee revenue. Charging an additional fishing or hunting fee to generate another \$35 million could create significant opposition.

**Related Options 4-5: Issue Corps boat licenses.**

**Issue parking permits for boat launch areas.**

According to a recent Corps estimate, approximately five million boats used Corps projects in 1988. A nominal annual fee of two dollars per boat to use Corps lakes could result in over \$10 million in fee revenue. A more reasonable fee of \$10 per boat per year could yield over \$50 million in gross revenue. Collecting all this revenue may not be possible, however.

This figure may need to be reduced by the number of boats on projects where the Corps shares management responsibilities with others. If the fee was for launching or parking at a launch ramp, a reduction could be based on the number of boats launched in non-Corps versus Corps launch areas so that the Corps does not collect revenue for the use of non-Corps facilities.

There is currently no information available to estimate the percentage of boats launched from Corps areas to determine the revenue that could be specifically credited to the Corps. Alternatively, it could be assumed that all boats on any project water are within Corps jurisdiction and thus subject to the boating fee. In any case, to gain a realistic picture of the potential revenue, some estimate is needed of the possible decline in boating use that might occur as a result of this fee.

On the negative side, several problems arise from instituting a boating fee for using Corps waters. First, current law (16 USC 460d-3) states that access to, and use of, project water areas will be free of charge. Second, states already have a boat registration fee and an additional fee for using a Corps project could be viewed as "double charging," as are proposed Federal hunting and fishing fees. Third, considerable public opposition could be expected, as has been the case in proposed boat licensing by the Coast Guard. Finally, implementation feasibility and costs must be considered. In most cases, sufficient Corps personnel are not available to enforce Title 36 provisions on project waters, and most local law enforcement agencies under cooperative agreement with the Corps do not have the authority to enforce state boating laws or the capability to patrol water areas. A fee to use boat launching ramps or to enter recreation areas with launching facilities would be easier to administer, but potential revenue would then constitute a portion of revenues already projected for entrance or day use fees.

#### **Option 6: Reduce or eliminate Golden Age/Golden Access Passports.**

Based on 1984-1987 surveys of users in 67 Corps campgrounds, an estimated 20 percent of the campers have Golden Age or Golden Access passports entitling them to a 50 percent reduction in recreation use fees. Camping revenue in 1989 was \$15 million. Had all campers paid the full fee, the additional revenue in 1989 would have been less than two million dollars (20 percent with passports x 50 percent reduction in fees x \$15 million). This figure does not account for the loss in visitation as a result of imposing full fees.

The effect of these passports on proposed entrance fees is greater since the revenue potential is greater and the fee reduction is 100 percent instead of 50 percent. Based on the estimates used to compute possible entrance fee revenue, the Golden Age/Access Passports could account for an estimated \$25 million in lost revenue per year (three million individuals with passports / three per car x \$25 per car = \$25 million that would have been collected in entrance fees had the passport holders paid full price for entrance). Cutting the passport reduction for entrance fees to 50 percent or giving only a 25 percent reduction during peak visitation periods would result in a loss of approximately \$10 million per year and may represent an acceptable compromise.

In addition to the limited effect on existing camping fees, eliminating or reducing Golden Age/Access discounts would be unpopular with certain segments of the public. The reaction to this idea at the regional workshops was mixed. Thirty-five percent favored the idea, while 43 percent opposed it. Several letters were received asking that the Corps not reduce

discounts since many senior citizens are on fixed incomes. Others believed that retired campers have more discretionary income and so should not be given the discount.

Implementing this option would require a change in the Land and Water Conservation Fund Act, as amended (16 USC 460l), which specifically created the passports for use at all Federal areas. Any changes would have to be coordinated with other Federal agencies using the passports.

**Option 7: Implement a nationwide reservation system.**

A nationwide reservation system would be valuable for two main reasons. First, a national reservation system could function as an effective marketing tool to inform the public of the availability and location of Corps campgrounds. Increasing the public's awareness of Corps recreation facilities could potentially lead to greater visitation, especially at underused areas and during low use periods. This could result in more revenue collected through fees. The Forest Service currently provides such a campground reservation system, with a 1-800 telephone number operated by a private contractor having direct links to individual campgrounds nationwide. Reservations for select Forest Service and National Park Service areas can currently be made through existing national reservations systems.

Secondly, joining an existing reservation system could provide better service to the recreating public at little or no cost to the Federal government. Recreational opportunities would be enhanced by better informing the public of the opportunities available to them. Some costs would be incurred in installing telephone lines or other equipment to integrate information on Corps campgrounds nationwide. These costs, however, could be partially borne by the users of the reservation system, who would be charged a fee for making the reservation. Based on the estimated number of campers using Corps campgrounds, if reservations were made for 60 percent of camping trips (the percentage observed by one district conducting a reservation system on a pilot basis), and a two dollar fee was charged per reservation, five million dollars could be realized in gross revenues (four million camping trips per year to Corps campgrounds x two dollars per trip x 60 percent). Implementation and contract costs would have to be subtracted from this total in estimating any potential net revenue to the Corps. This option can be implemented within existing statutory authority.

**Option 8: Expand the charging of variable rates depending on time and location of use.**

Variable fees are already being charged in some areas. This entails charging higher fees for more desirable sites or during more desirable times, such as weekends. Such sites or times receive increased use, thereby costing more and providing greater benefits to the user, justifying the higher fee.

The potential revenue from implementing this option Corps-wide, using a two to four dollar variation in camping fees, is estimated to be four million dollars based on the following. The average camping fee charged by the Corps is six dollars. If, for example, the average fee

for 20 percent of the sites were increased to eight dollars to account for variable pricing on these "prime" sites, the increase in revenue would be one million dollars (\$15,000,000 per year / six dollars per night per site = 2,500,000 "night/sites" per year x 20 percent = 500,000 "prime night/sites" per year x two dollars per night/site). If the average fee were increased an additional two dollars per night per site on weekends, another four million dollars could be generated (an estimated 60 percent of the "night/sites" of use occurs on weekends). This does not take into account reductions for Golden Age/Access Passports or any decline in visitation due to this change in fees.

No change in law would be needed. As long as the fees are justified within the broad criteria of current law (16 USC 4601), the Corps may charge variable fees as a matter of policy.

#### **Option 9: Charge for recreational boats going through navigation locks.**

According to the Corps Performance Monitoring System data base, recreational craft annually locked through the inland navigation system totaled 422,000 in 1985, 457,000 in 1986, 486,000 in 1987, and 588,000 during 1989. Assuming approximately 500,000 lockages per year on average, a lockage fee of two to five dollars could generate gross revenue of one to three million dollars annually, if the fee did not result in a decrease in lockage use. Some decline in lockage would, however, be expected, especially at the higher rate. A charge of five dollars per lockage would result in a \$10 "round trip" charge per lock, and some users would probably seek new launch sites to avoid lockage charges.

In addition to the revenue potential of lockage fees, other considerations may be beneficial as well. Instituting lockage fees might result in fewer recreational boaters using locks (many "lock through" out of curiosity, rather than need). Fewer recreational transits could both reduce delays for commercial traffic (lowering the so-called "nuisance factor") and result in better water conservation and increased hydropower production (by lowering water losses caused by the mechanics of locking).

The logistics and costs of the lockage fee collection must be considered. As noted by one Corps employee, during some lockages, numerous boats are "rafted" (tied together) wall to wall within the lock chamber. Under such situations, the ability to efficiently and effectively collect a lockage fee from each boat is questionable. The collection cost would greatly reduce the potential net revenues that could be collected. In addition, peak recreation lockages may be associated with heavy navigation traffic. Delays in the lockage process from fee collection could result in further delays and increase cost to navigation traffic.

An alternative method for collecting the lockage fee is to require the purchase of an annual boat sticker. There would still be problems, however, in being able to observe the presence or absence of a sticker during high volume periods, and in collecting from those boaters without a sticker. Another alternative is to include the cost of O&M resulting from locking recreation craft as further justification for an excise tax on recreational boats and equipment, which is discussed under the Resource Augmentation section of Chapter III.

In addition to the limited revenue potential and collection problems, this option would require a change in law (33 USC 5), which, in part, prohibits charging for water craft passing through a Federally owned lock.

**Option 10: Eliminate the free camping requirement.**

Potential revenue from converting 191 free camping areas to fee areas was recently estimated to be \$600,000. While the revenue is minimal, charging fees would help reduce costly management problems, such as vandalism and rowdiness. In addition, many free camping areas would better serve public need by being converted to day use areas. Some opposition can be expected since the perception is that the poor use the free camp areas. However, free areas are not always used by the disadvantaged, and no other Federal agency is required to provide free campgrounds. Free campgrounds also provide competition for private and other public providers of similar facilities in the area. Implementation of this option would require a change in law (16 USC 460l).

**Option 11: Charge a one time administrative processing fee for issuing Golden Age/Access Passports.**

The total number of Golden Age and Golden Access Passports issued by the Corps in 1989 was approximately 36,000. A one time administration fee of \$10 per card issued would generate \$360,000. Charging a fee of \$25 would result in almost one million dollars of revenue; however, a higher fee would be likely to generate more opposition. Charging any fee for the passports would require a change in law (16 USC 460l).

**Option 12: Encourage special events and charge sponsors for permits.**

The Land and Water Conservation Fund Act, as amended, provides for agency collection and regulation of special event permit fees. Fees for special events have typically been based on the administrative costs incurred by the Corps in allowing the event. Such events may be small, such as a localized fishing tournament, or large, such as a boat regatta.

Corps wide revenue received from this source in 1989 was \$12,000. The potential for greater receipts from this source exists if the special events program were expanded or higher fees were charged. Although no set fee exists for special event permits, Engineer Regulation 1130-2-404 mandates a minimum of \$25. Assuming the \$12,000 is based on an average of \$25 per permit, increasing the average permit fee to \$100 would result in revenue of \$48,000 per year. This represents a minor revenue source, but if fees were used only to offset administrative costs, increasing this fee would represent a cost avoidance if all costs were recovered. Implementation of this option would require a change in policy only.

**Option 13: Charge aircraft for use of public lands and waters.**

Aircraft use of land or water is limited and minimal costs are incurred in allowing this use. Collection and enforcement of this fee could also prove troublesome, and potential



nationwide revenue would be minimal. A change in law (16 USC 4601 and 460d-3) would be required to charge for aircraft use of project water areas.

**Option 14: Charge for special releases of water from the reservoir for enhanced downstream white water uses.**

There was no specific reaction to this option except at the Natural Resources Management Conference workshop, where 43 percent of the respondents rated it as positive in terms of meeting the study objective. Implementation of this option would have a limited impact in raising revenue because of the limited number of projects where special releases for white water rafting are demanded. The practice of special white water releases is better addressed in an ad hoc fashion at the local level. Charging additional fees to generate revenue would require amending the authorizing legislation for affected projects.

**Option 15: Institute a 1-900 toll charge telephone number for campground information.**

There was no specific reaction to this option except at the Natural Resources Management Conference workshop, where 28 percent of the respondents rated it as positive in terms of meeting the study objective. Revenue potential is unknown, but expected to be minor, since only a portion of the 1-900 telephone number toll charge revenues would be returned to the Corps. In addition to the limited revenue potential expected, there was a general consensus among those surveyed that charging for information is inappropriate. Implementation would require a change in policy, if this option were considered a "specialized outdoor recreation service" for which charging a fee is permitted under existing law (16 USC 4601).

**Option 16: Establish Corps membership campgrounds.**

Under this option, all members would pay a fee and receive ID cards which would allow free entrance and a reduced camping fee. The only reaction to this option was at the Natural Resources Management Conference workshop, where 29 percent of the participants surveyed responded the idea would have a positive effect on the study objective. While a fee would be charged for campground membership, camping fees for members would be reduced, resulting in limited net increase in revenue. This option may be interpreted by some as exclusive use of public facilities. Implementation of this option may be permitted under current law (16 USC 4601) as a "specialized outdoor recreation service."

**Option 17: Relax the 14-day camping limitation.**

The Code of Federal Regulations governing public use of Corps projects (36 CFR, Chapter III, Part 327.7) prohibits camping at one or more campsites at any one project for a period longer than 14 days within any 30-day period without the written consent of the District Engineer. The restriction is imposed to maximize public use of facilities. Specific dollar estimates of the potential revenue are not known at this time; however, a broad relaxation of the 14-day stay limit would make more efficient use of facilities during low use periods. This



option does not include complete elimination of this requirement, since allowing long-term stays could preclude the general public from having sufficient opportunities to use the facilities.

At the Natural Resources Management Conference workshop, 45 percent of the Corps respondents rated this option as positive in terms of meeting the study objective. When respondents at the regional workshops were asked whether they thought the Corps should relax the 14-day stay limit, 66 percent of Concessionaires answered affirmatively, but less than half (44 percent) of those in the user category responded that the limit should be reduced. This option could be implemented with a change in policy, but interagency coordination would be prudent, since other Federal and non-Federal agencies impose time limitations, as well.

**Option 18: Expand existing facilities and charge for their use.**

The revenue potential of this option depends on the costs incurred in expanding existing facilities. Further study is necessary to determine what facilities could be added or expanded, the cost of doing so and the revenue likely to be generated from their use. Depending on the result, changes in law (such as PL 89-72) may be necessary to implement this option.

**d. Conclusions.**

A majority of the users surveyed expressed a willingness to pay higher fees where the revenues are returned to the areas in which they are collected. There was, however, more opposition voiced to new fees or charging for facilities previously provided free of charge. In spite of the fact that new fees would require legislation, instituting day use, entrance, boating or fishing fees would have the greatest financial impact on the recovery of recreation O&M expenses. Some of these fees, however, may be mutually exclusive. Collection costs would vary for each type of fee.

Instituting a nationwide campground reservation system, eliminating free camping, charging variable fees and relaxing the 14-day stay limit could be pursued simultaneously and could collectively result in moderate revenue generation with an overall increase in operational efficiency. With the exception of elimination of free camping, and possibly the 14-day stay limit, little opposition to these options is expected. All but eliminating free camping can be accomplished with policy changes alone. Coordination with other agencies is necessary, however.

Options that could be considered for use on a local basis, but that would not result in significant revenue Corps-wide to meet the study objective are: instituting downstream white water use charges, charging for aircraft use of the project, instituting a 1-900 toll charge telephone number, having membership campgrounds and encouraging and charging for special events. With the exception of charging for aircraft use of project waters, these options can be implemented with policy changes alone.

Charging a minimal one time fee for Golden Age/Access Passports could result in limited revenue that may be reduced by administrative costs. A higher fee would result in some

net Federal revenue, but could increase public opposition. Reducing the discount on these passports would have greater impact on Corps revenue, but could also elicit negative reactions from affected segments of the public. Both options would require a change in law and coordination with other Federal agencies honoring the passports.

Charging for recreation lockages would result in little revenue and could be difficult to implement. Charging a recreation lockage fee would require a change in law.

The option of expanding existing facilities and charging for their use must be studied on a case-by-case basis to determine if revenue generation exceeds facility expansion costs. A change in law may be necessary.

With regard to recreation fees, two general points must be made. First, if O&M appropriations are to be cut by the amount of fees collected to reduce net Federal expenditures, net rather than gross revenue should be considered. Since there is always an annual cost to collect fees, only net revenues are actually available to fund the Corps recreation program.

A second aspect to be considered in all fee charging situations is the potential liability issue. In states with "recreational use statutes," a lesser standard of care is required of landowners who open their lands for public use without charge. Once a fee is imposed, the landowner is required to do more to protect the public from hazards occurring on the property. While this should be considered, it should not automatically preclude additional fees. Without an expanded fee program, the Corps would be limited in its ability to meet the study objective.

Table 7 provides a summary of the range of potential net revenue, whether law or policy changes are needed to implement the options, and study conclusions.

**Table 7**  
**Summary of Revenue Options--Recreation Fees**

<b>OPTION</b>	<b>POTENTIAL REVENUE<sup>1</sup></b>	<b>LAW OR POLICY CHANGE</b>	<b>CONCLUSION</b>
1. Charge for all day use	high	law	pursue
2. Charge an entrance fee	high	law	consider
3. Charge for hunting, fishing and trapping	high	law	consider
5. Issue Corps boat licenses or boat launch parking permits	high	law	consider
6. Reduce or eliminate Passport discounts	high-low	law	consider
7. Implement a nationwide reservation system	low	policy	pursue
8. Charge variable fees	low	policy	pursue
9. Recreational lockage fee	low	law	do not pursue
10. Eliminate free camping	low	law	pursue
11. Fee for Passports	low	law	do not pursue
12. Encourage special events	low	policy	pursue locally
13. Charge aircraft for use of project land or water	low	law	do not pursue
14. Charge for special water releases for downstream recreation	low	law	do not pursue
15. Institute a 1-900 number	low	policy	do not pursue
16. Membership campgrounds	low	may be law	do not pursue
17. Relax 14-day restriction	unknown	policy	pursue
18. Expand existing facilities	unknown	may be law	consider

<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).

## 2. OUTGRANT/PERMIT REVENUE

**a. Current situation.** The Corps allows for the long-term use of its land, waters and/or facilities thorough real estate instruments, such as leases, licenses and real estate permits, collectively termed real estate "outgrants." In some cases, these outgrants are for public use (such as a lease to a state for a state park). In addition to real estate outgrants, the Corps also issues shoreline use permits for private docks and shoreline vegetation modification. Methods of determining the outgrant or permit fee vary. Public agencies pay little or no rent for recreational leases. In the case of private concessionaires, the reinvestment of profits reduces the rent paid to the Federal government. Seventy-five percent of the rent revenues from leases are returned to the states. One hundred percent of all other real estate outgrant and shoreline use permit revenues go to the United States Treasury, but none are returned directly to the Corps.

**b. Options considered.** Options considered under this subcategory were:

- (1) redefine and charge appropriate market value fees for all recreation outgrants and shoreline use permits;
- (2) reduce the restrictions on the type and location of private exclusive use in conjunction with public recreation, and charge a realistic fee for that use;
- (3) return a portion of outgrant/permit revenue to the Corps;
- (4) lease community or individual dock space through marina concessions instead of issuing shoreline use dock permits;
- (5) lease hunting areas;
- (6) allow sales of lottery tickets in accordance with state and local laws;
- (7) expand retail activities;
- (8) charge for fishing guides, tour licenses on lakes;
- (9) allow gambling in accordance with state and local laws.

**c. Evaluation of Options.** To have a direct benefit on the study objective, current law (33 USC 701c-3) should be changed to allow a portion of the recreation lease revenue and all of the remaining recreation outgrant and shoreline use permit revenue to be returned to the Corps to maintain or enhance recreation while reducing Federal expenditures. If such a change could be made, several options discussed below could result in increased revenue to meet the study objective.

**Option 1: Redefine and charge appropriate market value fees for all recreation outgrants and shoreline use permits.**

Under the current system of determining recreation outgrant and shoreline use permit fees, limited Federal revenue is generated. Cabin lease rent is based on fair market value. Concession lease rent is based on the Graduated Rental System, which encourages reinvestment of income into the facilities, rather than emphasizing a greater rental return to the Government. A fee is charged for licenses issued for minor activities, such as the construction of steps or electrical lines on government property, according to a preset schedule. Public agencies,

however, pay nominal or no fees for recreation leases, licenses or permits to use Corps property. Shoreline use permit holders pay a nominal fee of \$30 every five years.

The option of charging fair market value fees for all recreation outgrants was favored by several groups surveyed throughout the study. Sixty-two percent of the regional workshop participants favored the suggestion that the Corps increase outgrant revenues from leases, licenses and permits. Even respondents in the concessionaire category slightly favored this option (52 percent for, 45 percent against). Since the real estate outgrant program and shoreline use permit programs are administered under separate regulations and policies, they are discussed separately here.

**a. Recreation Outgrants.** In 1989, the total rental from Corps concession leases and other recreation related leases, licenses and real estate permits was approximately three million dollars. The vast majority of this revenue (over 93 percent) is generated by commercial concession lease rentals.

Based on charging commercial concessionaires 10 percent of gross revenue (rather than the average two percent now collected by the Corps), a rough estimate of the revenue potential for concession outgrants is approximately \$15 million (three million dollars times five). Realization of this figure may not be possible. In some cases, the concessionaire profit margins are so narrow that charging 10 percent of gross revenues would potentially put many out of business. A lesser rate of return (such as five percent of gross revenue) would generate less revenue (approximately seven million dollars per year), but would have less detrimental effect on concessionaires with small profit margins.

Another approach may be to adopt a policy for the government to share in a percent of gross revenue. This would not penalize concessions that are just meeting the cost of operation, but Federal revenue would vary as a result.

Although charging concessionaires higher rentals could increase Federal revenue, charging higher rental fees would be a disincentive for increasing private involvement in the provision of recreation opportunities at Corps projects. In spite of the revenue potential, this option could, therefore, have a negative effect on the study objective.

Estimates of potential revenue from charging fair market value rental for outgrants to non-Federal public agencies was not made. Existing leases with non-Federal public providers of recreation represent an incalculable cost avoidance for the Federal government. Charging more than a nominal fee for public outgrants would discourage non-Federal public involvement and would, therefore, be counterproductive to the study objective. The benefits now received from the facilities and services provided by non-Federal public outgrantees far outweigh any revenue the Federal government or the Corps could realize by charging higher fees for non-Federal public outgrants.

**b. Shoreline Use Permits.** Increases in fees for shoreline use permits could enhance revenue without adverse affects on the study objective. A study conducted by an in-house task

force in 1986 determined that the actual cost to administer the 38,500 shoreline use permits for private docks was almost four million dollars per year, while total revenue from the permit fees was slightly over \$200,000. Fees of \$490 for five-year permits (\$98 per year) were recommended to cover these administrative costs. Charging fair market value for these permits was considered at that time, but it was determined that the cost of doing so, and responding to expected opposition, would result in costs exceeding the expected revenue.

Seventy-two percent of the regional workshop participants favored charging market value fees for shoreline use permits. However, shoreline use fees would not have to be based on fair market value, since determining that value on a case-by-case basis can be burdensome and expensive. Several options were considered in the 1986 study, including basing the fee for shoreline use permits on the average fee charged by commercial marinas on the lake. An example given was that a 20 foot dock slip would cost \$500 per year or \$2,500 for five years. Such fees applied to shoreline use permits for private docks would more than cover the cost of administering the shoreline use permit program and would meet the study objective. The revenue potential from charging an annual fee of \$500 for the currently existing 39,000 shoreline use dock permits is approximately \$20 million. Cutting that fee in half, to address the possible opposition (discussed below), would still result in almost \$10 million per year. An additional one million dollars could be generated from the approximately 10,000 shoreline use permits for vegetation modification, if the Corps charged \$100 per year for such permits.

Realizing this revenue may be difficult. There may be opposition from holders of shoreline use permits, particularly if the fee exceeds the administrative cost of issuing the permit. Objections could be raised based on the fact that marina slip renters are receiving substantial services (such as maintenance and security), while the private dock owner must cover these costs on the private dock. To charge the same fee as a marina operator would seem inequitable. On the other hand, the private dock owner is avoiding the costs of docking at a marina and is receiving other benefits from having a private dock in proximity to his or her property, justifying the higher permit fee.

Implementation of this option would require a change in policy.

**Option 2: Reduce the restrictions on the type and location of private exclusive use in conjunction with public recreation and charge a realistic fee for that use.**

Private exclusive use is defined as any action which gives a special privilege to an individual or group of individuals on land or water at Corps projects that precludes use of those lands and waters by the general public. The spectrum of private use considered includes: trailers, apartments, and other long-term rental facilities; privately owned facilities, such as private beaches, lodges, docks, club docks within commercial concession areas; floating cabins, cottage sites, or timeshare memberships. It does not include such "private" commercial uses as marinas or resort hotels open to the general public for a fee. It could include, however, long-term use in conjunction with a concession, such as year-round cabin or apartment subleases. This use could enhance concession revenues and thus serve as an incentive for additional private investment in concession facilities.



Specific calculations of potential revenue from outgrants for private exclusive use were not attempted since so many variables exist. Detailed market studies would be needed to determine actual revenue potential on a case-by-case basis. It is presumed, however, that the revenue potential for extensive private development could be high. As indicated, charging a higher fee for existing shoreline use permits, alone, could generate \$21 million.

In addition to the Federal revenue potential, this option would also allow the Corps to make additional use of project lands that are needed for overall project purposes, but are not currently utilized to the maximum extent possible. Disadvantages of private exclusive use are: (1) it could preclude public use of Federal land and waters that were previously open to the public; (2) it could increase the Corps O&M expenditures for administration and management of the use; and (3) under a lease arrangement, the Federal revenue would be limited to 25 percent of the lease revenue, and the Corps would not be entitled to any of the revenue to offset O&M costs.

Several variations of this option were considered. One variation that would meet the study objective is to allow private exclusive use conditional upon the private user providing public recreation to compensate for any loss of public use of the land dedicated for private use. The private exclusive user could also assume O&M responsibilities on existing Corps areas. This variation would provide direct benefit to the Corps through cost avoidance. Additional public recreation facilities could be provided or O&M on existing areas could be reduced with only administrative costs borne by the Corps. One disadvantage is that if the private exclusive users no longer provide the compensatory public recreation opportunity or discontinue O&M of an existing Corps area, the Corps could incur significant costs in operating or removing the recreation facilities. In addition, the Corps may be unable to eliminate the associated private exclusive use once established.

A second variation of this option could be considered in areas where the private exclusive use would not significantly impact existing or future recreation areas or opportunities. That variation is to permit private exclusive use under lease agreements. (Sale of land is discussed elsewhere.) In this situation, the private exclusive user would not provide additional, or take over existing, public recreation areas, but would make lease payments for the opportunity to develop and use the area. This would increase the utilization of project lands and would generate some revenue for the Federal government.

A third variation is allowing private exclusive use through existing or new concessionaires, rather than the Corps directly leasing land or facilities to private exclusive users. As an example, a marina concessionaire could sublease trailer sites or apartments. This arrangement would reduce the Corps administrative costs of managing private use, since it is difficult for the Federal Government to be an effective "landlord," due to limited resources and potential conflicting interests. A concessionaire may be in a better position to manage the day to day requirements of private exclusive use facilities. The concessionaire would have greater (financial) incentive to assure quality facilities are maintained and that facilities are in compliance with applicable state and Federal requirements.

In the third variation, while administrative costs are reduced, less Federal revenue would be realized. The concessionaire would charge the private exclusive users for use of the facilities, but the Federal Government would receive 25 percent of the concessionaire's rental payments, not 25 percent of the payments made by the private users. However, this arrangement could enhance concession revenues and serve as an incentive for enhanced or additional private investment in recreation concession facilities. This incentive aspect is discussed more fully in Option #3 of the Private Involvement section of this chapter.

While several variations were considered, the overall option of reducing restrictions on private exclusive use received strong opposition from several groups responding to the study. Seventy-nine percent of the regional workshop participants opposed it. In addition, over 200 letters and petitions with 5,800 signatures were received from the public specifically opposing an increase in private exclusive use, even if such use were in conjunction with public recreation and subject to a fair market value fee. Much of the negative sentiment was expressed in relation to specific projects, but an overall tone of opposition was heard in other areas, as well. For the most part, respondents were philosophically opposed to private exclusive use of public lands and feared that public access to project waters and adjacent lands would be curtailed.

Reducing restrictions on private exclusive use would require a change in policy only. Under 16 USC 460d, the Secretary of the Army is given broad discretion to administer water resource project lands. The only restriction is that the leasing of lands be upon such terms and for such purposes as the Secretary deems "reasonable in the public interest." There is no statutory prohibition against private use, if the Secretary determines that such use is in the public interest (reference November 7, 1986 Army General Counsel opinion). Determining what is in the public interest would require analysis on a case-by-case basis.

### **Option 3: Return a portion of the outgrant and shoreline use permit revenue to the Corps.**

In 1989, revenue of approximately three million dollars was generated by recreation outgrants and shoreline use permits. Under Federal law, none of this revenue is returned directly to the Corps. As noted, 75 percent of lease revenue is returned to the states and 25 percent is retained by the Federal Treasury, but is not earmarked for Corps use. This suggestion does not anticipate reducing the flow of revenues to the states, but rather supporting a legislative strategy that directs the 25 percent Federal share of lease revenue and all of the remaining recreation outgrant and shoreline use permit revenue to the Corps recreation program.

The 75 percent of lease rental revenue is returned to the states to offset the tax base loss created by Federal ownership of project lands. While reducing the states' revenues from outgrants would be strongly opposed by state and local governments, placing a cap on the amount of money that goes back to the states at current levels is an alternative with some merit. An argument in support of this option is that sufficient local economic impacts, increased taxes through property value enhancement created by recreational use of the project, and the current 75 percent share of lease revenue compensate the states for any tax base loss. Supporting a legislative strategy that places a cap on the states' share at current levels would not reduce the

states' revenues and would reserve for the Federal government any increases in revenue brought about by additional concessionaire rentals.

If outgrant or shoreline use permit fees were increased, returning a portion of the revenue to the Corps could result in significant reductions in Corps recreation O&M appropriations. If fees are not increased, this option would have less impact on the O&M budget, but it could help defray the Corps cost to administer the outgrant and shoreline use permit programs. Implementation of this option would require a change in law.

**Option 4: Lease community or individual dock space through marina concession agreements, instead of issuing shoreline dock permits.**

Under this option, existing marina operators would lease individual or community docks, (now provided and used by private individuals or groups under the shoreline use permit program). This would substantially reduce the four million dollars per year cost to the Corps of administering the shoreline use permit program and would also result in a fair market value being paid for maintenance and management of existing docks. The marina operator could also be responsible for providing new or replacement docks. In addition to the reduction in the Corps costs of administering the docks under the shoreline use permit program, Federal outgrant revenue would be generated through increased marina business. Success of this option would depend on the marina operator's willingness and capability to maintain docks scattered around the lake. There may be substantial opposition from dock owners, who now provide their own docks and pay a nominal fee for the shoreline use permit. Changes in the Corps shoreline use policy would be needed, but no known changes in law would be necessary to implement this option.

**Option 5: Lease hunting areas.**

Leasing hunting areas was not specifically addressed by any groups responding to the study. Paying for hunting access to private or public lands is commonplace; however, based on other reactions received relating to charging for hunting (see Fee Revenue section, Option #3), this may not be a popular method of generating revenue. It may also be opposed by states as an infringement on their right to manage wildlife. In addition, liability issues would be increased by charging for this use. This option could be implemented with policy changes, but the opportunities for revenue increases on a Corps-wide basis are unknown at this time.

**Option 6: Allow sales of lottery tickets in accordance with state and local laws.**

Allowing lottery ticket sales was considered as a way to increase lessee income, thus generating more Federal revenue. There were no specific calculations done on the potential revenue possible from allowing state lottery ticket sales. If the lottery tickets are sold only by state or local government lessees, there would be no potential Corps revenue generation. Lottery ticket sales by concessionaires, however, could increase the outgrant rental revenue.

In general, reactions to this option were mixed. Of all regional workshop participants, 38 percent favored the allowance of state lottery ticket sales on leased land, 23 percent were neutral and 39 percent opposed it. State and local government respondents were slightly more neutral; 30 percent favored the proposal, 31 percent were neutral and 39 percent opposed it. The letters from State Governors did not mention the sale of lottery tickets, but at least one state has asked for authority to do so in separate correspondence. Implementation of this option would require policy changes only.

**Option 7: Expand retail activities.**

This would increase private sector participation on Corps projects, thus generating more outgrant revenue. The resulting revenue potential would depend on the degree of expansion and type of activities. They could include expansion of the types of facilities now provided by concessionaires, such as tackle and bait shops, restaurants, motels, and convenience stores. They could also include new enterprises such as boat or camper sales. There could be some opposition from existing local businesses already providing these goods and services. This would probably require a change in policy only.

**Option 8: Charge for fishing guides and tour licenses on lakes.**

Charging for fishing guides and tour licenses on lakes could result in some revenue generation. At this time, guides and tour leaders provide these services at a cost to the user, but may pay nothing to the government. To generate revenue and avoid what may be unfair competition with concessionaires who pay rent on profits made, a tour leader or guide license fee could be charged. Revenue potential is unknown, since there is presently no way of knowing how many guides or tour leaders are now operating on Corps lakes or what the collection costs might be. Implementation of this option would most likely be through a type of concession agreement and would require a change in policy only. However, the Corps would incur administration costs for collection of fees and for monitoring guide activities.

**Option 9: Allow gambling in accordance with state and local laws.**

Allowing gambling was considered as a way to increase lessee income, thus generating more Federal revenue. There were no specific calculations done on the potential revenue possible from this option.

In general, there was little support for this option. Eighty-nine percent of the concessionaires surveyed responded that gambling restrictions were neither advantageous or disadvantageous to their business enterprise, and 88 percent of the users surveyed opposed gambling. Corps employees surveyed were also strongly opposed to permitting gambling. There are no known Federal statutory restrictions on allowing gambling on Corps projects.

#### **d. Conclusions.**

For the Corps to realize a portion of the funds generated from increasing outgrant/permit revenue, a change in law is needed to modify the distribution of those revenues. Currently the states receive 75 percent of all lease revenue and the United States Treasury retains 25 percent of the lease revenue, as well as all non-lease and shoreline use permit revenue. None of the revenue is directly available for the Corps to finance its O&M costs. Recognizing that significant changes in law would be needed, the ideal situation is for the Federal share of recreation lease revenue, all non-lease recreation outgrant revenue and shoreline use permit revenue to be returned to the Corps, and for the state share of lease revenue to be capped at existing levels.

If it were possible to redirect the distribution of funds, several options considered would augment the total revenue generated, resulting in increased Federal/Corps income. Increasing fees for shoreline use permits and reducing restrictions on private exclusive use and charging a realistic fee for that use could provide substantial potential revenue. Both must be pursued cautiously, however. Increasing outgrant rentals may be contrary to encouraging private and public involvement in the provision of recreation at Corps projects. Increasing private exclusive use for the purpose of revenue generation could result in greater costs to the Corps in terms of project management costs, resource loss and negative public reaction.

Allowing lottery sales or gambling could produce limited revenue. Separate correspondence indicates an increasing interest in sale of state lottery tickets. Gambling was generally opposed, but many draw a distinction between state lotteries and gambling.

Charging for fishing guides and tour licenses on lakes, leasing hunting areas and leasing community dock space through marinas may not produce significant revenue on a Corps wide basis, but could be pursued by changes in policy on a local basis for greater management efficiency.

Expansion of commercial facilities must be considered on a case-by-case basis to determine the outgrant revenue potential and possible legal or policy constraints.

Table 8 provides a summarization of the range of potential net revenue, whether a law or policy change is needed to implement each option, and study conclusions. The estimate of potential net revenue assumes that the revenue could be recovered.

**Table 8**  
**Summary of Revenue Options--Outgrants/Permits**

<b>OPTION</b>	<b>POTENTIAL REVENUE<sup>1</sup></b>	<b>LAW OR POLICY CHANGE</b>	<b>CONCLUSION</b>
1. Charge fair market value for outgrants/shoreline use permits	high	policy	pursue
2. Allow more private exclusive use for a realistic fee in conjunction with public recreation	high-medium	policy	consider
3. Return portion of outgrant and shoreline use permit revenue to the Corps	high-low	law	pursue
4. Lease lakeshore docks through marinas	low	policy	consider
5. Lease hunting areas	low	policy	do not pursue
6. Allow lottery ticket sales	unknown	policy	pursue
7. Expand retail activities	unknown	may be law	consider
8. Charge fishing guides	unknown	policy	pursue locally
9. Allow gambling	unknown	policy	consider

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).



### 3. SALES REVENUE

**a. Current Situation.** Federally-owned real estate that is not needed for project purposes can be sold by the General Service Administration. The Corps does not sell non-real estate property, such as souvenirs and surplus equipment. The revenue from land sales goes in part to the Land and Water Conservation Fund. The remaining revenues from real and non-real estate property goes to the United States Treasury, so none are returned to the Corps.

**b. Options Considered.** Options considered were:

- (1) conduct land sales with receipts going to the Corps recreation program;
- (2) sell or donate artifacts;
- (3) sell firewood;
- (4) sell non-traditional items;
- (5) place vending machines in recreation areas;
- (6) initiate recycling programs;
- (7) sell abandoned, surplus, and impounded items and equipment;
- (8) seek legislation for a Federal recreation lottery.

**c. Evaluation of Options.** The potential revenue from the options considered here is difficult to quantify at this time. Much of the revenue potential depends on the items sold. In the case of selling merchandise, the Corps would be competing with the private sector. With regard to sale of resources (land or artifacts), the potential may be great, but opposition is significant.

**Option 1: Conduct land sales with receipts going to the Corps recreation program.**

There are currently about four million acres of Federally owned land at Corps projects that are above water during the recreation season at the 459 projects with recreation visitation. Of that total, approximately three million acres are within existing recreation areas, currently outgranted to others or used for operation of the project and its appurtenances. An additional unknown number of acres are subject to periodic flooding. Substantially less than one million acres remain for consideration as potentially salable.

Land adjacent to the lake would generate the greatest revenue, but is also the land in greatest demand for recreation and provides an environmental buffer to protect water quality. Actual excess land is often inaccessible or comprised of small "uneconomical remnants." The revenue potential from a one-time sale of land may, therefore, be limited. Further study is needed to determine actual revenue potential from land sales; however, it is predicted that such revenue would be in the low to medium range. To produce high annual impacts (over \$20 million per year), land sales of \$200 million would be needed to produce an annual return of \$20 million (based on an annual return rate of 10 percent).

Although a state authority charged with promoting economic development suggested that the best way to spur economic development via recreation area development is to sell some of

the land at Corps sites to private developers, the Corps could expect some opposition. At the regional workshops, 67 percent of the attendees opposed land sale. Correspondence received magnified this reaction. Over 200 letters and petitions with 5,800 signatures were received stating that public lands should not be sold.

An Illinois city mayor wrote:

The very idea of the Corps stepping out of the picture at Rend Lake breaks a trust with the people of my community and southern Illinois in general... The involvement of the Federal Government guaranteed that there would be equal and open access to these lands and waters as a public trust to all the American people.

...It is one thing if my Government buys up my family's land and the land of dozens of other families in this area and keeps that land open and available for all who wish to use it. It is quite another matter to think that the land and waters could be closed to public use by a corporation or interests outside our immediate area. That would be intolerable.

Selling Federal lands could also be contrary to other recommendations made and actions taken to safeguard Corps resources for recreation and other purposes. As noted in Chapter I, both the President's Commission on American Outdoors and the President's Domestic Policy Committee Task Force reports stated the continued protection of the environmental quality of Federal lands is critical to the provision of outdoor recreation settings. Similar statements were received throughout this study effort. For example, 75 percent of resort developers and concessionaires from other agencies responding to the telephone interview indicated a "prime scenic location" would be an essential element in their consideration of providing recreation developments on public lands. Also, the "blue-ribbon" task force, selected by the Secretary of the Army to investigate the status of natural resource management programs on Army lands, recommended "that the maintenance and management of natural resources at civil works projects and military installations are in the nation's best interests and should be carried out effectively as a good stewardship program."

Selling the land with revenue going directly to the Corps would also require a change in Federal law (40 USC 484 and 16 USC 460l) and General Services Administration (GSA) regulations (41 CFR Chapter 107). At this time, for example, land sale revenue is used, in part, to fund the Land and Water Conservation Fund. Redirecting the revenue to the Corps program alone could be opposed by the other Federal agencies who receive money from the Fund.

## **Option 2: Sell/donate artifacts.**

While the potential revenue from this option was estimated to be medium, selling artifacts to increase revenue generated strong opposition throughout the study. At the regional workshops, 65 percent of the attendees opposed the sale of artifacts. Correspondence received validated these negative reactions. Although artifacts are expensive to curate as required by

law, the idea of selling them elicited serious ethical concerns from Corps employees. There are at least six Federal laws relating to the protection of cultural resources. Congressional, professional and public opposition to the sale of artifacts could, therefore, be expected. Donation of artifacts to responsible museums or to universities would not generate revenue, but would represent a significant cost avoidance for curation.

**Option 3: Sell firewood.**

Selling traditional items, such as firewood, was generally well received, but the potential revenue generation is limited (estimated at less than one million dollars per year). Selling firewood is not in contradiction with current policy or law, but such sales could put the Corps in competition with private suppliers.

**Option 4: Sell non-traditional items.**

The items referred to here are those the Corps has not sold to date, such as souvenirs, T-shirts, books, and maps. The actual net revenue is dependent upon merchandise costs and sales, which are unknown at this time. In any case, administrative costs would increase to implement this option. To improve the revenue potential with little administrative costs, the sale of non-traditional items could also be provided through cooperative associations, such as those used by the National Park Service and discussed under Section B, "Resource Augmentation."

The reaction of those surveyed at the regional workshops was slightly positive. It was favored by 48 percent of the attendees, while 35 percent opposed it. However, this option would put the Corps in competition with the private sector. Sixty-one percent of the concessionaires surveyed during this study responded that the Corps should not sell merchandise. Selling these items through cooperating associations would require a change in policy only; however, a change in law would be needed to allow the Corps to accept the resulting revenue as a cash donation from the association.

**Option 5: Place vending machines in recreation areas.**

Placing vending machines in recreation areas was considered by one of the information collection task forces to have a potential impact of less than one million dollars per year. Potential administrative costs may exceed revenue potential, and problems may also exist with regard to vandalism and accountability of the money received. Only policy changes are needed to implement this option.

**Option 6: Initiate recycling programs.**

Instituting recycling programs was also estimated by one in-house information task force to be of low impact; however, with the increasing interest in environmental programs, further investigation may indicate a greater revenue potential. In addition to possible revenue, such a program would demonstrate the Corps concern for the environment. Some negative reactions are possible from organizations, such as the Boy Scouts, that currently participate in

recycling programs at Corps projects, or from persons recycling discarded items to supplement their own income. For the most part, this option can be implemented with policy changes; however, there may be property disposal laws or regulations involved in recycling scrap metal or other materials.

**Option 7: Sell abandoned, surplus, and impounded items and equipment.**

The potential revenue is unknown at this time. However, under the current situation, revenues from these sales would go into the General Treasury and not necessarily be available to reduce the Corps O&M expenditures, although Corps administrative costs could increase. Implementation of this option, with revenue being returned to the Corps would require changes in Federal property law and General Services Administration (GSA) regulations.

**Option 8: Seek legislation for a Federal Recreation Lottery.**

A Federal recreation lottery (in which the Federal government would sell lottery tickets with revenue earmarked for Federal recreation programs) could produce revenue, but this idea was not acceptable to most respondents. At the regional workshops, almost 70 percent opposed this option. Other comments indicated that it was similar to gambling and should not be sponsored by the Federal government. Implementing this option would require legislation.

**d. Conclusions.**

The sale of land or artifacts with revenue returned to the Corps could potentially have revenue generating capability, but each met with extreme opposition from varying segments of society. Each would also require major revisions in existing Federal laws.

Selling equipment, firewood, merchandise or other traditional or non-traditional items could be pursued on a local or regional basis, but potential revenue is unknown at this time. Such sales compete with private suppliers. Only policy changes are needed.

Instituting recycling programs and placing vending machines in recreation areas could be done with policy changes and may have greater potential than estimated. Each requires further study.

Instituting a Federal Recreation Lottery could generate an unknown quantity of revenue; however, it was considered by most to be an inappropriate Federal activity. It would also require Federal legislation.

Table 9 provides a summary of the range of potential net revenue, whether law or policy changes are needed, and study conclusions.

**Table 9**  
**Summary of Revenue Options--Sales**

<b>OPTION</b>	<b>POTENTIAL REVENUE<sup>1</sup></b>	<b>LAW OR POLICY CHANGE</b>	<b>CONCLUSION</b>
1. Conduct land sales with receipts going to the Corps recreation program	medium	law	consider
2. Sell artifacts	medium	law	do not pursue
3. Sell firewood	low	policy	pursue locally
4. Sell non-traditional items (through cooperative associations)	low	policy (may also be law)	pursue
5. Place vending machines in recreation areas	low	policy	do not pursue
6. Initiate Recycling Programs	low	policy	pursue locally
7. Sell abandoned, surplus and impounded items and equipment with revenue returned to the Corps	unknown	law	consider
8. Seek legislation to establish a Federal Recreation Lottery	unknown	law	do not pursue

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).

## C. RESOURCE AUGMENTATION

The Resource Augmentation category includes activities and programs that could be used to supplement or augment existing resources of the Corps recreation operation and maintenance (O&M) program. It includes, but is not limited to: volunteer programs; programs for obtaining public and private donations, including donations of equipment and labor; and programs for using subsidized labor sources, such as juvenile offenders. It also includes alternative Federal sources, such as recreation trust funds, in which the collected revenues from such activities as the sale of off-shore oil leases or excise taxes on the sale of recreation equipment are held in separate government accounts and dedicated to help fund recreation programs. This category of suggestions has been further divided into the sub-categories of:

- (1) Supplemental Labor Sources;
- (2) Volunteers;
- (3) Donations;
- (4) Supplemental Funding Sources.

### 1. SUPPLEMENTAL LABOR SOURCES

**a. Current Situation.** The use of supplemental labor includes the use of prisoners, juvenile offenders, the military and programs for the disabled. The distinction here is between "free" labor (volunteers), low-cost, subsidized labor (i.e., supplemental), and full-cost government or contract personnel. The Corps currently makes little use of supplemental labor sources in its recreation program.

**b. Options Considered.** Specific options considered were:

- (1) institute a senior and/or youth conservation corps;
- (2) use prisoners and/or juvenile offenders;
- (3) increase military involvement;
- (4) make use of programs to employ underprivileged youth and/or the disabled;
- (5) provide campgrounds for the homeless in exchange for maintenance services;
- (6) support a new jobs bill program (authorizing Federally-funded public service jobs, similar to the Civilian Conservation Corps of the 1930's).

**c. Evaluation of Options.** There are both opportunities and constraints applicable to the employment of all supplemental labor sources for O&M services. The greatest advantage of any supplemental labor program is the potential cost savings to the Corps O&M budget of using low-cost labor. The use of such labor for day-to-day operation and maintenance of recreation facilities and special services could save dollars the Corps currently spends to contract for such services. Over 80 percent of the respondents at the regional workshops indicated that the Corps should increase the use of supplemental labor sources in general.



One obstacle to the implementation of supplemental labor programs is that, unless these groups are already supervised, the administrative costs to the Corps could be significant. Supplemental labor might cost less, but it is not free. Other constraints are the Corps policies and regulations restricting the use of supplemental labor.

**Option 1: Institute senior or youth conservation corps.**

A senior conservation corps, similar to the non-profit "Green Thumb" programs operating in 44 states, could constitute an inexpensive source of skilled, self-supervised, and experienced workers. Experience with the California Conservation Corps, a group of paid young adults, indicates a potential for a moderate level of cost savings nationwide. On the down side, the cost of providing quarters for a youth corps on-site could be significant. Additionally, legislation would be required to establish a senior or youth conservation corps.

**Option 2: Use prisoners and/or juvenile offenders for park maintenance.**

A social benefit from employing prisoners or juvenile offenders is that useful work could be provided for people society currently underutilizes. Officials surveyed by telephone as part of this study reported success in local park maintenance in conjunction with prisoner release programs. Fairfax County, Virginia, for example, recently announced a program to begin using inmates to maintain county parks and trails. The county will save \$300,000 annually employing just 32 inmates and at the same time ease jail overcrowding.<sup>1</sup> Savings to the county will multiply as the program is expanded.

The use of prisoners and juvenile offenders was not well received by Corps personnel at the Natural Resources Management Conference. Thirty-five percent responded favorably and 30 percent unfavorably. Common objections were the cost of administering and supervising both groups and the opposition that could be expected from maintenance contractors. The presence of prisoners in a "family recreation" atmosphere was also criticized. However, 63 percent of the regional workshop participants responded that the Corps should increase the use of prisoners and juvenile offenders. Interestingly, the majority of negative votes for these options were from state and local governments, public entities that sometimes employ supplemental labor themselves and do not want additional competition (from the Corps) for this labor source. Use of this labor source would require only a policy decision.

**Option 3: Increase military involvement in exchange for O&M services.**

Military and reserve units, also skilled and well-supervised, could be used to accomplish specific renovation or construction projects at recreation areas. In exchange for

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<sup>1</sup> Gidget Fuentes, "Inmates to Clean County Parks," The Fairfax Journal, (Fairfax, VA: May 8, 1990), p. 1.

such services, the military might receive the use of training areas on other project lands. Telephone surveys indicated success in using army reserve units for state park O&M services. One state governor wrote in favor of using Air National Guard units to assist at Corps recreation areas, which in return would derive training benefits and sites for maneuvers. This option also meets the Corps mission of support to the total Army.

Disadvantages of involving the armed services in O&M activities in exchange for training areas were noted by Corps participants at the Natural Resource Management Conference workshop. Objections included possible deterioration or loss of the natural resource base, minor benefits for the effort and possible contractor objections. Only changes in, or enforcement of, existing policy are needed to implement this option.

**Option 4: Make use of programs to employ underprivileged youth and/or the disabled.**

Encouraging these programs might help attain such broader social goals as providing jobs and income for unemployed or underprivileged youth or disabled workers. At the regional workshops, 63 percent of the public thought the Corps should employ more disabled people. The costs of administration and supervision would have to be considered, however. This option can be accomplished through policy decisions.

**Option 5: Provide campgrounds for the homeless in exchange for maintenance services.**

Providing campgrounds for the homeless in exchange for their maintenance services could generate minimal net savings. High administrative, supervision, and implementation costs may negate most labor cost savings. This option can be accomplished through a policy change.

**Option 6: Support new jobs bill program.**

A jobs bill program, similar to the 1983 unemployment relief legislation, could provide jobs, stimulate local economies, and reduce the maintenance backlog for Corps recreation facilities. While support from Corps personnel for a jobs bill was marginally positive (37 percent responded it would meet the study objective, 17 percent thought it would not), a criticism of such legislation is that it would ease the Corps budget at the expense of the Federal budget. This option could enhance recreation and represent a cost avoidance by replacing some higher-cost contracts with jobs bill employees.

**d. Conclusions.**

The cost savings and additional expenses of each individual supplemental labor program would have to be carefully weighed to determine feasibility at specific sites. The

programs that have already been tested and shown to work offer the best potential for further applications.

In most cases, the potential net savings, after subtracting the costs of administering the programs, could be low. Instituting a senior or youth conservation corps and using prisoners or juvenile offenders for park maintenance are options that have already been successfully implemented at the state and local levels, and therefore offer the most potential for implementation by the Corps. Use of military personnel, underprivileged youth, and the disabled for O&M services may work under some conditions in certain locations.

Table 10 summarizes supplemental labor options by potential Federal savings, whether a law or policy change is needed to implement each of the options, and study conclusions.

**Table 10**  
**Summary of Resource Augmentation Options--Supplemental Labor Sources**

OPTION	POTENTIAL SAVINGS <sup>1</sup>	LAW OR POLICY CHANGE	CONCLUSION
1. Institute senior/youth conservation corps	low	law	consider
2. Use prisoners/juvenile offenders	low	policy	pursue locally
3. Increase military involvement	low	policy	pursue locally
4. Employ underprivileged youth and/or the disabled	low	policy	pursue locally
5. Provide campgrounds for homeless in exchange for O&M services	low	policy	pursue locally
6. Support jobs bill	low	law	do not pursue

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).

## 2. VOLUNTEERS

**a. Current Situation.** Since passage of PL 98-63 (33 USC 569c) in 1983, the Corps has used volunteers. The law allows the Corps to pay for volunteers' incidental expenses, but prohibits the use of volunteers for policy making or law enforcement. However, Corps restrictions further limit volunteers' activities. Volunteers contributed an estimated \$2.7 million in services to the Corps in 1989.

**b. Options Considered.** Options considered were:

- (1) reduce restrictions on uses of volunteers;
- (2) use volunteer campground hosts;
- (3) expand use of Adopt-a-Shoreline or Park or Trail programs;
- (4) use student conservation groups;
- (5) use student interns.

**c. Evaluation of Options.**

Many of the benefits of volunteer programs are common to all the specifically considered options. In addition to complementing the government labor force and reducing the need for and expense of contract labor, volunteer programs educate the public, encourage community involvement, promote environmental awareness, and increase understanding and support for good stewardship of America's public lands.

Greater use of volunteers could have a moderate impact in reducing Federal expenditures through lower contract labor costs. An indication of the potential fiscal impacts from an expanded volunteer program Corps-wide can be inferred from the example of another Federal agency. As previously mentioned, the Corps received about \$2.7 million in services from 63,300 volunteers in 1989. Each of those volunteers worked, on average, one day, reflecting the large number of participants at one-day clean-up projects. By comparison, the U.S. Fish and Wildlife Service received approximately \$8.3 million in services from just 9,651 volunteers in 1989. Each of its volunteers donated an average 14 days of labor at refuges, fish hatcheries, and research facilities. Promoting volunteerism is one of the Department of the Interior's ten highest priorities. If the Corps could increase its efforts in promoting volunteer services in addition to clean-ups, a tripling of the contribution made by volunteers to the Corps recreation program (to the approximately \$10 million level) could be attained.

The idea of volunteerism has received publicity and support from many quarters. In Outdoor Recreation in a Nation of Communities, the President's Domestic Policy Council strongly encourages Federal agencies to expand the use of volunteerism through improved

information, recruitment, training, and supervision.<sup>1</sup> The Council also recommends proposing legislation to expand volunteer authority and increased flexibility for effective cooperation between the Federal agency and the volunteers. Importantly, expanding volunteer programs was supported by 89 percent of the public participants at the regional workshops, by over 50 percent of Corps participants at the Natural Resource Management Conference workshop, and in letters received from state Governors, foundations, user groups and others.

Examples of volunteer efforts cited during the study process include the "Greers Ferry Lake - Little Red River Clean-Up," the Grapevine Sailing Club program, the "Great Allatoona Clean-Up," and other undertakings not as well publicized which involved senior citizens, Boy and Girl Scouts, local boating and garden clubs, and various adopt-a-park, trail or shoreline programs. The Tom Bevill Visitors Center on the Tennessee-Tombigbee Waterway offers a successful illustration of a full-service, heavily visited Corps facility run by 85 senior citizen volunteers, sponsored and coordinated by the local American Association of Retired Persons chapter, who escort groups, give lectures, and otherwise operate the center.

At the same time, there are negative aspects common to all volunteer programs. Volunteers are not a panacea for manpower shortages, nor are they a source of steady or guaranteed services. The reliability, professionalism, and high turnover of volunteers were concerns raised by Corps task force personnel and public workshop participants. One example was given of a park that was allowed to deteriorate under volunteer oversight; government funds were then required to rehabilitate it. Another concern is that volunteer programs are not "free"; that is, the reduction in operation and maintenance costs from increased volunteer use could be offset by additional administrative costs in starting up and in training Corps personnel and volunteer supervisors to run volunteer programs. Changes in existing policy, as discussed below, could allow for the increased use and efficiency of the volunteer program.

#### **Option 1: Reduce restrictions on use of volunteers.**

Engineer Regulation 1130-2-432 precludes volunteers from both handling government funds and operating government owned or leased vehicles or equipment. If regulatory changes were enacted allowing volunteers to handle money and operate vehicles, the activities that volunteers could perform would be greatly increased. The Corps ability to attract corporate volunteers and other groups (rather than just individuals) might be expanded, as well. Cooperation from corporate volunteers, for example, has greatly assisted both the National Park Service and the Forest Service. Disadvantages of this option are that volunteers, like employees, are personally liable for damage to government vehicles they operate if that damage is caused by their negligence. To handle money, volunteers would

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<sup>1</sup> Task Force on Outdoor Recreation Resources and Opportunities to the Domestic Policy Council, p. 127.



have to be bonded. This may limit the interest of individuals in performing these activities. As noted, implementation of this option would require a change in policy only.

**Option 2: Use volunteer campground hosts.**

Volunteer campground hosts, identified with the help of such organizations as the "Good Sam Club," a recreational vehicle owners organization, could reduce the need for such contract services as fee collection and campground maintenance and would provide additional campground security in the case of unattended campgrounds. There are currently 574 campgrounds with contract gate attendants. If the average cost of each contract is \$10,000 per year, replacing these contracts with volunteer hosts could result in a maximum savings of approximately six million dollars. This does not consider costs incurred by the Corps to provide adequate training and supervision of the volunteers. In addition, volunteers are under no obligation to stay for the entire season. This could result in a situation in which the Corps would have to collect fees, increasing its overall O&M costs. A 1987 change in the Land and Water Conservation Fund Act, as amended (16 USC 4601), permits volunteers to collect Federal use fees; however, the law requires volunteers who collect fees to be bonded. According to this law, funds available to the collecting agency may be used to cover the cost of such surety bonds. Implementation of this option requires a change in Corps policy.

**Option 3: Expand use of Adopt-a-Shoreline/Park/Trail programs.**

Adopt-a-Shoreline programs, already successfully implemented in, for example, Little Rock District, allow civic groups, businesses, or clubs to "adopt" sections of shoreline at Corps lakes. Concerned citizens provide such worthwhile community services as litter control and planting of trees and wild flowers while beautifying the lake shoreline near their neighborhoods. Such programs often result in reduced vandalism because of increased public awareness of the resource and increased community pride. While there are no significant constraints to expansion of this program, this option may provide more clean-up and enhancement benefits than significant savings to the Corps recreation budget. Again, emphasis on the enlistment of corporate volunteers could improve the effectiveness of existing "adoption" programs.

**Option 4: Use student conservation groups.**

The development of a cooperative agreement between the Corps and the Student Conservation Association (SCA), a non-profit organization that recruits and places approximately 1,000 high school and college students every year in 250 Federal, state, and local parks, could provide the Corps a source of skilled, supervised student volunteers. Many of the recruits have natural resource backgrounds, and could thus help support professional ranger staff in addition to performing routine maintenance and clean-up operations. The U.S. Fish and Wildlife Service already has an agency cooperative agreement with the SCA. Other volunteer organizations with whom the Corps could work or after whom the Corps could model a program are the Iowa Youth Corps and the Wisconsin Conservation Corps.

A potential drawback here is the size of the pool of volunteer labor. The SCA, for example, receives roughly 50 percent more requests for volunteers than it is able to fill. The Corps would have to compete with other groups (including other Federal agencies) that have already established volunteer recruitment efforts.

As previously mentioned, volunteer services are not free. The SCA charges a significant administrative fee and requires host agencies to house volunteers on-site. Funding for a volunteer program would be necessary. As an example, even though the value of work performed by a volunteer could exceed his or her administrative costs, one twelve-week assignment for a volunteer could cost over \$2,000 in up-front outlays. Implementation could be accomplished through Corps policy.

**Option 5: Use student interns.**

Student interns from colleges or universities offering majors in outdoor recreation could staff Corps recreation areas while meeting internship requirements, conducting research, and receiving "hands-on" training under the guidance of experienced personnel. California State University, Chico, currently operates a campground for the U.S. Forest Service under a concessionaire lease agreement. Drawbacks to this option are current Corps restrictions on the use of volunteers, the potential high turnover of student volunteers and the practical need for the recreation area to be located in proximity to a college or university. Implementation could be accomplished through Corps policy.

**d. Conclusions.**

Expanded use of volunteers could have a moderate impact in reducing Federal expenditures through lower contract labor costs. Additionally, recreational opportunities could be enhanced by providing facilities and services currently unavailable and by increasing the general public's exposure to recreational programs. The fact that so many volunteer programs are working now presents an incentive to promote their utilization elsewhere.

Table 11 illustrates options under the volunteer category by potential net savings, whether law or policy changes are needed to implement the options, and study conclusions.

**Table 11**  
**Summary of Resource Augmentation Options--Volunteers**

<b>OPTION</b>	<b>POTENTIAL SAVINGS<sup>1</sup></b>	<b>LAW OR POLICY CHANGE</b>	<b>CONCLUSION</b>
1. Reduce restrictions on use of volunteers	medium	policy	pursue
2. Use volunteer campground hosts	medium	policy	pursue
3. Expand adopt-a-park/shoreline/trail programs	low	policy	pursue locally
4. Use student conservation groups	low	policy	pursue locally
5. Use student interns	low	policy	pursue locally

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).

### 3. DONATIONS

**a. Current Situation.** The Corps currently receives little in the way of voluntary donations and does not actively pursue such contributions. The Corps lacks statutory authority to accept cash donations. The Corps does not have the authority to administer a Challenge Cost Share program, in which non-Federal sponsors compete for government matching grants to provide public recreation facilities, services, and programs.

**b. Options Considered.** Options considered were designed to tap voluntary contributions from a wide range of organizations, corporations, and individuals. These included:

- (1) initiate a Challenge Cost Share program;
- (2) encourage the formation of non-profit cooperating associations;
- (3) establish a corporate and/or individual sponsorship program for facilities, equipment, or services in exchange for special acknowledgements;
- (4) establish a nationwide voluntary/contribution program.

**c. Evaluation of Options.** There are several benefits germane to all donor programs. Donations are popular with sponsors who receive publicity, an enhanced public image and, in some cases, a tax write-off. The Corps benefits from the public goodwill engendered, as well as from the actual donation. Over 52 percent of the regional workshop participants responded that the Corps should seek financial assistance for its recreation program through donations.

#### **Option 1: Initiate a Challenge Cost Share program.**

An indication of the potential net savings to be derived from the establishment of a Corps Challenge Cost Share program is offered by the success of the U.S. Forest Service program. In 1990, the Forest Service's Challenge Cost Share Program matched each Federal dollar with over two dollars in non-Federal contributions, producing an estimated \$17.5 million for recreation programs.<sup>1</sup> Begun in 1988, contributions have grown ten-fold in just three years. Completed cost shared projects include barrier-free access to recreation facilities, improved hiking facilities, rehabilitated and modernized campgrounds, interpretive signing, summer youth employment in recreation site operation and maintenance, vegetation management for scenic resources, and renovation of historical buildings. Although newer and

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<sup>1</sup> It is important to note that the Forest Service's regular appropriations were supplemented by the Challenge Cost Share appropriation of \$5.5 million. Had this not been the case, the agency would have had little incentive in promoting the program, and sponsors would have had little incentive to participate. Furthermore, other programs in the Forest Service's budget would have suffered as the agency lost budgeting flexibility, since each cost-sharing agreement obligates the agency and the sponsor to commit a given dollar amount to the cost-shared project.

smaller, the U.S. Fish and Wildlife Service's Challenge Cost Share program has attracted nearly three matching non-Federal dollars for every Federal dollar. Program projects totalled \$2.5 million in 1990.

Challenge Cost Share programs were supported by almost 60 percent of the non-Federal agencies contacted through telephone surveys, who responded that the initiation of a Challenge Cost Share program would encourage their organization to participate in the O&M of Corps recreation areas.

A plurality of Corps respondents (42 percent) responded that instituting a Challenge Cost Share program would meet the study objective, although enthusiasm was tempered somewhat by reservations about the potentially erratic level of year-to-year collections. Other potential disadvantages center on the administrative responsibilities and expenses of running a Challenge Cost Share program; competition for Challenge Cost Share dollars; statutory constraints prohibiting acceptance of cash donations; and the need for Congressional authorization. Subsequent to authorization, annual appropriations would be required to fund the Federal portion of the program.

**Option 2: Encourage the formation of non-profit cooperating associations.**

Agreements with cooperating associations, long used by other Federal agencies, including the Park Service, the Forest Service, and the Fish and Wildlife Service, were recently approved by the Corps with Vicksburg District's signing of a two year contract with a not-for-profit organization at Grenada Lake. The cooperating association sells interpretive materials and other souvenir items at the visitor center and reinvests any "profits" into facility operation and interpretive programs.<sup>1</sup> Other existing donation programs identified through telephone surveys include involvement of non-profit groups in interpretive and other specialized services.

The President's Domestic Policy Council in Outdoor Recreation in a Nation of Communities strongly encourages Federal agencies to undertake partnerships with nonprofit organizations that can improve recreation services to the public, such as cooperating associations, "Friends" groups, civic organizations, foundations, and educational institutions. "Nonprofits also promote strong links between the communities and the public lands serving local recreation demands."<sup>2</sup> In addition, the Domestic Policy Council recommends that the Administration give recognition for donations of funds, land, or physical property, so long as

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<sup>1</sup> Jim Metzger, "Vicksburg Contract Explores New Service," Engineer Update, (Washington, DC: HQUSACE, October, 1989), p. 7.

<sup>2</sup> Task Force on Outdoor Recreation Resources and Opportunities to the Domestic Policy Council, p. 128.

such acknowledgement does not endorse a product. Corps guidance is currently being formulated to encourage the use of cooperating associations on a Corps-wide basis.

**Option 3: Establish a corporate and/or individual sponsorship program.**

Encouraging corporate and/or individual sponsorships in providing O&M at Corps areas was rated as positive in terms of meeting the study objective by over 54 percent of Corps personnel at the Natural Resource Management Conference workshop, while only four percent responded the option would not meet the study objective. Examples of corporate sponsorships already in place identified through telephone surveys include sponsorship of recreation area clean-ups, such as Stouffer's Clean-up and the Pepsi-Cola and Coca-Cola programs.

Possible drawbacks to corporate sponsorships include potentially aggressive (proprietary) corporate sponsors and statutory (33 USC 591) and policy (Engineer Regulation 1130-2-400) constraints disallowing Corps acceptance of cash donations and limiting the value of donated gifts of material or personal property that may be accepted to \$5,000.

**Option 4: Establish a nationwide voluntary contribution/ donation program.**

A plurality of Corps respondents at the Natural Resource Management Conference workshop reported that developing a nationwide voluntary contribution program would meet the study objective (38 percent), but enthusiasm for this option was lukewarm. Potential drawbacks to increased emphasis on a voluntary donation program center again on the administrative responsibilities and expenses of running a donor or contribution program; competition for donations; the public's perceived "ownership" of donated resources, resulting in additional management problems because of perceived "indebtedness" to the donors; and the need for statutory and policy changes allowing the Corps to solicit and accept increased levels of donations. The National Park Service and the Forest Service, for example, have statutory authority to accept cash donations (16 USC 460l-1); however, the Corps is limited by law to acceptance of materials and personal property (33 USC 591).

**d. Conclusions.**

Initiation or expansion of donor programs could achieve both study goals. First, recreational opportunities could be enhanced by making more facilities available to the public, by providing interpretive programs, resources, and personnel, and by broadening public involvement. Second, greater solicitation and acceptance of donations could have a significant impact in reducing Federal expenditures. While sponsorship or cooperative association programs might not generate as much income at the national level, their impacts at any particular project are potentially significant.

Table 12 summarizes donations options by potential net savings, whether law or policy changes are needed to implement the options, and study conclusions.



**Table 12**  
**Summary of Resource Augmentation Options--Donations**

<b>OPTION</b>	<b>POTENTIAL SAVINGS<sup>1</sup></b>	<b>LAW OR POLICY CHANGE</b>	<b>CONCLUSION</b>
1. Initiate Challenge Cost-Share Program	medium	law	pursue
2. Encourage non-profit cooperating associations	medium	policy	pursue
3. Establish Corporate Sponsorship Program	low	law	consider
4. Establish donation/contribution programs	low	law	pursue

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).

#### 4. SUPPLEMENTAL FUNDING SOURCES

**a. Current Situation.** Supplemental funding sources are potential sources of income for the Corps recreation program outside of Corps recreation facility-generated revenues. The Corps currently does not participate in such programs for the purpose of funding O&M of its recreation areas. The Corps recreation program does not receive funds from the sale of other project outputs such as hydropower and water supply.

**b. Options Considered.** Options considered were:

- (1) consider excise taxes on recreational equipment, vehicles, and boats;
- (2) increase the price of vendables and apportion a share of revenues to the recreation program;
- (3) participate in Land and Water Conservation Fund programs;
- (4) include the Corps in proposed American Heritage Trust Fund legislation;
- (5) establish a Corps of Engineers recreation trust fund.

**c. Evaluation of Options.** On the whole, public sentiment was positive toward the general category of supplemental funding options. Over 74 percent of the regional workshop participants indicated that the Corps should seek additional financial support through supplemental funding sources. Upon close examination, however, there are considerable disadvantages to the implementation of specific proposals. These center on public opposition to excise taxes, the effectiveness of trust fund participation, and opposition from other interest groups to reallocation of other project revenues, such as hydropower.

##### **Option 1: Consider excise taxes on recreational equipment.**

The fiscal impacts of Corps participation in a new or existing trust fund program relying on collected revenues from excise taxes on recreational equipment, boats, and recreational vehicles could be significant. Using excise taxes as a source of funding could help reduce both Federal and Corps outlays. For example, an article published in The Washington Post reported that a one percent tax on pleasure boats, outboard motors and accessories could raise an estimated \$100 million annually.<sup>1</sup> The imposition of excise taxes on recreational equipment, with the collected funds channeled to a "recreation trust fund," could provide an opportunity to draw upon users of recreational facilities for revenue. User fees are currently employed elsewhere in government to support a variety of programs. While the issue of whether excise taxes constitute "user fees" has been debated, the case can be made that a strong link exists between the purchase of recreational vehicles and boats and use of Federal recreation lands and waters.

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<sup>1</sup> John Lancaster and Paul Blustein, "Bush Plans 'User Fees' on Boats, RVs," The Washington Post, (Washington, DC: The Washington Post Co., Vol. 112, No. 353, December 19, 1989), p. A1.

The enactment of excise tax legislation on all recreational vehicles, equipment and boats could conceivably generate over \$500 million annually to help finance any of the above trust funds, but the major obstacle here is public opposition to excise taxes. Although supported as meeting the study objective by 54 percent of Corps participants at the Natural Resource Management Conference workshop, only 38 percent of the regional workshop responses indicated that the Corps should support excise tax legislation on recreational equipment. To bring about such legislation, support from others would be needed.

**Option 2: Increase the price of vendables and apportion a share of revenues to the recreation program.**

The proposal to charge the users of project outputs such as hydropower, water supply, navigation, or irrigation an increased share of recreation O&M costs through higher pricing could provide substantial funds for the Corps recreation program. Looking at it from one perspective, this would ensure that project beneficiaries (whether hydropower users, water supply customers, or others) who adversely impact water levels for associated users (i.e., recreation users) would pay a more equitable, market-based price. At the regional workshops, 64 percent of the participants supported directing revenues from hydropower sales to support the recreation program. Among Corps participants at the Natural Resource Management Conference workshop, charging additional fees for other project purposes, such as hydropower or water supply storage, and dedicating some of the revenues to recreation programs, received strong support as a method to meet the study objective (63 percent positive versus 17 percent negative).

However, increasing the prices charged by the Corps for hydropower generation or water supply storage, with some of the increased revenues apportioned to recreation programs, would be highly controversial. Utility companies, Federal power marketing agencies, and consumers who purchase Federally-produced hydropower are already on record protesting any renegotiation of existing hydropower contracts for this purpose. One respondent wrote, "We think the Corps should account for the damages hydropower customers have already suffered [from Corps management favoring recreation over hydropower] before contemplating Federal treasury gains." Additional opposition could be expected, as well, from municipalities which receive water supply from Corps projects. Any diversion of funds from hydropower generation to recreation would require changes in existing law (dating back to the Flood Control Act of 1944 and reiterated in the Water Resource Development Act of 1986), because the revenues from hydropower currently "offset" the original project construction costs and operation and maintenance. Furthermore, the Energy and Water Development Appropriation Act of 1983 (and language in subsequent appropriations) prohibits any unilateral or administrative changes in the rate agreements between the Federal government and the power marketing administrations. This means that the rate structure cannot be increased without the enactment of appropriate legislation.

**Option 3: Participate in Land and Water Conservation Fund programs.**

The Land and Water Conservation Fund (LWCF) contains monies derived, in part, from the sale of Federal property, offshore oil lease revenue and facility-generated revenue (recreation fees collected by the Department of Agriculture). The money is used to fund Federal (National Park Service, Forest Service and Fish and Wildlife Service) and non-Federal land acquisition for recreation and may be used for payment into miscellaneous receipts of the Treasury as a partial offset for the Federal capital costs of water resource development projects allocated to recreation or fish and wildlife enhancement. Recreation fee revenues for most agencies (including the Corps) are deposited into a separate account in the Treasury for each agency for later appropriation by Congress. As such, the recreation fee portion of the LWCF is not considered a "supplemental funding source" as defined here.

Attempting to increase the Corps benefits from the fund would result in competition with other land managing agencies for scarce fiscal resources and may be opposed by those agencies on that basis. Further, since the LWCF is currently used to finance land acquisition, and the Corps objective is financing ongoing O&M, participation would not generally address the study objective. An exception might be if a change could be made in the law, such that money from the LWCF could be used for Corps land acquisition to improve accessibility and eliminate the need for extensive road construction and maintenance.

**Option 4: Include the Corps in the American Heritage Trust Fund bill.**

Participation by the Corps in the American Heritage Trust Fund would require changes to the legislation and concurrence from the Departments of Interior and Agriculture. Although the assumption here is that this trust fund would be better funded than the current LWCF, the fund is still to be used for land acquisition and facility development, which would not help the Corps meet O&M needs. Using American Heritage Trust funds for facility rehabilitation would serve Corps O&M needs, however. Further, Corps involvement would not reduce Federal expenditures unless the revised legislation were to tap new funding sources, such as excise taxes.

**Option 5: Establish a Corps of Engineers Recreation trust fund.**

Almost two-thirds (65 percent) of the regional workshop attendees responded that the Corps should participate in a recreation trust fund, while approximately 50 percent of Corps personnel attending the Natural Resource Management Conference workshop also found that establishing a Corps recreation trust fund would meet the study objective. A separate Corps recreation trust fund, however, would not reduce Federal expenditures, unless revenues for seed money and annual operations were to come from a new funding source, such as excise taxes on recreational boats. New legislation would be required to implement this option.

**d. Conclusions.**

The proposal to seek supplemental funding sources to help finance the Corps recreation O&M program is credible in the abstract. However, concrete means of obtaining such funds, such as Corps participation in LWCF, legislation levying excise taxes on recreational equipment, vehicles, and boats, and redirection of revenue from vendables to the recreation program are not realistic.

Table 13 outlines the potential savings, whether a law or policy change is needed to implement each of the specific supplemental funding options, and study conclusions.

**Table 13**  
**Summary of Resource Augmentation Options--Supplemental Funding Sources**

<b>OPTION</b>	<b>POTENTIAL SAVINGS<sup>1</sup></b>	<b>LAW OR POLICY CHANGE</b>	<b>CONCLUSION</b>
1. Support excise tax legislation on recreational equipment, vehicles, boats; Corps would receive share of revenues	high	law	do not pursue
2. Increase and allocate share of revenues from vendables to recreation	high	law	do not pursue
3. Participate in Land and Water Conservation Fund programs	low	law	do not pursue
4. Include Corps in American Heritage Trust Fund legislation	low-none	law	do not pursue
5. Establish Corps recreation trust fund	low-none	law	do not pursue

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).



## **D. NON-FEDERAL PUBLIC INVOLVEMENT**

The Non-Federal Public Involvement category includes programs or activities that could be used to encourage greater participation by state, city, county, and other non-Federal public agencies in the operation and maintenance, further development or takeover of Corps recreation areas. It has been further subdivided into:

- (1) Financial Incentives;
- (2) Developmental Incentives;
- (3) Lease Incentives.

### **1. FINANCIAL INCENTIVES**

**a. Current Situation.** Funds for recreation cost sharing are limited within current guidelines. These guidelines are also very restrictive. Current policy requires cost share partners to contribute their share up front and to assume all operation, maintenance and facility replacement costs. Other sources of Federal funds cannot be used for the non-Federal public share. There are no provisions, policies, or laws for low interest loans, or for an established fund that could encourage development. Completion of extensive research and studies is sometimes required before allowing non-Federal entities to take over management of an existing recreation area. The costs of these studies may deter such entities from pursuing lease agreements.

**b. Options Considered.** Options considered were:

- (1) allow Federal cost sharing of operation and maintenance;
- (2) develop a fund to finance the cost of improvements;
- (3) relax requirements for up-front payments for cost sharing;
- (4) increase Federal share of initial development costs;
- (5) permit cost sharing for recreation development on non-Federal contiguous lands;
- (6) provide low interest loans;
- (7) fund market studies;
- (8) provide technical assistance for planning, design, and construction management for recreation developments;
- (9) allow the use of other Federal funds for the local share.

**c. Evaluation of Options.**

With regard to non-Federal public participation, the major finding is that, on the whole, non-Federal public entities do not have adequate funding to assume additional operation and maintenance costs on Corps projects. According to State Parks in a New Era, a 1989 research report from the Conservation Foundation, Federal financial assistance to states and locals from the Land and Water Conservation Fund diminished sharply throughout the 1980's. According to this report, many states have been unable to make up the difference, as

a result of more competition for state funds in the wake of Federal cutbacks. Funding for parks has not fared well in state legislatures, as a general rule.<sup>1</sup> The findings of other major studies performed within the last year support this finding. Results were: (1) although the state agencies seem to be the most logical alternative to Federal O&M outlays for Corps recreation areas, states are already facing fiscal problems; and (2) state and local public agencies see themselves as capable and willing to provide recreation services and facilities at Corps areas. However, for this alternative to be implemented, at least partial Federal funding would be required.

The Corps of Engineers Recreation study found similar results with regard to non-Federal public takeover of Corps recreation areas. Of the non-Federal public officials interviewed as part of the telephone survey, 97 percent represented state and county agencies; about half leased land from the Corps now and 89 percent had recreation facilities on their own land, as well. Although 50 percent responded that they would be willing to take partial or complete control of the financial responsibility of O&M, their financial situation most often would not allow it. According to the survey report (Appendix G),

Repeatedly these representatives of state and local agencies emphasized their need for more budget allocations in order to meet the current operation and maintenance demands within their own existing park system...Once again, it was emphasized by state and local agency personnel that current levels of funding do not meet the budgeted needs of their existing operations, and it would be highly unlikely that they could financially contribute to a cooperative Corps and state or local effort.

When asked what incentives would interest them in taking over additional areas, 82 percent responded favorably to total Federal funding. However, 10 percent responded that they did not think their agency would be interested in participating in the Corps O&M even with total Federal funding.

In addition to the telephone interviews, several personal interviews were conducted. As part of that interview process, one respondent stated that 55 percent of state areas are now on Corps leased areas, but that the state's financial situation limited its takeover of additional lands; it has no up-front money for construction. He also stated that the Corps promised to provide O&M and that it should do so. Another respondent stated that he would not take over Corps areas just to take them over. They must be where a state park is needed. He has had requests for 14 new parks, but the state legislature has no money to provide them.

Of the 37 responses received from state Governors, 18 (48 percent) indicated that the state could not assume additional O&M responsibilities. These states contain 56 percent of

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<sup>1</sup> Phyllis Myers and Sharon Green, State Parks in a New Era, Volume I: A Look at the Legacy, (Washington, DC: The Conservation Foundation, 1989), pp. x-xii.

the Corps projects with recreation visitation. Eighteen responses were neutral in that they did not mention the state's capability one way or the other. Only one responded that the state would be willing to assume the O&M (on one river launch ramp). Examples of the other state responses are:

"We have the same type of need and maintenance dollars are the most difficult funds to obtain."

"We are apprehensive about expanding our role as a non-Federal public entity providing additional recreational opportunities on COE leased park land."

"What assistance can the [state] expect from the federal government that will help enable us to sustain and enhance our existing partnership with the Corps of Engineers?...[We] suggest consideration be given in the Corps plan for financial assistance to states which have previously assumed these responsibilities."

"The Corps cost share program has been an effective way to encourage public and private sector involvement on Corps projects in the past. This program should be reinstated."

"For us to lease additional Corps lands in [state] in the near future, you would need to assist us with funding for our operation budget."

"Recreation agencies are currently facing serious budgetary constraints and have indicated that they could not absorb any such additional operational expenditures."

Another state "has encountered fiscal constraints very similar to those the Corps is currently experiencing...it would be almost impossible to assume the additional management responsibilities of Corps water resource development projects."

"Our present financial situation prevents us from accepting any additional arrangements with the Corps unless their operation cost would be at least covered either through fees and charges or through financial support from the Corps."

One state said it "would be unable to assume operation of any of the small access parks currently operated by the Corps... Numerous free access points on lakes also severely limit our ability to collect fees, which can be used to defray operating costs...I would also support continuation of funding assistance on a matching basis for park development and operation costs."

"It is unlikely that you will find many non-federal public agencies or the private sector that would accept management responsibilities on Corps facilities without some type of economic incentive. Incentives could take the form of long-term agreements where the non-federal interests could charge adequate fees to provide sufficient funds to operate the site, or the Corps could lease or contract maintenance."

**Option 1: Allow Federal cost sharing of operation and maintenance.**

As noted, in the majority of cases, state and local funding is not available to develop new or take over existing recreation areas on Corps projects. This option is one that directly addresses the non-Federal public entity's lack of operation and maintenance funding. Four of the state Governors' letters specifically expressed an interest in the Corps cost sharing in lessee O&M expenses. At this time, no known law specifically precludes such an arrangement on projects authorized prior to passage of PL 89-72. As a way to meet the study objective, however, this option, as described below, may "backfire."

The necessary takeover of all Corps areas under this arrangement may not occur. As previously noted, 10 percent of the non-Federal public representatives contacted by phone would not even consider total Federal funding as enough incentive to take over Corps areas. The Corps currently manages 2,436 recreation areas with 1,854 managed by other entities. If the Corps could encourage non-Federal take over of its 2,436 areas by providing a portion of the O&M costs (e.g., 50 percent), substantial reductions in Federal expenditures could result. However, non-Federal interests managing the other 1,854 recreation areas could request similar reciprocal agreements, which may be difficult to deny. If the average O&M costs of Corps and non-Federal interests are similar (data are not available to confirm this premise), some reductions in Federal expenditures would still result, since there are more areas managed by the Corps than other non-Federal interests.

On the negative side, if only a portion of Corps areas are taken over, yet many other currently leased areas are returned to the Corps or existing leases are not renewed unless O&M is cost shared, net Federal expenditures may increase. The potential loss of goodwill if cost sharing O&M were not applied to all states could be an unquantifiable, but real, cost to the Corps, as well. As noted by one of the Governors, states are asking what the Federal government can do for those already leasing areas, not how the states can assist the Federal government. Cost sharing O&M also requires the Corps to make a long term commitment to continued recreation funding. Once initiated, it would be difficult to curtail, even if Federal budgets were reduced. This could adversely impact funding for other project purposes.

Implementation of this option on projects authorized prior to passage of PL 89-72 would require a change in policy only. Implementation of this option on other projects would require changes in Federal cost sharing law.

**Option 2: Develop a fund to finance the cost of improvements.**

One option considered under the Developmental Incentives section below is renovating existing recreation areas for takeover by non-Federal public entities. This option addresses the source of Federal financing for such consolidation or renovation.

Developing a fund from Corps revenue (such as recreation fees) for renovation of existing areas to be turned over to non-Federal public partners could be done, but using

Federal revenue to renovate areas for takeover would deplete such revenue for other programs. It would, therefore, be necessary to balance long-term O&M savings (realized by turnover of the area to others) against loss of revenue to determine if a net reduction in Federal expenditures would be realized. While some states could take advantage of this option, it does not address the overall scarcity of non-Federal public funding for ongoing O&M. Depending on the source of funding, a change in law may be necessary to implement this option.

**Option 3: Relax requirements for up-front payments for cost sharing.**

Relaxing up-front payments would in effect be the same as providing low cost loans for recreation development. The fact that up-front financing is now required under PL 99-662 for other project purposes, as well as recreation, indicates that Congressional opposition to this option could be expected. The resulting increase in Federal expenditures would increase significantly in the short run. Long-term decreases would have to be analyzed on a case-by-case basis. This option could assist only those few non-Federal public entities that have adequate funding for taking over additional O&M or providing some other payment to the Federal Treasury to meet the study objective. A change in Federal cost sharing law (e.g., PL 89-72) would be needed to implement this option.

**Option 4: Increase Federal share of initial development costs.**

This option would require a greater commitment of non-Federal public O&M dollars to gain a net reduction in Federal expenditures. Since it would still place a burden on financially able cost share partners and because most other non-Federal public agencies do not have adequate funding to participate, this option has little potential for increasing overall non-Federal public participation. It would also require a change in Federal cost sharing law (e.g., PL 89-72).

**Option 5: Permit cost sharing recreation development on non-Federal contiguous lands.**

The precedent exists for Federal funding of non-Federal lands and development on those lands. Portions of the Land and Water Conservation Fund are now used for acquisition of non-Federal public lands for recreation development. Cost sharing on these lands, however, has the same drawbacks as cost sharing on Federal lands. Corps O&M must be funded to meet the study objective, in addition to payback of the Federal share. Most state and local governments are not in the financial position to accomplish both.

For those agencies that can afford it, this option may be viable. It is unknown at this time what developable non-Federal public lands lie adjacent to Corps lands or what interest there may be in pursuing this option. It may also require a change in Federal cost sharing law (e.g., PL 89-72).

**Option 6: Provide low interest loans.**

This option is similar to relaxing up-front payments for cost sharing, in that initial Federal expenditures would increase to provide the loan. Considering the eventual cost to pay back the loan in addition to taking over Corps O&M to meet the study objective, this option would probably not be of interest to most non-Federal public agencies.

**Option 7: Fund market studies.**

Corps-provided marketing studies could increase non-Federal public interest in determining appropriate development in the region, but specific returns to the Corps are not evident. A more direct benefit from this option is that it may provide planning, design and construction work that would utilize in-house capability. Since the non-Federal public entity's major problem is funding ongoing O&M, this option would only be beneficial if the studies uncovered a revenue generating possibility that resulted in long term capability to fund Corps O&M. This option could be implemented with changes in policy.

**Option 8: Provide technical assistance for planning, design and construction management for recreation developments.**

This option may reduce the non-Federal public partner's costs, but it was not identified as a high interest item by any of the surveyed sources. In fact, when non-Federal public agency representatives were surveyed by telephone about what responsibilities they would be willing to assume, 82 percent said they would provide technical assistance to the Corps. This option could be implemented with changes in policy.

**Option 9: Allow the use of other Federal funds for the local share.**

While this option may attract non-Federal public interest initially, it has the same drawbacks as increasing the Federal cost share portion or providing low interest loans. In effect, this option is to provide recreation development at 100 percent Federal funding. To realize a net Federal expenditure reduction, the non-Federal public partner would have to take over sufficient Corps O&M to offset the entire cost of the development. Few state or local governments appear to be in a financial position to do so. Implementation of this option may also require a change in Federal cost sharing law (PL 89-72).

**d. Conclusions.**

Several options address various forms of cost sharing or providing the funds for recreation development at 100 percent Federal expense. For any of these options to meet the study objective, the non-Federal public entity must assume existing Corps O&M. A policy to that effect was instituted in 1983. All cost sharing contracts were subject to a provision that existing Corps O&M had to be assumed by the non-Federal public cost share partner, in addition to the assumption of O&M on the cost shared development. From the inception of



that policy until the provision was eliminated by PL 99-662, no contracts were submitted to the Corps. After the provision was lifted, over 20 contracts were submitted. This indicates that the takeover provision is a significant deterrent to non-Federal public participation and that such entities do not have the capability to fund additional O&M or provide some other payment to the Federal Treasury to meet the study objective. Since the takeover provision was stricken by Congress, re-instituting it as a way of meeting the study objective on new cost sharing contracts would require a change in law.

Cost sharing the non-Federal public entity's operation and maintenance was the only option that addressed the primary concern of most agencies surveyed, funding ongoing O&M. This option would be viable only if management of sufficient Corps areas is taken over under the agreement. If O&M is cost shared on only a few areas, the potential exists for significant increases in net Federal expenditures.

Funding market studies and providing technical assistance could provide some support to non-Federal public entities, but their value as major incentives for non-Federal public involvement is unknown at this time.

Table 14 outlines the potential savings and whether a change in law or policy is needed to implement each of the specific financial incentive options, and study conclusions. The net savings are dependent upon the extent to which the option would attract non-Federal public involvement and the extent to which those entities take over existing Corps O&M. "None" indicates that unless additional O&M is taken over in conjunction with the incentive, the savings would be negated by increased Federal expenditures. In the case of cost sharing O&M, "none" refers to the situation in which Corps costs to operate or close relinquished areas exceed the savings realized by cost sharing O&M.

**Table 14**  
**Summary of Non-Federal Public Involvement Options--Financial Incentives**

OPTION	POTENTIAL SAVINGS <sup>1</sup>	LAW OR POLICY CHANGE	CONCLUSION
1. Allow Federal cost sharing of O&M	high-none	policy (law for some)	consider
2. Develop a fund to finance improvements	high-none	may be law	pursue
3. Relax up-front financing requirement	high-none	law	do not pursue
4. Increase Federal share of initial development costs	medium-none	law	do not pursue
5. Cost share on non-Federal lands	medium-none	law	do not pursue
6. Provide low interest loans	medium-none	law	do not pursue
7. Fund market studies	low-none	policy	pursue locally
8. Provide technical assistance	low-none	policy	pursue locally
9. Allow use of other Federal funds for the Federal share	low-none	law	do not pursue

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).

## 2. DEVELOPMENTAL INCENTIVES

**a. Current Situation.** Non-Federal public entities are sometimes not interested in leasing Corps recreation areas because these areas are inefficient, the facilities need renovation, and/or the entity is unable to provide the initial infrastructure (roads and utilities). In some instances, the amount of government land may be insufficient for an efficient operation. Local Corps policy may restrict development by others to that which may enhance the public's ability to enjoy intrinsic natural resource features. In addition, administrative policy further restricts the types of facilities for which Federal cost sharing is allowed.

**b. Options Considered.** Options considered were:

- (1) consolidate or renovate existing recreation areas;
- (2) allow more types of recreational developments which non-Federal entities may provide;
- (3) allow Federal cost-sharing on a wider range of facilities;
- (4) construct all or part of the infrastructure facilities at recreation areas;
- (5) seek legislative authority to allow for additional land acquisition to facilitate recreation development.

**c. Evaluation of Options.** Sixty-seven percent of all regional workshop participants favored developmental incentives in general. Of those respondents, 37 percent were state and local government representatives. As a group, 74 percent of state/local representatives favored such incentives.

### **Option 1: Consolidate/renovate existing recreation areas.**

With some up-front Federal financing, areas could be made more attractive for takeover by non-Federal public entities. The success of this option is tied to the state and local government's ability to fund the resulting O&M on a continuing basis. No change in law is needed to implement this option.

### **Option 2: Allow more types of recreational developments which non-Federal public entities may provide.**

An option that would assist the non-Federal public partner in funding recreation O&M is to allow it to provide more types of recreational developments. There are no apparent legal constraints to allowing "non-traditional" types of recreation facilities; 16 USC 460d provides that the Secretary of the Army may authorize local interests to construct, operate and maintain public parks and recreation facilities. Since the statute does not provide a definition of the terms "recreation facilities," it would seem that these facilities are not limited to only water resource related facilities. The only legal limitation would seem to be that the facilities are in the "public interest."

While the following findings are not offered to indicate what facilities are in the "public interest," they present an idea of the acceptance of the various types of facilities the Corps might allow the non-Federal public partner to provide. When asked what types of facilities should be provided on Corps projects, 98 percent of the telephone surveyed users responded facilities that blend into and relate to the natural resources; 70 percent said recreational vehicle (RV) parks; 96 percent said campgrounds for trailers and tents; and 44 percent responded that "constructed facilities," such as tennis courts or swimming pools, should be allowed. Fifty-eight percent of the users surveyed were against "resort-type" development; however, the individual's perception of what constitutes a "resort development" may, of course, vary and once such development is in place, "new" users may be attracted to it.

Current policy regarding cost sharing (Engineer Regulation 1165-2-400), permits facilities that "stand-alone" (are not dependent on the presence of the project), if those facilities are provided at 100 percent non-Federal expense. Examples of facilities cited in the regulation are swimming pools, golf courses and tennis courts. However, local Corps restrictions may discourage the development of these "stand-alone" facilities. In some cases, restrictive local policies are based on the interpretation that if a facility is not specifically listed in ER 1165-2-400, that facility is not permitted on Corps land, regardless of the funding source.

Of the non-Federal public entities surveyed by phone, 67 percent reported that they had no constraints on provision of resort development on their lands (10 percent had legal constraints, 20 percent had philosophical constraints), and 78 percent had no constraints on the use of concessionaires to provide additional facilities. Thus, most non-Federal public entities would be able to provide more revenue generating facilities if encouraged or permitted to do so by local Corps jurisdictions.

This option could be implemented with a change in, or clarification of, policy.

### **Option 3: Allow Federal cost sharing on a wider range of facilities.**

A related option is allowing Federal cost sharing on a wider range of facilities. While cost sharing alone does not meet the study objective, cost sharing on revenue producing facilities would make it more likely that the non-Federal partner could afford to take over additional Corps O&M to meet the study objective.

This option was generally accepted by many of those surveyed during the study. At the Natural Resource Management Conference Workshop, 36 percent of the Corps employees indicated that allowing cost sharing on a wider range of facilities would have a positive impact on both aspects of the study goal. Negative comments were that the proposal would increase recreation, but not necessarily recreation of a desirable nature. Recreation uses must be socially acceptable and should be dealt with on a case-by-case basis. Another comment

was that the Corps should give the public what it wants, if the public is willing to pay for it and the resources can still be protected.

Many states are interested in a relaxation of cost sharing. As an example, one Governor's letter indicated that the state wants the Corps to cost share on swimming pools because beaches are not as easily managed or desirable for public recreation. Another Governor stated that the Corps cost sharing program is too rigid.

By providing an incentive for development of revenue generating facilities, the non-Federal public partner can better afford to take on additional O&M burdens. As with all cost sharing options, the impact must be evaluated on the basis of the initial Federal costs versus the long term reduction in net Federal expenditures. Although cost sharing is a statutory requirement, the current restrictions on the types of facilities that can be cost shared are imposed by policy.

**Option 4: Construct all or part of the infrastructure facilities at recreation areas.**

Corps construction of the infrastructure of recreation areas at 100 percent Federal cost prior to turning the area over to a non-Federal public agency for management was favored by 52 percent of all regional workshop participants and by 68 percent of the state and local government respondents. Several states were interested in this option, as illustrated by examples of responses from the state Governors. One stated, "...an initial capital investment by the Corps to rehabilitate an area or to restructure an area to a modified purpose might provide sufficient reason for a state or local park agency to risk assuming the operational costs." According to another state Governor's response, an incentive for increasing participation on Corps projects is for the Corps to cost share major capital investments on river access areas.

While the option was popular with non-Federal public entities, standing alone, it would not meet the study objective. As noted by the Corps employees surveyed at the Natural Resource Management Conference workshop, the proposal would enhance recreation development, but would also increase the net Federal expenditure. Unless O&M on an existing Corps area is taken over in conjunction with the infrastructure development, the net Federal expenditures will increase, rather than decrease. As with other options focusing on initial Federal expenditures, few non-Federal public entities surveyed may be financially able to participate in this option. This could be implemented within existing laws.

**Option 5: Seek legislative authority to allow for additional land acquisition to facilitate recreation development.**

A discussion on the non-Federal public entities' need for lands relative to transfer of existing Corps lands is included in the next section on Lease Incentives; however, there was limited response to this option of the Corps buying additional land. It is possible that a sufficient land base exists now, particularly since the most desirable areas are adjacent to the

project waters. Additional land beyond the project perimeter would be of less value to most agencies. In addition, where Corps land is limited to a narrow strip around the lake, adjacent residential development is common. To attempt to purchase such lands would probably be opposed by landowners and would be costly since the land is now valuable "lake front" property.

According to Engineer Pamphlet 1165-2-1, under Section 926(b) of the Water Resource Development Act of 1986 (PL 99-662), the Corps has sufficient authority to acquire additional lands for public park and recreation purposes.

**d. Conclusions.**

Allowing Federal cost sharing on a wider range of facilities may alleviate the non-Federal public partner's fiscal problems by allowing more revenue generating facilities to be developed. By the same token, less local Corps restrictions on permissible facilities would also assist in this regard.

For those non-Federal public partners with adequate funding to take on additional O&M to meet the study objective, construction of infrastructure at Federal expense and consolidation/renovation of existing recreation areas could be incentives for increased non-Federal public involvement.

Acquiring additional land to facilitate recreation development would be costly, and no real need was demonstrated for this option.

Table 15 outlines the potential savings, whether a change in law or policy is needed to implement each of the specific financial incentive options, and study conclusions.



**Table 15**  
**Summary of Non-Federal Public Involvement Options--Developmental Incentives**

<b>OPTION</b>	<b>POTENTIAL SAVINGS<sup>1</sup></b>	<b>LAW OR POLICY CHANGE</b>	<b>CONCLUSION</b>
1. Consolidate/renovate existing recreation areas (for non-Federal takeover)	high- none	policy	pursue
2. Allow more types of recreation developments which non-Federal public entities may provide	high- none	policy	pursue locally
3. Cost share on wider range of facilities	high- none	policy	do not pursue
4. Construct all or part of the infrastructure facilities	medium- none	policy	do not pursue
5. Acquire additional land to facilitate recreation development	low- none	policy	do not pursue

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<sup>1</sup> High is greater than \$20M; medium is \$5M to \$20M; and low is less than \$5M (per year).

### 3. LEASE INCENTIVES

**a. Current Situation.** Current policies and regulations provide restrictive clauses on outgrant leases that could deter participation by non-Federal public interests. These include restrictions on length of leases, duration of overnight stays, prohibitions on charging differential fees (higher fees for non-residents), and the sale of liquor and lottery tickets. Administratively, regulatory restrictions and time involved in the cost-sharing approval process may affect participation by non-Federal public interests. In addition, the Corps typically negotiates on a park-by-park basis with non-Federal interests, rather than considering multi-park or entire lake leases. Finally, many colleges and universities with park and recreation programs are located in proximity to Corps projects, but few of these currently lease or have cooperative agreements for the management of Corps areas.

**b. Options Considered.** Options considered were:

- (1) encourage non-Federal entities to accept Corps lands in exchange for development and/or management of Corps recreation areas;
- (2) allow charging differential fees for residents;
- (3) reduce restrictions and reporting requirements;
- (4) delegate more authority to Corps districts;
- (5) encourage non-Federal entities to exchange areas with the Corps to create more efficient operating units;
- (6) encourage qualified colleges and universities to enter into leases or cooperative agreements;
- (7) enter into multi-area or entire lake lease agreements;
- (8) enter into longer term leases;
- (9) provide more flexibility in determining length of stay;
- (10) allow sale of lottery tickets in compliance with state/local laws;
- (11) allow sale of liquor in compliance with state/local laws;
- (12) relax policy of closing areas turned back to the Corps.

**c. Evaluation of Options.** Sixty-nine percent of all regional workshop attendees and 79 percent of the state and local government attendees favored lease incentives in general. In response to whether the Corps should increase leasing flexibility, 72 percent of all regional workshop respondents and 89 percent of the state and local government representatives responded affirmatively.

**Option 1: Encourage non-Federal public entities to accept Corps lands in exchange for development and/or management of Corps recreation areas.**

In 1988, of the \$900 million spent on state parks, approximately \$550 million was spent on O&M and \$350 million was spent on capital expenditures.<sup>1</sup> This lower figure for capital expenditure indicates that either land is not needed or that sufficient funding has not been appropriated to meet the requirement. In the telephone interviews, 76 percent of the non-Federal public agency respondents stated that their agency was seeking to acquire additional land by lease and purchase. (Only one percent was attempting to acquire land through lease arrangements alone.) When the remaining 24 percent were asked why the agency was not attempting to acquire more lands, only seven percent cited budgetary reasons; eight percent stated that they had sufficient lands already.

It is therefore difficult to assess what the real need for land is, or what the constraint might be in satisfying that need. It appears that if land is needed, most non-Federal public entities are not interested in leasing lands from others. They would rather own it. As an example, the letter from one Governor says the state could not take over additional responsibilities without long term control of the land.

The regional workshop respondents were split on the issue of land transfers to non-Federal public agencies in exchange for development or takeover of recreation areas. Forty-three percent of all respondents said lands should be transferred; 43 percent said lands should not be transferred. Of those who responded favorably, 38 percent were state and local government representatives. As a group, 57 percent of the state and local government workshop participants favored transfer. However, the telephone survey conducted found that 73 percent of the non-Federal public sector respondents thought their agency would consider land transfer as an incentive to encourage the agency to take over Federal areas.

It is important to consider this option on a case-by-case basis to insure that other project purposes are not compromised by a complete loss of land ownership. This could be particularly important in relation to water quality and flood control requirements. Implementation of this option would require changes in Federal property law (41 USC 484) and General Services Administration rules and regulations (41 CFR 101-47.3).

**Option 2: Allow charging of differential fees.**

A source of income for non-Federal public lessees is charging non-residents higher fees. Where resident tax dollars fund the project development, or O&M costs on leased areas, a higher fee for non-residents may be justified.

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<sup>1</sup> National Association of State Park Directors, pp. 17-20.

The Land and Water Conservation Fund Act, for example, allows some differential fees on areas partially funded with Federal monies. The Act [16 USC 460l-8(f)(8)] provides: "With respect to property acquired or developed with assistance from the fund, discrimination on the basis of residence, including preferential reservation or membership systems, is prohibited except to the extent that reasonable differences in admission and other fees may be maintained on the basis of residence." However, this refers to use of the LWCF for acquisition and development of non-Federal areas. It does not address the situation in which the area is Federally owned, and only leased to non-Federal interests.

Where non-Federal project costs and recreation O&M are funded entirely by entrance fees, allowing non-Federal lessees to charge a differential fee based on residency would be difficult to justify. Differential fees in that case would be inappropriate, since residents and non-residents would share equally in project costs.

An argument against differential fees, in general, is that the local economy is enhanced by expenditures made by non-resident users of the project, reducing the need for differential fees to compensate local taxpayers.

There are no known Federal laws specifically authorizing or prohibiting implementation of this option. Implementation, where appropriate, would probably require a change in policy only.

### **Option 3: Reduce restrictions and reporting requirements.**

Reducing restrictions and reporting requirements would decrease the non-Federal public entity's costs and provide some incentive for its participation in the Corps recreation program. When asked in the telephone survey what actions would be incentives for takeover of Corps recreation areas, 75 percent of the non-Federal public respondents cited input into project operation decisions and 71 percent cited input into project land use decisions.

Reducing lease restrictions, however, was one of the two least supported options presented to Corps employees at the Natural Resource Management Conference workshop. Of the 41 respondents, the majority indicated that this proposal would have negative impacts on the study objective. Comments indicated that potential existed for this option to meet the study objective, but that the potential also existed for an increase in unsafe areas and environmental problems. The Federal government, for example, is still responsible for legal requirements, such as National Environmental Policy Act compliance, on Federal lands even if the land is leased to others. Implementation of this policy requires policy changes only.

### **Option 4: Delegate more authority to Corps districts.**

This option entails reducing "red tape" and, as such, would eliminate excessive time and money spent on getting approvals for various actions. Examples of situations requiring higher level approvals are non-standard leases and cost sharing contracts. The option was

avored by several groups surveyed throughout the study process. A question posed to the workshop attendants was whether the Corps should reduce recreation cost-sharing red tape. Eighty-four percent of all respondents and an overwhelming 92 percent of the state and local government representatives responded affirmatively.

Presently, non-standard leases must be submitted to Corps Headquarters or Assistant Secretary of the Army (ASA) levels for approval, and all cost sharing agreements must be approved at the ASA level. Many non-standard lease requests can be handled more expeditiously, but the approval process for cost sharing agreements (from the time of local agreement to cost share to the time of final approval) takes an average of two years to complete. After approval, actual funding may be delayed indefinitely. While no actual dollar figures can be assigned to these delays, inflation may significantly increase the ultimate cost of cost share developments, once they are funded. Information Collection Task Force Number Three estimated that reducing red tape would yield greater than five million dollars per year in net benefits to the Corps.

As with all options, this one is not without drawbacks. Corps employees surveyed at the Natural Resource Management Conference workshop commented that the option would result in increased efficiency and provide a more realistic view of the local situation and needs. On the negative side, however, inconsistency in policy, particularly within one state that contains more than one Corps district or division, is a potential concern. Implementation of this option requires policy changes only.

**Option 5: Encourage non-Federal entities to exchange areas with the Corps to create more efficient operating units.**

This option entails realigning the management of existing recreation areas. It does not address actual transfer of title in land to other agencies, which is covered elsewhere in the report. Exchanging areas for management is being done in the Missouri River Division, for example, where large projects have several state and Corps areas interspersed throughout the project. Areas were grouped geographically, with each agency taking all areas in one general location. The overall impact on the study objective is difficult to assess, since numerous factors would be involved in each individual exchange. In general, however, it is an incentive for some non-Federal public agencies since it potentially reduces their operating costs under existing leases with the Corps. The letter from one Governor, for example, recommended "swapping" areas so that it could manage all areas on one project and the Corps could manage all on another. This option can be implemented through existing policy.

**Option 6: Encourage qualified colleges and universities to enter into leases or cooperative agreements.**

At the regional workshops, 56 percent of all respondents and 54 percent of the respondents in the state or local government category responded favorably to the proposal. Eighty percent of the academic community category responded favorably. As in all cases,

there were regional differences between the workshop respondents. Areas, such as the Atlanta region, which have access to several universities with park management programs, had a slightly higher percentage rate that favored the proposal.

This option has been successfully pursued by other agencies. The U.S. Forest Service currently has an agreement with California State University, Chico, for the school to operate and maintain recreation areas at Eagle Lake, California. Currently, the services are provided by the University under a concession lease, whereby the school recovers its costs through camping fees. The University would like, however, to change this to a cooperative agreement arrangement, thereby avoiding the concession bidding process. As demonstrated by this arrangement, the option is a viable one and could be pursued by the Corps on a case-by-case basis. It can be accomplished through policy changes, as needed.

**Option 7: Enter into multi-area or entire lake lease agreements.**

Leasing entire projects under one lease instrument entails consideration of natural resource management leases, as well as recreation leases, and, as such, is beyond the scope of this study. However, including several recreation areas (from one or several projects) in one lease is being done in several districts. Its impact on the study objective may be limited, however, since separate leases were not mentioned by any group as a problem at this time. Implementation can be accomplished within existing policy.

**Option 8: Enter into longer term leases.**

Authority exists at the Assistant Secretary of the Army level for granting 50 year leases; however, not all Corps divisions or districts may take advantage of this authority. Where the lease length is limited to less than 50 years, it becomes more difficult for the non-Federal manager to obtain subleases with private developers. (Fifty-eight percent of the resort developers surveyed said a long term lease was an essential incentive for their participation.) To assist the non-Federal public agency in maximizing its recreation potential, all districts could be encouraged to request leases with a 50-year lease term where major capital investments are involved. Implementation entails encouraging use of this option within existing policy.

**Option 9: Provide more flexibility in determining length of stay.**

The Code of Federal Regulations governing public use of Corps projects (36 CFR, Chapter III, Part 327.7) prohibits camping at one or more campsites at any one project for a period longer than 14 days within any 30-day period without the written consent of the District Engineer. As all outgrantees must comply with Federal and Corps rules and regulations, this provision applies to lessee campgrounds, as well as Corps camping areas. However, the 14-day stay limit has also been imposed on other overnight facilities provided by lessees, such as lodges and cabins.