CECW-AG Engineer Pamphlet 1165-2-1	Department of the Army U.S. Army Corps of Engineers Washington, DC 20314-1000	EP 1165-2-1 30 July 1999
	Water Resources Policies and Authorities DIGEST OF WATER RESOURCES POLICIES AND AUTHORITIES	
	Distribution Restriction Statement Approved for public release; distribution is unlimited.	

US Army Corps
of Engineers®

DIGEST OF WATER RESOURCES POLICIES AND AUTHORITIES

EP 1165-2-1
30 July 1999

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
Washington, D.C. 20314-1000

EP 1165-2-1

CECW-AG

Pamphlet
No. 1165-2-1

30 July 1999

Water Resources Policies and Authorities
DIGEST OF WATER RESOURCES POLICIES AND AUTHORITIES

1. Purpose. This pamphlet provides a brief summary, in digest form, of the existing administrative and legislative water resources policies and authorities pertinent to the Civil Works activities of the Corps of Engineers.

2. Applicability. This pamphlet applies to all HQUSACE elements, major subordinate commands (MSC), districts, laboratories, and all field operating activities (FOA) having Civil Works responsibilities.

3. References. Relevant published references indicated in the text of each chapter of this pamphlet are listed at Appendix A.

4. Distribution. Approved for public release, distribution unlimited.

5. Use of this Pamphlet. This pamphlet was developed as a ready reference to policies spread throughout a voluminous body of engineer regulations, manuals, technical letters and memoranda. Those documents are cited in each chapter and should be consulted for specific application in individual cases. In addition, the pamphlet will be of value in orienting and familiarizing newly assigned personnel, military and civilian, and study/project cost-sharing partners with essential and paramount policies regarding Corps of Engineers Civil Works activities.

6. Coverage. Although dated 30 July 1999, the information included in this pamphlet summarizes policies as of 27 January 1999 (i.e., including Policy Guidance Letter No. 61).

FOR THE COMMANDER:

RUSSELL L. FUHRMAN
Major General, USA
Chief of Staff

6 Appendices
(See Table of Contents)

This pamphlet supersedes EP 1165-2-1 dated 15 Feb 1996.

TABLE OF CONTENTS

	Paragraph	Page
CHAPTER 1 - THE FEDERAL RESPONSIBILITY IN WATER RESOURCES		
General	1-1	1-1
Federal Powers	1-2	1-1
The Navigation Servitude	1-3	1-1
Sharing of Responsibility	1-4	1-2
Degrees of Federal Responsibility	1-5	1-2
Dynamic Nature of Federal Policy	1-6	1-2
CHAPTER 2 - LEGISLATIVE, EXECUTIVE, JUDICIAL ROLES AND POLICIES		
Legislative Branch	2-1	2-1
Executive Branch	2-2	2-4
Administrative Policy	2-3	2-7
Judicial Branch	2-4	2-8
CHAPTER 3 - GENERAL POLICIES		
General	3-1	3-1
Environmental Impact Statement (EIS)	3-2	3-2
Opposition by a State	3-3	3-3
Identification and Administration of Cultural Resources	3-4	3-4
Clean Water Act (CWA)	3-5	3-5
Marine Protection, Research and Sanctuaries Act (MPRSA)	3-6	3-5
National Pollution Discharge Elimination System (NPDES) Storm Water Discharge Permit Requirements	3-7	3-5
Clean Air Act (CAA) General Conformity Rule	3-8	3-6
Executive Order 11988, 24 May 1977, Flood Plain Management	3-9	3-6
Executive Order 11990, 24 May 1977, Protection of Wetlands	3-10	3-6
Executive Order 12898, 11 February 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	3-11	3-6
Executive Order 13007, 24 May 1996, Indian Sacred Sites	3-12	3-6
Influencing Legislation	3-13	3-8
OMB Circular A-76, 4 August 1983, Acquiring Products and Services	3-14	3-8
Environmental Efforts	3-15	3-8
Hazardous, Toxic, and Radioactive Wastes (HTRW) (ER 1165-2-132)	3-16	3-9
Expenditures on Aesthetics	3-17	3-10
Mobilization	3-18	3-12
Mitigation Banks for Corps Civil Works Projects	3-19	3-12
Watershed Perspective	3-20	3-14

	Paragraph	Page
CHAPTER 4 - MANAGEMENT OF THE CIVIL WORKS PROGRAM		
General Concept	4-1	4-1
Organizational Structure	4-2	4-2
Other Institutions for Management of River Basin Operations	4-3	4-7
Management and Administrative Controls	4-4	4-8
CHAPTER 5 - PLANNING STUDIES		
Authorization of Studies	5-1	5-1
Types of Planning Studies	5-2	5-1
Preconstruction Engineering and Design	5-3	5-2
Planning Assistance to States	5-4	5-3
Corps Planning Guidance	5-5	5-3
The Planning Process	5-6	5-3
Procedures for Evaluating NED	5-7	5-6
Procedures for Evaluating Environmental Quality Outputs	5-8	5-11
Selection of a Recommended Plan	5-9	5-12
Indian Lands	5-10	5-13
Cost Allocation	5-11	5-13
Identification of Non-Federal Sponsor Responsibilities in Planning Reports	5-12	5-15
Recommendations	5-13	5-17
Release of Information on Civil Works Investigations and Reports	5-14	5-18
Sale of Corps Civil Works Publications and Reports	5-15	5-20
CHAPTER 6 - PROJECT COST SHARING AND REPAYMENT		
Principles and Objectives of Cost Sharing	6-1	6-1
Formulas, Legislative and Administrative Rules	6-2	6-1
Applicability of Cost Sharing	6-3	6-2
Navigation	6-4	6-3
Flood Damage Reduction	6-5	6-7
Hydroelectric Power	6-6	6-9
Municipal and Industrial Water Supply	6-7	6-10
Agricultural Water Supply	6-8	6-10
Recreation	6-9	6-10
Hurricane and Storm Damage Reduction	6-10	6-11
Aquatic Plant Control	6-11	6-12
Water Quality Enhancement	6-12	6-12
Fish and Wildlife Mitigation	6-13	6-12
Fish and Wildlife Enhancement	6-14	6-12
Deferred Payment by Non-Federal Sponsors	6-15	6-13
Environmental Protection (Environmental/Ecosystem Restoration)	6-16	6-13
Hazardous, Toxic, and Radioactive Wastes (HTRW)	6-17	6-14
Dam Safety Assurance	6-18	6-15
Correction of Design or Construction Deficiencies	6-19	6-15

	Paragraph	Page
CHAPTER 7 - REPORT PREPARATION, PROCESSING AND PROJECT AUTHORIZATION, DEAUTHORIZATION		
Preauthorization Planning Reports	7-1	7-1
Processing and Review of Pre-authorization Planning Reports	7-2	7-2
Authorization of Plans for Improvements	7-3	7-3
Preconstruction Engineering and Design	7-4	7-4
Deauthorization Review Program	7-5	7-4
CHAPTER 8 - PROGRAMMING, BUDGETING AND APPROPRIATIONS		
Program Development	8-1	8-1
Appropriations	8-2	8-2
Budget Year New Starts	8-3	8-4
Classification of Projects	8-4	8-4
Acceptance and Return of Contributed or Advanced Funds	8-5	8-5
Credit or Reimbursement for Non-Federal Work on Projects	8-6	8-6
CHAPTER 9 - PRECONSTRUCTION ENGINEERING AND DESIGN AND ENGINEERING DURING CONSTRUCTION		
Preconstruction Engineering and Design Studies(PED)	9-1	9-1
Remaining Engineering and Design	9-2	9-1
Project Modifications	9-3	9-2
Design Sizing of Projects	9-4	9-3
Aesthetic Treatment and Environmental Design	9-5	9-3
Low Level Discharge Facilities	9-6	9-4
Engineering and Design Performance Analysis	9-7	9-4
Value Engineering	9-8	9-4
Use of Architect-Engineers	9-9	9-4
Use of Consultants	9-10	9-5
CHAPTER 10 - CONSTRUCTION		
Requirements of Project Cooperation	10-1	10-1
Real Estate Requirements and Acquisition for Multiple Purpose Reservoir Projects	10-2	10-6
Real Estate Requirements for Single Purpose Flood Control Reservoirs and Non-Reservoir Projects	10-3	10-9
Relocations	10-4	10-10
Water Quality Requirements	10-5	10-14
Accomplishment of Construction Work	10-6	10-14
Reservoir Clearing	10-7	10-15
Use of Dredged Material	10-8	10-15
Housing of Project Personnel	10-9	10-16
Special Statutory Authority for Relocations and Alterations	10-10	10-16
Disposal of Land at non-Local Cooperation Projects Stopped During Construction	10-11	10-16

	Paragraph	Page
Transfer of Completed Local Cooperation Projects to non-Federal Interests	10-12	10-17
Project Cost Increase Limitations	10-13	10-17
Appraisal of Lands Containing Hazardous, Toxic, and Radioactive Wastes (HTRW) on Local Cooperation Projects	10-14	10-17
CHAPTER 11 - OPERATIONS, MAINTENANCE, AND PROJECT MANAGEMENT		
Resource Management of Project Lands and Facilities	11-1	11-1
Responsibility for Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R)	11-2	11-3
Major Rehabilitation	11-3	11-10
Correction of Design or Construction Deficiencies	11-4	11-11
Dam Operations Management	11-5	11-11
Dam Safety Assurance	11-6	11-11
Changes in Water Control Plans	11-7	11-12
Mitigation of Damages Resulting from Construction and Operation of a Project	11-8	11-12
Use of Corps Reservoir Flowage Easement Lands	11-9	11-13
Granting Use of Civil Works Project Real Estate	11-10	11-14
Disposal of Civil Works Project Real Estate	11-11	11-15
Pest Management Program	11-12	11-16
Acceptance of Donations of Materials	11-13	11-16
Discontinuation of Maintenance of Projects	11-14	11-17
Operation and Maintenance Resumption after Suspension of Substantial Curtailment of Maintenance	11-15	11-17
Monitoring Coastal Projects	11-16	11-17
Energy Conservation	11-17	11-18
Environmental Compliance, Pollution Prevention and HTRW Site Restoration	11-18	11-18
CHAPTER 12 - NAVIGATION		
The Federal Interest	12-1	12-1
Navigable Waters of the United States	12-2	12-2
NED Benefit Evaluation, Navigation	12-3	12-2
Priority Outputs, Cost Sharing, and Certain Kinds of Fishing Activities	12-4	12-4
Cost Sharing and Project Cooperation for Navigation	12-5	12-5
Navigation Project for General Versus Restricted Interest	12-6	12-6
Transfer and Lightering Facilities, Barge Fleeting Areas	12-7	12-9
Ownership of Lands Created for Port Facilities	12-8	12-10
Development of Public Port or Industrial Facilities	12-9	12-10
Aids to Navigation	12-10	12-10
Waterway User Charges	12-11	12-10
Navigation Data	12-12	12-13

	Paragraph	Page
Navigation Regulations	12-13	12-14
Danger Zones	12-14	12-14
Drift and Debris Removal	12-15	12-15
Wreck Removal	12-16	12-15
Charts, Publications and Notices	12-17	12-15
Channel Condition Surveys	12-18	12-16
Project Dimensions	12-19	12-16
Dredged Material Disposal	12-20	12-16
Placement of Dredged Materials on Beaches	12-21	12-19
Advanced Maintenance Dredging	12-22	12-19
Lock and Dam Replacements	12-23	12-19
Correction of Federal Navigation Project Induced Shore Damage	12-24	12-20
Federal Project Development by Others	12-25	12-21
Navigation versus Hurricane and Storm Damage Reduction	12-26	12-23
CHAPTER 13 - FLOOD DAMAGE REDUCTION		
The Federal Interest	13-1	13-1
Flood Plain Management	13-2	13-1
Flood Related Planning Policy	13-3	13-2
Design Flood Criteria	13-4	13-2
Risk-Based Analysis	13-5	13-3
Structural Measures	13-6	13-3
Nonstructural Measures	13-7	13-5
Definition of the Flood Control Plan	13-8	13-5
Drainage	13-9	13-5
Project Cooperation and Cost Sharing	13-10	13-6
Single Owner Properties	13-11	13-9
Credit for Compatible Non-Federal Works	13-12	13-9
Flood Insurance	13-13	13-10
Evaluation of Economic Benefits for Flood Damage Reduction	13-14	13-10
Flood Emergency Operations and Disaster Assistance	13-15	13-13
Use of Storage Allocated for Flood Damage Reduction and Navigation at Non-Corps Projects	13-16	13-15
Provision of Flood Protection at Urban Renewal Projects	13-17	13-15
Construction of Flood Control Projects by Non-Federal Interests	13-18	13-15
CHAPTER 14 - SHORE PROTECTION		
Beach Erosion Control	14-1	14-1
Recreation	14-2	14-6
Hurricane and Abnormal Tidal Flood Protection	14-3	14-6
Lake Flood Protection	14-4	14-7
Evaluation	14-5	14-7
Project Cooperation	14-6	14-7
Technical and Engineering Assistance on Shore Erosion	14-7	14-9
Emergency Protection	14-8	14-9

	Paragraph	Page
CHAPTER 15 - STREAM BANK EROSION CONTROL		
The Federal Interest	15-1	15-1
Nature of Effects	15-2	15-1
Special Continuing Authority	15-3	15-1
Specific Project Authority	15-4	15-2
Project Implementation	15-5	15-2
Technical and Engineering Assistance on Streambank Erosion	15-6	15-3
Streambank Erosion Resulting from Project Construction and Operation	15-7	15-3
CHAPTER 16 - HYDROELECTRIC POWER		
Authority and Corps Responsibilities	16-1	16-1
Evaluation	16-2	16-1
Cost Sharing	16-3	16-2
Coordination with Other Agencies	16-4	16-2
Marketing of Corps-Produced Power	16-5	16-3
Pumped Storage Power	16-6	16-3
Provision for Future Power	16-7	16-4
Control of Releases from Power Plants	16-8	16-4
Non-Federal Development at Corps Projects	16-9	16-5
Corps Developments at Non-Corps Sites	16-10	16-5
CHAPTER 17 - RECREATION		
Authorities	17-1	17-1
Natural Resources Management Program Mission	17-2	17-2
Development of Outdoor Recreation Facilities	17-3	17-2
Recreation Use Projection and Benefit Evaluation	17-4	17-8
Cost Participation	17-5	17-8
Special Recreation Facility Considerations	17-6	17-10
Protection of Recreational Users at Civil Works Projects	17-7	17-11
CHAPTER 18 - WATER SUPPLY AND QUALITY MANAGEMENT		
The Federal Interest	18-1	18-1
Water Supply	18-2	18-1
Water Quality Enhancement and Management	18-3	18-5
Water Rights Involved in Project Development	18-4	18-6
Emergencies	18-5	18-7
CHAPTER 19 - ENVIRONMENTAL RESTORATION AND PROTECTION		
Introduction	19-1	19-1
Ecosystem Restoration and Protection in the Civil Works Program	19-2	19-1
Corps Focus in Ecosystem Restoration and Protection	19-3	19-1
Restoration and the Ecosystem Approach	19-4	19-2
Federal and Ecosystem Restoration		

	Paragraph	Page
Objectives	19-5	19-3
Collaboration with Other Agencies	19-6	19-3
Authorities Supporting Ecosystem Restoration	19-7	19-3
Environmental Authorities within WRDAs	19-8	19-4
Ecosystem Restoration Relationship to Traditional Environmental Topics	19-9	19-6
Consideration of Wetland Resources within the Civil Works Program	19-10	19-7
Wetland Policy	19-11	19-7
Administration's Wetlands Policy	19-12	19-8
Executive Order 11990, Protection of Wetlands	19-13	19-8
Section 150 of the Water Resources Development Act of 1976 (PL 94-578)	19-14	19-9
Section 307 of the Water Resources Development Act of 1990 (PL 101-640)	19-15	19-9
Consideration of Fish and Wildlife Resources in the Civil Works Program	19-16	19-9
Fish and Wildlife Coordination Act (FWCA) of 1958 (PL 85-624; 16 U.S.C. 661-666)	19-17	19-10
The Endangered Species Act of 1973 (PL 93-205)	19-18	19-12
The Clean Water Act of 1972, as amended (PL 92-500 and 33 USC 466 et seq.)	19-19	19-13
Legal Basis for Mitigation of Damages to Fish and Wildlife Resources	19-20	19-13
Mitigation Principals	19-21	19-14
Consideration of Beneficial Uses of Dredged Material within the Civil Works Program	19-22	19-17
Justification of Ecosystem Restoration Using Dredged Material	19-23	19-17
Cost Sharing of Ecosystem Restoration Using Dredged Material	19-24	19-18
Environmental Monitoring of Ecosystem Restoration Using dredged Material Projects	19-25	19-18
Procedures for Ecosystem Restoration Using Dredged Material for New Navigation Projects or Modifications (Construction)	19-26	19-18
Procedures for Ecosystem Restoration Using Dredged Material for Existing Navigation Projects (Maintenance Dredging)	19-27	19-18
Procedures for Ecosystem Restoration Using Dredged Material for Navigation Projects in Pre-Construction Engineering and Design (PED) or Construction	19-28	19-19
Consideration of Project Modifications for Improvement of the Environment within the Civil Works Program	19-29	19-19
Eligibility and Objectives for Section 1135 Projects	19-30	19-19
Objectives and Constraints for Section 1135 Projects	19-31	19-20

	Paragraph	Page
Program Cost Sharing for Section 1135 Projects	19-32	19-20
Operation and Maintenance for Section 1135 Projects	19-33	19-21
Cost Allocation for Section 1135 Projects	19-34	19-21
Monitoring of Section 1135 Projects	19-35	19-21
Consideration of Aquatic Ecosystem Restoration Within the Civil Works Program	19-36	19-22
Consideration of Cultural Resources Management within the Civil Works Program	19-37	19-22
Cultural Resources Management in the Planning Process	19-38	19-23
Cultural Resources Management for Continuing Authority Projects	19-39	19-25
CHAPTER 20 - AQUATIC PLANT CONTROL		
Aquatic Plant Control Program	20-1	20-1
Program Controls	20-2	20-1
Budget	20-3	20-2
CHAPTER 21 - REGULATORY PROGRAM - PROTECTION OF THE PUBLIC INTEREST IN THE WATERS OF THE UNITED STATES		
Background	21-1	21-1
Authorities to Issue Permits	21-2	21-1
General Policies for Evaluating Permit Applications	21-3	21-3
Jurisdictional Limits	21-4	21-7
CHAPTER 22 - SUPPORT FOR OTHERS		
Support for Others (SFO)	22-1	22-1
Authorities	22-2	22-1
Guidance on Considering SFO Opportunities	22-3	22-1
Approval Authorities	22-4	22-1
Work for State and Local Governments	22-5	22-1
Work for Private Firms	22-6	22-2
Work on Problems of National Significance	22-7	22-2
Resourcing	22-8	22-2
Categories and Examples of Work	22-9	22-2
CHAPTER 23 - CIVIL WORKS RESEARCH AND DEVELOPMENT (R&D)		
Purpose and Scope	23-1	23-1
Authorization	23-2	23-1
Program Development and Execution	23-3	23-1
Current Emphasis and Program Mix	23-4	23-2
Organizational Responsibilities	23-5	23-2
Transfer of Research Results	23-6	23-3
Internal and External Coordination and Information Exchange	23-7	23-3
Exclusion of Non-R&D Activities from R&D Funding	23-8	23-4
Research not Funded as R&D	23-9	23-4

	Paragraph	Page
CHAPTER 24 - ACTIVITIES RELATED TO PROGRAMS ADMINISTERED BY OTHER FEDERAL AGENCIES		
General	24-1	24-1
Environmental Review and Coordination	24-2	24-1
Watershed Protection	24-3	24-1
National Wild and Scenic Rivers System	24-4	24-1
Land and Water Conservation Fund	24-5	24-2
Community Development Program	24-6	24-2
Small Reclamation Projects	24-7	24-2
National Recreation Areas	24-8	24-2
Forest Service Lands	24-9	24-3
National Trails System	24-10	24-3
Endangered and Threatened Species	24-11	24-3
Federal Energy Regulatory Commission (FERC) Licenses	24-12	24-4
Prime and Unique Farmland	24-13	24-6
Highly Erodible Lands and Wetlands Conservation	24-14	24-6
Superfund Program	24-15	24-7
Coastal Zone Management Act (CZMA) of 1972, as amended (Public Laws 92-583 and 101-508)	24-16	24-7
Coastal Barrier Resources Act of 1982 (Public Law 92-348)	24-17	24-8
Abandoned Shipwreck Act of 1987 (Public Law 100-298)	24-18	24-8
Support to the National Flood Insurance Program	24-19	24-8
Department of Energy (DOE) Real Estate Assistance	24-20	24-9
Department of Commerce (DOC) Real Estate Assistance	24-21	24-9
National Estuary Program	24-22	24-9

APPENDICES

APPENDIX A - REFERENCES	A-1
APPENDIX B - LEGISLATION PERTINENT TO THE WATER RESOURCES PROGRAM OF THE CORPS OF ENGINEERS	B-1
APPENDIX C - EXECUTIVE ORDERS PERTINENT TO THE WATER RESOURCES PROGRAM OF THE CORPS OF ENGINEERS	C-1
APPENDIX D - OFFICE OF MANAGEMENT AND BUDGET CIRCULARS	D-1
APPENDIX E - INTERAGENCY AGREEMENTS RELATED TO WATER RESOURCES	E-1
APPENDIX F - INDEX	F-1

TABLES AND FIGURES

		Paragraph	Page
Table 2-1	Continuing Authority Projects		2-2
Table 12-1	Non-Federal Share, Studies, PED		12-5
Table 12-2	Non-Federal Share, Construction, Operation and Maintenance		12-6
Table 12-3	General Policy for Proceeding with Proposed Projects In Single Owner Situations		12-7
Figure 4-1	Organization of HQUSACE		4-3
Figure 4-2	Organization of Directorate of Civil Works		4-4

CHAPTER 1

THE FEDERAL RESPONSIBILITY IN WATER RESOURCES

1-1. General. The Constitution of the United States limits the authority of the Federal Government to those powers expressly delegated or as may reasonably be inferred from those granted. All other powers belong to the states or the people. Regardless of the character of Federal undertakings, enabling authority must be found among the powers conferred upon the Federal Government by the states. Over the years the Congress has enacted large amounts of legislation in accordance with those powers to define the Federal responsibility.

1-2. Federal Powers. Legislation which has been passed to define the Federal role in water resource development is in conformance with the following delegated powers.

a. Commerce Power. Federal commerce authority includes navigation, and Congress has jurisdiction over all navigable waters of the United States. This power may be extended to nonnavigable waterways and tributaries if the navigable capacity of the navigable waterway or interstate commerce is affected.

b. Proprietary Power. The Property Clause of the Constitution, entrusts Congress with unlimited authority to control the use of Federal public lands. This power is the basis for the 1902 Reclamation Act and provides the authority to sell power generated at Federal dams.

c. War Power. The scope of this power in relation to water resources is largely unexplored by the judiciary. However, the Court has found that the Wilson Dam on the Tennessee River was constructed in the exercise of war and commerce powers.

d. Treaty-Making Power. This power has importance, particularly on international streams. Important functions with respect to international streams have been vested in international agencies created pursuant to the provisions of treaties. This power is also the basis for treaties with Indian Tribes through which certain rights to use of water have been reserved.

e. General-Welfare Power. This power must be exercised for the common benefit as distinguished from some mere local purpose and provides sufficient power for many large-scale water resource projects and other internal improvements.

f. Judicial Power. Using this power the Supreme Court has applied the principles of equitable apportionment to resolve disposition of water controversies between states.

g. Compact Power. This power provides that no state may enter into an agreement with another state without the consent of Congress.

1-3. The Navigation Servitude. This sovereign power allows the Government to use lands under navigable waters for navigation related purposes without payment under the Fifth Amendment. The power includes the right to remove any structures within the servitude.

The navigation servitude is derived from rights recognized under Roman civil law and English common law for the public to use navigable waterways without payment, despite the private ownership of the bed or bank. The navigation servitude was incorporated into United States law as part of the Commerce Power under the U.S. Constitution. Hence, in exercise of Congress' power over navigation stemming from the Commerce clause of the Constitution, no further Federal real estate interest is required for navigation projects in navigable waters below the ordinary high water mark. Further, the courts have also generally held that, under the navigation servitude, claims of consequential damages arising from Federal development for navigation, with respect to property values or otherwise, are not compensable. However, Congress has, to a degree, foregone that advantage through what some may view as a definition of compensation for Federal real property acquisitions (Section 111, Public Law 91-611, 31 December 1970)and the definition of non-Federal sponsor cost-sharing requirements (Title I of Public Law 99-662, 17 November 1986).

1-4. Sharing of Responsibility. In authorizing Federal participation in water resource development projects Congress seeks to maintain a reasonable balance between the powers of the Federal Government and those retained by the states, local governmental entities, and private enterprise. Many of the laws which Congress has enacted permit Federal agencies to exercise latitude in developing plans which must be specifically authorized by Act of Congress before they may be carried out. This latitude requires that the responsible Federal agency recommend to Congress, for each project or program planned, a division of responsibility between Federal and non-Federal entities. This division of responsibility should represent a reasonable balance between what the Federal Government should undertake and what should be left to non-Federal interests. Arriving at that division requires careful consideration of indicators of Congressional intent, as well as the principles and policies spelled out by the legislation authorizing the agency to propose projects and programs.

1-5. Degrees of Federal Responsibility. Acts of Congress, and interpretations thereof by the Supreme Court, clearly indicate that the Federal Government may participate to some degree in all aspects of water and related land conservation, development, and management. However, the degree of Federal participation and financing is not the same for all purposes. Also participation varies between planning, construction, and operation and maintenance activities. Federal participation in planning, construction, and operation or maintenance activities is guided by careful consideration of applicable precedent and law; the likelihood of widespread and general benefits; local ability to solve problems; and savings to the Nation that might be achieved by meeting needs through economies of scale.

1-6. Dynamic Nature of Federal Policy. Legislative enactments reflect both long- and short-range National priorities and require progressive adaptation. Rigid policies are undesirable when dealing with resources which affect the well-being of our people, and which have broad economic, environmental, and social implications. Changing technology and public priorities require flexible policies and informed leadership to meet urgent needs and to assure the welfare of future generations. Unusual and unique circumstances may present a valid basis for exceptions to existing policies. However, approval of departures from established Corps policies is not a delegated authority. Reporting officers must request special guidance in such circumstances. The Chief of Engineers will consult with higher authority when necessary.

CHAPTER 2

LEGISLATIVE, EXECUTIVE, AND JUDICIAL ROLES AND POLICIES

2-1. Legislative Branch.

a. Role. The basic legislation which governs the conduct of the Corps civil works program consists of numerous separate enactments of the Congress. The work of preparing and considering such legislation is done largely in the Senate Committee on Environment and Public Works and the House Committee on Transportation and Infrastructure. The tendency has been for Congress to gradually increase Federal responsibility in response to needs of the times. Some water resources project purposes were originally established through specific legislation. Others were established as a result of repetitive congressional authorization of projects containing resource purposes incidental to the "primary" project purposes. Legislation pertinent to the water resources program of the Corps of Engineers is listed in Appendix B. While the public laws governing water resources are the basic source of formal, explicit policy, the Congressional intent which may be deduced from the documented history of these legislative statements is also an important policy source. Sources which express the sense of Congress include House and Senate Committee reports and resolutions and the Congressional Record of discussions during consideration of the proposed legislation.

b. Authorizing Legislation. House Committee on Transportation and Infrastructure and Senate Committee on Environment and Public Works resolutions and specific legislation provide basic authorization for feasibility studies by the Corps. Generally, water resource developments recommended to the Congress in response to study authorities may not be implemented without being specifically adopted in law. The majority of the Corps water resources projects or programs fall into that category. However, Section 201 of the 1965 Flood Control Act, as amended, delegated to the Secretary of the Army the right to administratively authorize water resources developments for which the estimated Federal cost is less than $15 million. Approval by the Public Works Committees is required prior to project implementation. Additionally, subject to specific limits on the allowable Federal expenditures, Congress has delegated continuing authority to the Secretary of the Army acting through the Chief of Engineers for study, adoption and construction of small projects for navigation, flood control, beach erosion control, shore protection, and ecosystem restoration as summarized in Table 2-1. Criteria for design, evaluation, cost sharing and other local cooperation (with the added requirement that local interests bear all project costs in excess of the Federal limit, except for Section 111 projects) are the same for these projects as for projects specifically authorized by Congress.

c. Legislative Landmarks. The Corps civil works responsibility began with an Act of Congress in 1824 for the improvement of rivers and harbors for navigation. This led to legislation in 1879 creating the Mississippi River Commission and establishment of the Board of Engineers for Rivers and Harbors(BERH) in 1902 (Note: The BERH ceased to exist in 1993 in accordance with Section 223 of WRDA 1992). Legislative expansion of the Corps functional responsibility has included:

Table 2-1 Continuing Authority Projects

Authority	Type of Project for Which Used	Statutory Limit of Federal Costs Per Project (2)
Section 14 1946 FC Act(1)	Streambank and Shoreline Protection for Public Facilities	$1,000,000
Section 103 1962 R&H Act(1)	Small Beach Erosion Control Projects	2,000,000(3)
Section 107 1960 R&H Act(1)	Small Navigation Projects	4,000,000(4)
Section 111 1968 R&H Act(1)	Mitigation of Shore Damage Due to Federal Navigation Projects	2,000,000(3)(5)
Section 204 1992 WRDA	Projects for Protection, Restoration, and Creation of Aquatic and Ecologically Related Habitats, including Wetlands (Ecosystem Restoration Projects in Connection with Dredging)	None
Section 205 1948 FC Act(1)	Small Flood Control Projects	5,000,000
Section 206 1996 WRDA	Aquatic Ecosystem Restoration Projects	5,000,000
Section 208 1954 FC Act(1)	Snagging and Clearing for Flood Control	500,000
Section 1135 1986 WRDA(1)	Project Modifications for Improvement of the Environment (Ecosystem Restoration)	5,000,000

(1) As subsequently amended.

(2) Implementation, includes all Federal expenditures, including preauthorization study costs.

(3) Includes actual costs for subsequent periodic nourishment, if part of the adopted project, as well as for initial implementation.

(4) Also, the Federal share of total costs (initial implementation costs plus the capitalized value of future maintenance costs) may not exceed 2.25 times the initial Federal costs or $4.5 million, whichever is greater.

(5) A project involving Federal costs in excess of $2 million will be transmitted to Congress for specific authorization.

(a) Regulatory activities over waters, 1899, 1972, 1977 and 1987;

(b) Hydroelectric power in dams, 1912 and 1917;

(c) Flood control, 1917, 1927, 1936, 1974;

(d) Recreation navigation, 1932;

(e) Recreation, 1944, 1962, and 1965;

(f) Irrigation (limited), 1944;

(g) Water supply, 1944, 1958, and 1965;

(h) Shore and beach erosion protection, 1946, 1956, 1962, 1974, 1996;

(I) Hurricane protection, 1955, 1958;

(j) Fish and wildlife conservation, 1958, 1965, and 1974;

(k) Water quality, 1961, 1972, 1974;

(l) Environmental concern and emphasis, 1970;

(m) Wastewater management, 1972;

(n) Wetlands development, 1976 and 1992;

(o) Groundwater damages, 1986;

(p) Environmental Protection, 1990;

(q) Ecosystem Restoration, 1986 and 1996

The Water Resources Development Act (WRDA) of 1986 is the legislative landmark of major current significance. In it, the Congress has comprehensively reestablished and redefined, by purpose, the Federal interest in water resources development and has--in recognition of the limitations on Federal financial resources in an era of persistent budgetary deficits--instituted requirements for proportionately greater non-Federal cost sharing in Corps projects.

d. Other Significant Legislation. During the 1970s there was a qualitative change in public policy toward resource planning and development, spurred by the recognition that this Nation's natural resources are both interrelated and finite. Considerations other than economic efficiency evolved. Among others, this legislation includes:

(1) The Clean Water Act of 1977 (Public Law 95-217). This Act amends Public Law 92-500 and continues the massive research and action program designed to clean up U.S. waters. The Environmental Protection Agency (EPA) has primary responsibility for implementing this program. However, under Section 404 of the amended Act, the Corps of Engineers retains primary responsibility for permits to discharge dredged or fill material into waters of the United States. The Act also defines the conditions which must be met by Federal projects before they may make discharges into the Nation's waters.

(2) Water Resources Development Act of 1976 (Public Law 94-587). Section 150 authorizes the Chief of Engineers to establish wetland areas with dredged material from water resources projects. Although Section 150 authority has not been implemented, Section 204 of WRDA 1992 is currently the primary authority for implementation of projects for the use of dredged material to protect, restore, or create aquatic and related habitats.

(3) Water Resources Development Act of 1974 (Public Law 93-251). Section 73 states a general policy that, during planning, Federal agencies will give consideration to nonstructural measures to reduce or prevent flood damage and that the Federal Government may participate in the costs.

(4) River and Harbor and Flood Control Act of 1970 (Public Law 91-611).

(a) Section 122 directed the Secretary of the Army, acting through the Chief of Engineers, to promulgate guidelines for consideration of significant economic, social and environmental effects of proposed water resources developments, so that final project decisions are made in the best overall public interest.

(b) Section 209 expressed the intent of Congress that the objectives of enhancing regional economic development, quality of the total environment, well-being of people, and national economic development are to be included in the formulation and evaluation of Federally financed water resource projects.

(5) National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190). NEPA declared it a national policy to encourage productive and enjoyable harmony between man and his environment, and for other purposes. Specifically, it declared a "continuing policy of the Federal Government ... to use all practicable means and measures ... to foster and promote the general welfare, to create conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans." Section 102 authorized and directed that, to the fullest extent possible, the policies, regulations and public laws of the United States shall be interpreted and administered in accordance with the policies of the Act.

2-2. Executive Branch. The Executive Branch of the Government is responsible for implementing the policies and programs established by law. This branch of Government includes the Executive Office of the President and the various Federal departments and agencies. The Department of the Army and the Corps of Engineers are charged by Congress with the major Federal program of water resources development. This has been the outgrowth of legislative and administrative activity over many years. The term "civil works program" is usually applied to these non-military Corps activities. The Executive Office of the President, acting directly or through support offices, specifies policy, principles, methods, standards and procedures on water and related land resources programs to be used by Federal agencies in implementing their lawful activities. Executive policies are generally issued through the Office of Management and Budget (OMB). Pertinent Executive Orders (E.O.) are listed in Appendix C. In addition, international commissions, and interagency councils and agreements have been developed to aid in the accomplishment of executive policy.

a. Department of the Army. The Secretary of the Army oversees direction of the Corps of Engineers and its civil works program. Civil works laws authorize action in the following ways: action by the Secretary; action under the direction of the Secretary and supervision of the Chief of Engineers ; and by the Secretary, acting through the Chief of Engineers. The Chief regularly submits reports to the Secretary for transmittal, along with the Secretary's comments and recommendations, to OMB for its advice on the relation of the report recommendations to the programs of the President. The Office of the Assistant Secretary of the Army for Civil Works (OASA(CW)) works closely with the Headquarters, U.S. Army Corps of Engineers (HQUSACE) on central or critical management areas, including general programming of the Corps civil works budget; substantive policy issues; quality assurance of the policy compliance process; priorities for "new starts"; new or evolving functional areas of responsibilities for the Corps; and legislative drafting services requested by members of Congress. The OASA(CW) reviews and transmits the proposed Corps civil works budget to OMB as a basis for the President's budget recommendations to Congress.

b. Office of Management and Budget (OMB). The current structure of OMB was established by Executive Order 11541, July 1970, in the Executive Office of the President. OMB coordinates Executive Branch reports on proposed legislation and reviews proposed projects to determine their relationship to the program of the President. It reviews proposed Executive Orders and assists in the preparation of the President's annual budget and in the formulation of the fiscal program of the government, and also supervises and controls the administration of the budget. Administration positions relating to fiscal and budgetary matters are generally issued as OMB memoranda, circulars and bulletins. Pertinent OMB circulars are listed in Appendix D.

c. Water Resources Council (WRC). The WRC was created as an independent agency by the Water Resources Planning Act, Public Law 89-80, 22 July 1965, to be composed of member Federal agencies involved in natural resources development. The purpose of the Act was to encourage the conservation, development, and utilization of water and related land resources on a comprehensive and coordinated basis by the Federal Government, states, localities, and private enterprise. The Council members are the Secretaries of Agriculture; Army; Commerce; Energy; Housing and Urban Development; Interior; and Transportation; and the Administrator of the Environmental Protection Agency. The principal functions of the Council were specified under three titles of the Act:

(1) Title I - Water Resources Council.

(a) Prepare and maintain a national water assessment;

(b) Coordinate water and related land resources planning policies and programs with and among the Federal participants;

© Establish principles, standards and procedures for Federal participants in the preparation of plans and formulation and evaluation of Federal water and related land projects. (*)

(2) Title II - River Basin Commissions. (**)

(a) Establish and assist river basin commissions, interagency committees and coordinating groups;

(b) Coordinate and review river basin and regional plans and programs prepared by Federal - state interests;

(3) Title III - Financial Assistance to the States. Administer Federal financial grants to states for water and related land resource planning.

Section 103 of the Act (*) directs WRC to promulgate, with the approval of the President, principles, standards and procedures for water and related land resources planning for use by member agencies. This is the only function currently being performed by WRC. (WRC is no longer supported by permanent staff.) The six River Basin Commissions (**) established pursuant to Title II were subsequently terminated in accordance with Executive Order 12319, 17 February 1981.

d. Council on Environmental Quality (CEQ). The CEQ was established by Section 202 of the National Environmental Policy Act (NEPA) of 1969. The Office of Environmental Quality (OEQ), which was established by Public Law 91-224, 3 April 1970, provides staff for the CEQ. The CEQ advises and assists the President in providing leadership in protecting and enhancing the quality of the Nation's environment. It develops and evaluates Federal policies and activities on environmental quality. One of CEQ's primary functions in relation to water resources is the preparation of regulations concerning the development of environmental impact statements developed by the Corps and other agencies. CEQ regulations on implementation of the procedural provision of NEPA are printed in 40 CFR 1500-1508.

e. International Relations.

(1) Canada. The International Joint Commission (IJC) was established under the Boundary Water Treaty of 1909. It is empowered to establish local international boards to assure adherence to the rules and regulations pertaining to the utilization and safeguard of United States and Canada boundary waters. IJC boards fall into two broad categories: boards of control, which are more or less permanent; and engineering or advisory boards, which are usually dissolved after completing their investigation. Members on an IJC board are in no sense representatives of their employers. Their board service is of a professional capacity under the direction of the IJC; their agency is not committed by their actions or those of the board. Initiation and approval of IJC reference actions by the U.S. Section of the Commission is through the U.S. Department of State. Funding of this activity is under the "International Waters Studies" account or under an on-going study or project account.

(2) Mexico. The International Boundary and Water Commission (IBWC), United States and Mexico, was established pursuant to the Rio Grande, Colorado and Tijuana Treaty of 1944 and deals with the utilization of the waters of the three rivers basins. Activities of the U.S. Section of the IBWC are funded under the Department of State. The Corps, upon request of the U.S. Section, provides advisory and technical services to the IBWC.

(3) Management of Activities. Corps members serving on boards of these International Commissions and their subordinate groups are governed by USACE Supplement 1 to AR 15-1. Members submit an annual fiscal year report on board activities per ER 25-2-1 for the Secretary of the Army's Annual Report on Civil Works Activities.

(4) Native American Tribal Governments. The United States Constitution specifically addresses Indian sovereignty by classing Indian treaties among the “supreme Law of the land,” and establishes Indian affairs as a unique focus of Federal concern. Principles outlined in the Constitution and treaties, as well as those established by Federal laws, regulations and Executive Orders, continue to guide our national policy toward Indian Nations. On 29 April 1994, the United States reaffirmed its “unique legal relationship with Native American tribal governments.” In recognition of the special considerations due to tribal interests, the President directed Federal agencies to operate within a government-to-government relationship with federally recognized Indian tribes; consult, to the greatest extent practicable and permitted by law, with Indian tribal governments; assess the impact of agency activities on tribal trust resources and assure that tribal interests are considered before activities are undertaken; and remove procedural impediments to working directly with tribal governments on activities that affect trust property or governmental rights of the tribes. The U.S. Army Corps of Engineers has lasting and positive relations with many Indian tribal governments (e.g., since 1990, Indian tribes have been local partners in the development and construction of over 200 Corps water resources development projects, and Indian tribes annually apply for hundreds of permits under the Corps Clean Water Act permitting responsibilities. To ensure that all Corps commands adhere to principles of respect for Indian tribal governments and honor our Nation’s trust responsibility, the “U.S. Army Corps of Engineers Tribal Policy Principles” is to be used on an interim basis until more detailed statements are developed. These Principles have been developed with the OASA(CW) and are consistent with the President’s goals and objectives.

f. Interagency Agreements. These agreements represent a coordination device agreed upon by two or more Federal agencies to analyze or solve common problems in a consistent manner so as to optimize the results of the joint effort. Interagency agreements, adopted as common interagency policy, carry the authority of the respective agency heads. Such agreements to which the Corps may be a party are executed, on behalf of the Department of the Army, by ASA(CW). The scope and degree of formality of this limited form of Executive policy varies widely. Pertinent interagency agreements are listed in Appendix E of this EP.

2-3. Administrative Policy.

a. Historic Policy. Administrative policy has developed gradually but continuously over the years to implement laws and to encompass the growth of economic and social need and changing technology. Basic principles of formulation and evaluation were outlined in the report to the Interagency Committee on Water Resources entitled, "Proposed Practices for Economic Analysis of River Basin Projects," originally issued in May 1950 and revised in May 1958 (generally referred to as the "Green Book"). In May 1962, the President approved use of the principles and standards contained in Senate Document 97, 87th Congress. In September 1973, the President approved (and WRC published in the Federal Register) WRC's "Principles and Standards for Planning Water and Related Land Resources" (P&S). The P&S set forth two co-equal national objectives, national economic development (NED) and environmental quality (EQ); required, in investigations of the member agencies, formulation of alternative NED and EQ plans; and called for a display of the potential impacts of plans in a system of four accounts--an account for each of the two

national objectives, an account for regional development and an account for social well-being. WRC later revised the P&S for clarity and conciseness; to emphasize water conservation; and to require, in investigations of member agencies, formulation of a primarily nonstructural plan as one of the alternatives displayed. Separately, WRC also promulgated procedures for NED evaluation and for EQ evaluation. The WRC revised P&S, and the evaluation procedures were published, 14 December 1979 and 29 September 1980, as final administrative rules for the uniform observance of Federal agencies engaged in level C planning. They were repealed 10 March 1983.

b. Current Policy. On 11 September 1981, a proposal to repeal the then standing administrative rules (P&S) was published by WRC in the Federal Register. On 17 September 1981, the President ordered that agency reports, proposals or plans be consistent with WRC's existing P&S "or other such planning guidelines for water and related land resources planning as shall hereafter be issued." (E.O. 12322) On 22 March 1982 WRC extended the period for comment on the proposed repeal of the existing rules and published for public comment proposed new Principles and Guidelines -- full title: "Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies." Thereafter, on 3 February 1983, the President approved new principles superseding those incorporated in P&S. On 10 March 1983 all of the elements of P&S were repealed (48 FR 10250) and notice of adoption and availability of the new Principles and Guidelines (P&G) issued (48 FR 10259) in the Federal Register. The effective date of change is 8 July 1983. These WRC P&G are applicable to Corps implementation studies for civil works water project plans (and to similar plans of the Bureau of Reclamation, Tennessee Valley Authority, and the Natural Resources Conservation Service). They have standing as Administrative Guidelines, not (as did the P&S) Administrative Rules. The new principles differ from the previous P&S most notably in that they prescribe a single Federal objective, national economic development (NED), and do not specifically characterize other plans that must be in the array of alternatives considered. They do retain provision for display of potential impacts in four accounts: NED, EQ, regional economic development (RED) and other social effects (OSE). The new guidelines are organized in three chapters: Chapter I - Standards integrates the new principles into guidelines for carrying out the planning process; Chapter II - National Economic Development (NED) Benefit Evaluation Procedures; and Chapter III - Environmental Quality (EQ) Evaluation Procedures which sets forth one alternative environmental evaluation system that may be used.

2-4. Judicial Branch. Federal courts clarify and define the responsibilities and limitations placed on the Corps civil works activities by Federal statutes and the Constitution. Judicial decisions have affected civil works policies in several major areas: basic authority to construct or operate projects; administrative practices and required factors of consideration in project construction and operation (including environmental factors); and the scope and application of regulatory authorities.

a. The Courts. The Federal courts include the Supreme Court of the United States, the Court of Appeals, and the District Courts in the eleven Federal Judicial Circuits. Questions of law decided in one District or Circuit often foreclose similar questions in another District or Circuit. However, cases regarding the conduct of specific projects or activities are considered binding only with the District or Circuit in which the case was decided. The Court of Claims is also

a Court of original jurisdiction. Conflicting decisions among the circuits are resolved by appeal to the Supreme Court.

b. Relation to Congressional Authority. Congressionally approved Corps projects must have been authorized in exercise of one of the powers granted to Congress by the Constitution. Such authorizations are generally based on the congressional powers to regulate interstate and foreign commerce, or to tax and spend for the general welfare. Major Supreme Court decisions have established that those general powers include not only the power to promote navigation, but also to provide for flood damage reduction, hydropower production, watershed development, and similar activities of broad water resources management. Furthermore, the powers can be applied by Congress not only to the main portions of a river or other body of water, but to it's watershed and non-navigable portions as well. Also involved is the resolution of interstate water problems. States often assert conflicting claims to the waters made available by a major interbasin project. The Supreme Court has ruled that Congress may adopt a comprehensive statutory plan for apportionment of the waters involved when authorizing a project. Similarly, the court itself may adjudicate such interstate disputes. Interstate cooperation is approved by Congress in the form of an interstate compact. (Paragraph 4-3)

c. Interpretation of Legislative Policy. Policies in new or controversial fields often require judicial interpretation. In recent years judicial effect on policy has been most pronounced in matters of administrative procedures, particularly those involving public participation in decision-making and related environmental questions. The provisions of the NEPA have been applied by the courts virtually to the whole scope of the planning, construction, and operation of water resources projects, resulting in numerous changes in agencies' basic procedures. Due to this increased judicial scrutiny which occurred in the early 197Os, individuals and groups affected by present or proposed projects will have a continued opportunity to use the courts to test the propriety and application of administrative procedures.

d. Legislation and Corps Regulatory Activity. Corps regulatory authorities have been interpreted by the courts to require detailed attention to systematic decision-making and protection of the interests of the public at large as well as the particular interests of the persons or entities subjected to Federal regulation. The policies governing the administrative procedures in Corps regulatory programs have accordingly become increasingly detailed.

CHAPTER 3

GENERAL POLICIES

3-1. General. It is the policy of the Corps of Engineers to develop, control, maintain, and conserve the Nation's water resources in accordance with the laws and policies established by Congress and the Administration. In accordance with those laws and policies, the Corps carefully considers and seeks to balance the environmental and developmental needs of the Nation. Actions taken comply with all relevant environmental statutes, have no significant safety problem, and are in the overall public interest. The following guidelines summarize considerations taken to insure that actions taken are in the public interest.

a. Range of Alternative Solutions. The full range of alternative solutions to a problem including their positive and negative impacts should be considered from the outset of the planning activity. Any water resource management proposal should be preceded by a thorough assessment of all relevant alternative means, including conservation, to achieve proposed project objectives and purposes singly or in combinations reflecting different choice criteria. Such an assessment should include a full range of structural and nonstructural alternatives and an unbiased analysis of both Corps and non-Corps means of resolving water and related land use problems; while protecting the environment.

b. With and Without Consequences. The with and without consequences of each feasible alternative should be determined adequately. The net effect of any proposed solution to a water resource problem should be carefully considered under a with and without action framework, using projections of economic, environmental and social impacts. Beneficial and adverse project impacts may be evaluated by measuring the differences between indicator values which result if a proposed plan is implemented, and their values if the natural forces of change continue to develop free of the influence of action by the Corps. Proposed plans should include provisions for protecting unique cultural and biological resources, such as historic and archeological sites and threatened, endangered and otherwise significant species and their habitats.

c. Options Foreclosed. Options foreclosed by the proposed action should be analyzed. Changing national values and priorities will be reflected in different approaches to the future well-being of the general public. In a rapidly changing society the needs of the future cannot be forecast with accuracy. Where evolving technology provides new alternatives a primary tenet of planning should be to maintain flexibility for the future. Phased development or deliberate delay may frequently be better than action for which incremental need has not been demonstrated thoroughly and the resultant effects have not been evaluated adequately. To maintain flexibility it is necessary to devote extra attention to those actions which would irrevocably limit freedom of action to deal with future changes to project-area water development problems and needs. Significant options retained or foreclosed should be specified.

d. Cumulative Effects of the Plan. The cumulative effects of the plan and other similar activities should be analyzed. Each proposed water resource development activity is but a piece of a large-scale program. The combined beneficial and adverse economic, environmental and social impacts of individual projects, each of which

may be relatively minor, can have a significant regional or national impact. At each level of the evaluation and review process it is necessary to assess the cumulative beneficial and adverse effects of individual project impacts. Significant effects should guide the decisions.

e. Public Participation. The civil works program is conducted in an atmosphere of public understanding, trust and mutual cooperation in a manner responsive to public needs and desires. To this end opportunities for public input to the decision making process are provided.

f. Program and Project Proponency.

(1) The Corps is a program proponent of the budgetary priority purposes of commercial navigation, flood damage reduction (including hurricane and storm damage reduction), and ecosystem restoration. For commercial navigation and flood damage reduction, the emphasis of Corps program proponency is promoting national economic development while protecting the Nation's environment. Program proponency also extends to restoration of degraded ecosystem functions and values with a focus on ecological resources and functions associated with, or directly dependent on, the hydrologic regime.

(2) Project proponency is the support of specific action and expenditure of funds to promote navigation, flood damage reduction, or ecosystem restoration. Federal project proponency evolves through the project implementation process. Initially, when a study is started, there is no Corps project proponency even though the non-Federal sponsor may have a project which it supports. When a project recommendation is made, the Corps becomes the proponent for specific Federal investment in that project. This project proponency, however, is necessarily conditioned on the budgetary process. Corps unconditional proponency in advocating that a project should be built cannot be given until construction funds are budgeted and appropriated for the project.

g. Response to Goals and Priorities. The plan should respond to the long-range development goals and priorities for the study area, and to National policies and objectives. Many regions and basins have long-range development goals and priorities, as specified in assessments, framework studies, comprehensive basin studies, ecosystem management plans, and in other sources. Any proposed plan should be consistent with these objectives. To insure this consistency, adequate coordination must be achieved with regional planning bodies and all other interested parties.

3-2. Environmental Impact Statement (EIS). Section 102(2)(C) of NEPA requires a detailed statement to accompany every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment. The Corps normally prepares EISs for feasibility reports for authorization and construction of major projects, for changes in projects which increase size substantially or incorporate additional purposes, and for major changes in the operation and/or maintenance of completed projects. Environmental assessments are normally prepared for other Corps actions except for certain minor and/or routine actions which are categorically excluded from NEPA documentation. A finding of no significant impact is prepared by the reporting officer to accompany an assessment when it is determined that an EIS will not be prepared. NEPA documentation is accomplished prior to

implementation of emergency work, if practicable. (ER 200-2-2)

a. Notice of Intent. A notice of intent to prepare a draft EIS is published in the Federal Register as soon as practicable after reporting officers decide to prepare a draft EIS. (ER 200-2-2)

b. Record of Decision. A Record of Decision is prepared to document the Corps final decision on a proposed action requiring an EIS. The Record of Decision identifies the reasonable alternatives; designates the environmentally preferable alternative or alternatives and the agency's preferred alternative; the relevant factors including economic and technical considerations, statutory missions, and national policy which were balanced to make the decision; and whether all practicable means to avoid or minimize environmental harm have been adopted, and if not, why not. (ER 200-2-2)

3-3. Opposition by a State. During the period from project conception through construction, a governor or other state official may request termination of a project or delay pending restudy of modifications or alternatives. The views of the state are given great weight in actions taken by the Corps as discussed in the following paragraphs.

a. Projects in Preauthorization Stages. The Corps traditionally defers to adverse views of a governor on a proposed project located in his/her state. A favorable recommendation over the objections of a governor would be justified only if the project: is physically located in more than one state and provides substantial and urgently needed interstate benefits; is an indispensable element of a major river basin plan; or involves compelling circumstances related to national interest or security. The feasibility report would contain a full documentation of the governor's opposition and would be submitted to Congress for its decision.

b. Authorized but Unfunded Projects. Projects in this category are proposed for deauthorization using the authority of Section 1001 of Public Law 99-662 (paragraph 7-5.b). If not eligible for deauthorization under Section 1001, consideration is given to placing them in the inactive category (paragraph 8-4).

c. Projects Funded for Preconstruction Engineering and Design. If gubernatorial opposition to projects in this stage occurs, the Corps generally will phase out and suspend planning as long as the governor remains opposed. Congress is informed during appropriation hearings. If the project meets one of the criteria in paragraph 3-3.a the Corps should propose to continue planning. If a project lacks local support, or if a governor withholds or withdraws necessary assurances or contractual requirements, planning should cease and actions taken to classify the project as inactive. The final decision to terminate planning on projects rests with Congress; the Corps cannot unilaterally terminate planning.

d. Projects with Construction Funds. Appropriation of construction funds is a major project milestone, signifying a decision by Congress to proceed with the project. All non-Federal commitments have presumably been met, and at that late point a governor's objection should not, in itself, be the grounds for terminating a project. As a practical matter, projects that have been funded for construction but have not proceeded--or have only had minimal land acquisition--are in a somewhat different status than those actually under physical construction. If a governor objects before

construction is underway, the Appropriations Committees should be notified and the Corps position outlined. Ordinarily, the Corps defers all contract awards until after the next appropriations hearings in order to give the Committees an opportunity to explore the matter carefully, and construction would proceed if funding is continued. For projects where construction is underway, the Corps cannot, on its own, terminate construction except for engineering reasons. If a governor raises objections to a project physically under construction, existing contracts should be continued. New contracts can be deferred until after appropriation hearings have been conducted, if they do not seriously delay progress on the project. Otherwise, the Corps should inform the Committees of its intention to award new contracts and do so unless instructed not to. Only the courts or Congress can halt a project in this category.

3-4. Identification and Administration of Cultural Resources. The Reservoir Salvage Act of 1960, Public Law 86-523, as amended, provides Federal agencies the authority to expend up to one percent of the amount authorized to be appropriated for the project to conduct cultural resource surveys and follow-on activities on a nonreimbursable basis. The consideration of the effects of projects on cultural resources is initiated in preauthorization studies. Studies are coordinated with the National Park Service; the Advisory Council on Historic Preservation; and the appropriate State Historic Preservation Officer. A primary emphasis is to provide for cultural activities prior to completion of project construction. However, where need for such activities may occur during the operation and maintenance of the project by the Federal Government, it will be undertaken.

a. Identification, Survey, and Evaluation. The costs of identifying, surveying, and evaluating historical properties will be treated as reimbursable planning costs, in accordance with Section 208(l) of Public Law 96-515 (16 U.S.C. 469c-2). Costs of these activities during feasibility studies will be shared with the study cost-sharing partner in accordance with Section 105(a) of WRDA 1986. Costs of these activities during or following preconstruction engineering and design (PED) studies will be shared with the non-Federal sponsor in accordance with Section 105© of WRDA 1986.

b. Recovery and Mitigation. The costs of recovery and mitigation activities associated with historic preservation will be treated as nonreimbursable project construction costs, up to the one percent limitation specified in Section 7(a) of Public Law 93-291 (16 U.S.C. 469c). Nonreimbursable project costs are to be kept separate from other project construction costs, and are not subject to cost sharing. The costs of recovery and mitigation activities associated with historic preservation which exceed the one percent limitation specified in Section 7(a) of Public Law 93-291 will be treated as follows:

(1) Non-Federal sponsors will be asked to pay a portion of the project costs over the one percent limitation, and waivers will be obtained to spend more than the one percent on recovery and mitigation activities, as specified in Section 208(3) of Public Law 96-515. Requests for waivers should be referred to HQUSACE (ATTN: CECW-A) along with justification.

(2) Once a waiver is obtained, expenditures for recovery and mitigation activities over the one percent limitation will be shared in the same manner as project costs are shared. For flood control,

the cost sharing will be the minimum non-Federal cost-sharing requirement for the underlying flood control purpose (see paragraph 6-5).

3-5. Clean Water Act (CWA). There are two primary requirements of the CWA with regard to Corps water resources projects. Full compliance with the CWA must be attained before the initiation of project construction. (ER 1105-2-100)

a. Section 404. Corps projects involving the discharge of dredged or fill material into the waters of the United States shall be developed in accordance with guidelines promulgated by the Administrator of the Environmental Protection Agency (EPA) in conjunction with the Secretary of the Army under the authority of Section 404(b)(1) of the CWA (40 CFR 230) unless the activity is exempt under Section 404(f). Procedures for the evaluation of potential contaminant-related impacts associated with the discharge of dredged material, as required by the Section 404(b)(1) Guidelines are contained in the "Evaluation of Dredged Material Proposed for Discharge in the Waters of the U.S. - Testing Manual" commonly referred to as the Inland Testing Manual which was jointly developed by the EPA and the Corps. The investigations and analysis required by the Section 404(b)(1) Guidelines shall be included in feasibility reports. (ER 1105-2-100)

b. State Water Quality Certification. Section 401 of the CWA requires that the Corps obtain certification from the state or interstate water control agencies that a proposed water resources project is in compliance with established effluent limitations and water quality standards. If the state in question has assumed responsibilities for the 404 regulatory program, a state 404 permit would be obtained which would serve as the certification of compliance. Section 404(r) waives the requirement to obtain the state water quality certificate if the information on the effects of the discharge are included in an EIS on the proposed project submitted to Congress before the discharge takes place and prior to either authorization of the project or appropriation of construction funds. It is the general policy of the Corps to seek state water quality certification rather than utilizing the Section 404(r) exemption. (ER 1105-2-100)

3-6. Marine Protection, Research and Sanctuaries Act (MPRSA). For projects involving transportation of dredged material through the territorial sea for the purpose of ocean disposal, or involving dredged material disposal within the territorial seas for the primary purpose of disposal, the discharge will be evaluated under Section 103 of the MPRSA. The disposal must meet the criteria established by the EPA (40 CFR 227 & 228). Procedures for evaluating the potential contaminant-related impacts of disposing dredged material in the ocean are contained in the "Evaluation of Dredged Material Proposed for Ocean Disposal - Testing Manual" jointly developed by EPA and the Corps. The Corps will generally utilize ocean disposal sites designated by the EPA to the maximum extent practical. Where no EPA designated site is available, the Corps may select a suitable ocean disposal site or sites using procedures and outlined criteria in 40 CFR 228.4(e), 228.5 and 228.6. Potential ocean disposal sites will be specified in feasibility reports and, to the fullest extent practicable, the Section 103 evaluation will be completed during the feasibility study. (ER 1105-2-100)

3-7. National Pollution Discharge Elimination System (NPDES) Storm

Water Discharge Permit Requirements. All Corps facilities and activities that meet the definition of an "industrial activity" under 40 CFR 122.26 are subject to the requirement to obtain storm water permits. One Corps activity covered by the storm water rule is any construction activity that disturbs five acres or more of land. The “five acre” rule applies only in those states that do not have an authorized NPDES storm water permit program. In the states where EPA has delegated the NPDES responsibilities, the acreage rule requirements may vary considerably between the states. Storm water permits are issued by the states if they have an authorized NPDES storm water permit program or by EPA for areas not covered by an authorized state program. Activities regulated under Section 404 of the CWA do not require permits under the NPDES program.

3-8. Clean Air Act (CAA) General Conformity Rule. Section 176(c) of the CAA requires that Federal agencies assure that their activities are in conformance with Federally-approved CAA state implementation plans for geographical areas designated as "nonattainment" and "maintenance" areas under the CAA. On 30 November 1993, EPA published its final General Conformity Rule to implement Section 176(c). EPA's final rule addresses how Federal agencies are to demonstrate that activities in which they engage confirm with Federally approved CAA state implementation plans. The EPA rule contains a number of "exempted" or "presumed to conform" activities which include a number of Corps activities. As applicable and required, CAA conformity determinations will be completed during feasibility studies and included in feasibility reports.

3-9. Executive Order (E.O.) 11988, 24 May 1977, Flood Plain Management. This order outlines the responsibilities of Federal agencies in the role of flood plain management. Each agency shall evaluate the potential effects of actions on flood plains, and should avoid undertaking actions which directly or indirectly induce growth in the flood plain or adversely affect natural flood plain values. Agency regulations and operating procedures for licenses and permits should include provisions for the evaluation and consideration of flood hazards. Construction of structures and facilities on flood plains must incorporate flood proofing and other accepted flood protection measures. Agencies shall attach appropriate use restrictions to property proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties. (ER 1165-2-26)

3-10. Executive Order (E.O.) 11990, 24 May 1977, Protection of Wetlands. This order directs Federal agencies to provide leadership in minimizing the destruction, loss or degradation of wetlands. Section 2 of this order states that, in furtherance of the National Environmental Policy Act of 1969, agencies shall avoid undertaking or assisting in new construction located in wetlands unless there is no practical alternative.

3-11. Executive Order (E.O.) 12898, 11 February 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. A description of this order is provided in Appendix C (paragraph 50, page C-9). The Corps is developing implementation guidance to address this order and NEPA compliance.

3-12. Executive Order (E.O.) 13007, 24 May 1996, Indian Sacred Sites. Directs each executive branch agency with statutory or administrative responsibility for the management of Federal lands, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to (1) accommodate access to and

ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies are to maintain the confidentiality of sacred sites. To implement this E.O., the Corps has adopted the following policy:

a. Goals. Corps Commands will use all reasonable means to accommodate Indian tribes by providing meaningful access to sacred sites on Corps lands. Corps Commands will also ensure that Indian tribes have reasonable opportunities to review plans for activities and programs on Corps lands that could potentially adversely affect sacred sites.

b. To accomplish the above policy goals, Corps Commands will initiate consultation with Indian tribes on E.O. 13007, or will focus ongoing consultation efforts on the requirements of the E.O. Consultation should address current needs and interests of the tribes with regard to sacred places as well as a dialog on the development of procedures for long-term tribal input and comment. The use of Memoranda of Agreement (MOA) may be the most convenient vehicle for both the Corps and the tribes to ensure the protections of the E.O. MOA can clearly delineate the responsible Corps/Indian tribe officials, the responsibilities of all parties with respect to sacred sites and safety issues associated with the accessing and use of sacred places. These MOA can also be used to reinforce or augment government-to-government protocols.

c. The “sacred” nature and “ceremonial use” of an area may imply a multiplicity of meanings. Ceremonial use can include, but is not necessarily limited to, the collection of plants, the clearing of habitat, the gathering of animal parts or feathers, and other types of resource-consuming activities. Corps commanders have the discretion to allow for consumptive use of Indian sacred sites if granting such use is consistent with the functioning of Corps activities at the site. Moreover, authorities other than E.O. 13007, such as treaties, Federal laws, and other E.O.s may require a Corps commander to make accommodations for ceremonial use that include consumption of resources.

d. Accommodating Indian tribes through access to sacred sites may entail closing areas to the general public during particular times of the year, as well as during certain seasons or months. In the absence of a conflict with an essential command function, Corps commanders should extend tribal accommodations to temporary partial closures of narrowly delineated areas. This E.O. does not obligate the Corps to permanently close any areas to the general public, although Indian tribes may make, and Corps commanders may consider, such requests.

e. A serious concern that all parties share is the confidentiality of information on sacred sites. One way to respond to these concerns is to minimize the information needs regarding sacred sites. There may be some, or indeed many, sacred sites on Corps that have few, if any, outward signs discernable to non-Indians and these sites may not be in jeopardy or threat. These sites might be visited on a regular basis without being physically affected by religious practices. As part of the above consultation process, Corps commands and Indian tribes may agree that for these non-threatened and physically unaffected sites, tribes can continue to visit without reporting the sites’ nature or location to Corps officials.

f. For those sacred sites which tribes report to Corps commanders, Corps documentation of the existence and location of these sites may warrant protection from public disclosure under Exemption 3 of the Freedom of Information Act (FOIA), 5 U.S.C.A. ss552(b)(3)(1998), and Section 304 of the National Historic Preservation Act, as amended, 16 U.S.C.A. ss470w-3(a). The former statute governs matters specifically exempted from disclosure by other statutes. The latter allows the head of a Federal agency, under specified circumstances and after consultation with the Secretary of the Interior, to withhold disclosure of "information about the location, character, or ownership of the historic resource." In any event, Corps commanders should not release information on Indian sacred sites without first consulting with counsel.

3-13. Influencing Legislation. 18 U.S.C. 1913 prohibits the use of appropriated funds, directly or indirectly, to pay for any personal service, telegram, telephone, letter, printed matter, or any other device intended to influence a member of Congress to favor or oppose, by vote or otherwise, any legislation by Congress. It is the policy of the Chief of Engineers that the spirit and intent of the referenced statute be fully adhered to by all Corps of Engineers personnel.

3-14. OMB Circular A-76, 4 August 1983, Acquiring Products and Services. This circular sets forth the policies and procedures for determining which method of performance will be used to obtain services that can be performed in-house using Government resources facilities or by contract with private sources. The Government's business is not to be in business. The general policy of the Government is to rely on competitive private enterprise to supply necessary goods and services. However, it is recognized that certain functions are so closely allied with the general public interest that performance by Federal employees is required. Where private performance is possible and no overriding factors require in-house performance, the most economical method is to be chosen. (This is reinforced and reemphasized in E.O. 12615.) It is the policy of the Corps of Engineers to adhere to this policy and the Department of the Army implementing guidance in carrying out its civil works activities. (ER 5-1-3)

3-15. Environmental Efforts.

a. Policy. The Corps conducts its civil works program in full compliance with the NEPA, the CEQ's regulations (40 CFR 1500-1508), and other environmental statutes and executive guidelines.

b. Chief of Engineers Environmental Award Program. The Corps conducts a biennial awards program applicable to all field operating activities (FOA) having civil works and/or military programs construction responsibilities. This is part of the Chief of Engineers Design and Environmental Awards Program. The categories of competition, types of awards, basis of awards, and the procedures are covered in an annual engineer circular. The objectives of the awards program are:

(1) Recognize excellence in the design and environmental achievement of recently completed structures, developments, or demonstrated research by the Corps FOAs and design firms.

(2) Provide an incentive for design and environmental professionals to develop new projects which will exhibit excellence in function, economy, resource conservation, aesthetics and creativity,

while being in harmony with the environment.

3-16. Hazardous, Toxic, and Radioactive Wastes (HTRW)(ER 1165-2-132).

a. Definitions.

(1) Except for dredged material and sediments beneath navigable waters proposed for dredging, HTRW includes any material listed as a “hazardous substance” under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq (CERCLA). Hazardous substances regulated under CERCLA include “hazardous wastes” under Section 3001 of the Resource Conservation and Recovery Act, 42 U.S.C. 6921 et seq (RCRA); “hazardous substances” identified under Section 311 of the CAA, 33 U.S. C. 1321, “toxic pollutants” designated under Section 307 of the CWA, 33 U.S.C. 1317, “hazardous air pollutants” designated under Section 112 of the Clean Air Act, 42 U.S.C. 7412; and “imminently hazardous chemical substances or mixtures” on which EPA has taken action under Section 7 of the Toxic Substance Control Act, 15 U.S.C. 2606; these do not include petroleum or natural gas unless already included in the above categories.

(2) Dredged material and sediments beneath navigable waters proposed for dredging qualify as HTRW only if they are within the boundaries of a site designated by the EPA or a state for a response action (either a removal or a remedial action) under CERCLA, or if they are part of a National Priority List (NPL) site under CERCLA. Dredged material and sediments beneath the navigable waters proposed for dredging shall be tested and evaluated for their suitability for disposal in accordance with the appropriate guidelines and criteria adopted pursuant to Section 404 of the CWA and/or Section 103 of the MPRSA and supplemented by the Corps of Engineers Management Strategy for Disposal of Dredged Material: Containment Testing and Controls (or its appropriate updated version) as cited in Title 33 Code of Federal Regulations, Section 336.1.

b. Policy. Civil works project funds are not to be employed for HTRW-related activities except as provided below, or otherwise specified in law.

(1) Civil Works Project Construction. Construction of civil works projects in HTRW-contaminated areas should be avoided where practicable. This can be accomplished by early identification of potential problems in reconnaissance, feasibility, and PED phases before any land acquisition begins. Costs of environmental investigations to identify any existence of HTRW and studies required for formulation of the NED plan, recognizing the existence and extent of any HTRW, and studies required to evaluate alternatives to avoid HTRW will be cost shared the same as cost sharing for the phase the project is in (i.e., feasibility, PED, or construction). Where HTRW contaminated areas or impacts cannot be avoided, response actions must be acceptable to EPA and applicable state regulatory agencies. Table 1 in ER 1165-2-132 provides the policy on cost sharing of activities for HTRW.

(a) For cost-shared projects, the non-Federal sponsor shall be responsible for ensuring that the development and execution of Federal, state, and/or locally required HTRW response actions are accomplished at 100 percent non-project cost. No cost sharing credit shall be given for the cost of the response actions.

(b) For non-cost-shared projects where Federal funds are spent for HTRW response actions, the cost of response actions will be a project cost to be borne by the Department of the Army except when another Federal agency is responsible for the HTRW, in which case the response action should be borne by the responsible agency. A district should not proceed with any response action for which another agency is responsible until appropriate agreements have been reached with that agency regarding funding for the response.

(c) Funding arrangements and responsibilities for HTRW response actions involving Federally owned lands, including those administered by the Department of the Army, will be approved on an individual basis.

(d) Only where the cost of the reponse action is a project cost will it be part of the economic evaluation.

(2) Non-CERCLA Regulated Contaminents. Costs for necessary special handling or remediation of wastes, pollutants and other contaminents which are not regulated under CERCLA will be treated as project costs if the requirement is the result of a validly promulgated Federal, state, or local regulation. In such cases, land value included in the economic analysis will be the fair market value of the land considering the contamination, and the cost of the required treatment will be a construction cost. The land value to be credited to the sponsor will be the fair market value of the land in the condition acquired. Credit will not be allowed for both costs of the treatment or remediation and for the value of the land as if clean.

(3) Civil Works Project Plans. The plan for, and execution of, each civil works project will routinely include a phased and documented review to provide for early identification of HTRW potential at civil works project sites.

(4) Civil Works “Transition” Projects. On projects in “transition”, where no HTRW investigation was conducted and where a Project Cooperation Agreement (PCA) for construction has not been executed, the district may conduct studies to determine the existence and extent of HTRW as part of PED. After a PCA is executed, HTRW investigations must be performed by the sponsor or the sponsor must provide funds up front to pay for the district’s performance of the studies. Costs of the studies will be shared based on the project purpose and the project stage.

(5) Response Actions. Response actions, involving HTRW discovered on lands where the Government has been an owner and/or the Corps has been an operator, will be handled on an individual basis.

3-17. Expenditures on Aesthetics. Incorporating environmental quality into project design, including consideration of the visual quality of the project, continues to be an important goal of the civil works program. Guidance for assessing the aesthetic impacts of civil works projects, and planning and designing projects to make positive contributions to aesthetic quality is provided in the following: ER 1105-2-100; EM 1110-2-38; EM 1110-2-301; EM 1110-2-1205; EM 1110-2-1202; EM 1110-2-1204. However, reasonableness must also be applied in defining the appropriate levels of expenditures for aesthetic quality at civil works projects. Current budgetary constraints and the intense competition for Federal funds dictate a greater level of discipline in meeting our responsibilities to harmoniously blend

projects with the surrounding environment while avoiding excessive expenditures. The following principles should be applied in defining the appropriate measures for aesthetic quality at civil works projects at all stages of project development.

a. Project Relationship. Any aesthetic project features must be related to harmoniously blending the project into the project setting and not aimed at "beautifying" the surrounding area. This is not at issue with measures that are integral to project design but is an important consideration for measures that are not integral. For example, plant materials can be used to reduce visual contrast or screen projects. Landscape plantings must be limited to the land required for the project and plantings will not extend to adjacent property even if the adjacent property is a public park or recreation area.

b. Project Setting. The acceptability and compatibility of aesthetic features of project design are affected by the project setting and the expectation of the users and viewers of the project. The land use in the area surrounding the project is an important consideration in determining the appropriate measures for aesthetics. For example, a concrete channel without aesthetic treatment may not be visually objectionable in a heavy industrial area but a concrete channel in a residential area may require texturing and screening with trees and shrubs to be visually compatible with the residential land use. Linear projects such as levees and channels may incorporate different aesthetic features in different reaches of the same project, depending on the visual qualities and land uses of the adjacent property in that reach, with an appropriately designed transition between different treatment reaches.

c. Partnership. Project aesthetic features will be closely coordinated with the non-Federal project sponsor. The objectives, goals, desires, and values of the non-Federal sponsor will be carefully considered in formulating the aesthetic features of the project within the limits of a uniform application of standard Corps practices for aesthetic quality, as defined in the above mentioned ER, EMs, and paragraph 3-17.a-f of this EP. This does not preclude the incorporation of measures into a project that would exceed the standard Corps practice if the non-Federal sponsor is willing to bear all of the incremental costs of such measures as elements of a locally preferred plan. Equity is also an important consideration in working in partnership with local sponsors. The preservation and enhancement of aesthetic quality must be an important goal in all projects, regardless of the socioeconomic conditions of the project area.

d. Compatibility. All aesthetic measures must be designed so that they are fully compatible with the project purpose and in no way compromise the safety, integrity, or function of the project. For example, it may be appropriate to screen a floodwall with vegetative plantings but it would be inappropriate to plant trees directly on a levee that might endanger its structural integrity or diminish its hydraulic characteristics.

e. Cost Allocation. Costs for aesthetic measures that are in accordance with standard Corps practices are shared as project costs. Cost allocation would be an issue in multi-purpose projects where aesthetic costs would be shared in accordance with the purpose to which the costs are allocated. The addition of recreation as a project purpose may introduce the need for an increased consideration of aesthetics since it results in increased public visibility and use

of the project. An example would be a hiking trail on a flood control levee. In these cases, any incremental aesthetic costs associated with the recreation purpose should be allocated to the recreation purpose and cost shared with the non-Federal sponsor on a 50-percent basis.

f. Definition in the Feasibility Phase. Project measures to preserve and restore aesthetic quality should be fully defined (i.e., described and displayed) in the feasibility report with engineering appendix and reflected in the project cost estimate. The report should include a description of the project setting and the relationship of aesthetic features of the project to the setting. To the extent practical, all the incremental costs of the project aesthetic features should be identified, recognizing that some aesthetic considerations are completely integral to the project design and are not separable. This complete description and display of costs will allow any issues on the reasonableness of the aesthetic measures to be addressed prior to project authorization and be reflected in the authorization document. Increases in levels of project costs for aesthetics during pre-construction engineering and design, beyond inflation, will not be approved.

3-18. Mobilization. The Corps of Engineers is one component of the United States Army team. The Congress, by assigning the Chief of Engineers' national missions of civil works for water resources development in addition to the military missions, has provided the nation a vital element of insurance for the rapid mobilization and discharge of military engineering, construction and logistic services in time of emergency. The civil works program and the peacetime military construction program provide the base for maintenance of a well rounded organization providing engineering, construction and logistic services to the Army. In times of emergency those civil works projects not essential to National defense will be rapidly curtailed to provide an immediate working staff to execute military engineering work. Inasmuch as all phases of rapid mobilization depend on rapid construction, appropriate elements of the Corps of Engineers maintain plans for mobilization. The civil works program is accomplished in a manner which enhances this mobilization capability. (EP 500-1-2)

3-19. Mitigation Banks for Corps Civil Works Projects. In the context of Federal activities, and in accordance with "Federal Guidance for the Establishment, Use and Operation of Mitigation Banks" (Federal Register, Volume 60, No. 228, November 28, 1995), mitigation banking means the restoration, creation, enhancement and, in exceptional circumstances, preservation of wetlands and/or other aquatic resources expressly for the purpose of providing compensatory mitigation in advance of authorized impact to similar resources. "Authorized impacts" refers to impacts resulting from federally regulated activities or impacts resulting from Federal projects or programs. To date, there is no established Federal policy on the establishment, use and operation of mitigation banks to compensate for impacts on upland resources. Therefore, mitigation banks will not be used to compensate for upland impacts of Corps civil works projects.

a. General Policy. As defined in "Federal Guidance for the Establishment, Use and Operation of Mitigation Banks", the objective of a mitigation bank is to provide for the replacement of the chemical, physical and biological functions of wetlands and other aquatic resources which are lost as a result of authorized impacts. Conceptually, there is no net gain in ecological value as a result of

the creation and operation of a mitigation bank. Therefore, the Corps permanent ecosystem restoration authorities under Section 1135 of the WRDA 1986, as amended; Section 1103 of WRDA 1986; Section 204 of WRDA 1992, as amended; and Section 206 of WRDA 1996, will not be used for the creation of mitigation banks. Similarly, funding will not be requested to initiate feasibility studies solely for the creation of mitigation banks, but may be considered for joint ecosystem restoration and mitigation banking projects as discussed below.

b. Exceptions to General Policy. The Corps can participate in implementing joint projects that include both ecosystem restoration and mitigation banking elements as long as the Corps financial participation in the project is limited to the ecosystem restoration element. An exception to the general policy of not budgeting for the creation of mitigation banks will also be considered where a mitigation bank is being established primarily to mitigate for Corps civil works projects. For example, a central mitigation bank could be proposed for Corps implementation to provide credits for compensatory mitigation for multiple projects in the same geographic area or for a large project that is built in stages. Corps implementation of a mitigation bank could also be considered to compensate for the impacts of operation and maintenance activities. These exceptions will be considered on a case-by-case basis. Any Corps bank must be established in accordance with "Federal Guidance for the Establishment, Use and Operation of Mitigation Banks".

c. Use of Mitigation Banks in Civil Works Projects. While, as a general policy, Corps civil works funds will not be used to finance the creation of mitigation banks, credits from mitigation banks established by others may be used to compensate for environmental impacts from construction or operation and maintenance of Corps civil works projects. The following policies apply to use of credits from mitigation banks.

(1) Mitigation banks that can be considered for meeting the mitigation requirements for civil works projects include public and privately sponsored banks. To be eligible for consideration, a bank must have been established and approved in accordance with "Federal Guidance for the Establishment, Use and Operation of Mitigation Banks". This guidance provides for a Corps led interagency process for review and approval of mitigation banks which addresses all relevant issues including accounting procedures, the banking instrument, management, monitoring and contingencies actions in the event of bank failure and default. Where a mitigation bank was established prior to the Federal guidelines, the bank can be considered if it meets the standards established by the Federal guidance.

(2) The use of credits from a mitigation bank to meet the compensatory mitigation requirements for a civil works project must be evaluated in accordance with guidance for mitigation planning and recommendation in paragraph 7-35 of ER 1105-2-100.

(3) Credits from a mitigation bank are a service which is acquired to meet the compensatory mitigation requirements of a civil works project. This service includes acquisition of required lands, easements and rights-of-way; construction and management activities to produce credits; and operation and maintenance of the bank. However, there will be no division of costs for credits into its components for cost sharing purposes. All costs associated with acquisition of credits from a mitigation bank will be classified as construction

costs of the civil works project for which the mitigation is being provided. The costs for acquisition of credits will be shared in accordance with the cost sharing applicable to construction costs for that project purpose.

(4) The purchase of mitigation credits must comply with any applicable Federal procurement laws and regulations such as the Federal Acquisition Regulation (FAR) codified at 48 C.F.R.

3-20. Watershed Perspective. The watershed perspective applies to all Civil Works programs through planning, design, construction, operation, maintenance, restoration, rehabilitation, and regulatory activities. The application of this perspective into the Civil Works program encourages opportunities for enhancing the operations and maintenance of existing projects, especially the management of the natural resources. In addition, this perspective facilitates the integration of the nine Civil Works business programs into the identification and development of new Corps initiatives. The perspective recognizes the responsibility of the Corps as a major stakeholder in many of the Nation's watersheds.

a. Definitions. Federal, tribal, State, and local agencies and organizations have varying interpretations of the definition of a watershed, the identification of the range of water resources issues, and the methods of evaluation. They also have differing views on the anticipated purposes and goals of watershed initiatives. These interpretations are based on defining manageable units and specific issues that a particular agency or organization have determined to be appropriate for their individual mission areas and identifying ways to meet their program goals. For the purpose of Corps Civil Works initiatives, the following definitions apply:

(1) Watershed perspective is the viewpoint which requires that all activities be accomplished within the context of an understanding and appreciation of the impacts of those activities on other resources in the watershed. The watershed perspective encourages the active participation of all interested groups and requires the use of the full spectrum of technical disciplines in activities and decision making. This viewpoint takes into account: the interconnectedness of water and land resources; the dynamic nature of the economy and environment; and the variability of social interests over time. It recognizes that watershed activities are not static, and that the strategy for managing the resources of the watershed needs to be adaptive.

(2) A watershed is an area of land within which all surface waters flow to a single point. It encompasses the area necessary to adequately scope, analyze, and manage related water and land resources.

(3) Watershed management is the administration of and potential adjustments to the level and type of interaction among various human activities and natural processes occurring in the watershed through the application of the watershed perspective. Watershed management includes the planning, development, use, monitoring, regulation and preservation of the water and land resources. It should achieve a desirable balance among multiple, and often competing, watershed goals and objectives.

(4) Watershed studies are planning initiatives that have a multi-purpose and multi-objective scope and that accommodate

flexibility in the formulation and evaluation process. The outcome of a watershed study will generally be a watershed management plan, which identifies the combination of recommended actions to be undertaken by various partners and stakeholders in order to achieve the needs and opportunities identified in the study and may or may not identify further Corps studies or implementation projects. However, budgetary priority will be given to those studies likely to result in further Corps activities or which will provide benefits to an existing Corps project whose uses are being impaired by activities or conditions within the watershed. Further consideration for funding will be given to Corps involvement in watershed studies of national importance which do not necessarily lead to a Corps project.

b. Policy. The Corps will integrate the watershed perspective into opportunities within, and among, Civil Works elements. Opportunities should be explored and identified where joint watershed resource management efforts can be pursued to improve the efficiency and effectiveness of the Civil Works Programs. The Corps will solicit participation from Federal, tribal, state, and local agencies, organizations, and the local community to ensure that their interests are considered in the formulation and implementation of the effort. Due to the complexity and interrelation of systems within a watershed, an array of technical experts, stakeholders, and decision-makers should be involved in the process. This involvement will provide a better understanding of the consequences of actions and activities and provide a mechanism for sound decision making when addressing the watershed resource needs, opportunities, conflicts, and trade-offs.

CHAPTER 4

MANAGEMENT OF THE CIVIL WORKS PROGRAM

4-1. General Concept. Decentralization through delegation of authority is a basic tenet of the Corps organization and structure. Managers at each level should have sufficient authority to discharge their missions. The Chief of Engineers attempts to provide every manager clearly defined policies, principles, and criteria. Compliance with this guidance is checked with a minimum number of essential personal contacts, such as Command Inspections, staff visits, Inspector General (IG) inspections, various types of audits and management reports. Authority is ordinarily delegated to the next subordinate manager if: facts upon which to formulate a prudent decision are available to the manager; adequate resources, including personnel possessing the specialties and experience to make a professionally acceptable decision are available to the manager, or can be economically made available; no restriction on delegating or discharging the authority has been imposed by law or regulation of higher authority. (ER 10-1-2)

a. Corps Missions. The mission of the U.S. Army Corps of Engineers is to provide quality, responsive engineering services to the nation. The Corps provides water resources and other civil works projects, facilities for the U.S. Army and U.S. Air Force, support for other U.S. Department of Defense agencies in times of both war and peace, and support for other Federal agencies. The U.S. Army Corps of Engineers' Civil Works mission is to contribute to national welfare by providing quality authorized water resources and emergency response programs through partnerships. Civil Works programs are: navigation; flood and storm damage reduction; environmental protection; regulation of work by others in waters of the United States, including wetlands; emergency operations; research and development; and support to other Federal agencies. Additional outputs of Corps Civil Works projects may include hydropower, water supply (municipal/industrial; irrigation), and recreation.

b. Command Goals and Objectives. The Chief of Engineers establishes a set of goals and objectives at the beginning of his tour (as commander of the Corps) and they generally remain unchanged for the duration of his tenure. However, the Chief can revise his goals as may be appropriate based on significant events impacting on the Corps missions. The goals are selected to mesh with the goals of the Army and to meet the Corps' long-term management needs. These goals and objectives are used to focus Corps-wide efforts on improving performance. Major Subordinate Commands (MSC), District Commands (DC), field operating activities (FOA), and laboratories, establish programs supporting the command goals and objectives, tailoring their supporting objectives to local situations and periodically assessing progress to assure supporting objectives are met.

c. Civil Works Program Goals and Objectives. Prior to the beginning of each fiscal year the Assistant Secretary of the Army for Civil Works (ASA(CW)) establishes a set of broad goals for the Civil Works Program. The Director of Civil Works establishes specific objectives to accomplish each goal and identifies specific actions for each objective and the office responsible to accomplish the action. This process establishes the management and direction of the Civil Works Program for each fiscal year and provides a framework of action and accountability to meet Civil Works goals.

d. Command Inspections. At the direction of the Chief, Headquarters staff elements undertake on-site inspections of MSCs, DCs, FOAs, and laboratories, to review compliance with delegated authorities. Items inspected include the assigned missions and functions of the MSC and FOA; establishment of programs and accomplishments in support of the command objectives; future planning and programming; impacts of HQUSACE policies and guidance; and special topics selected by the Chief. Reports are prepared by the inspecting team and submitted to the Chief for approval and resolution of findings. The inspection cycle is three years.

e. Weekly Significant Activities Report (WSAR). The WSAR is a very important source of information for the Chief of Engineers, and provides the Chief a quick view of the key and significant events that are happening across the U.S. Army Corps of Engineers and about which he should be informed. The intent of the report is to provide a snapshot of significant achievements, key decisions, National Performance Review initiatives, critical meetings and other such events that have taken place each week at district, division, laboratory, and Headquarters level. This report does not replace established emergency operations reporting procedures or Serious Incident Reports.

f. Corps-Wide Areas of Work Responsibility (ER 5-1-10). As an integral part of the Corps normal business practices, USACE activities have been assigned geographical or functional responsibilities to ensure customers receive the best corporate response to their needs and expectations. Each USACE activity is expected to conduct business in accordance with these responsibilities and to be open and flexible to entering into voluntary agreements with each other to jointly satisfy a customer’s needs when it is in the best interest of the customer and the Corps to do so. This voluntary agreement, which is referred to as “brokering”, allows for customer access to the total capabilities of the Corps regardless of geographical location. USACE activities are expected to advise customers of how the Corps normally conducts business and to encourage customers to follow these business practices. When the customer desires to deviate from normal Corps business practices, the USACE activity with whom the customer desires to work must broker the work with the affected USACE activities or obtain written approval from HQUSACE prior to executing the work.

4-2. Organizational Structure.

a. Headquarters, U.S. Army Corps of Engineers (HQUSACE). Prior to 1979 the Corps of Engineers was an Army staff element. The Office of the Chief of Engineers (OCE) supervised all Corps activities, of whatever nature. The Corps became a major Army command (MACOM) in 1979. Now OCE is confined in its use to the portion of the Chief's staff that is involved in direct support of the Army staff. HQUSACE is used as the designation for the portion of the Chief's staff involved in supervision of the missions assigned to the Corps as a MACOM. HQUSACE assists the Chief of Engineers in planning, directing, and controlling the civil works activities assigned to the Chief. The organization of HQUSACE is shown in Figure 4-1. The role of Headquarters is to develop the policies, procedures, and business processes needed to make Corps programs run well and to provide oversight of the Corps programs. Headquarters also conducts policy compliance review to ensure that there is uniform application of established policies and procedures nationwide and identifies policy issues that must be resolved in the absence of established criteria,

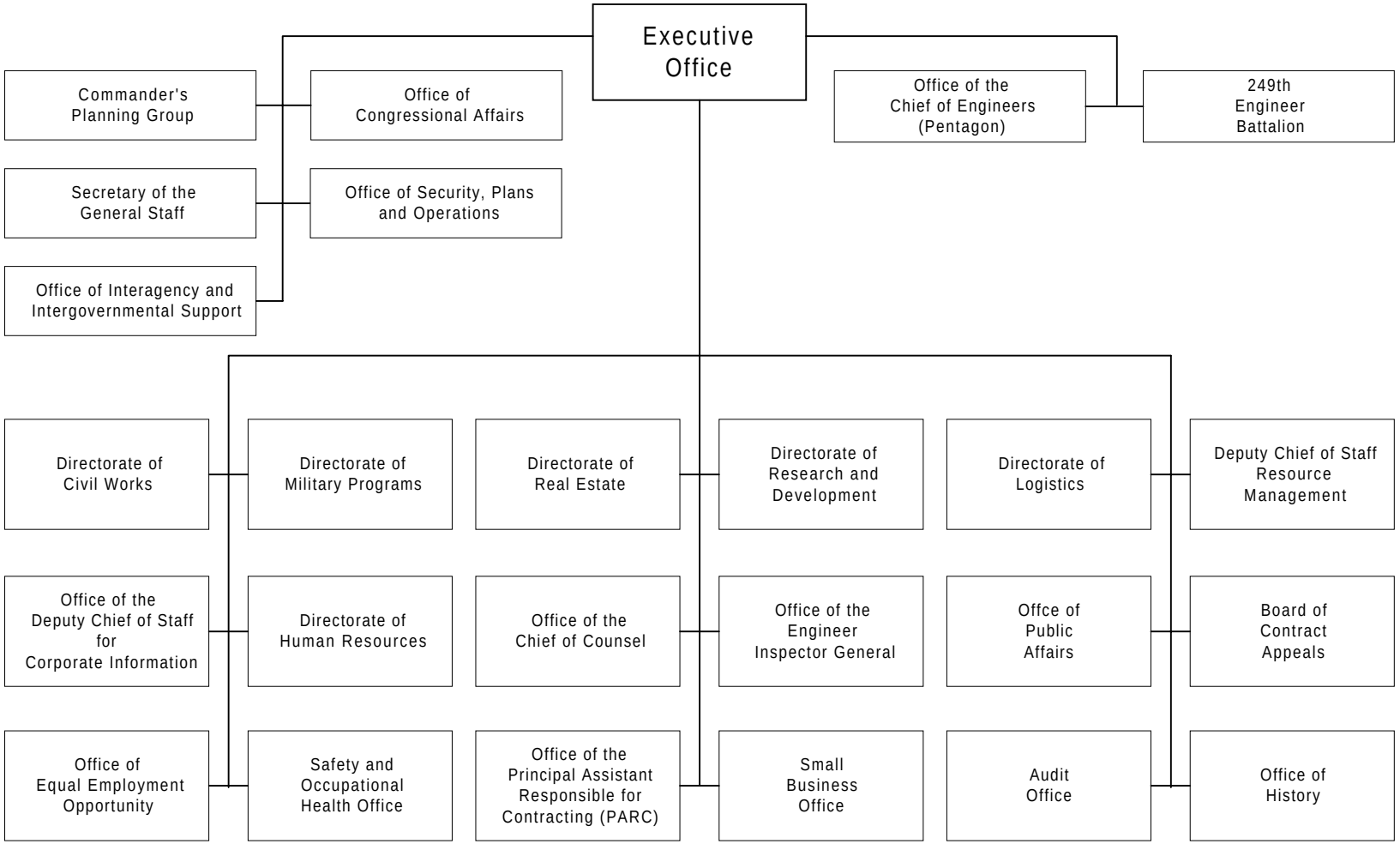

Figure 4-1 Organization of HQUSACE

(30 July 99)

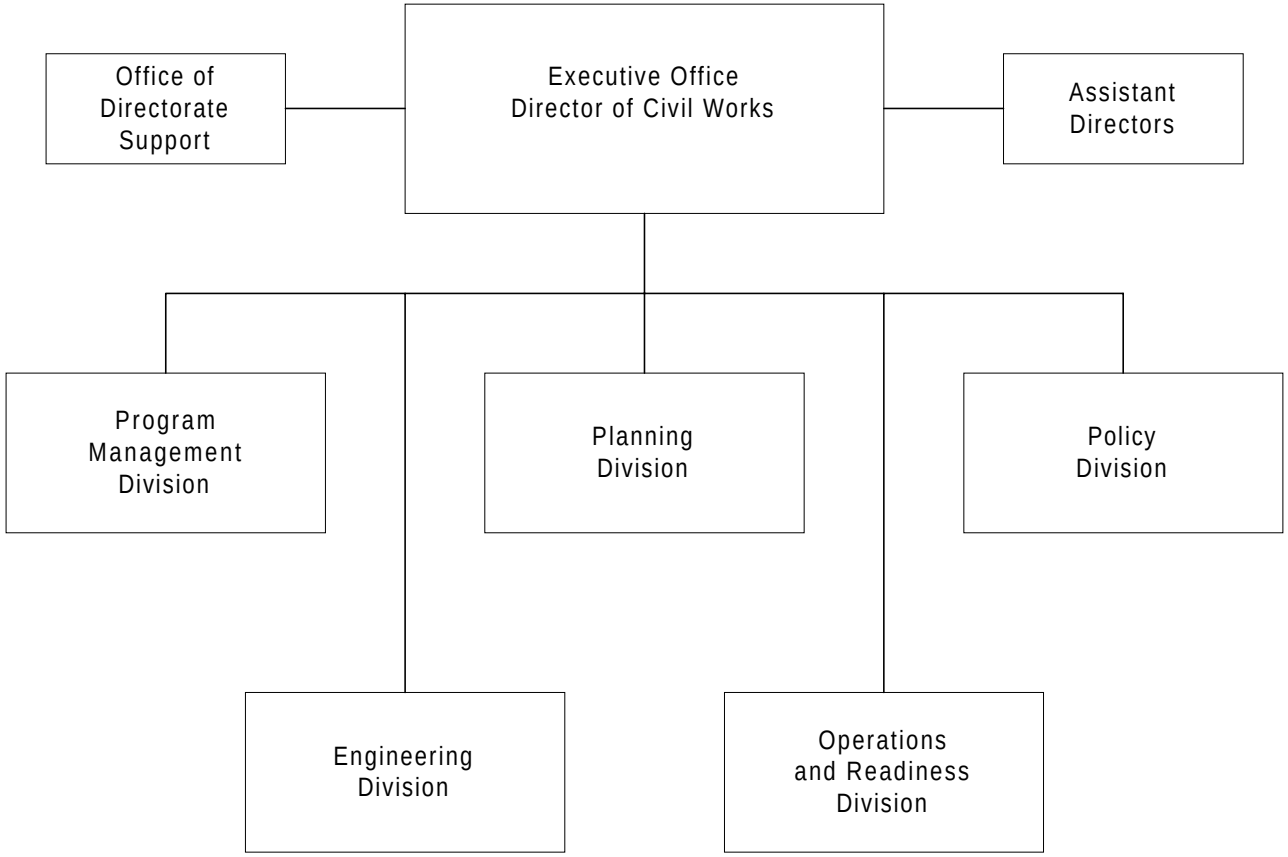

Figure 4-2 Organization of Directorate of Civil Works (30 July 99)

guidance, regulations, laws, codes, or where judgment plays a substantial role. Districts execute the Corps program which includes technical review of their products and development and implementation of a Quality Control (QC) plan. Each division's primary responsibility is to oversee the execution of the program by the districts. Through appropriate Quality Assurance (QA) mechanisms, the division assures that the districts are able to plan, design, and deliver quality projects on schedule, within budget, that meet customer expectations.

b. Directorate of Civil Works. The Deputy Commanding General for Civil Works is responsible to the Commander USACE for staff supervision of policy, planning, programming, design and construction, operation, and maintenance of the Corps civil works activities. Such works include management and improvement of rivers, harbors, and waterways, for navigation, flood control, regulatory, environmental, multiple-use purposes and shore protection projects or programs. The Director is also responsible for the administration of laws to protect and preserve the navigable waters of the United States; for the conduct and direction of emergency operations pursuant to special authorities for flood control and navigation; and for the accomplishment of special projects as assigned. The organization of the Civil Works Directorate in HQUSACE is shown in Figure 4-2.

c. Major Subordinate Commands (MSC) and District Commands (DC). The bulk of the Civil Works program assigned to the Chief of Engineers is accomplished through delegation to field officers, under the staff supervision of HQUSACE.

(1) U.S. Army Engineer Divisions. These supervisory offices, also known as Major Subordinate Commands (MSC), have jurisdiction over specified geographical areas, usually based on watershed boundaries. The role of a division is to have oversight of district programs, to ensure that district programs are producing quality products on time and within budget, and to support policy compliance. Divisions no longer perform technical review. These reviews are performed at the district level. In discharging these responsibilities, division commanders:

(a) Administer the mission of the Chief of Engineers involving civil works planning, engineering, construction, operation and maintenance of facilities and related real estate matters.

(b) Command and supervise districts assigned to their control. This supervisory responsibility includes review and approval of the major plans and programs of the districts, implementation of plans and policies of the Chief of Engineers and review and control of district operations. (ER 10-1-2) MSCs evaluate and recommend changes to the district's business and quality control processes and ensure that the districts deliver products and services in innovative and cost-efficient ways. MSCs support project priorities established by districts and provide the necessary resources to meet commitments made to customers.

(2) U.S. Army Engineer Districts. These are the principal planning and project implementation offices of the Corps, also known as District Commands (DC). The role of a district is to execute projects on schedule, within budget, and in compliance with law and policy. Districts perform technical reviews. In executing their programs, the districts focus on establishing and maintaining

effective and continuous interface with customers to ensure that the customers' requirements and expectations are met or exceeded. In discharging their responsibilities, district commanders:

(a) Prepare water and related land resources studies in response to specific congressional resolutions.

(b) Conduct engineering design and operations and maintenance studies.

(c) Construct civil works facilities.

(d) Operate and maintain major water resource projects.

(e) Administer the laws for the protection and preservation of the navigable waters of the United States.

(f) Acquire, manage and dispose of real estate in connection with civil works functions and assigned military functions. (ER 10-1-2)

d. Boards and Commissions. Organizations which advise and support the Chief of Engineers in civil works functions include:

(1) Coastal Engineering Research Board (CERB). This advisory board provides policy guidance and reviews plans for research and development in coastal engineering and recommends priorities of research projects. (ER 10-1-16)

(2) Board of Engineers for Rivers and Harbors (BERH). In accordance with Section 223 of WRDA 1992, the BERH ceased to exist in 1993.

(3) Mississippi River Commission (MRC). The MRC's jurisdiction extends from the Mississippi River's headwaters in Minnnesota to its mouth in Louisiana. The statutory mission of the MRC is to "take into consideration and to mature such plan or plans and estimates as will correct, permanently locate, and deepen the channel and protect the banks of the Mississippi; improve and give safety and ease to the navigation thereof; prevent destructive floods; promote and facilitate commerce, trade, and the postal service and, when so prepared and matured, to submit to the Secretary of the Army a full and detailed report of these proceedings and actions and of such plans with estimates of the cost thereof for the purposes aforesaid to be by him transmitted to Congress" (33 USC 647). MRC and its work are funded separately from other Civil Works projects under "Mississippi River and Tributaries (MR&T) Appropriations Accounts." (ER 10-1-5)

(4) Chief of Engineers Environmental Advisory Board (EAB). The Environmental Advisory Board consists of six members selected by the Chief of Engineers representing a broad range of expertise and experience in environmental matters. The Board serves as advisor to the Chief of Engineers primarily for environmental policy and procedural matters. (OM 15-2-1)

(5) Board of Contract Appeals. This board is established under the Contracts Disputes Act of of 1978 (Public Law 95-563) to decide disputes arising under Civil Works contracts of the Corps of Engineers. (Charter issued 6 August 1979; revised 20 January 1984)

e. Research and Development (R&D) and Field Operating Activities (FOA).

(1) Water Resources Support Center (WRSC). WRSC provides information, advice and guidance to HQUSACE, MSCs and DCs concerning water resources (including navigation) data collection, processing and monitoring, including remote sensing; performs research and development in the field of hydrologic engineering, and provides expert services to MSCs and DCs in this field; collects, compiles and distributes data and statistics on waterborne commerce and vessel movements in the United States, on U.S. commercial ports and waterway facilities, on lock characteristics and performance, and on Corps dredging activities; and, organizes, manages and performs special studies for meeting national water resources needs and objectives. The Institute for Water Resources; the Hydrologic Engineering Center, Davis, California; and the Navigation Data Center (with its Waterborne Commerce Statistics Center, New Orleans, Louisiana) are assigned to WRSC. (ER 10-1-23)

(2) U.S. Army Engineer Waterways Experiment Station (WES). WES conducts studies through the operation of a complex of laboratories in the broad fields of coastal engineering and nearshore oceanography, hydraulics, soil mechanics, concrete, engineering geology, rock mechanics, pavements, expedient construction, and environmental relationships. WES provides MSCs and DCs specialized consulting services and training in coastal engineering. WES accomplishes model studies for site-specific MSC and DC design problems. The individual laboratories are: the Information Technology Laboratory; the Hydraulics Laboratory; the Geotechnical Laboratory; the Structures Laboratory; the Environmental Laboratory; and the Coastal Engineering Research Center (CERC). (ER 10-1-8)

(3) U.S. Army Construction Engineering Research Laboratory (CERL). CERL develops methods of advancing the concepts and technology of the design, construction, operation, and maintenance of all types of Federal structures and facilities, through research, investigation, and analytical studies. (ER 10-1-26)

(4) U.S. Army Cold Regions Research and Engineering Laboratory (CRREL). As the Army Laboratory for science and technology in the cold environments of the world, CRREL conducts and coordinates research and surveillance of technology applicable to the Army's needs in those geographic areas of the world where cold presents a severe problem. It also has responsibility for the research project on Ice Engineering. (ER 10-1-25)

(5) U.S. Army Engineer Topographic Engineering Center (TEC). TEC accomplishes research and development into the topographic sciences; provides scientific and technical advisory service to meet environmental design criteria requirements of military material developers; provides environmental resource inventory requirements of military and non-military programs. (ER 10-1-45)

4-3. Other Institutions for Management of River Basin Operations. The Water Resources Council (WRC) published a report in August 1967, on "Alternative Institutional Arrangements for Managing River Basin Operations." This report describes institutional arrangements developed and used to improve basinwide management of the Nation's water and related land resources. The report identifies eight patterns of administrative organization which can be used to integrate management efforts: Interstate Compact; Federal Interstate Compact; River Basin Commission; Basin Inter-Agency Committees; Regional

Federal-State Commissions (Appalachian Regional Commission); Intra-State Special District (Soil and Water Conservation Districts); Federal Regional Agency (Tennessee Valley Authority); and a Single Federal Administrator (Colorado River):

a. Interstate Compact. This is an agreement between two or more states whereby they obligate themselves to the terms of the compact. Such a compact must be consented to by Congress, but does not obligate the Federal Government to the terms and conditions of the compact. The Federal Government often assists, through a Federal representative, in the development of the compact and in the work of any compact-created agency. Interstate compacts can serve a wide range of functions, from the simple one-time allocation of the waters of an interstate stream to the vesting of enforcement and regulatory powers in an entity whose judgments are binding upon the member states (for example, as to water quality). A compilation of interstate compacts relating to water resources is contained in House Document 319, 90th Congress, "Documents on the Use and Control of the Waters of Interstate and International Streams".

b. Federal-Interstate Compact. The most significant difference between this agreement and the interstate compact is that the United States is a signatory party. Except as stated in the compact, the exercise of Federal powers is subjected to the terms and conditions of the compact and the authority of any compact created agency. The compact form must, as with the interstate compact, be consented to by the Congress. The Federal-Interstate compacts have been used to implement, in a single basin authority, the full range of managerial planning, construction, and operation and maintenance functions. The first of two such compacts, the Delaware River Basin Compact, is administered by the Delaware River Basin Commission. The second is the Susquehanna River Basin Compact administered by the Susquehanna River Basin Commission. In granting consent to the compacts, Congress attached reservations to prevent impairment of the future exercise of Federal power and to avoid limitations on congressional power to pass laws inconsistent with the compact.

c. River Basin Commissions (Title II). River basin commissions may be established by the President pursuant to Title II of the Water Resources Planning Act of 1965. WRC and not less than one-half of the states within which the subject basin lies must concur. Members of a commission include representatives of interested Federal agencies and the affected states. The commissions may conduct planning and coordinating activities, which may include preparing and keeping up-to-date a comprehensive plan for water and related land resources development within the basin; recommending priorities for data collection, planning, and construction of projects; and submission to WRC of recommendations for implementing the plan. They would not have authority to construct or operate projects. There currently are no Title II river basin commissions (six such commissions at one time created under Title II have been terminated).

4-4. Management and Administrative Controls.

a. Guidance and Controls. The goal of HQUSACE management efforts is to assure timely completion of quality studies and projects and otherwise accomplish continuing operations, maintenance and regulatory responsibilities assigned to the Corps, as most needed to satisfy existing public concerns and future needs. Management is founded on issuance, for the uniform observance by all internal Corps offices, of guidance on all aspects of Corps activities in the form of Engineer Regulations (ERs), Engineer Manuals (EMs), Engineer Circulars

(ECs) and Engineer Technical Letters (ETLs). In special circumstances, less formal "guidance letters" (e.g., Policy Guidance Letters (PGLs)) are addressed directly to the MSCs and DCs. For dissemination of information, Engineer Pamphlets (EPs) are sometimes issued. Procurement guidance is provided in an Engineer Federal Acquisition Regulation Supplement (EFARS) which establishes uniform procedures to be followed by the Corps in connection with the making, administration and termination of contracts, and the resolution of claims and appeals. Many individual project decisions are subject to review and approval in HQUSACE prior to implementation although, based on criteria set forth in the published guidance, MSCs and DCs are empowered to make most determinations without referral. Conferences are occasionally needed to resolve questions and reach HQUSACE/MSC and DC agreement on unusual or particularly complicated problem solutions. In connection with planning, standing guidance specifically provides for Issue Resolution Conferences during the course of MSC and DC feasibility or preconstruction planning and engineering studies. Civil Works program management data is required quarterly from the MSCs and DCs under the Command Management Review (CMR). CMR requires data on various performance indicators--both measurable "bottom line" indicators and influencing indicators which, in a project delivery cycle format, provide comprehensive program management information. For civil works, CMR includes progammatic/financial and manpower planning data; project planning (including status of reconnaissance reports, cost sharing agreements and feasibility studies), design, real estate, construction and operations data; and data on regulatory and readiness programs.

b. Program and Project Management (ER 5-1-11). The Program and Project Management Business Process (PMBP) is the corporate management approach for execution of all USACE programs and projects under business processes that are uniform throughout the command. The PMBP emphasizes the importance of project teams and the role of the project manager, whose focus is on the overall process and the members of the team, who are empowered to act on behalf of their functional organizations. It focuses attention on the end results -- execution of projects and programs, and customer satisfaction. The PMBP is appicable to all USACE activities (i.e., laboratories, field operating activities (FOAs), and centers). Each commander has the responsibility for ensuring his or her organization is aligned to support the PMBP. The essential elements of the USACE PMBP are outlined below.

(1) Program and Project Management Imperatives -“Above the Line”.
These are to be followed across USACE:

(a) Consistent project definition;
(b) Each project has one project manager (PM);
(c) The PM is the team leader;
(d) The PM is the primary point of contact with the customer;
(e) Every project will be managed with a management plan;
(f) PMs manage project resources, data, and commitments;
(g) The Deputy for Project Management (DPM) has programmatic oversight for all work;
(h) All work will be managed using the project management automation information systems (AIS) and the PMBP.

(2) Program and Project Management Imperatives -“Below the Line”.
Authorities not detailed in ER 5-1-11 or prohibited in other regulations remain under the purview of individual commanders.

(3) Project Management. This is the component of the PMBP used by USACE for delivering individual projects to its customers. The project management business process embodies leadership, systematic and coordinated management, teamwork, partnering, effective balancing of competing demands, and primary accountability for the life-cycle (including the warranty period and, often, operation and maintenance) of a project. It reflects the USACE corporate commitment to provide customer service that is seamless, flexible, effective, efficient, and focuses on the customers’ expectations, participation, and satisfaction, consistent with law and policy. The individual PM is assigned by the commander or DPM and serves as an advisor and consultant to the corporate board and each of its members. The PM is responsible and accountable for successful completion and delivery of assigned projects to customers within established costs, schedules and quality parameters. The PM can make district commitments within preassigned constraints as defined in the management plan in coordination with the functional elements. The PM is responsible for ensuring that the organization speaks with one voice by coordinating all matters relating to the project, and acting as the customer’s representative within USACE to ensure requirements are conveyed, understood, and met. Each project will have a single PM regardless of how many USACE organizations are represented on the team. The PM will ensure that the direction and efforts of the team are unified, focused, and coordinated.

(4) Program Management. This is the component of the PMBP used by all USACE levels to manage a collection of similar projects, activities and services derived from assigned missions. It consists of the development, justification, management, defense and execution of programs within available resources, in accordance with applicable laws, policies, and regulations, and includes accountability and performance measurements. Under program management, the entire district’s or division’s programs, projects and other commitments are aggregated for oversight and direction by the organization’s senior leadership. Program management takes project management to a greater level of interdependencies and broadens the corporate perspectives and responsibilities.

c. Financial Resources Management.

(1) Budget Process. The Programs Management Division of HQUSACE directs the annual development of the Civil Works budget and funding activities of studies and projects throughout the year. In districts and divisions, this function is performed by the Program and Project Management Office. Detailed information is contained in Chapter 8.

(2) Procurement of Planning Investigation Services. The Corps enters into a contract for services for planning studies upon the signature of the Contracting Officer, usually a district or division commander. When a contract for services for planning studies is prepared, the immediate responsibility for a successful contracting effort lies with the project manager who functions as the Contracting Officer's Authorized Representative. The project manager furnishes the contracting division with a proposed scope of work developed by the appropriate team members who have the requisite technical expertise. When the request for proposals is prepared, it is

advertised in the Commerce Business Daily and then generally competitively negotiated. In competitive negotiation, a list of criteria against which the proposers will be judged is announced in the solicitation. These are such items as price, management ability, previous experience in similar work, etc. The criteria may vary with the nature of the work and internal numerical weights are assigned by the evaluation board (of the Corps soliciting office). The weights to be applied are not revealed to the prospective contractors but the criteria are listed in the solicitation in order of priority. A proposed award to other than the low (price) proposal must be justified in writing, as must a sole-source procurement.

(a) Should it be considered that the requirement can only be filled by a professional engineer, the specialized method of procurement from an Architect-Engineer firm is used. This, too, is advertised and the responding firms are ranked in order of preference by a selection board of engineers. Negotiations are then carried out with the first ranked firm. If the firm is able to agree to a fair and reasonable price, award is made. If not, the negotiator moves on to the second ranked firm, and so on.

(b) The Contracting Officer's Authorized Representative has the responsibility to monitor and assure the effective performance of the contractor. As a control, he or she may initiate action to withhold partial and final payment if the contractor does not perform in accordance with the contract. He or she also prepares the contractor's performance rating if it is an Achitect-Engineer contract. (EFARS Section 36, Part 6)

d. Miscellaneous Controls. The objective of the Paperwork Reduction Act of 1980, the Paperwork Reduction Reauthorization Act of 1986, and prior legislation, is to reduce the paperwork load on individuals and private industry by Federal agencies. Whenever information is to be collected from ten or more non-government employees by the use of identical forms, the Federal agency concerned must first obtain the approval of the Office of Management and Budget.

CHAPTER 5

PLANNING STUDIES

5-1. Authorization of Studies.

a. Authorization. The Corps undertakes studies of water and related land resources problems and opportunities in response to directives, called authorizations, from the Congress. Congressional authorizations are contained in public laws, and in resolutions of either the House Transportation and Infrastructure Committee or the Senate Environment and Public Works Committee. Study authorizations are either unique, study-specific authorities; or standing, program authorities, usually called continuing authorities, under which specific studies related to the program authority may be done at the discretion of the Secretary of the Army or the Chief of Engineers. The focus of the studies is on determining whether a Federal project responding to the problems and opportunities of concern should be recommended, within the general bounds of Congressional interest in authorizing Federal participation in water resources development (see paragraph 6-1).

b. Naming. Whenever the name of a project is established by separate legislation, that designation shall be used exactly as stated in the law. Otherwise, study and project titles will be assigned during the reconnaissance or feasibility study, based on a nearby geographic feature; i.e., town, river or mountain. Projects which impound water are designated as "lakes".

c. Deauthorization. Section 710 of the Water Resources Development Act (WRDA) of 1986 (PL 99-662) specifies that authorized studies will be deauthorized if study funds have not been appropriated for five fiscal years preceding the submission of the annual list, and if funds are not appropriated within 90 days of submittal of the list. Section 1001 of that act specifies a similar mechanism for deauthorization of projects (authorized for construction).

5-2. Types of Planning Studies. There are several types of planning studies as discussed in the following paragraphs. Most studies are conducted in two phases and include the reconnaissance phase and the feasibility phase.

a. Reconnaissance Phase. The reconnaissance phase is fully funded by the Federal Government and is usually completed in 12 months.
The reconnaissance phase shall accomplish the following four essential tasks:

(1) Determine that the water and related land resources problem(s) warrant Federal participation in feasibility studies. Defer comprehensive review of other problems and opportunities to feasibility studies;

(2) Define the Federal interest based on a preliminary appraisal consistent with Army policies, costs, benefits and environmental impacts of identified potential project alternatives;

(3) Prepare a Management Plan; and,

(4) Assess the level of interest and support from non-Federal entities in the identified potential solutions and cost sharing of the

feasibility phase and construction. A letter of intent from the non-Federal sponsor stating the willingness to pursue the feasibility study described in the Management Plan and to share in the costs of construction is required.

The reconnaissance phase is completed upon the signing of the Feasibility Cost Sharing Agreement (FCSA) by the Corps and the non-Federal sponsor. The feasibility study cannot be initiated until the FCSA is signed.

b. Feasibility Phase. The feasibility phase can take up to four years to complete and is cost shared equally between the Federal Government and the non-Federal sponsor. At least 50 percent of the non-Federal share (25 percent of the total feasibility phase cost) will be in cash; the remaining 50 percent of the sponsors share may be contributed as in-kind products or services. Feasibility phase cost sharing is not applicable to navigation studies on the Nation's inland waterways. The non-Federal cost share for feasibility studies in American Samoa, Guam, Northern Mariana Islands, Virgin Islands, and the Trust Territory of the Pacific Islands, is reduced by $200,000 for each study (Section 1156 of WRDA 1986). The report results in recommendations to Congress for or against Federal participation in solutions to the water and related land resources problems and opportunities identified in the study. A recommendation for Federal participation is generally a recommendation for construction authorization.

c. Legislative Phase I Studies. This is a special type of study, where only continuation of planning, rather than construction, was authorized for selected projects in the WRDAs of 1974 (Public Law 93-251) and 1976 (Public Law 94-587). For these studies, which are subject to a two-stage authorization process, a new feasibility report would be submitted to Congress for construction authorization.

d. Review of Completed Projects Studies. This type of study is in response to the standing authority of Section 216 of the Flood Control Act of 1970, which authorizes studies to review the operation of completed Federal projects and recommend project modifications "when found advisable due to significantly changed physical or economic conditions... and for improving the quality of the environment in the overall public interest". An initial appraisal is conducted using Operation and Maintenance (O&M), General funds to determine whether or not a study is warranted. If it is determined that further study is warranted, these studies are conducted in the two phase study process in the same manner as feasibility studies.

e. Continuing Authorities Studies. These types of studies are in response to one of the body of standing study and construction authorities listed in Table 2-1. With some exceptions, they are conducted in the same two-phase study process as feasibility studies specifically authorized by Congress.

5-3. Preconstruction Engineering and Design (PED). Continuation of planning efforts following completion of the feasibility report is discussed in Chapter 9. The PED phase (including preparation of the General Reevaluation Report (if needed), Design Memorandums and Plans and Specifications) will be cost shared in accordance with the authorized construction cost sharing for the project. During the PED phase, non-Federal financial contributions are to be 25 percent of the total PED cost, with offsetting credits or debits during the first year of construction.

5-4. Planning Assistance to States. Section 22 of Public Law 93-251 authorized cooperation with states in the preparation of comprehensive plans for the development, utilization and conservation of the water and related resources of drainage basins located within the boundaries of the state. Expenditures in any one state cannot exceed $500,000 in any one year, as amended by Section 221 of WRDA 1996. Federal input to the state planning program is on an effort or service basis in lieu of an outright grant. Section 214 of Public Law 89-298 and Section 204 of Public Law 91-611 provide separate authority to undertake studies in New York and Puerto Rico; however, funding for planning assistance to New York and Puerto Rico shall ordinarily be funded under Section 22. Section 605 of Public Law 96-597 defines the Virgin Islands and the territories in the Pacific as "states" for the purpose of eligibility under Section 22 of Public Law 93-251. Section 319 of WRDA 1990 authorizes the Corps to establish, collect, and expend appropriate fees from states and other non-Federal public bodies to recover approximately 50 percent of the total cost of providing assistance under the Planning Assistance to States Program. Section 208 of WRDA 1992 gives federally-recognized Indian Tribes the same status as states and territories under the Planning Assistance to States Program.

5-5. Corps Planning Guidance. Detailed planning guidance essential for the conduct of Corps planning studies is contained in ER 1105-2-100 which incorporates the Water Resources Council’s (WRC) Principles and Guidelines (P&G) in its entirety.

5-6. The Planning Process. The WRC’s P&G state that "the Federal objective of water and related land resources project planning is to contribute to national economic development consistent with protecting the Nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements." Accordingly, this is the primary objective of the Federal water resources planning process. Ecosystem restoration is a Federal planning requirement and a Corps priority mission. In water and related resources planning which involves restoration of ecosystems, contributions are to National Ecosystem Restoration (NER). As required by the P&G, and with the advent of non-Federal study cost sharing, state and local water resource objectives are also incorporated into the planning process. The planning process consists of a series of steps that identify and respond to the problems and opportunities associated with the Federal objective and specific state and local concerns and culminates in the selection of a recommended plan.

a. Major Planning Steps. The planning process consists of the following six major steps:

(1) Specify Problems and Opportunities. The problems and opportunities statements should be framed in terms of the Federal objective and specific state and local concerns. The statements should be constructed to encourage a wide range of alternative solutions with identifiable levels of achievement. Statements should encompass current as well as future conditions and the planner should be cognizant that initial expressions of problems and opportunities may need to be modified during the study.

(2) Inventory and Forecast of Conditions Without a Plan. The inventory and forecast step quantifies and qualifies the planning area resources important to the identified water resources problems and opportunities, now and in the future in the absence of a plan. This

step is a statement of the without project condition. It is the most important step in the planning process because it is the baseline from which alternative plans are formulated; benefits are measured; and impacts are assessed. Since benefits and impact assessment are the bases for plan comparison and selection, clear definition and full documentation of the without project condition are essential. For ecosystem restoration studies, inventory and forecast of past, present and future environmental conditions require that some form of qualitative measurement be defined and used. Where indicators or other units of measure of ecosystem function or structure are used, the models used to develop them must be fully described.

(3) Formulate Alternative Plans. An alternative plan consists of a system of structural and/or nonstructural measures, strategies, or programs formulated to alleviate specific problems or take advantage of specific opportunities associated with the water and land related resources in the planning area. Alternative plans are to be formulated in a systematic manner to ensure that all reasonable alternative solutions are evaluated. A full range of alternative plans are identified at the beginning of the planning process and are screened and refined in subsequent iterations throughout the planning process. However, additional alternative plans may be introduced at any time. In the reconnaissance study, the potential non-Federal sponsor should be apprised of the need to develop alternative plans during the feasibility study and the cost of the analyses to be undertaken. A plan that reasonably maximizes net national economic development (NED) benefits, consistent with protecting the nation's environment, is to be identified as the NED Plan in the feasibility report. Other plans which reduce net NED benefits in order to further address other Federal, state, local and international concerns should also be formulated. Specifically, plans contributing to ecosystem restoration may be formulated. Plans should be in compliance with existing statutes, administrative regulations, and common law or propose the required changes in law. Each alternative plan is to be formulated in consideration of four criteria described in the P&G: completeness, efficiency, effectiveness, and acceptability. Appropriate mitigation of adverse effects is to be an integral part of each alternative plan. Existing resources plans, such as state water resources plans, are to be considered as alternative plans if they are within the scope of the planning effort.

(4) Evaluate Effects. The evaluation of effects is a comparison of the with- and without-plan conditions for each alternative. The evaluation is conducted by assessing or measuring the differences between each with- and without-plan condition and by appraising or weighting those differences. Four accounts are established to facilitate evaluation and display effects of alternative plans.

(a) The national economic development (NED) account displays changes in the economic value of the national output of goods and services.

(b) The environmental quality (EQ) account displays nonmonetary effects on ecological, cultural, and aesthetic resources. Positive and adverse effects of ecosystem restoration plans are displayed in the EQ account as separate entries.

(c) The regional economic development (RED) account registers changes in the distribution of regional economic activity (i.e., income and employment).

(d) The other social effects (OSE) account registers plan effects from perspectives that are relevant to the planning process, but are not reflected in the other three accounts (e.g., community impacts, health and safety, displacement, and energy conservation).

(e) Display of the national economic development account is required. Since technical data concerning benefits and costs in the NED account are expressed in monetary units, the NED account already contains a weighting of effects; therefore, appraisal is applicable only to EQ, RED and OSE evaluations. The period of analysis is to be the same for each alternative plan. Planners shall also identify areas of risk and uncertainty in their analyses and describe them clearly, so that decisions can be made with knowledge of the degree of the reliability of the estimated benefits and cost and of the effectiveness of alternative plans. Flood damage reduction, storm damage reduction, deep-draft navigation and major rehabilitation studies will be performed using a risk-based analytical framework. This framework captures and quantifies the extent of the risk and uncertainty, and enables quantified trade-offs between risk and cost.

(5) Compare Alternative Plans. Plan comparison focuses on the differences among the alternative plans determined in the evaluate effects step. Differences should be organized on the basis of the effects in the four accounts. Monetary and nonmonetary effects should be comparably represented in narrative or display.

(6) Plan Selection. The culmination of the planning process is the selection of a recommended plan or the decision to take no action. After consideration of the various alternative plans, their effects, the sponsor's and public comments, the NED plan is selected unless an exception is justified and granted by the Assistant Secretary of the Army. For plans having only ecosystem restoration outputs, the plan with the greatest net ecosystem restoration benefits, and for plans having both economic and restoration benefits, the plan with the greatest net sum of economic and restoration benefits is to be selected, consistent with both protecting the Nation’s environment and Secretarial exception.

b. Iteration. Planning is a dynamic process requiring refinement and refocusing during the course of the study. Planners should be flexible and responsive to internal and external data development which could necessitate a reiteration of one or more of the planning steps.

c. Two-Phase Planning Process. Studies are generally to be conducted under the two phase planning process. The two-phase planning process consists of: (1) a reconnaissance phase culminating in a certified Section 905(b) of WRDA 1986 Analysis and the negotiated feasibility cost sharing agreement, and (2) the feasibility phase resulting in the Corps feasibility report, expression of related views by the Office of Management and Budget, and the ASA(CW) report to the Congress. An expedited reconnaissance phase process was implemented in FY 97. The new process will result in a Section 905(b) of WRDA 1986 Analysis of limited scope that complies with the requirements for signing the FCSA. Most of the reconnaissance phase effort and funds will be devoted to the preparation of the Project Study Plan (PSP).

d. General Planning Considerations.

(1) Interdisciplinary Planning. An interdisciplinary approach should be used in planning to ensure the involvement of physical, natural and social sciences personnel. The disciplines of the planners should be appropriate to the problems and opportunities identified in the planning process.

(2) Public Involvement. Interested and affected agencies, groups, and individuals (collectively termed the public) should be provided opportunities to participate throughout the planning process. The purpose of public involvement is to ensure that Federal programs are responsive to the needs and concerns of the public. The objectives of public involvement are to provide information about proposed Federal activities to the public; make the public's desires, needs, and concerns known to decision makers; to provide for consultation with the public before decisions are reached; and to take into account the public's views in reaching decisions. Public involvement and coordination with certain agencies (e.g., U.S. Fish and Wildlife Service) is statutorily required in the planning process. Coordination with other agencies and potential non-Federal sponsors should be initiated as early in the planning process as possible.

(3) Federal-State Relationship in Planning. The governor or his or her designated representative for each affected state is to be contacted before initiating a study and such agreements as are appropriate to carry out a coordinated planning effort are to be established. The state agency or agencies responsible for or concerned with water resource planning are to be provided with the opportunity to participate on the study management team in defining the problems and opportunities, scoping the study, and in review and consultation.

5-7. Procedures for Evaluating NED. Procedures for evaluating NED benefits of alternative plans are prescribed in P&G, Chapter II (incorporated in Corps planning guidance as part of ER 1105-2-100).

a. Period of Analysis. The period of analysis for comparing costs and benefits following project implementation shall be the lesser of: (1) the period of time over which any alternative plan would have significant beneficial or adverse effects; or (2) a period not to exceed 50 years except for major multiple-purpose reservoir projects; or (3) a period not to exceed 100 years for multiple-purpose reservoir projects.

b. Price Level. Project NED benefits and costs must be compared at a common point in time. (P&G 1.4.10)

c. Cost Estimating Procedure. Resources required or displaced to achieve project purposes by project installation and/or operation, maintenance, and replacement activities represent an NED (real) cost and are evaluated as such. Resources required or displaced to minimize adverse impacts or mitigate environmental losses are also evaluated as NED costs. Costs incurred for features other than those required for project purposes are not project costs and therefore not NED costs. (P&G 2.12, ER 1110-2-1302)

(1) Real and Financial Costs. Two concepts of cost are used in Federal planning. The two are related but distinct; care must be taken in their use. The two concepts are real cost and financial cost, and each has several synonyms. Synonomous with real cost is

economic cost, NED cost, alternative cost, opportunity cost, resource cost and exchange value. Real costs are values of resources. Resources are valued at their opportunity costs, that is their value in the best alternative use. Opportunity cost is the conceptual basis for cost in economic analysis. Real costs are used exclusively in all aspects of benefit-cost analysis, including benefit-cost ratios. Monetary cost and accounting cost mean the same as financial cost. Financial costs are any money outlays or accounting transactions or entries whether or not they are payments for resources. Therefore, it follows that the presence of financial payments do not necessarily imply the presence of real costs.

(2) Project Outlays. The real costs of project outlays include the costs incurred by the responsible Federal entity and, where appropriate, contributed by other Federal and non-Federal entities to construct, operate, maintain, repair, replace, and rehabilitate a project in accordance with sound engineering and environmental principles. These costs include:

(a) Postauthorization Investigation, Survey, Planning and Design Costs. These costs are estimated based on actual current costs incurred for carrying out these activities for similar projects and measures.

(b) Construction Costs. These costs include the direct cost of project measure installation goods and services. They are estimated based on current contract bid items in the project area or on the current market value of purchased materials and services, etc.

(c) Construction Contingency Costs. These are costs added to estimates to reflect the effects of unforeseen conditions on estimates of construction costs. They are computed as a percentage of the estimated construction cost depending on the intensity of the investigations performed, the variability of site conditions, and the type of measure being installed.

(d) Administrative Services Costs. These are costs associated with the installation of project measures, including the cost of contract administration, permits, inspection, etc. Estimates of these costs are based on current costs of carrying out these activities on similar projects or as a percentage of the construction cost when such a rate is documented.

(e) Fish and Wildlife Habitat Mitigation Costs. These are the costs involved in implementing measures recommended to mitigate losses of fish and wildlife habitat caused by project construction, operation, maintenance, and replacement. The cost of implementation of these measures is assumed to be expended concurrently and proportionately with their related project measures.

(f) Relocation Costs. These are project costs associated with the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646); and the relocation of highways, railroads, utilities, and other existing facilities. Real property acquisition relocation payments are applicable to a displaced person, business or farm operation. The NED cost of replacement housing is based on replacement in kind. Costs over and above replacement in kind are not considered economic costs for purposes of project evaluation. The relocation costs of railroads and utilities shall be based on the costs of replacement in kind. In the case of highways, the relocation cost shall be based on

replacement that reflects the current traffic count and current standards of the owner. (ER 1165-2-117, ER 405-1-12, EFARS)

(g) Historical and Archaeological Salvage Operation Costs. These are project costs associated with salvaging artifacts that have historical or archaeological values as described in Public Law 86-523 as amended. (See paragraph 3-4)

(h) Land, Water and Mineral Rights Costs. These costs include all costs of acquiring the land, water and mineral rights required for installing, operating, maintaining and replacing project measures. These costs are estimated based on current market values and the actual costs incurred for carrying out similar acquisitions. The value of easements is based on the difference in market value of the land with and without the easement.

(i) Operation, Maintenance, Repair, Replacement and Rehabilitation Costs (OMRR&R). These costs represent the current value of materials, equipment, services, and facilities needed to operate the project and make repairs, replacements, and rehabilitations necessary to maintain project measures in sound operating condition during the period of analysis. Estimates are based on actual current costs incurred for carrying out these activities for similar projects and project measures. For those projects currently in Preconstruction Engineering and Design (PED), and those with Project Cooperation Agreements (PCAs) yet to be submitted to HQUSACE as of 7 February 1991, estimates of OMRR&R costs and schedules will need to be individually set out in the technical document that accompanies the PCA and addressed in the non-Federal sponsor's financing plan. In particular, estimates for Operation and Maintenance and for future Repair and Rehabilitation must be emphasized. Non-Federal sponsors need to specifically show their capability to fund such costs in their financing plans accompanying PCA packages. For projects in the initial stages of development, the Project Management Plan is to include procedures for developing detailed OMRR&R costs.

(3) Associated Costs. These are costs other than those involved directly in establishing, maintaining, and operating the project, but necessary for realization of certain benefits of the project. An example is the cost of on-farm drainage systems required to produce the increased outputs on which benefit computations are based.

(4) Other Direct Costs. These are the costs of resources directly required for a project or plan, but for which no financial outlays are made. Consequently, they are included in the economic costs of a plan but not in the financial costs. Other direct costs also include uncompensated NED losses caused by the installation, operation, maintenance, or replacement of project or plan measures. An example would be increased downstream flood damages caused by channel modification.

d. Benefit Estimating Procedures. Beneficial effects in the NED account are increases in the economic value of the national output of goods and services. These beneficial effects include: the direct value of goods and services resulting from implementation of a plan; increases in external economies caused by implementation of a plan; and the value associated with the use of otherwise unemployed or underemployed labor resources. (P&G 1.2 and 1.7.2)

(1) Value of Goods and Services Resulting from a Plan. The specific procedures for computing these NED benefits are presented in P&G, Chapter II. Provision is made for computing other benefits when documented in the planning report and consistent with P&G 1.7.2(b). That reference sets forth the general measurement standard: willingness to pay as conceptually measured by the area under the demand schedule. Since it is not possible in most instances for the planners to measure the actual demand schedule, four alternatives are permitted:

(a) Actual or Simulated Market Price. Where the market is considered reasonably adequate and competitive, the value of outputs is based on probable exchange values that are determined by supply and demand factors, and expressed in monetary terms by means of price, at the time of project construction. Where project output is substantial and is expected to influence market prices, a price midway between that expected with and without the plan may be used to estimate the total value. The appropriate market value for certain principal agricultural commodities is specified by the WRC.

(b) Change in Net Income. The benefit is measured by the value of output of intermediate goods as inputs to producers with, as compared to without, the plan.

(c) Cost of the Most Likely Alternative. The expected costs of production by the most likely alternative source that would be utilized in the absence of the project may serve as a basis for measuring the value of goods and services.

(d) Administratively Established Value. Administratively established values are values for specific goods and services explicity set and published by WRC. An example is the unit-day value for recreation.

(2) Unemployed or Underemployed Labor Resources. These benefits are conceptually an adjustment to the cost of the project, because there is no economic cost associated with the use of an otherwise unemployed resource. Benefits are limited to payments to unemployed and underemployed labor resources directly employed in the construction and installation of the plan for projects in areas designated by WRC as having "substantial and persistent" unemployment. (P&G 2.11)

e. Risk and Uncertainty. The degree of risk and uncertainty associated with the project evaluation is displayed in a manner that makes clear to decision makers the types and degrees of risk and uncertainty believed to characterize the project; the adjustments in project design that could be made to modify the degree of risk and uncertainty; and the gains and losses in various dimensions that might accrue from those adjustments. The guidelines (P&G 1.4.13) state that planners have a role to characterize to the extent possible the different degrees of risk and uncertainty and to describe them clearly so decisions can be based on the best available information. A risk-based approach to water resources planning captures and quantifies the extent of risk and uncertainty in the various planning and design components of an investment project. The total effect of risk and uncertainty on the project’s design and economic viability can be examined and conscious decisions made reflecting an explicit trade-off between risk and costs. Risk-based analysis can be used to compare plans in terms of the likelihood and variability of their physical performance, economic success and residual risks.

f. Net Economic Benefit Analysis.

(1) NED Plan. Net national economic benefits, the difference between average annual benefits and average annual cost, is an indicator of economic efficiency. The plan which provides for the maximum net benefits is the NED plan. The Federal objective in water resources planning other than for environmental restoration purposes is achieved by maximizing net benefits in plans that are consistent with protecting the nation's environment. A plan other than the NED plan may be recommended if it would help respond to other international, national, state or local concerns. Its acceptance, however, requires an exception by ASA(CW) to the Federal NED objective (during processing of the Federal preauthorization report before submittal to Congress). The NED plan must be formulated, evaluated, displayed, and carried forward in selectable form, even if it is not the recommended plan.

(2) Determination of Net Economic Benefits. NED benefits and costs are calculated at a common point in time, the end of the installation period. This is accomplished by discounting the benefits, deferred installation costs, and OMRR&R costs to that date using the applicable project discount rate and bringing installation expenditures forward to that date by charging compound interest at the project discount rate from the date the costs are incurred.

(3) Interest and Discount Rate. The interest rate for discounting future benefits and computing costs, or otherwise converting benefits and costs to a common time basis, is specified annually by the Water Resources Council, pursuant to Section 80 of WRDA 1974. Currently, however, HQUSACE obtains the rate directly from U.S. Treasury Department. Under the existing formula it represents the average yield during the preceding fiscal year on interest-bearing marketable securities of the United States which, at the time the computation is made, have terms of 15 years or more to maturity. The rate may not be raised or lowered more than one quarter of one percent for any year. The computation is made as of 1 October each year by the Treasury Department and the rate thus computed is used during the succeeding 12 months. Present policy for projects which have received appropriations for construction is that the interest rates used to prepare the supporting economic data presented to Congress in justification of the initial appropriation of construction funds (including land acquisition) will be retained in making subsequent evaluations. This is a long standing administrative policy not to be confused with the statutory "grandfather" clause in Section 80 of the 1974 Act. Section 80 freezes the interest rates at the rate in effect immediately prior to 24 December 1968 for projects authorized prior to 3 January 1969 provided satisfactory assurances of local cooperation were received by 31 December 1969. The administrative policy agrees with the intent and purpose of the grandfather provision of Section 80. It recognizes that local interests may have undertaken financial arrangements or other actions in anticipation of the project. The appropriation of construction funds implies a commitment and raises a strong and reasonable expectation that the project will be built. If after initiation of construction, reformulation studies indicate that another alternative solution to the basic problem is desirable, the current discount rate is applicable to the new solution. Partial reformulation to consider adding a new purpose or expanding an existing purpose, to a project under construction, would also use the current discount rate. An exception would be the addition of fish and wildlife mitigation to an authorized project, for which it is permissable to use the discount rate applicable to the authorized

project. Reimbursement rates are based upon the computed rates except for water supply, recreation and irrigation for which rates are specified by legislation.

5-8. Procedures for Evaluating Environmental Quality (EQ) Outputs. Environmental planning is more similar to traditional water resources planning than it is dissimilar. Only two important differences between planning for environmental outputs and planning for NED outputs exist. Both result from the absence of readily estimated and generally accepted monetized environmental benefits. This absence means environmental outputs' worth must be based on some other sense of value, and following from this, that a decision rule for identifying best projects completely analagous (simple, quantified, objective) to the NED decision rule does not exist. A reasonable and workable decision rule can be developed however. In most other respects planning for environmental outputs is the same as for NED outputs.

a. Missions. Outputs considered Corps priority outputs change or evolve over time. Chronologically, these descriptors have been used to give specificity to, identify and label Corps environmental missions: "mitigation", "fish and wildlife habitat restoration", "protection", and "ecosystems restoration". Regardless of how narrowly or broadly the mission is described, and how the range of environmental outputs for which planning may be conducted is modified, the same planning considerations and principles apply.

b. Planning Considerations. Paragraph 5-6 (above, "The Planning Process") applies generally to planning for environmental outputs. Alterations are in some cases appropriate. For example, for mitigation, specification of problems and opportunities would be truncated. Those portions of paragraph 5-7 (above, "Procedures for Evaluating NED") that deal specifically with monetized benefit estimation are not relevant. Much of the rest of the paragraph is relevant.

c. Special Emphasis. Risk of redundancy notwithstanding, several planning considerations are worth special emphasis. First, environmental planning is quantified planning. Outputs should be precisely defined, with appropriate units of measurement. Second, formulation of alternative plans and plan scales is as much a part of environmental planning as it is for NED planning. All or nothing, or inappropriately limited options available for decision makers is not acceptable. Third, a justified plan is to be recommended. The incremental cost analysis/cost effectiveness technique is an acceptable tool for identifying the most cost effective and efficient environmental restoration plan. The rationale for justification and selection of a recommended plan must be fully documented and reasonable.

d. EQ Planning Procedures. Detailed environmental quality planning procedures (i.e., how to do it) similar to those for NED evaluation (i.e., the NED Manuals) have been developed as well as comprehensive environmental restoration policy and procedures guidance (i.e., what to do, with some how to do it information). The following three key ideas, or fundamentals, from that guidance form a cursory analysis.

(1) Outputs. Environmental projects produce outputs. These outputs are precisely defined, unambiguous and quantitative. Examples might be habitat units of a particular species; habitat units of a mix

of species representing a specified and recognized resource type, ecosystem, community, etc.; biodiversity as expressed by changes in biodiversity index "alpha"; and so on. Corps environmental projects produce changes in the number of units of specified outputs: habitat units, value of an index.

(2) Significance. Significance is the environmental counterpart to monetized NED benefits. It is the basis for valuing the worth of outputs. Significance is established using standard categories and criteria. The categories within which significance arguments are made and evidence presented, as established by the WRC, are legal/institutional, scientific/technical, and public perception. Supplementing the WRC categories the Corps adds the idea of scarcity. In other words, continuing scarcity is a necessary component of significance. Outputs of Corps projects must be significant. The significance of outputs is the justification for Corps environmental investments, just as monetized benefits are the justification for traditional water resources projects. Significance arguments must be substantial and documented.

(3) Cost Effectiveness. Each plan and each plan scale eligible for recommendation must be the least cost way of achieving its level of output. Furthermore, the cost effectiveness of plans and plan scales should be supported by documentation. This will frequently mean recognized techniques for formulating or discovering/isolating cost effective plans should be employed. Except in simple cases, cost effective plans and plan scales can not be formulated or discovered/isolated by intuition, negotiation or trial and error. Plans developed in these ways may be good plans, but they can not usually be demonstrated to be cost effective plans.

e. Environmental Restoration Projects and Recreation. Environmental restoration projects are not recreation projects. Formulation proceeds for environmental outputs and justification is based on the relative value of the those outputs. Recreation associated with the outputs may be important ancillary information. Except in true mulitple-purpose projects, recreation is not the principal justification.

f. Decision Rule for Environmental Projects. The decision rule is to recommend a justified environmental project. The best environmental project is that project for which the value, as based on significance and scarcity, of the last added increment of output just equals the (minimum) cost of producing that increment. Another plan or plan scale may be recommended as long as it is justified, and the tradeoffs when compared to the best environmental project are evident and reasonable.

5-9. Selection of a Recommended Plan. The planning process leads to the identification of alternative plans that could be recommended; one of which is to be designated as the NED plan, or the plan for projects with environmental restoration outputs only, and/or the plan for projects with economic and environmental restoration outputs (multi-purpose). The culmination of the process is the selection of the recommended plan from among the alternatives, or the decision to take no action. This selection is based on a comparison of the evaluated effects (NED, environmental, social, regional; tangible or intangible) and consideration of how well each plan meets tests of completeness, effectiveness, efficiency and acceptability and how well they meet the planning objectives. For Federal development, the NED plan, the plan for single-purpose environmental restoration projects

or the plan for multi-purpose economic and environmental restoration projects, is to be recommended unless there are believed to be overriding reasons favoring the selection of another alternative which would justify an exception by ASA(CW). In cases where local interests strongly favor a plan other than the Federally supportable plan (NED plan, plan for single purpose environmental restoration, plan for multi-purpose economic and environmental restoration projects, or ASA(CW) granted exception) the locally preferred plan may be recommended subject to special cost sharing.

a. ASA(CW) Exceptions. ASA(CW) granted exceptions are cost shared on the same basis as the NED plan (i.e., in accordance with project cost sharing as outlined in Chapter 6) and becomes a Federally supportable plan. Circumstances which would support a recommendation for such an ASA(CW) exception and in which such exception would most likely be granted are:

(1) When another justified plan, less costly than the NED plan, is the locally preferred plan.

(2) When the local sponsor prefers a plan more costly than the NED plan and the incremental costs for the increased development are not justified, that plan may be recommended if the sponsor is willing to pay 100 percent of the difference in costs between the Federally supportable plan and the locally preferred plan. (The balance of costs would be shared in accordance with policies outlined in Chapter 6.) The increment of cost between the Federally supportable plan and the locally preferred plan will not be included in the benefit-cost ratio calculation for the recommended project, but designated as a sponsor's adjunct costs. Also, the locally preferred plan must have outputs similar in-kind, and equal to or greater than, the outputs of the Federally supportable plan.

5-10. Indian Lands. Indian Tribal Lands, which have been set aside by treaty, may be acquired by eminent domain only where there is a clear expression of congressional intent to abrogate or modify the treaty. Pre-authorization reports must clearly identify Indian Tribal Lands to be acquired to ensure that sufficient congressional authority is stated.

5-11. Cost Allocation.

a. Objective. The objective of the cost allocation is to divide the project costs among the purposes served so that all purposes share equitably in the savings realized from multipurpose construction. In order to obtain an equitable distribution, the project costs are allocated so that it can be determined that the share of the costs to any purpose does not exceed its benefits and that each purpose will carry at least its separable cost. A preliminary cost allocation will be included in the feasibility report.

b. Legislation. There is no uniform cost allocation method established by law. For the hydropower function, Section 5 of the 1944 Flood Control Act established that power costs should be repaid through revenues. For municipal and industrial (M&I) water supply, the Water Supply Act of 1958, as amended, allows for repayment over a period of thirty years. However, current policy is for investment cost allocated to hydropower and water supply to be paid during construction. Existing law does not assign responsibility to any one agency for making allocations of cost, except for a few projects

covered by specific legislation. Thus, the agency responsible for planning, constructing, operating, and maintaining the project is assumed to be responsible for the cost allocation.

c. Administrative Procedures. An inter-agency agreement, 12 March 1954, among the Departments of Army and Interior and the Federal Power Commission recognized three methods of allocation as acceptable for multipurpose reservoir projects. These were the Separable Costs-Remaining Benefits (SCRB), the Alternative Justifiable Expenditure, and the Use of Facilities methods. This agreement and subsequent understanding standardized major principles and practices for allocations at multipurpose projects.

d. Principles and Guidelines. The P&G address cost allocation briefly, and specifically permit the SCRB and Use of Facilities methods. (P&G 1.9.3)

e. Principles and Methods of Allocation. Selection of the method to use in each case, except where specified by legislation, must be based on informed judgment. For this reason, it is considered undesirable to set rigid rules for assigning project costs among project purposes. Although there are exceptions, the Corps considers the SCRB method as preferable for general application. In most instances this method provides an equitable distribution of total project cost among the different project purposes.

(1) The objectives of the SCRB method of cost allocation are:

(a) To allocate to each project purpose all costs associated with inclusion of that purpose in the project. This amount, referred to as incremental or separable cost, is the minimum that would be allocated to the included purpose.

(b) To allocate costs in such a way that costs allocated to a purpose do not exceed the benefits associated with inclusion of that purpose or the costs of the most economical alternative way of providing equivalent benefits. This amount would be the maximum that would be allocated to the included purpose.

(c) To distribute joint (or common) costs among all project purposes in such a way that each purpose shares equitably in the advantages of multiple-purpose development as compared with alternative single-purpose developments.

(2) While the procedure is complex, the principle is simple. All project costs are distributed among the purposes on the basis of the alternative costs that could justifiably be incurred to achieve equivalent benefits by alternative means. The costs used in an allocation include investment costs and operation, maintenance and replacement costs, all reduced to a common time basis. These costs may be expressed either as a present worth amount or an average annual amount. For allocation purposes, costs and benefits are presented as average annual equivalents.

(3) Although the above principles and methods followed by the Corps in allocations have been developed largely in connection with the determination of power costs, allocations are also necessary where other reimbursable functions such as water supply and irrigation are involved. Also, a cost allocation is required if the project includes future water supply and/or recreation to determine if the costs assigned to these purposes are within legal and administration

limitations. Essentially the same principles and standards apply for these other purposes.

(4) Allocation of actual operation and ordinary maintenance expenses is consistent with the basic allocation.

5-12. Identification of Non-Federal Sponsor Responsibilities in Planning Reports. Section 221 of the Flood Control Act of 1970 requires that a written agreement be executed between the Secretary of the Army and the non-Federal sponsor to identify the "items of local cooperation" for Corps projects. Section 102 of WRDA 1986 added the requirement for feasibility study cost sharing. The purpose of this paragraph is to define what different types of planning reports must say regarding general and specific responsibilities of the non-Federal sponsor. This paragraph identifies those responsibilities in general terms. The specific requirements of non-Federal sponsorship vary according to the purpose(s) of the project. For definition of what those specific requirements are, refer to the appropriate project purpose chapter(s) (Chapters 12-20), presented later in this pamphlet.

a. Legal Basis. It is important to identify general and specific responsibilities of the non-Federal sponsor in the recommendations of the planning report because that document will serve as the basis of understanding among the Federal Government, the non-Federal sponsor and third parties who have an interest in or are affected by the project. It is a general principle that the requirements specified in the law or document prevail despite any administrative direction or guidelines issued previously or thereafter.

b. Preauthorization Studies.

(1) Feasibility Studies. Feasibility studies, irrespective of funding source, will identify the extent of non-Federal sponsor responsibilities and the ability of the non-Federal sponsor to fulfill its responsibilities. In the reconnaissance phase of the feasibility study, the sponsor will provide a letter of intent (LOI) stating both that the sponsor intends to sign the Feasibility Study Cost Sharing Agreement (FCSA) and understands the cost sharing requirements and financing options for project implementation. Prior to initiating the feasibility phase of the study, the Federal Government and the non-Federal sponsor will execute the FCSA, based on the Management Plan which delineates the Federal and non-Federal responsibilities for the study and prospective project. During the feasibility phase study, and prior to the Feasibility Review Conference (FRC), a preliminary draft PCA, a preliminary financial capability statement and supporting financial information will be developed to establish implementability of the project, as prescribed by the P&G. The process of developing the draft PCA will ensure that the non-Federal sponsor has a clear understanding of the type of agreement that they will be expected to sign and its requirements prior to the start of construction. The draft PCA will not be included in the draft feasibility report or provided with it; rather, the PCA will be a subject for the FRC. In addition, if flood control or agricultural water supply purposes are to be included in the recommendations of the study, the report will include an ability to pay analysis.

(2) Preconstruction Engineering and Design (PED). PED studies presume that the recommended project will be authorized for construction. Accordingly, PED studies should follow the same rules defined in subparagraph e below (Postauthorization Studies).

c. Continuing Authorities Studies. For potential projects pursued under the Continuing Authorities Program (Sections 14, 103, 107, 111, 205 and 208), the same procedures apply as for Feasibility Studies above, except that the financial analysis requirement are adjusted for the complexity and cost of the project involved. Often, the construction of these projects can be completed under one contract and, therefore, the non-Federal cooperation is provided in advance of construction. In such cases, the financial analysis requirement can be satisfied by a statement of financial capability and financial plan in the form of a letter from the sponsor and a short narrative in the "Findings and Conclusions" section of the Detailed Project Report. In more complicated cases, appropriately more of the financial analysis requirements for a feasibility study will apply.

d. Ecosystem Restoration Studies (Section 1135 of WRDA 1986; Section 204 of WRDA 1992; and Section 206 of WRDA 1996). Prior to approval to initiate a study under these authorities, the non-Federal sponsor must provide a letter of intent stating its understanding of the cost-sharing requirements and its capability and willingness to participate as the sponsor for the proposed project. The project approval document will be accompanied by a draft PCA which has been fully coordinated with the sponsor and a financial analysis. When a feasibility phase report is prepared, the report will contain a discussion of the sponsor's responsibilities.

e. Postauthorization Studies. A final PCA is required, pursuant to Section 221, as a prerequisite to initiating construction. Consequently, during the postauthorization planning, the emphasis is on ensuring that the items of non-Federal cooperation for the authorized project, as identified in the report cited in the authorizing language, are specified and that the non-Federal sponsor can comply with them. Inasmuch as a considerable period of time may have passed since the project was authorized for construction, the items of non-Federal cooperation should be reviewed for compliance with current policy. When a policy change affects an item of non-Federal cooperation, the post authorization study should address the question of whether the policy change is applicable to the authorized project and whether the non-Federal sponsor is willing to continue into construction of the project subject to the change in the particular item(s) of non-Federal cooperation. The postauthorization planning document will recommend items of non-Federal cooperation only if they are directly related to: implementation of the recommended Federal project; achievement of specified objectives of the Federal project; or realization of benefits attributed to the Federal project. Cash contributions generally are expressed as percentages of construction cost to allow the Chief of Engineers to make final determinations without further Congressional action. It is not necessary to list all routine requirements of generally applicable Federal legislation such as those for pollution control, civil rights and safety. PCAs are not required for projects to construct or improve the inland waterway transportation system where all of the costs are assigned to the Federal Government. To add recreation improvements though, PCAs are required.

f. Payment. Project costs are sometimes shared by assignment of specific items of work, such as acquisition of land, provision of

relocations, etc. In some cases, however, cash payments are required toward first costs, as in non-Federal contributions required toward certain purposes and in return for special benefits (see subparagraph 5-13.c below). Normally the payment is in a single lump sum, though Section 40 of Public Law 93-251 provides general authority to permit non-Federal interests to make annual payments of required contributed funds as construction proceeds. While legislative authorities permit extending repayment for certain projects under certain conditions, the Corps views such arrangements as contrary to the intent of non-Federal cost sharing, which is to maximize the number of projects that can be undertaken in each year's Federal appropriations. The terms of payment should be specified in the planning report. Authorities for advance project work by non-Federal sponsors subject to subsequent reimbursement or credit toward items of non-Federal cooperation are available and may be considered when helpful in achieving timely accomplishment of needed actions (see paragraphs 8-6 and 13-12). Otherwise, there is no general authority to allow non-Federal sponsors to substitute work-in-kind for required cash contributions. Any such substitutions, to be allowable, must have been provided for in report recommendations or specified by the subsequent project authorization language.

5-13. Recommendations. The recommendations in a study report are based upon the study findings and are a concise statement of the plan or improvements recommended, or of no Federal participation at this time, as appropriate. When Federal participation is recommended, clear, standard wording in simple statement form is used since it becomes the basis of authorization and is thus, for all practical purposes, draft legislation. Reliance is placed on a simple citing of the selected plan presented in the report. Similarly, citations of Acts bearing on non-Federal participation is simple and paraphrasing avoided. When separable elements of a plan are independently justified and functional, reports may recommend implementation of the plan by separable element. Such recommendations provide for obtaining written agreements for items of local cooperation for each element and proceeding with construction of that element independent of remaining elements.

a. Nature of Recommendations. Recommendations for Federal participation generally consist of two parts. The first is the authority being sought for the Chief of Engineers to undertake, modify, and maintain, as appropriate, the cited inprovements as Federal projects or programs, with discretionary authority for modifications (and any clarifying provisions needed to cover desirable project-related divergences from general-law-related Federal practice). Second, is the specification of non-Federal participation in construction, operation, maintenance and the requirements of non-Federal assurances for other necessary cooperation, such as the prevention of encroachments on flood control channels. Where cost estimates are shown, they will be presented in the context of estimates for information and not as binding amounts.

b. Changes in Recommendations. The initial recommendations are those in the basic report, which is usually that of the District Commander, and will be consistent with legislative requirements, precedents, and policies. They may be modified in the subsequent correspondence. It is acknowledged in the Chief's report that the recommendations therein are subject to modification before they are transmitted to Congress as proposals for authorization and implementation funding.

c. Special Beneficiary Situations. Special beneficiary situations will be identified in preauthorization studies, and the basis for including or excluding special non-Federal cooperation will be stated in the report and its recommendations. The policy basis is Section 2 of the River and Harbor Appropriations Act approved 5 June 1920 (33 U.S.C. 547) which specifies that "Every report submitted to Congress ... shall include a statement of special or local benefits ... with recommendations as to what local cooperation should be required, if any, on account of such special or local benefits." Generally, the Corps does not support projects that serve only property owned by a single individual, commercial/business enterprise, corporation, or club or association with restrictive membersip requirements (see paragraph 12-6). When a project provides large benefits to a few beneficiaries, the Corps gives close scrutiny to the existence of:

(1) windfall land enhancement benefits accruing to limited special interests resulting from reduction of flood hazards;

(2) land creation benefits resulting from harbor projects (see ER 1105-2-100, paragraph 4-7); and

(3) special savings to land owners in the cost of fill material or enhancement of land values as a result of disposal of material excavated from project areas.

5-14. Release of Information on Civil Works Investigations and Reports.

a. Disclosure of Information. It is Federal policy that the maximum amount of information shall be made available to the public. Disclosure of information is the rule and withholding of information is the exception. The Freedom of Information Act Amendments of 1974 (Public Law 93-502) include a requirement, among other provisions, that a decision to release or not to release records must be made "within ten days" (as defined therein). The Federal Civil Works function requires preparation of many types of reports leading to a variety of actions. Information must be gathered and used to permit a thorough analysis, reach sound conclusions, and make appropriate recommendations. Information needed includes market and sales information; present and future commodity movements; plans of expansion and new locations of industry; operating costs of transportation companies; damage estimates of real and personal property; and real estate appraisals. These data are vital to preparation of the Civil Works reports that lead to recommendations concerning sizeable expenditures of public funds. While in many instances the necessary information can be obtained only on a privileged "in confidence" basis, the Corps will endeavor to release sufficient information to permit public scrutiny of the non-privileged data supporting the reports, especially those recommending expenditures of public funds. Questions as to the propriety of release of data considered sensitive or privileged must be identified and forwarded to the Chief of Engineers, the initial denial authority (IDA), within three working days following receipt of the request for a determination.

b. Collection and Use of Privileged Data.

(1) Whenever feasible, information will be requested and obtained in such a manner that it can be released to the public.

(2) Any information which has been obtained with the express understanding it will not be disclosed will be used in a manner that will protect the privileged nature of that information.

(3) Upon request, the maximum information consistent with the above will be made available to the public from the Corps Civil Works records.

c. Releasable Information. The following types of data can be made available upon request:

(1) Final reports in response to Acts of Congress and Resolutions of Congressional Committees.

(2) Complete records of public hearings, including transcripts, correspondence, and information from the public except any requested to be held in confidence.

(3) Reports of the District and Division Commanders after issuance of the public notice, or approval of the report by HQUSACE.

(4) Letters and information to and from the public regarding any type of Civil Works reports except those containing a statement that the contents are to be held in confidence.

(5) Material previously published for public use.

(6) Engineer Regulations (ERs) and Engineer Manuals (EMs) on Civil Works activities.

d. Non-Releasable Information. The following types of information will not be released by the action officer but must be forwarded to the IDA for a determination:

(1) Trade secrets, inventions and discoveries, or other proprietary data. Formula, designs, drawings, and other technical data submitted in confidence in connection with research, grants, or contracts.

(2) Items specifically exempted from disclosure by statute.

(3) Privileged or commercial and financial information obtained expressly as confidential (for such time as the person furnishing the information specifies that it is privileged).

(4) Interagency and intra-agency memorandums and letters which would not be available by law to a private individual in litigation with the DOD or any agency of the Department.

(5) Internal letters, memorandums, and other internal communications within the Civil Works element of the Corps of Engineers that contain evaluations, opinions, recommendations, or proposed solutions, and are primarily of a decision-making nature. These include staff papers containing advice, opinions, suggestions or recommendations preliminary to decision or action by the Chief of Engineers and the Department of the Army.

(6) Records, papers and advice exchanged internally in preparation for administrative settlement of potential litigation. Evaluation of contractors and their products which constitute internal recommendations or advice and which involve a significant measure of

judgment on the part of evaluating personnel.

(7) Advance information on such matters as proposed plans to procure, lease or otherwise hire and dispose of materials, real estate, facilities, or functions when such information could provide undue or unfair competitive advantage to private personal interests.

(8) Design Memoranda for Real Estate, Gross Appraisals for Real Estate, Public Use Plan, Land Requirements for Public Use, and Master Plans until final acquisition of lands covered has been completed.

(9) Data on commodity origins and destinations, tonnages, costs, etc., if it would identify specific firms or persons and thereby disclose or reveal other privileged information.

(10) Drafts of reports in the process of preparation presenting unresolved questions are not released to the public without prior HQUSACE approval. This does not include completed drafts which, in accordance with ER 1105-2-100, must be coordinated with interested agencies and the public in order to obtain views needed as input to selection of the reporting officer's recommendations. In particular, care is taken that final reports requiring notification of the Office of Management and Budget and the Public Works and Appropriations Committees of Congress are not released prior to completion of such notifications. This does not preclude necessary coordination with state, local and Federal agencies who are requested to withhold public release of such information prior to completion of the required coordination. Special care is taken to avoid releasing project proposals which are often changed during the review and approval process. Premature disclosure of such preliminary proposals is a disservice to both the public and to the Corps. (AR 340-17)

5-15. Sale of Corps Civil Works Publications and Reports. Public Law 85-480 authorizes publishing and sale of information pamphlets, maps, brochures, and other material on river and harbor, flood control, and other Civil Works Activities, including related public park and recreation facilities under the jurisdiction of the Chief of Engineers.

a. One or more gratuitous copies of publications are available upon request by industry, private organizations, or the general public provided stocks permit and there are no restrictions on release, such as inclusion of classified, protected, proprietary, or copyrighted information.

b. Quantities distributed per request will not exceed 50 copies. If production cost of the copies is less than $50, the quantity limitation does not apply.

c. When considered appropriate, a fee may be charged for the copies. See AR 37-60 for a schedule of fees and charges.

d. Sale price cannot be less than cost of reproduction. The cost formula authorized by Title 44 of the United States Code for use by the Superintendent of Documents, Government Printing Office, is applied. The components of the formula are: Cost of press time, cost of paper, cost of bindery operations, and a 50 percent surcharge added to the total of the first three items. The sale price is obtained by dividing the total cost of these components by the number of publications produced.

e. Proceeds received from the sale of publications are transmitted to the Finance and Accounting Officers for deposit in accordance with Chapter 4, ER 37-2-10.

f. Construction drawings and specifications can be sold to potential contractor bidders.

CHAPTER 6

PROJECT COST SHARING AND REPAYMENT

6-1. Principles and Objectives of Cost Sharing. A fundamental objective of the Congress in authorizing Federal participation in water resources development is to insure that such action makes an optimum contribution to the public good. At the same time, Congress has sought to maintain a reasonable balance between the responsibilities assumed by the Federal Government and those left with the states and other non-Federal entities. A planning agency, accordingly, must carefully consider all available specific indications in law as well as those principles and policies defined by Congress. As reflected in existing Federal water resources legislation, Congress has established generally that the Federal Government:

a. Should undertake only those activities which local levels of government or private enterprise cannot do as readily or as well from the standpoint of the national interest;

b. May bear a part of the costs of projects and programs that benefit the Nation as a whole, or are deemed necessary to protect the interest of future generations, particularly in those fields in which profit-making organizations do not operate;

c. Should provide for mitigation of any damaging effects of Federal projects, or carry out measures to compensate for such effects;

d. May, where special circumstances make such action necessary or desirable in the National interest, provide services which normally would be provided by private enterprise or non-Federal public entities. (Examples are when long-range financial returns are not sufficiently attractive in the short-range view of private enterprise; or when costs are included for purposes not readily marketable; or when problems of comprehensive and coordinated development cannot be readily resolved below the Federal level);

e. May construct certain works for which local interests will be willing to pay, or may provide subsidies, as by permitting repayment at low Federal interest rates;

f. May develop comprehensive plans embracing even those purposes for which a high degree of responsibility remains with non-Federal entities;

g. Should not consider all purposes to warrant equal or maximum Federal participation.

The costs of establishing and maintaining resource programs must be borne, in one way or another, by the primary beneficiaries, secondary beneficiaries, state or other non-Federal public entities, or the Nation.

6-2. Formulas, Legislative, and Administrative Rules. The costs of water resources projects under the jurisdiction of the Corps of Engineers are shared between Federal and non-Federal interests in accordance with: (1) the provisions of water resource development, flood control, and other laws; (2) the specific requirements of acts authorizing the projects in some cases; and (3) administrative

instructions. Legislative authorizations have defined general rules for cost sharing, or have prescribed percentages of costs required by non-Federal entities. Prescribed percentages were traditionally developed on the basis of analogous precedents or from a sense of equity. With Congressional acceptance and approval of recommendations for projects proposed on such basis, these rules became established policy. Enactment of the Water Resources Development Act of 1986 (WRDA 1986), Public Law 99-662, produced the first comprehensive treatment of cost sharing, with formulas for all water resources purposes. Arrangements for cost sharing may include one or a combination of several aspects of the program, such as planning, design, construction, operation, maintenance and management, or an interest therein such as through provision of advice, data, materials, labor, cash, or other contributions. The amount of the local (non-Federal) cooperation involved, both monetary and non-monetary, is thus dependent upon the nature of the project under consideration and the general and specific laws pertinent thereto. The new cost sharing rules for project construction and repayment are summarized in this chapter and discussed further in subsequent chapters devoted to the individual water resources purposes.

6-3. Applicability of Cost Sharing.

a. General. Unless otherwise specified, the cost sharing provisions of Title I of WRDA 1986, as amended, apply to all projects and separable elements authorized in the Act, or in subsequent Acts, as well as to previously authorized projects, depending on the date when physical construction is started, and the type of project. For harbor projects under Section 101 of WRDA 1986, the new cost sharing applies to any project or separable element thereof, on which a contract for physical construction was not awarded before 17 November 1986. On projects for flood control and other purposes, under Section 103 of WRDA 1986, new cost sharing applies to any project (including any small project which is not specifically authorized by Congress and for which the Secretary has not approved funding before 17 November 1986), or separable element thereof, on which physical construction was initiated after 30 April 1986. Under Section 202(a)(2) of WRDA 1996, physical construction is defined to be initiated on the date of award of a construction contract. Physical construction is distinguished from the acquisition of land which is accomplished before physical construction can begin. Title I cost sharing is also applicable to the small projects not specifically authorized by Congress. When the Federal share of any project authorized in WRDA 1986 is not established in Title I, the Federal share is as otherwise provided by law (Section 108 of WRDA 1986).

b. Definition of Separable Element. The concept of "separable element" was intended as an equitable way of phasing new cost sharing policy into an ongoing program, by applying the new rules to work that represents new commitments. Section 103(f) of WRDA 1986 defines "separable element" as a portion of a project which is physically separable from other portions of the project and which achieves hydrologic effects, or produces physical or economic benefits, which are separately identifiable from those produced by other portions of the project. For separability, operational, environmental, and economic impacts must be directly related to, and only associated with, the individual project element. In the case of environmental impact, the environmental treatment for the element must be capable of passing the legal test for adequacy of coverage. Independent hydrologic effects connote a hydrologic and hydraulic independence from the output and benefits of other projects and separable elements.

Economic separability refers to the criterion requiring the separable element to have net NED benefits as the next construction element. In the programming of project construction, separable elements may be identified so as to avoid a commitment to work beyond that which has been planned in detail or to which full approval has not been granted within the Executive Branch. When construction funding for a project is programmed initially and supported by a local cooperation agreement with the project sponsor, authorized elements beyond this scope are implemented as separable elements.

c. Consistent Application. Cost sharing reforms embodied in WRDA 1986 represent a long-sought compromise between the Administration and Congress. Consistent application of the new cost sharing policy is essential, and special treatment in the form of exemption and/or exception is to be avoided.

d. Cost Sharing Exceptions and Limits.

(1) Exceptions. Title I cost sharing does not apply to the Yazoo Basin, Mississippi, Demonstration Erosion Control Program, authorized by Public Law 98-8 or to the Harlan, Kentucky, and Barbourville, Kentucky, elements of the project authorized by Section 202 of Public Law 96-367, in accordance with Section 103(e)(2) of WRDA 1986.

(2) Cost Sharing Waiver for the Territories (Section 1156 of WRDA 1986). Local cost sharing requirements for all studies and projects in American Somoa, Guam, the Northern Mariana Islands, the Virgin Islands, and the Trust Territories of the Pacific Islands, will be reduced, up to $200,000 for each study and project. Cost sharing for each study and for each project will be established using the general cost sharing criteria. The non-Federal cost for each study and/or project will then be reduced by $200,000, or to zero if the non-Federal share is less than $200,000. Waivers for studies and projects are considered separately. If the waiver for a study is less than the $200,000 maximum, there is no "balance" remaining for transfer to a project waiver.

(3) Small Project Authorization Limits (Section 915(i) of WRDA 1986). The amendments increasing small project cost limits (Section 915) do not apply to any project under contract for construction on 17 November 1986.

(4) Ability-to-Pay (Section 103(m) of WRDA 1986, as amended by Section 202(b) of WRDA 1996). Cost sharing agreements for flood control or agricultural water supply are subject to the ability of a non-Federal interest to pay, as discussed in paragraphs 6-5.f and 6-8.

6-4. Navigation.

a. Commercial Harbors, and Inland Harbors (Section 101 of WRDA 1986, as amended by Section 201 of WRDA 1996).

(1) Non-Federal sponsors must pay during the period of construction, a portion of the costs associated with the general navigation features (GNF) of the project. GNF include navigation channels, anchorages, turning basins, jetties, breakwaters, and land-based and aquatic dredged material disposal areas. The non-Federal share is based upon the project depth: 10 percent of that portion of the total cost of construction of the GNF assigned to dredging to a depth not in excess of 20 feet and any overdepth dredging associated

therewith; 25 percent of that portion of the total cost of construction of the GNF assigned to dredging to a depth in excess of 20 feet but not in excess of 45 feet and any overdepth dredging associated therewith; and 50 percent of that portion of the total cost of construction of the GNF assigned to dredging to a depth in excess of 45 feet and any overdepth dredging associated therewith. At projects where depths are not modified, non-Federal sponsors must provide a share of the GNF costs, using the appropriate percentage corresponding to the authorized or existing project depth, whichever is greater. Non-Federal sponsors must pay an additional 10 percent of the total cost of construction of the GNF, in cash, over a period not to exceed 30 years. The value of lands, easements, rights-of-way, and relocations (LERRs) provided by the non-Federal sponsor (paragraph 6-4.a(2)) for the construction, operation and maintenance of the GNF, is credited toward this 10 percent payment, including credit for utility relocation costs except in the case of deep-draft harbors (depth over 45 feet) or harbors constructed by non-Federal interests under Section 204 of WRDA 1986 (see paragraph 12-26.b) where the credit would be limited to one-half of the cost of utility relocations. In addition, no credit can be given to the non-Federal sponsor for lands which lie within the Navigational Servitude. The owner of a bridge requiring modification must share in the costs according to the principles of the Truman-Hobbs Act (P.L. 77-647); the balance is cost shared as part of the GNF.

(2) Non-Federal sponsors must provide the necessary LERR, including LERR required for fish and wildlife mitigation for the construction, operation and maintenance of the GNF. Non-Federal sponsors must also perform or assure the performance of all relocations and alterations of utilities, cemeteries, highways, railroads, or public facilities, but excluding bridges over navigable waters, necessary for the project, except that in the case of a project for a deep-draft harbor (depth over 45 feet), including those constructed by non-Federal sponsors under Section 204 of WRDA 1986, one-half of the cost of each such utility relocation is borne by the owner of the facility being relocated, and one-half by the non-Federal project sponsor (see also paragraph 10-4.b).

(3) A sponsor must also provide and maintain, without cost to the Federal Government, all local service facilities other than those for GNF needed to achieve anticipated project benefits, including dredging in berthing areas and local access channels serving GNF.

(4) Dredged Material Disposal Facilities (Section 201 of WRDA 1996). Upon request of a non-Federal sponsor, the Secretary of the Army (SA) shall modify a Project Cooperation Agreement (PCA) executed on or before 12 October 1996 to reflect the new cost sharing provisions for dredged material disposal facilities for which a contract for construction of such facilities has not been awarded. The cost sharing provisions shall not increase the non-Federal share of the construction, operation, or maintenance of:

(a) expanding any confined dredged material disposal facility which is operated by the U.S. Army Corps of Engineers and which is authorized for cost recovery through the collection of tolls;

(b) any confined dredged material disposal facility for which the Invitation for Bids for construction was issued prior to 12 October 1996; and

(c) expanding any confined dredged material disposal facility authorized by Section 123 of the River and Harbor Act of 1970, for which the capacity of the confined dredged material disposal facility was exceeded in less than six years.

(5) Dredged Material Disposal Facility Partnerships (Section 217 of WRDA 1996).

(a) The SA/Federal Government may, at the request of a non-Federal interest, add capacity at a dredged material disposal site being constructed by the SA/Federal Government if the non-Federal sponsor pays, during the period of construction, all costs associated with the additional capacity. The non-Federal interest can set and collect fees assessed to third parties to recover those costs.

(b) The SA/Federal Government may allow non-Federal interests to use capacity in an existing Corps disposal site if such use will not reduce the availability of the facility for the Federal project. The (SA)/Federal Government can impose fees to recover capital, operation, and maintenance costs associated with the partner’s use.

(c) The SA/Federal Government may use public-private partnerships in the design, construction, management, or operation of dredged material disposal facilities in connection with construction or maintenance of Federal navigation projects. These partnerships may be implemented through agreements with non-Federal interests, a private entity, or both. Funds for the work may be provided in whole or in part by the private entity. The SA/Federal Government may reimburse the private entity, subject to appropriations, for the disposal of dredged material in the facility through the payment of a disposal user fee. The fee shall be sufficient to recover the funds contributed by the private entity plus a reasonable rate of return on investment. The Federal share of the fee shall equal the Federal percentage of the disposal facility cost, in accordance with existing cost sharing requirements.

(6) Cost Sharing Applications.

(a) Where channel deepening is not limited to one depth zone (e.g., where a channel is being deepened from 40 to 50 feet) cost sharing is determined as shown in Appendix G to ER 1165-2-131. This approach also applies to GNF features associated with such a project which involves deepening which crosses different depth zones such as widenings, turning basins, and anchorage areas. The existing and improved main channel depths will be used to determine cost sharing (e.g., for a channel deepened from 40 to 50 feet, there are two depth zones - one to from 40 to 45 feet, and a second from 45 to 50 feet - even though widening or other GNF features may be in areas that have natural depths of 20 feet or less).

(b) Where channel deepening is limited to one depth zone (e.g., where a channel is deepened from 40 to 45 feet) cost sharing is determined by the improved depth.

(c) Where channel deepening is limited to one depth zone (e.g., where a channel is deepened from 40 to 45 feet) the cost sharing for the entire cost of GNF associated with that deepening project are determined by the improved depth (e.g., if there is channel widening associated with a project deepened from 40 to 45 feet, all of the widening costs will be shared at the cost sharing which applies to the 45 foot depth (25 percent during construction) even though the

widening may be in areas adjacent to the existing channel that have depths of 20 feet or less. The same would apply to a new turning basin or new anchorage area associated with such a project).

(d) For navigation projects that involve no deepening (e.g., a widening only project or a project involving addition of a breakwater), the entire GNF costs are shared at either the cost sharing associated with th existing project depth, or if there is no improved depth, the natural controlling depth.

b. Inland Waterways.

(1) In WRDA 1986, and subsequent legislation, projects on waterways that are subject to fuel taxes, are specifically authorized to be funded in part by the Inland Waterways Trust Fund, with 50 percent of the construction costs paid from amounts appropriated from the General Fund of the Treasury, and the other 50 percent from the Trust Fund. The term construction in these specific cases is defined to include planning, designing, engineering, surveying, and acquisition of LERRD, including lands for disposal of dredged material and maintenance disposal, and LERRD required for fish and wildlife mitigation. Future proposals to modify or rehabilitate elements of the inland and coastal waterways system of the United States, as identified in Section 206 of the Inland Waterways Revenue Act (IWRA) of 1978, as amended, should recommend financing on this basis (see paragraph 12-4.a).

(2) Costs for all waterways outside the system identified in Section 206 of the IWRA of 1978, as amended, will be shared as commercial or recreational harbors, based on allocation to these project purposes.

c. Recreational Navigation (Section 103(c)(4) of WRDA 1986).

(1) Non-Federal sponsors for a recreational navigation project, or separable element thereof, must pay 50 percent of the joint and separable costs of constructing the GNF allocated to recreational navigation during the construction period. Non-Federal sponsors receive credit for the value of LERRD contributions (paragraph 6-4.c(2)) against the 50 percent share. The non-Federal sponsors must accomplish or pay for 100 percent of GNF operations and maintenance costs allocated to recreational navigation.

(2) Non-Federal sponsors must provide all LERRD, including LERRD required for fish and wildlife mitigation, with all retaining dikes, bulkheads, and embankments, or pay the cost of such retaining works. The value of LERRD contributions are included in the 50 percent non-Federal share of project costs assigned to recreational navigation. The non-Federal sponsors must also provide and maintain, without cost to the Federal Government, all local service facilities other than GNF needed to achieve anticipated project benefits, including dredging in berthing areas and local access channels serving GNF.

d. Emergency Navigation Authority. The cost sharing in Title I of WRDA 1986 does not apply to activities under the special authority for emergency clearing provided by Section 3 of the River and Harbor Act of 1945 (see paragraph 11-2.a(3)).

6-5. Flood Damage Reduction.

a. Single Purpose Structural Flood Control (Section 103(a) of WRDA 1986, as amended by Section 202(a) of WRDA 1996).

(1) Before construction, non-Federal sponsors must agree to: pay 5 percent of the project first costs assigned to structural flood control, in cash, during the construction of the project, proportional to the rate of Federal expenditures; and to provide all lands, easements, rights-of-way, including suitable borrow and dredged material disposal areas, and perform all related necessary relocations (LERRD), including LERRD required for fish and wildlife mitigation. All costs for relocations are part of LERRD, including costs for measures needed to prevent serious adverse effects to the flood control project structures, in the event of failure/rupture (e.g., stronger pipe requirements, special compacting or cementing to provide for added strength or to prevent piping, mechanical bolt joints to prevent leakage, new valves, relocated structures, etc.).

(2) Minimum and Maximum Contributions. If the value of the contributions in paragraph 6-5.a(1) is less than 25 percent of the costs of the project (35 percent for projects authorized, or reauthorized after formal deauthorization, after 12 October 1996) assigned to structural flood control, the non-Federal interest shall pay during construction of the project any additional amounts necessary for the total non-Federal contribution to equal 25 percent (35 percent for projects authorized, or reauthorized after formal deauthorization, after 12 October 1996). Pursuant to Section 103(a)(3) of WRDA 1986, the total non-Federal contribution cannot exceed 50 percent of the first costs assigned to structural flood control (5 percent cash contribution is required, with the remaining contribution consisting of LERRD limited to 45 percent). Guidance on funding the value of LERRD that exceeds the 45 percent is contained in ER 1165-2-131 and its successor regulation. Regarding project modifications, new cost sharing (i.e., post 12 October 1996) will not be required for project authorizations necessitated by increases in project costs in accordance with Section 902 of WRDA 1986, i.e., the basic project has not changed. However, the increased/new cost sharing (i.e., post 12 October 1996) will apply to all projects where reevaluation studies have indicated a significant change in project scope or purpose has occurred necessitating the need for a new congressional authorization. The increased/new non-Federal cost share also applies to those Section 205 projects whose Detailed Project Reports are approved after 12 October 1996, and to those Section 14 and 208 projects which are approved for construction by the division commander after 12 October 1996 unless these projects have been specifically authorized in or prior to WRDA 1996.

(3) Deferred Payment. Section 103(a)(4) of WRDA 1986 permits non-Federal sponsors to defer payment of contributions in excess of 30 percent of the costs assigned to structural flood control (5 percent cash plus 25 percent LERRD). The excess costs may be paid over a 15-year period, or shorter period, if agreed to by the ASA(CW) and non-Federal sponsors. Repayment shall begin on the date construction of the project or separable element is completed, and must include interest from the date payments would otherwise have been made, at the interest rate determined pursuant to Section 106 of WRDA 1986. However, full payment during construction is preferred.

b. Nonstructural Flood Control (Section 103(b) of WRDA 1986, as amended by Section 202(a) of WRDA 1996).

(1) Before construction, non-Federal sponsors must agree to provide the LERRD, with that necessary for construction to be furnished the Federal Government prior to the advertisement of any construction contract. Demolition and removal of structures is usually performed by the Government, and costs associate therewith are considered construction, not LERRD, costs.

(2) Minimum and Maximum Contributions. If the value of the LERRD contributions is less than 25 percent of the costs of the nonstructural flood control features/project (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996), the non-Federal sponsor shall pay upon completion of construction, such additional amounts as are necessary for its share to be equal to 25 percent (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996). The value of non-Federal contributions shall not exceed 25 percent of the costs of the nonstructural flood control features/project (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996). When the value of LERRD is more than 25 percent (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996), agreement must be reached with the non-Federal sponsor on the most efficient and practical means for acquisition of the portion of the LERRD over 25 percent (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996)(see ER 1165-2-131, paragraph 12.c(8)). Regarding project modifications, new cost sharing (i.e., post 12 October 1996) will not be required for project authorizations necessitated by increases in project costs in accordance with Section 902 of WRDA 1986, i.e., the basic project has not changed. However, the increased/new cost sharing (i.e., post 12 October 1996) will apply to all projects where reevaluation studies have indicated a significant change in project scope or purpose has occurred necessitating the need for a new congressional authorization. The increased/new non-Federal cost share also applies to those Section 205 projects whose Detailed Project Reports are approved after 12 October 1996, unless these projects have been specifically authorized in or prior to WRDA 1996.

(3) Deferred Payment. Additional funds needed to bring non-Federal contributions up to 25 percent of the cost of the nonstructural flood control features, may be paid over a 15-year period, or shorter period if agreed to by the ASA(CW) and non-Federal sponsor. Repayment shall begin on the date construction of the project or separable element is completed, and must include interest at the rate determined pursuant to Section 106 of WRDA 1986. However, full payment upon completion of construction is preferred.

c. Application to Projects Containing Both Structural and Nonstructural Elements. Costs will be allocated and shared in accordance with the formulas applicable to each element.

d. Special Cost Sharing Considerations.

(1) Betterments. Betterments are defined as changes in the design and construction of an element of a project resulting from the application of standards that the government determines exceed those that the government would otherwise apply for accomplishing the design

and construction of that element. Betterments desired by non-Federal sponsors that are related to the basic project and that can be accommodated in the construction of the basic project, may be approved for implementation, as part of the project, if non-Federal sponsors agree to provide any additional costs incurred by the Federal Government upfront prior to the Government incurring any obligations. Costs for betterments are not included in the total project cost estimate or economic evaluation.

(2) Comparable Features. In some projects, construction of the project and portions of the LERRD constitute approximately the same work. An example would be a bridge abutment constructed as part of a flood wall. If a clearly identifiable increase in construction costs results from these provisions (such as when abutment requirements exceed flood wall section requirements), the increased cost shall be included as part of the LERRD responsibilities and non-Federal sponsors shall contribute an equivalent amount in cash.

e. Emergency Flood Control Authorities. The cost sharing in Title I of WRDA 1986, as amended, does not apply to emergency operations and disaster assistance programs pursuant to Section 5 of the 1941 Flood Control Act (FCA), as amended. Flood control cost sharing in Title I is applicable to recommendations under the special continuing authorities provided by Section 14 of the 1946 FCA, as amended (see paragraph 15-3.c).

f. Ability-to-Pay (Section 103(m) of WRDA 1986,as amended by Section 202(b) of WRDA 1996). All local cooperation agreements for flood control projects, for which the cost sharing provisions of WRDA 1986, as amended by WRDA 1996, apply, are subject to the ability of the non-Federal sponsor to pay. Procedures for applying an ability-to-pay test were published as a Final Rule in the Federal Register, 2 October 1989, and are codified at 33 CFR 241. (ER 1165-2-121). Projects qualify for a reduction in the non-Federal share only if they meet the conditions of an "income test" (comparison of project area per capita income to national average) and a "benefit test" (comparison of one-fourth the benefit cost ratio to the normal non-Federal cost share requirement). The income test requires the use of the latest available information, which is perodically published in ECs by HQUSACE. An amendment to the ability-to-pay rule for flood control was published in the Federal Register, 26 January 1995. The amended rule establishes an eligibility for reductions in the non-Federal cost share using higher cost criteria. Projects which do not qualify for a reduction under the income and benefits receive additional consideration under the high cost test. (A proposed Final Rule further amending the amended ability-to-pay rule to reflect Section 202(b) of WRDA 1996 is in preparation)

6-6. Hydroelectric Power (Section 103(c)(1) of WRDA 1986). All costs associated with development of hydroelectric power at the site of a Corps project are borne, one way or another, by non-Federal sponsors. Current policy is to encourage non-Federal sponsors to undertake the development of the power potential at a Corps project under the Federal Energy Regulatory Commission (FERC) licensing process, and to pursue Federal development only where such non-Federal activity would be impractical. In those cases where non-Federal development is impractical and Federal development is authorized as part of a Corps multiple purpose project, a non-Federal sponsor is sought who will agree to provide the share of project development costs (joint and separable) allocated to the hydroelectric power purpose during the period of project construction in return for later reimbursement by

the Federal marketing agency out of revenues realized from sale of the power (allocated OMRR&R costs will be funded by the Corps and repaid to the U.S. Treasury out of the revenues also). In the event the development is undertaken without such a sponsor, all allocated hydroelectric power costs will be funded by the Corps and ultimately repaid to the U.S. Treasury out of the power revenues collected by the Federal marketing agency. (See paragraphs 16-3 and 16-9.)

6-7. Municipal and Industrial Water Supply (Section 103(c)(2) of WRDA 1986). For new construction of Corps multiple purpose projects in which municipal and industrial (M&I) water supply is one of the purposes (including unstarted projects previously funded for construction, resumptions, and separable elements of ongoing projects) all separable and joint costs allocated to that purpose must be provided by a non-Federal water supply sponsor during the period of construction. The sponsor is also responsible for the share of project OMRR&R costs allocated to M&I water supply. These costs are to be paid as they are incurred or in lump sum after completion of the work involved. The sponsor should be encouraged to establish a sinking fund in order to cover the replacement and rehabilitation costs when the occasion should arise. Non-Federal cost sharing and repayment arrangements required in connection with M&I water supply functions of completed Corps projects are discussed in paragraph 18-2.

6-8. Agricultural Water Supply (Section 8 of the FCA of 1944 and Section 103(c)(3) of WRDA 1986). When irrigation storage is included in a Corps reservoir pursuant to Section 8 of the Flood Control Act of 1944 (see paragraph 18-2.i), costs allocated to the irrigation purpose are funded by the Corps and ultimately repaid to the U.S. Treasury by the non-Federal users in conformity with reclamation law, under contract arrangements with the Department of the Interior. Section 8 authority is used only in the 17 western states to which reclamation law applies. Section 103(c)(3) of WRDA 1986 provides that non-Federal interests are to be responsible for 35 percent of costs (joint and separable) allocated to agricultural water supply purposes in a Corps project, to be paid during the period of construction, and for the allocated OMRR&R costs as they are incurred. Section 103(c)(3) applies to irrigation water outside the 17 western states and to other agricultural water supply functions in all areas. The non-Federal cost sharing requirements for agricultural water supply provided pursuant to this section are subject to the ability-to-pay provision in Section 103(m) of WRDA 1986,as amended by Section 202(b) of WRDA 1996. Related rules for applying an ability-to-pay test have not been formulated; policy questions should be addressed to HQUSACE (CECW-AA).

6-9. Recreation (Section 103(c)(4) of WRDA 1986). Cost sharing pursuant to Section 103(c)(4) of WRDA 1986 as applicable to recreational navigation improvements is covered in paragraph 6-4.c. The following policies are applicable to recreational elements of other Corps projects.

a. Investment Costs. The non-Federal share of the costs assigned to recreation, is 50 percent of the separable costs, to be paid during the construction period. Non-Federal sponsors must also provide all LERRD assigned to the recreation purpose and insure the performance of all necessary relocations. The value of these contributions is counted as part of the 50 percent non-Federal share of separable recreation costs.

b. Additional Cash Contribution. When the fair market value of the LERRD contributions for recreation is less than 50 percent of the separable recreation costs, the difference must be provided by non-Federal sponsors as a cash contribution during construction. When the fair market value of the LERRD contributions exceeds 50 percent of the separable recreation costs, the non-Federal share is limited to 50 percent (the Corps becomes responsible for the increment of LERRD which exceeds 50 percent of separable recreation costs).

6-10. Hurricane and Storm Damage Reduction (Section 103(c)(5) of WRDA 1986). Section 103(c)(5) designates cost sharing for the purpose of hurricane and storm damage reduction (HSDR). This introduced a new way of viewing shore protection projects which, prior to WRDA 1986, were viewed as either being for beach erosion control or for hurricane, tidal, and lake flood protection. Pursuant to Section 103(d), the costs of constructing measures for "beach erosion control" are now assigned to one of the basic purposes designated in Sections 103(a), (b) or (c). Normally this will be either HSDR or recreation. The following policies are applicable to HSDR shore protection projects.

a. Investment Costs. The non-Federal share of the costs assigned to HSDR (project or separable element) is 35 percent, to be paid during the construction period. Non-Federal sponsors must also provide all related LERRD requirements, the value of which (see paragraph 6-10.c, following) is counted as part of the 35 percent non-Federal share.

b. Additional Cash Contribution. When the value of the LERRD contributions for HSDR is less than 35 percent of the project costs assigned to HSDR, the difference must be provided by non-Federal sponsors as a cash contribution during construction. When the value of the LERRD contributions exceeds 35 percent of the assigned costs, the non-Federal share is limited to 35 percent (the Corps becomes responsible for the increment of LERRD which exceeds 35 percent of HSDR costs).

c. Valuation of LERRD. Non-Federal sponsors must provide all of the LERRD for shore protection projects, including borrow areas, at non-Federally-owned shores. The value of these items is included in the total project cost, and non-Federal sponsors receive equivalent credit against the non-Federal cost share. There are special considerations with respect to valuing the real estate interests involved.

(1) Lands, Easements, and Rights-of Way (LER) for Project Features. Private land holdings (LER) subject to shore erosion and required for project purposes must be appraised considering special benefits in accordance with relevant statutes and Department of Justice regulations implemented by ER 405-1-12. Generally, in the absence of the protective project features the shore would erode away and be lost. However, the non-Federal sponsor should receive credit for land values, if any, resulting from this special benefits analysis, in addition to administrative and/or other costs associated with the acquisition or condemnation of the requisite elements. The market value of the entire tract at the time of acquisition, excluding any enhancement or diminution from the project, is compared to the market value of the remainder property, including any benefits or diminution in value from the project. Public land holdings (LER) subject to shore erosion and required for project purposes must also be appraised considering special benefits, but any land values

developed in this analysis must be approved by CERE-E.

(2) Borrow Areas. Similarly, when a borrow area is provided by the sponsor as part of LERRD, the resource invested by the sponsor and available for credit against its share of project costs, is the net cost of the borrow area, which reflects the change in fair market value of the borrow area before and after its use. Only the net cost should be included in project evaluations and credited against the non-Federal cost sharing responsibilities. If a sponsor makes available a borrow area already in its ownership, the net value for crediting purposes will be established on the basis of borrow area appraisals before and after use for project borrow. Normally no credit will be given when offshore borrow areas are used, since the before and after market values are considered identical.

6-11. Aquatic Plant Control (Section 103(c)(6) of WRDA 1986). Costs are shared 50 percent Federal, 50 percent non-Federal (see paragraph 21-1).

6-12. Water Quality Enhancement (Section 103(d) of WRDA 1986). This legislation provides new cost sharing policy for water quality enhancement. The costs of measures for water quality enhancement are to be assigned to the appropriate project purposes and shared in the same percentage as the purposes to which the costs are assigned. Normally, costs for water quality enhancement will be assigned to the purposes of M&I and/or agricultural water supply, recreation, or fisheries enhancement.

6-13. Fish and Wildlife Mitigation (Section 906(c) of WRDA 1986). Costs incurred after 17 November 1986 will be allocated among the authorized purposes which caused the requirement for mitigation, and cost shared to the same extent as other project costs allocated to these purposes. However, no cost sharing will be imposed without the consent of the non-Federal sponsor where contracts have previously been signed for repayment of costs unless such contracts are complied with or renegotiated. Non-Federal sponsors are also required to provide all LERRD where this is a requirement of the purpose which necessitates the mitigation, except where it is otherwise agreed that the Corps will provide them using non-Federal funds.

6-14. Fish and Wildlife Enhancement (Section 906(e) of WRDA 1986 as amended by Section 107(b) of WRDA 1992).

a. When the Secretary of the Army recommends fish and wildlife enhancement in reports to Congress, the first costs are all Federal when any of the following apply (different provisions may apply to previously completed or authorized projects; see paragraph 19-5.b):

(1) Enhancement benefits are determined to be national in character;

(2) Enhancement is designed to benefit species that have been listed as threatened or endangered by the Secretary of the Interior; or

(3) Enhancement activities will be located on lands managed as a national wildlife refuge.

b. When enhancement benefits do not qualify as above, non-Federal sponsors are responsible for 25 percent of the first costs associated with these benefits, paid during implementation.

c. In all cases, the cost of operation and maintenance is the responsibility of the agency that manages the land for fish and wildlife purposes. (ER 1105-2-100, Chapter 4, Section VIII, Fish and Wildlife Enhancement, Paragraph 4-37, Federal and Non-Federal Participation)

6-15. Deferred Payments by Non-Federal Sponsors. The cost sharing established by WRDA 1986 specifies: (1) non-Federal payments to the Federal Government for its share of the cost of works accomplished under Federal control; and (2) non-Federal accomplishment of certain activities such as provision of LERRD. The general concept to be followed is for each party to provide its share of cost shared work prior to initiation of that work and for each party to produce its separate work activities in a time frame that permits efficient accomplishment of the overall effort (pay-as-you-go). The legislation does, however, make provision for deferral of certain non-Federal payments, most of which are at the discretion of the ASA(CW). Certain conventions have been adopted for computing interest charges for non-Federal payments made later than they would have been made under the "pay-as-you-go" concept described above. (ER 1165-2-131)

6-16. Environmental Protection (Environmental/Ecosystem Restoration). Section 306 of WRDA 1990 authorizes the Secretary of the Army to include environmental protection as one of the primary missions of the Corps. Section 307(a), WRDA 1990, establishes "no net loss of wetlands" and an "increase in the quality and quantity of the nations wetlands" as goals of the water resources development program. However, neither section provides a specific new authority to study, construct or implement specific measures. Section 210 of WRDA 1996 establishes the cost sharing for ecosystem (environmental) protection and restoration projects by amending Section 103(c) of WRDA 1986 to add environmental protection and restoration to the list of project purposes and establishes the the non-Federal share as 35 percent. Current Corps policy on cost sharing for ecosystem restoration improvements proposed for congressional authorization (i.e., projects authorized after 12 October 1996) is 50 Federal/50 percent non-Federal for feasibility study, 65 percent Federal/35 percent non-Federal for implementation (preconstruction engineering and design, construction) including separable elements, and 100 percent non-Federal for operation, maintenance, repair, rehabilitation, and replacement (OMRR&R). The non-Federal sponsor provides all LERRDs and the value of the LERRDs are included in the non-Federal 35-percent share. Where the LERRDs exceed the non-Federal sponsor’s 35-percent share, the sponsor will be reimbursed for the value of the the LERRDs that exceed the 35-percent non-Federal share. Section 103 of WRDA 1986, as amended, makes no provision for work-in-kind and the non-Federal sponsor 35-percent share, after appropriate accounting for LERRD and required non-Federal sponsor project coordination activities under the terms of the Preconstruction Engineering and Design Agreement and PCA, will be provided in cash during construction. Section 206 (of WRDA 1996) Aquatic Ecosystem Restoration projects (with Federal costs limited to $5 million per project) are also cost shared 65 percent Federal/35 percent non-Federal for implementation costs and 100 percent non-Federal for LERRDs and OMRR&R costs. However, Section 1135 (of WRDA 1986) and Section 204 (of WRDA 1992) projects are cost shared 75 percent Federal/25 percent non-Federal for both feasibility study costs and implementation costs, and 100 percent non-Federal for

the incremental OMRR&R.

6-17. Hazardous, Toxic, and Radioactive Wastes (HTRW). Expending Civil Works funds is to be avoided for remediation of HTRW. Construction of Civil Works projects in HTRW-contaminated areas should be avoided where practicable. The reconnaissance and feasibility study for each project will routinely include a phased and documented review to provide for early identification of HTRW potential. Studies to determine the the existence and extent of HTRW problems will be treated as study cost and shared accordingly. Investigations for the purpose of identifying the existence and extent of any HTRW performed during PED (i.e., prior to execution of the PCA) will be performed by the Federal Government, and these costs will be included in total project costs and cost shared in accordance with the basic project purpose. However, where hazardous substances regulated under CERCLA are found to exist, the non-Federal sponsor shall be responsible for any subsequent studies and investigations required to determine the appropriate response and clean up actions. Should HTRW be discovered on lands required for the project, the non-Federal sponsor shall not proceed with land acquisition until mutually agreed upon by both parties. If the land has already been purchased, the Federal Government and the non-Federal sponsor shall decide whether to proceed with construction.

a. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Regulated Contaminants. The design and construction of remediation measures for CERCLA regulated contaminants will be the responsibility of the project sponsor and the cost will not be considered a project cost nor will the sponsor receive credit for any HTRW response costs. The non-Federal sponsor must indemnify the Government for all response costs for which the Government is found liable under CERCLA, except for such response costs or clean up costs which result from negligence of the Government or its contractors during construction. If a decision is made to avoid an HTRW site by redesigning the project (e.g., realignment of a channel or levee), the costs of redesigning and constructing the change will be cost shared in accordance with the basic project purpose, even if the realignment option costs more to construct. For projects which are not cost shared, any necessary HTRW costs will be a part of project cost. ER 1165-2-132 provides details for consideration of HTRW potential at Civil Works projects.

b. Non-CERCLA Regulated Contaminants. For all contaminants not regulated under CERCLA, but for which there is a validly promulgated Federal, state, or local requirement necessitating special action which would apply to the Government and others pursuing similar initiatives, the cost of the special action necessary to comply with the requirements will be included in project costs and will be shared as a construction cost in accordance with the cost sharing provisions of WRDA 1986. Land value credited to a non-Federal sponsor will be the fair market value of the land in the condition acquired, considering any contamination that may be present. Investigations will be undertaken during the planning phase to indicate the presence of contaminated material in the project area. Any required action (e.g., remediation, treatment, handling, disposal) will be included in the design and cost estimate as part of the project. If, prior to initiation of project construction, the non-Federal sponsor wishes to accomplish the required action, the action is considered to be a separate undertaking, independent of the Civil Works project. Therefore, for project cost and economic analysis the value of the land is the fair market value after the required action. The non-

Federal sponsor receives credit for the fair market value of the land after the required action, but does not receive credit for the cost of undertaking the required action.

6-18. Dam Safety Assurance. Dam safety assurance modifications are those modifications which are required by new hydrologic or seismic data or changes in state-of-the-art design or construction criteria deemed necessary for safety purposes. These criteria are defined more specifically in ER 1110-2-1155. Work that does not meet these criteria is accomplished as maintenance or as major rehabilitation. All dam safety assurance modifications are subject to the cost sharing requirements of Section 1203 of WRDA 1986:

a. Section 1203(a)(1). Costs incurred in dam safety assurance modifications shall be recovered: Fifteen percent of the cost of the modification is to be assigned to project purposes in accordance with the cost allocation in effect for the project at the time the modification is initiated, and shared in accordance with cost sharing in effect at the time of initial project construction. Costs assigned to irrigation will be recovered by the Secretary of the Interior in accordance Public Law 98-404. The basis for cost sharing will be the cost sharing for the basic project, based on a cost allocation, project or local cooperation agreement, letter of assurance from a local interest, or contract for use of storage, whichever was used for initial project construction cost sharing or for subsequent reallocation.

b. Section 1203(a)(2). Repayment of costs, except for costs assigned to irrigation, may be made, with interest, over a period not to exceed 30 years from the date of completion of the work.

c. Cost Recovery. Recovery of the non-Federal share of the dam safety assurance modification cost will be determined by the current arrangement for project cost recovery. For costs which are reimbursable through the sale of power, the share of dam safety cost will be reported to the power marketing agency for recovery in the same manner as major rehabilitation costs. For cost sharing based on a project local cooperation agreement which does not have a provision for dam safety cost sharing, the agreement will need to be modified to include the dam safety costs, or a new agreement will be required. Where the project cost sharing was based on a letter of intent, an agreement will be negotiated with the sponsor. In the case of water supply, the existing contract may need to be modified, or a new contract signed to cover the dam safety cost sharing. If no current agreement addresses this cost, the sponsor may elect to repay the cost, with interest, over a period of 30 years.

6-19. Correction of Design or Construction Deficiencies. Proposals for correction of design or construction deficiencies evident in completed Corps projects will be cost shared as follows:

a. A reconnaissance-type initial appraisal and report will be made at full Federal expense. This reconnaissance report will serve as the decision document.

b. If a proposal for corrective measures is made and adopted, involving cost sharing, a PCA to cover the cost sharing requirements shall be executed prior to accomplishment of further work on the adopted project. Consistent with this guidance, the PCA shall provide that:

(1) All further preconstruction engineering and design work will be cost shared in the same percentages as specified in Public Law 99-662 for the project purposes.

(2) Construction costs will be shared in the same percentages as specified in WRDA 1986, as amended, for the project purposes.

c. Provision of the non-Federal share of preconstruction engineering and design costs may be deferred until the first year of corrective measures construction. The non-Federal share of the construction costs will be provided, in each year of construction, proportionate to the anticipated Federal expenditures in that year.

CHAPTER 7

REPORT PREPARATION, PROCESSING AND PROJECT AUTHORIZATION, DEAUTHORIZATION

7-1. Preauthorization Planning Reports.

a. Types and Objectives. Feasibility studies are undertaken in response to specific Congressional direction or other available authority, with the basic objective of formulating recommendable solutions to water resources problems. Several kinds of planning reports are prepared, depending on the genesis of the study, to document results and seek project authorizations.

(1) Feasibility (Survey) Report. This report is prepared in partial or full response to a Congressional study authority. (When in partial response it is referred to as an "interim" feasibility report, unless it follows one or more such reports and completes response to the study authority. Then it is referred to as the "final" feasibility report.)

(2) Section 216 Report. This is a feasibility (survey) report to Congress recommending changes to a completed project. Decision to undertake feasibility studies and prepare a report rests with the Corps. Such reports are authorized by Section 216 of the Flood Control Act of 1970.

(3) Fish and Wildlife Report. This is a report to Congress recommending the addition, to an authorized project, of land acquisition and other measures for fish and wildlife purposes as warranted but not provided for in the project authority. Such reports are prepared under authority of Section 2 of the Fish and Wildlife Coordination Act or, if the project is complete, under Section 216.

b. Organization and Content. It is intended that each report be a complete decision making document. Detail shall be sufficient to fully support the essential analyses and conclusions of the study, to support the recommendations, and to enable reviewers to understand the rationale for the conclusions and recommendations. The main report will describe and summarize the results of studies so that, in combination with conclusions and recommendations, it will constitute a cohesive, readable document easily understood by interested laymen. The report shall demonstrate conformance with WRC's Principles and Guidelines (P&G) including suitable consideration of the National Environmental Policy Act (NEPA) and other environmental statutes. If recommendations are for authorization of a Federal project or other overt Federal action, the main report will incorporate a concise environmental assessment (EA) or environmental impact statement (EIS) whichever is most appropriate. Particular care shall be given to so writing the report recommendations that, should Congressional authorization be provided by reference thereto, there can be no doubt about what was intended and what is authorized. (See paragraph 5-13)

c. Study Conduct. Feasibility studies will be conducted in two phases to provide a mechanism to accommodate greater non-Federal participation in Corps feasibility studies. The reconnaissance (first) phase will provide a preliminary indication of the potential of the study to yield solutions which could be recommended to the Congress as Federal projects. The results will provide the basis for evaluation, within and outside the Corps and the Administration, of the merits of continuing the study and allocating feasibility phase

funds. The reconnaissance phase is expected to accomplish the following four essential tasks:

(1) Determine that the water resource problem(s) warrant Federal participation in feasibility studies. Comprehensive review of other problems and opportunities is deferred to feasibility studies.

(2) Define the Federal interest based on a preliminary appraisal consistent with Army policies, costs, benefits, and environmental impacts of identified potential project alternatives.

(3) Prepare a Management Plan.

(4) Assess the level of interest and support from non-Federal entities in the identified potential solutions and cost sharing of feasibility phase and construction. A letter of intent from the non-Federal sponsor stating the willingness to pursue the feasibility study described in the Management Plan and to share in the costs of construction is required.

The reconnaissance phase shall be based on the P&G and the needs of prospective non-Federal sponsors. The outputs of the reconnaissance phase are a Section 905(b) (WRDA 86) Preliminary Analysis and a Management Plan. The feasibility (second) phase will be conducted under current Federal guidelines and statutes and will result in a feasibility report with a recommendation to Congress. This two-phase procedure is intended to result in concentration of resources on those studies with substantial non-Federal support, and should increase the proportion of completed studies that lead to implementation of projects.

d. Programming. Feasibility studies, once initiated, are to be prosecuted with a view to completion in as short a period as possible and at the least cost consistent with achieving sound, professional determinations and quality reports. The reconnaissance phase should be scheduled for completion within 6-12 months from initial obligation of funds to a signed Feasibility Cost Sharing Agreement (FCSA). The feasibility phase should, normally, be completed in no more than three years from the date of the first allotment of funds after completion of the reconnaissance phase. Reporting officers must be alert to the need to terminate study at any time when accumulated information establishes this is advisable. When no recommendation for Federal action can be made, the goal is nevertheless to conclude the study in such a way that a useful product can be provided to non-Federal interests. Report organization will be the same as for reports in which Federal action is recommended, but abbreviated to the essential information needed to support the recommendation, consistent with the level of study. It may, however, be expansive enough to record any basic data developed in the course of study which might be of future use to local interests.

7-2. Processing and Review of Preauthorization Planning Reports.

a. Assignment. Investigations of potential water resources projects by the Corps are commonly authorized in acts or resolutions of Congress. After the President has signed a Congressional Act authorizing an investigation, or after the Chief of Engineers has received formal notification of a committee resolution authorizing an investigation, the Chief of Engineers normally assigns the task of report preparation to (1) the division which has jurisdiction in the area subject to investigation, who in turn, assigns the task to the

district for the location; or (2) the Mississippi River Commission, in the case of localities under jurisdiction of that commission, who then will normally assign the task to the district for the location.

b. Single Review. Feasibility reports will be reviewed only once. Technical review is accomplished at the district level, and policy compliance review is accomplished at HQUSACE. HQUSACE policy compliance review focuses on underlying assumptions, conclusions and recommendations, and analyses in the context of established policy and guidance. Districts are responsible for the quality and accuracy of the technical aspects of the feasibility report. Major Subordinate Commands are responsible for quality assurance of the district review process. The goal is to resolve issues and policies as they arise during the course of the feasibility study rather than identifying and resolving issues after the feasibility report is prepared.

c. HQUSACE Policy Compliance Review. Transmittal letters forwarding the feasibility report are sent to the Director of Civil Works with a copy to the Chief of Planning Division. Concurrently copies of the feasibility report and transmittal letter will be sent to the Policy Division (CECW-A) for initiation of the policy compliance review. HQUSACE goal is to initiate the state and agency review as soon as possible after receipt of the feasibility report and complete all other HQUSACE review actions necessary to process the report immediately after the state and agency review period expires. HQUSACE policy compliance review of feasibility reports will concentrate on the adequacy of district compliance with the Project Guidance Memorandum. After completion of the state and agency review, and after HQUSACE has completed its review of the final feasibility report, the Chief of Engineers will sign the final Chief's Report and transmit the report package to the Assistant Secretary of the Army for Civil Works (ASA(CW)).

d. Consideration by Office Management and Budget (OMB). The report package, along with a copy of ASA(CW)'s proposed letter of transmittal to Congress, is furnished to OMB by the Office of the Assistant Secretary for review and determination of the relationship to the program of the President. (Executive Order 12322)

e. Submission by the Secretary of the Army. ASA(CW)'s letter transmits the report of the Chief of Engineers and accompanying papers, including a letter from OMB setting forth its views, to Congress. This constitutes the final step in the processing of feasibility studies authorized by Congress.

7-3. Authorization of Plans for Improvements. Projects undertaken under the Civil Works program receive specific authorization by legislative action of the Congress, except for projects under certain continuing or special authorities. Upon receipt of a report in Congress, it is referred to the Senate Environment and Public Works Committee (SEPWC) and House Transportation and Infrastructure Committee (HTIC). Reports that contain recommendations for authorization or information which should be made readily available for future reference are printed as a House or Senate Document and become the basis for Congressional authorization action. Reports which do not contain recommendations for authorization are usually not printed but are available to the committees for consideration. The committees or individual members of Congress may introduce a special bill proposing authorization of a particular project. Usually, the reports are accumulated and are considered by the committees for inclusion in an omnibus authorization bill. However, projects of less

than $15 million Federal cost may be approved by resolutions of both Committees.

a. Congressional Hearings. The SEPWC and HTIC establish a schedule of hearings. Each report is discussed at their hearings to permit the Corps to present a brief summary of information and to permit interested members of Congress, other Federal agencies, the States and the public, opportunity to present their views.

b. Authorization of Projects under $15 million Federal Cost. Section 201 of the 1965 Flood Control Act, Public Law 89-298, as amended, provides a procedure for authorization of projects with an estimated Federal first cost of construction of less than $15 million. Under the Section 201 procedures, qualifying projects may be authorized upon adoption of approval resolutions by both SEPWC and HTIC. The decision to recommend authorization in accordance with Section 201 is made by the Secretary of the Army. Such recommendation is made in the letter transmitting the study report to Congress. Use of this authority will be recommended by the Secretary of the Army only in those cases where there is little or no controversy and there is no departure from established policy.

7-4. Preconstruction Engineering and Design. Preconstruction studies are required to establish the basic design of the project features in final detail. The further planning and engineering study and reporting efforts required subsequent to completion of the preauthorization feasibility report are discussed in Chapter 9.

7-5. Deauthorization Review Program.

a. Studies. Section 710 of WRDA 1986 requires an annual Corps submission to Congress of a list of authorized but incomplete preauthorization feasibility studies which have not had funds appropriated during the preceding five full fiscal years. Submission of the list will not constitute a recommendation for deauthorization, but merely fulfillment of the requirement to provide a list of studies that meet the criteria for listing as set by Congress. Congress then has until 90 days after its submission to appropriate funds for studies on the list. Any studies which do not have funds appropriated before the end of the 90-day period will, thereafter, no longer be authorized.

b. Projects. The provisions of Section 1001 of WRDA 1986 provide for automatic deauthorization of projects specifically authorized by Congress. They supercede all requirements and provisions of Section 12 of Public Law 93-251, as amended.

(1) Section 1001 provides criteria for submission of a list to Congress identifying any unconstructed project or separable element that has not had funds obligated during 7 full fiscal years. Submission of the list does not constitute a recommendation for deauthorization, but rather fulfillment of the requirement to submit a list of projects meeting the criteria set by Congress. A project or separable element on the list which does not have funds obligated within the 30-month period following submission of the list to Congress is no longer authorized after that period. A list of those projects and separable elements meeting the Section 1001 criteria is required every two years.

(2) Pursuant to Section 1001, the lists of projects and separable elements deauthorized in accordance with (1) above, will be published in the Federal Register.

CHAPTER 8

PROGRAMMING, BUDGETING AND APPROPRIATIONS

8-1. Program Development.

a. General. The Corps of Engineers' annual recommendation for the Civil Works Program is submitted by the Assistant Secretary of the Army for Civil Works (ASA(CW)) to the Office of Management and Budget (OMB) for review in behalf of the President. The recommendation is prepared in HQUSACE in consultation with the ASA(CW) after review and analysis of recommendations of the division commanders. Submissions are based on principles and requirements outlined in the annual program guidance and OMB circulars. OMB places specific ceilings on overall funding, associated employment strength, and spending for the Civil Works program .

b. Agency Submission. Agencies of the Executive Branch of Government develop recommendations for the President's Program and Budget in compliance with the guidelines set forth in OMB Circular A-11, and within overall funding and spending ceilings set by OMB. The Corps publishes its own annual program guidance incorporating requirements of OMB Circular A-11 and policy and related guidance of HQUSACE and ASA(CW). Existing activities (projects, studies, programs) are reexamined to determine their validity and necessity. Each activity is rejustified as to funding, manpower requirements, and spending each time a program is prepared. The process involves assigning a priority to individual studies and projects.

c. OMB Passback. The Corps of Engineers recommended Civil Works Program is defended by ASA(CW) and HQUSACE at hearings before OMB. Following the hearings, OMB reviews and revises the recommended program in accordance with then prevailing objectives and criteria of the Administration. The program is evaluated against recommended programs of other agencies to determine its relative performance in meeting the Administration's requirements. OMB “passes back”, through ASA(CW), tentative overall funding, employment, and spending allowances for programs, studies, and projects; and other guidance, as conditions warrant. ASA(CW), together with HQUSACE, reviews the OMB passback and submits one or more appeals, as warranted. Subsequently, the President’s Program and Budget are prepared and submitted to the Congress, usually in February.

d. Program Defense and Congressional Hearings. Following establishment of the President's Program and Budget, the Corps prepares supporting data and defends the President's Program and Budget at hearings before the House and Senate Appropriations Committees. The Corps fully supports the President's Program and Budget. Testifying Officers do not encourage appropriations in amounts different than budgeted. Congress reviews and revises the President's Program and Budget based on then prevailing objectives of the Congress. The Congress has established a budget process and timetable for completing specific activities towards establishing the annual appropriation and revenue amounts. The Congressional Budget and Impoundment Control Act of 1974 (Public Law 93-344), as amended, principally by Title XIII (Budget Enforcement Act) of the Omnibus Budget Reconciliation Act of 1990 (Public Law 101-508), establishes these requirements.

e. Capabilities.

(1) The capability for any specific project or study is the maximum amount of funding that could be used efficiently in the fiscal year if that project or study were the first added increment over the recommended program for a given district. The capability amount does not reflect budgeting or fiscal constraints, but does reflect manpower constraints, sound engineering practice and the timing of funds availability. If a district has the capability to initiate or increase funding for any study or project in addition to the basic program, it normally would have a capability to initiate or increase any other study or project, unless there are specific factors justifying a zero capability or lack of increase.

(2) Capability amounts may be released to anyone but only in response to a specific request. Capability amounts are not volunteered. They are expressed in accordance with formally specified language. Part of that language notes that while the Corps can use additional funds on individual projects and studies, offsetting reductions would be required to maintain overall budgeting objectives. (ER 11-2-240, ER 11-2-220)

f. Disclosure of Budgetary Information. All budgetary data, such as the budget recommendations of the district commanders, the division commanders, the Chief of Engineers, and the Secretary of the Army are of a confidential nature. These data are not to be released outside of the Department of the Army, except in response to specific questions from Congressional Committee members and staff during official testimony on the President's Budget requests. When all hearings on the President's Program and Budget have been completed by the Appropriations Committees of Congress, disclosure is then only in response to a written request from a Member of Congress to the Director of Civil Works. The President's Budget amounts are not disclosed until after the budget message is presented to the Congress. In those cases where OMB releases budget amounts to congressional committees prior to presentation of the budget message, those amounts may be discussed with members and staff of those committees only. Budgetary records may be disclosed to the public, if otherwise appropriate, upon request pursuant to the Freedom of Information Act following the end of the fiscal year to which such information pertains. (ER 11-2-240, ER 11-2-220, ER 360-1-1)

8-2. Appropriations.

a. General. The Corps policy is to allocate and use appropriated funds as closely as practicable in accordance with the program presented to the Congress, including any modifications by the Congress in its action on the Appropriations bill. Allowances for surveys and projects agreed to by the conferees at the time of passage of the annual Energy and Water Development Appropriations Bills are referred to as appropriations, even though these amounts are subject to reductions when making final allocations to district commanders. The reduction is necessary to distribute an overall Appropriation Title reduction for "savings and slippage" and other undistributed reductions applied by Congress to the total of the individual allowances.

b. Deferral and Rescission Actions Under Public Law 93-344.

(1) Deferrals. Deferrals are the withholding or delaying of obligation or expenditure of budget authority provided for projects or activities. Deferrals also include any other type of Executive action or inaction which effectively precludes the obligation or expenditure

of budget authority. Whenever the President, the Director of OMB, the head of any department or agency of the United States, or any other officer or employee of the United States proposes to defer any budget authority provided for a specific purpose or project, the President shall transmit to the House of Representatives and the Senate a special message. A deferral may not be proposed for any period of time extending beyond the end of the fiscal year in which the special message proposing the deferral is transmitted to the House and the Senate. Any amount of budget authority proposed to be deferred shall be made available for obligation if either House of Congress passes a resolution disapproving such proposed deferral. Otherwise, the funds proposed for deferral become available at the start of the next fiscal year or on the earlier date specified in the deferral message.

(2) Rescissions. Rescissions are the permanent withdrawal of funding authority because such authority is not required to carry out the full objectives and scope of the appropriations concerned. A rescission differs from a deferral in that there is no intent ever to spend the funds being proposed for rescission. In effect, it is a de-appropriation. A rescission message to Congress is required whenever the President determines that all or part of any budget authority will not be required to carry out the full objectives or scope of programs for which it is provided or that such budget authority should be rescinded for fiscal policy or other reasons (including the termination of authorized projects or activities for which budget authority has been provided), or whenever all or part of budget authority provided for only one fiscal year is to be reserved from obligation for such fiscal year. The President is required to transmit to both Houses of Congress a special message. Congress must pass a resolution within 45 days for a rescission to be implemented.

c. Reprogramming.

(1) The Appropriations Committees have delegated to the Chief of Engineers the authority to reprogram funds among projects in the construction category, not to exceed 15 percent of the amount available for obligation to a project for any fiscal year, including the Conference allowance plus the unobligated balance at the beginning of the fiscal year. An exception to the percent limitation permits the reprogramming of up to $300,000 for projects on which the amount available for the fiscal year is $2,000,000 or less. A second exception permits the reprogramming of up to $5,000,000 for settled contractor claims, accelerated contractor earnings, or real estate deficiency judgments. Reprogramming beyond these limits must be coordinated with the Appropriations Committees. Funds cannot be reprogrammed from one appropriation account to another without an act of Congress such as a supplemental appropriation. (ER 11-2-201)

(a) Surveys and Preconstruction Engineering and Design reprogramming are approved on a different basis. The minimum reprogramming authority is $25,000 in any case. Where existing allowances equal or exceed $25,000, the reprogramming authority is 100 percent up to $50,000 and 25 percent of the increment over $50,000, not to exceed a total of $150,000.

(b) Reprogramming within the above cited limits is made only to those projects and surveys which have previously received an approved allocation through the budgetary process.

(c) Unless specifically limited by Congress, reprogramming between operations and maintenance items is without limit and is

approved on a case-by-case basis considering the urgency, justification, and availability of funds.

(2) District and Division Commanders Authority. Within the reprogramming authorities of the Commander, USACE, division and district commanders have been delegated authority to reprogram, within limits prescribed by HQUSACE, to optimize program progress within Administration and Congressional guidelines. (ER 11-2-201)

d. Overprogramming. Overprogramming is the establishment of progress goals slightly higher than possible by use of then available funds. For high priority activities, division commanders are encouraged to prepare advance plans for application of additional funds, should such funds become available for reprogramming due to unanticipated slippages in other similar activities. The purpose of overprogramming is to provide better utilization of current year funds and to reduce carryovers of unobligated and unexpended balances. Overprogramming of activities must be consistent with anticipated funding in the following fiscal year. (ER 11-2-240)

8-3. Budget Year New Starts. The Corps budget recommendation to OMB each year includes a separate section of the budget memorandum which identifies each new start in many subprograms. These include reconnaissance studies, preconstruction engineering and design, construction of specifically authorized projects, major rehabilitation of federally maintained projects, reconstruction of non-Federally maintained projects, and large Revolving Fund items, such as dredges. Also considered under the Other New Starts category are separable elements of continuing construction projects, deficiency corrections, resumptions of construction, and initiation of construction of previously funded new starts. Current budget procedures involve a joint effort of the staffs of the Chief of Engineers and ASA(CW) in developing criteria for selection of each category of new starts to be recommended to OMB for inclusion in the President's Budget. These criteria are published each year in the budget guidance for the year. The selection is made so as to fit, together with the continuing program, within the budget ceiling which OMB had established for the budget year.

8-4. Classification of Projects. The inventory of uncompleted authorized projects is divided into three categories, "Active," "Deferred," and "Inactive." (ER 11-2-240)

a. Classification Criteria.

(1) "Active" Category. Projects considered to be necessary and economically justified; engineeringly feasible without requiring modification of the authorized plan beyond the discretionary authority of the Chief of Engineers; generally supported by local interests; and with no anticipated major problems of compliance with requirements of local cooperation.

(2) "Deferred" Category.

(a) Projects for which a restudy is necessary to determine whether they are economically justified.

(b) Projects not opposed by local interests, but for which local interests are currently unable to furnish the required cooperation.

(c) Projects whose authorized plan could be significantly affected by an authorized survey investigation and, therefore, should not be undertaken pending the outcome of the survey and Congressional action based thereon.

(3) "Inactive" Category.

(a) Authorized projects with obvious lack of economic justification and for which it is apparent that a current restudy would not develop an economically justified plan;

(b) Projects which, as authorized, are not adequate to meet current and prospective needs, and which would require such substantial modifications and involve such increased costs to obtain an adequate improvement that they should not proceed without new authorization.

(c) Projects generally opposed by local interests, or for which there is no reasonable prospect that the required local cooperation will be forthcoming.

(d) Projects, or parts thereof, which have been accomplished by local interests, or another agency, or which have been superseded by another project, or for other reasons are no longer required.

b. Reclassification. Recommendations for reclassification of projects may be made by district commanders as the need develops. The division commander is the approval authority for all reclassifications to deferred or inactive. Requests for reclassification to active must be approved at HQUSACE (CECW-P). (ER 11-2-240)

8-5. Acceptance and Return of Contributed or Advanced Funds.

a. Categories.

(1) "Required Contributed Funds" are provided by non-Federal interests as specified in the authorizing project document and included in the terms of the project cooperation agreement, to be used in association with Federal funds, for the accomplishment of authorized Federal project construction work.

(2) "Non-required Contributed Funds" are gratuitously provided by non-Federal interests (i.e., there is no requirement to contribute, no repayment, and no credit) to be used, in association with Federal funds, for accomplishment of portions of an authorized Federal project (i.e., a project which has been authorized by a Water Resources Development Act or similar Act, or authorized for planning and design by House and Senate resolutions).

(3) "Contributed Funds, Other" are provided by non-Federal interests to be used, in association with appropriated Federal funds, for constructing a special feature of an authorized Federal project desired by non-Federal interests, for locally desired betterments, or for improvements intended to be accomplished by non-Federal interests with their own resources.

(4) "Advanced Funds" are non-Federal funds contributed in the absence of Federal project funding to finance Federal construction of all or part of an authorized Federal project.

(5) "Other Non-Federal Funds" are non-Federal funds received for acquiring lands, easements, and rights-of-way or performing relocations required to be provided by and which are the obligation of non-Federal interests pursuant to the terms of project cooperation agreements (PCAs), or for design and/or construction of facilities physically related to the authorized Federal project and desired by the non-Federal sponsor, including betterments.

b. Acceptance. District commanders are authorized to accept "Required Contributed Funds" once a PCA has been executed. District commanders are authorized to accept "Other Non-Federal Funds" pursuant to the terms of relocation agreements or agreements with non-Federal interests as provided in PCAs. Action by ASA(CW) is required prior to acceptance of "Non-required Contributed Funds," "Contributed Funds, Other," and "Advanced Funds." "Non-required Contributed Funds" and "Contributed Funds, Other" cannot be accepted until Federal funds have been appropriated for the work to which they relate and until informing the Appropriations Committees of the Congress of such proposed action. The authority to accept “Non-required Contributed Funds” and “Contributed Funds, Other” in the amount of $2,000,000 or less may be exercised by district commanders for certain actions under the Operations and Maintenance (O&M) Program (See paragraph 10 of ER 1165-2-30). The authority to accept "Advanced Funds" shall be exercised by district commanders only after prior approval by HQUSACE, the ASA(CW), OMB, and notification of the Appropriations Committees of the Congress prior to negotiation of the agreement for advanced funds. (See paragraph 11 and Appendix A of ER 1165-2-30)

c. Return. Action by ASA(CW) is required for the return (refund or repayment) of all "Advanced Funds" contingent upon availability of the funds. Authority for return of excess or unused portions of contributed funds is normally granted concurrently with approval for acceptance. District commanders are authorized to return unused portions of "Required Contributed Funds", "Non-required Contributed Funds," "Contributed Funds, Other," and "Other Non-Federal Funds" as part of the final settlements of non-Federal cooperation requirements and relocation agreements. (ER 1165-2-30, ER 37-2-10)

d. Time and Manner of Payment. Unless otherwise specifically set out in authorizing documents or general legislation, contributions will be received prior to initiation of construction of facilities to which they apply. In the event the project is programmed for accomplishment over a considerable period of time, escrow arrangements may be established. In addition, Section 40 of the Water Resources Development Act of 1974 authorized annual installment payments of "Required Contributed Funds" during the construction period. When escrow accounts are established, sufficient funds are deposited in the Federal Treasury to cover the non-Federal share of the work prior to obligation of funds. (ER 1165-2-30)

8-6. Credit or Reimbursement for Non-Federal Work on Projects. Pursuant to Section 215 of the Flood Control Act of 1968 (Public Law 90-483), as amended, ASA(CW) may execute agreements providing for credit or reimbursement to states or political subdivisions thereof for construction work undertaken at authorized projects. As provided in Section 215, reimbursement may take the form of cash repayment or crediting the non-Federal sponsor for an equivalent reduction in the project contributions the local sponsor would otherwise be required to make pursuant to a PCA for the project. In practice, the non-Federal interests will be initially compensated by crediting the value of their work against the local contributions toward the Federal project

required by the governing legislation (credit cannot, however, be given against the minimum 5 percent cash contribution required for structural flood control projects). Reimbursement by a cash payment will be allowed only to the extent the value of their work exceeds the total of required non-Federal contributions against which credit may be given. (ER 1165-2-18)

a. Limits. The Section 215 authority will not be used in connection with projects authorized under continuing authorities. Use is limited to projects specifically authorized by Congress and cases that meet all of the following conditions:

(1) The work, even if the Federal Government does not complete the authorized project, will be separately useful or will be an integral part of a larger non-Federal undertaking that is separately useful;

(2) The work done by the non-Federal entity will not create a potential hazard;

(3) Approval of the proposal will be in the general public interest;

(4) Only work commenced after project authorization and execution of a Section 215 agreement is eligible for reimbursement or credit;

(5) Proposed reimbursement (credit and/or repayment) will not exceed the greater of $5 million or 1 percent of total project costs and is limited to the amount that the district commander considers a reasonable estimate of the reduction in Federal project expenditures resulting from the construction of the project component by the non-Federal entity. (The $5 million limitation is set by Section 224, WRDA 1996, Public Law 104-303, and the 1-percent limitation is set by Section 12, WRDA 1988, Public Law 100-676.)

b. Congressional Notification. Before negotiation of an agreement under Section 215 begins, the ASA(CW) will inform the Chairman (Senate and House), Subcommittee on Energy and Water Development, Committee on Appropriations of the proposed arrangements.

c. Timing of Reimbursement. Any reimbursement shall depend upon appropriation of funds applicable to the project and shall not take precedence over other pending projects of higher priority. (ER 1165-2-18)

CHAPTER 9

PRECONSTRUCTION ENGINEERING AND DESIGN AND ENGINEERING DURING CONSTRUCTION

9-1. Preconstruction Engineering and Design Studies (PED). This phase of project development encompasses all planning and engineering necessary for project construction, after release of the Division Engineer's Public Notice on a favorable preauthorization study. These studies are required to review the earlier study data, obtain current data, evaluate any changed conditions, establish the most suitable plan for accomplishment of the improvement and establish the basic design of the project features in final detail. Preconstruction planning and engineering studies for projects authorized for construction will be programmed as "continuing" activities. For projects authorized for planning, engineering and design only by the Water Resources Development Act (WRDA) of 1986, studies will be budgeted only after "new start" selection by the Assistant Secretary of the Army for Civil Works (ASA(CW)) and concurrence by the Office of Management and Budget (OMB). The results of preconstruction planning and engineering studies are presented in reports identified as "design memorandums." Preparation of design memorandums, and plans and specifications will be cost shared in accordance with the cost sharing required for project construction. The non-Federal share of costs for this work will ordinarily be recovered during the first year of construction. Current engineering guidance respecting document preparation and approvals should be consulted. (ER 1110-2-1150)

9-2. Preconstruction Engineering and Design (PED) Agreement. The model agreement for PED was approved by the ASA(CW) on 1 October 1996. Under this model PED agreement, no non-Federal credit will be given for non-Federal costs to negotiate the project cooperation agreement (PCA). However, non-Federal credit for PED Coordination Team costs incurred during the period of PED will be provided in accordance with the policy below.

a. Projects With PED Agreements. Credit for PED Coordination Team activities will be provided to non-Federal sponsors. Credit will be against the 25-percent cash payment for PED by non-Federal sponsors that have entered into a PED agreement.

b. Projects Without PED Agreements. Credit for PED Coordination Team activities will be provided under the following criteria:

(1) A PED Coordination Team has been established and non-Federal sponsor coordination activities to be credited occurred after the establishment of the PED Coordination Team.

(2) Only PED Coordination Team activities after 1 October 1996 are creditable.

(3) PED Coordination Team activities eligible for credit are activities involving the oversight of issues related to PED, including scheduling of report and work products; plans and specifications; anticipated real property and relocation requirements for construction or implementation of the project; contract awards and modifications; contract costs; the Government’s cost projections; anticipated requirements and needed capabilities for performance of OMRR&R of the project; and other related matters. Eligibility of expenses for

credit will depend upon documentation that the expenses were incurred during the PED period in accordance with the audit and other financial standards established in model PCAs language.

9-3. Project Modifications. Congressional authorizations of Corps projects normally include a provision for implementation of the recommended plan with such modifications as the Chief of Engineers may deem advisable, in the interest of the purposes specified. However, for projects authorized or amended in WRDA 1986 (or in any law enacted after WRDA 1986 or amendment thereto) the total modified project cost, exclusive of price level changes, may not exceed 120 percent of the cost authorized in that Act without further congressional approval. Procedures for adoption of proposed project changes differ depending on whether they may be approved by the Chief of Engineers using such delegated discretionary authority or must be submitted to Congress for consideration and legislative modification of the existing authorization. To a limited extent, approval authority for some changes which are within the Chief's discretion has been redelegated to the division commanders. Where proposed changes are more significant, they are documented in a Post Authorization Change (PAC) Notification Report submitted to HQUSACE (unless timely coverage can be provided in a design memorandum or other routine preconstruction planning document submitted to HQUSACE). If it is determined, after review, that the proposed changes are not within delegated authority but are of sufficient importance to warrant a recommendation for modification of the project authorization, procedures and further reporting requirements for processing such a recommendation to the Congress will be selected as best suits that specific case. Occasionally, a project may warrant modification because its original development was inherently deficient. Given certain conditions, measures to correct such deficiencies may be undertaken (see paragraph 11-4). (ER 1165-2-119)

a. Modification Authority Delegated to the Chief of Engineers. Modifications and changes of a project necessary for engineering or construction reasons to produce the degree and extent of flood protection or the extent of navigation improvement or other purpose intended by the Congress are within the latitude delegated to the Chief of Engineers. Examples of such changes are shift of a dam to a nearby better foundation location; changes in channel alignment and dimensions indicated by more detailed studies; changes from a concrete to an earth structure because of lack of proper concrete aggregate; or moderate extensions of project scope, such as necessary to provide flood protection to adjacent urban areas developed since the project was authorized. The Chief of Engineers recognizes that this latitude for changes and modifications of authorized projects is an important delegation of authority which must be exercised carefully. Changes involving the addition of project purposes, significant changes in project cost, scale, features, benefit, location, and costs allocated to reimbursable project purposes require notification of OMB.

b. Modifications Beyond Delegated Authority. A proposed modification of an authorized project is brought to the attention of Congress if study after authorization shows that: the scope of functions of the project will be changed materially; the plan of improvement will be materially changed from that originally authorized by Congress; special circumstances exist which were not known to the Corps or recognized by Congress when the project was authorized; or, for projects authorized or amended in WRDA 1986 (or in any law enacted after WRDA 1986 or amendment thereto), the updated estimate of total project costs exceeds the limitation on increases set in that

Act. Decisions regarding project modifications are made on an individual case basis. Questionable cases are reported to HQUSACE in a PAC report (if not as one subject in a routine precontruction planning document of broader project coverage) with the views and recommendations of the division and district commander. Recommendations for modifications beyond the authority delegated to the Chief of Engineers are submitted to the ASA(CW) with supporting documentation suitable to the case, for review and subsequent transmittal to Congress for authorization.

9-4. Design Sizing of Projects. The basic scope of projects is established in the project authorization and, if necessary, reaffirmed in a subsequent Design Memorandum or other post-authorization report. Modification of the project from authorized dimensions may require additional authorization in accordance with paragraph 9-3.

a. Flood Control. Flood damage reduction projects are authorized to provide a specific "degree of protection" with a given "degree of certainty". The "degree of protection" and the certainty with which it is provided for a particular project is the measure of flood severity and the certainty for its elimination of detrimental flood effects downstream from a reservoir or within the confines of a local flood protection project. This type of presentation gives the decision makers the opportunity to assess the degree of protection and the costs associated with increasing the certainty of obtaining the degree of protection desired. Risk based analysis is an approach to evaluation and decision making that explicitly, and to the extent practical, analytically, incorporates considerations of risk and uncertainty in the engineering and economic analysis of a project. Such analyses are particularly useful in evaluating levees and floodwalls, where the consequences of an overtopping may be severe and the benefits of increasing the certainty of protection may make such action desirable.

b. Navigation. Navigation projects are generally authorized to provide a channel of specific dimensions. In accordance with Section 5 of the River and Harbor Act of 1915 channel depths generally signify the depth at mean low water in tidal waters tributary to the Atlantic and Gulf coasts, at mean lower low water in tidal waters tributary to the Pacific coast, and the mean depth for a continuous period of 15 days of the lowest water in the navigation season of any year in rivers and non-tidal channels. Authorized channel dimensions are understood to permit increase at entrances, bends, sidings and turning places to allow free movement of vessels. Authorized channel depths include allowances for vessel draft, squat, roll, pitch, yaw and underkeel clearance. (EM 1110-2-1607, ER 1110-2-1403, 1457, 1458)

9-5. Aesthetic Treatment and Environmental Design. All project features are designed so that the visual and human-cultural values associated with the project will be protected, preserved, or maintained to the maximum extent practicable. Specific ecological considerations include actions to preserve critical habitats of fish and wildlife; accomplish sedimentation and erosion control; maintain water quality; regulate streamflow, runoff and groundwater supplies; and avoidance or mitigation of actions whose effect would be to reduce scarce biota, ecosystems, or basic resources. In the development of individual project features, consideration is given to the needs for architectural design, land treatment or other resource conservation measures. Emphasis is given to developing measures for realizing the full scenic potential of the project feature as it affects the overall project. This is accomplished by providing for cover reforestation,

erosion control, landscape planting, management of vegetation, healing of construction scars, prevention of despoilment, and other related activities for all project lands. (EM 1110-2-38)

9-6. Low Level Discharge Facilities. Generally, lakes impounded by Civil Works projects provide low level discharge facilities. Low level discharge facilities, capable of essentially emptying the lake, provide flexibility in future project operation for unanticipated needs such as major repair of the structure, environmental controls or changes in reservoir regulation. (ER 1110-2-50)

9-7. Engineering and Design Performance Analysis. The analysis, based on Command Management Review (CMR) data, includes performance in meeting scheduled physical milestones, performance in meeting scheduled funds expenditure, accurate cost estimating, and cost control. Quarterly reports are required from districts and divisions monitoring engineering and design performance.

9-8. Value Engineering (VE). VE is defined as the systematic application of recognized techniques which identify the function(s) of a product or service; establish a monetary value for that function; and provide the necessary function reliably at the lowest overall cost. VE is concerned with the elimination or modification of anything that contributes to the cost of an item or task but is not necessary for needed performance, quality, maintainability, reliability, aesthetic or interchangeability, or other intended function or objective of a product. VE is performed on the earliest document that satisfies the functional requirements of the project that includes a comprehensive micro-computer aided cost estimating system (M-CACES) cost estimate.

a. Use. VE is a permanent and integral part of Corps design and is applied actively to all Civil Works projects costing in excess of $2,000,000. VE studies adhere to specifically prescribed methods of procedure and supplements the analysis of alternatives that is part of normal management or design procedures.

b. Non-Applicability. In Civil Works planning, VE is not substituted for economic value or feasibility studies. VE is not applied to aesthetic or environmental features of a project, except where it can be shown that the resulting design, after VE, is as pleasing from an environmental or aesthetic viewpoint as the original design. (OCE Supplement No. 1 to AR 5-4)

9-9. Use of Architect-Engineers (A-Es). Engineering for the civil works program usually requires: continuity of project investigations and planning over a period of several years; integration of project planning with related projects in basin-wide developments; engineering and design skills distinctive to the field of water resource development; and special coordination responsibilities with the public. Because of these requirements, the engineering required for survey investigations and basic design memoranda involving formulation of plans of improvements for civil works projects can be performed by Corps staff or by supporting A-Es. When existing workload or resources (including manpower restraints or lack of specialized technical skills) in any district prevents accomplishment of these tasks in a timely and efficient manner, all or part of the investigations or design may be reassigned to another Corps office or to private A-E or consulting firms. Such reassignment is encouraged pursuant to effective utilization of funds, particularly for those field installations having difficulty in meeting scheduled obligation

and expenditure of funds.

9-10. Use of Consultants. Services of individual experts and specialists outside the Corps of Engineers may be utilized for advice and consultation at appropriate stages of Civil Works project investigation, design, construction and operation activities. Consultants are often employed when problems are encountered that involve specialized fields in which Corps personnel are not regularly employed, or special problems of such magnitude or importance are encountered that it is advisable to obtain the views and advice of eminent experts to supplement conclusions of the Corps staff.

a. Other Federal Agencies. Services of other Federal agencies will be utilized as appropriate in their special fields to complement the investigations and planning of Civil Works by the Corps. Such agencies include the Environmental Protection Agency (EPA), National Park Service (NPS) and Fish and Wildlife Service (F&WS), among others.

b. Owners of Existing Facilities. Services of the owners of existing facilities to be relocated for Civil Works projects may be engaged for planning and design of relocations of their facilities. Procurement of such services from states, local governmental units, railroad companies, utility companies, etc., may be accomplished by use of a separate contract for engineering services. Alternately, these services may be made a part of the relocations contract.

CHAPTER 10

CONSTRUCTION

10-1. Requirements of Project Cooperation.

a. General. Prior to the initiation of construction, the non-Federal sponsor of a water resources project and the Government must enter into a binding agreement in the form of a Project Cooperation Agreement (PCA) as required by Section 221 of the Flood Control Act of 1970 (Public Law 91-611), as amended, and by Section 101(e) {Harbors} and Section 103(j) {Flood Control and Other Projects} of the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662), as amended. The PCA must describe, among other things, all of the requirements and responsibilities relating to construction of the project including items of local cooperation required from the non-Federal sponsor. Local cooperation requirements typically include that the non-Federal sponsor pay a percentage share of the costs of construction. The required percentage varies depending on the project purpose (e.g., harbor navigation projects, flood control) and is generally prescribed by law (see, for example, Sections 101, 103 and 1135 of WRDA 1986, as amended). In addition, a non-Federal sponsor must also provide all lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas required for the project (except in the case of navigation projects where dredged material disposal areas are part of the general navigation features (GNF) under Section 201 of WRDA 1996) as well as perform or ensure the performance of all necessary relocations (collectively referred to as LERRD requirements; see Section 101(a) and (e), Section 103(a) and (j) of P.L. 99-662). Generally, the value of the required LERRD provided by the non-Federal sponsor will be credited against the non-Federal sponsor’s percentage share of the costs of construction. The portion of the non-Federal sponsor’s required share of costs that remains after LERRD credit is afforded must be paid to the Government in cash. If construction of the project will be completed within one fiscal year, the cash payment must be made in a lump sum prior to solicitation of the first construction contract. If construction of the project will not be completed within one fiscal year, the non-Federal sponsor must make cash payments each fiscal year in proportion to the Government's estimated financial obligations for construction in each fiscal year. (ER 1165-2-131; Chapter 12, ER 405-1-12).

b. PCA Approval. The PCA for a project is initially negotiated between representatives of the district and the non-Federal sponsor following the terms of a model PCA if one has been approved for the project purpose by ASA(CW). For structural flood control projects, District commanders have authority to execute PCAs for projects with a Federal cost of less than $50 million for PCAs which do not deviate from the flood control model. Division commanders may execute PCAs with Federal cost greater than $50 million if the model is used. Delegated authority for PCA execution with use of an approved model also applies to the continuing authorities and the Section 1135 and Section 204 programs. PCAs for other purposes without approved models must be approved by the ASA(CW).

c. Projects Specifically Authorized by Congress. n addition to the general requirement imposed by law, there may be further required items of local cooperation provided in the authorizing legislation for the projects or in any report referenced therein. Therefore, such legislation and reports must be carefully reviewed to

determine all applicable items of local cooperation for the project.

d. Projects Under Continuing Authorities. Similar to specifically authorized projects, the continuing authority project decision document or report may require additional items of local cooperation. Therefore, such legislation and document or report must be carefully examined to determine all applicable items of local cooperation for the continuing authority project.

e. Other Specific Requirements.

(1) Facilities for recreation require a 50 percent non-Federal contribution and a PCA which includes the recreation elements. Construction of the rest of the project may commence without formal local agreement for recreation, provided the benefit-cost ratio is recomputed and economic justification for the balance of the project is achieved with inclusion of minimum basic facilities provided at Federal expense.

(2) Section 77 of the Water Resources Development Act of 1974 (Public Law 93-251) amended the requirements for local participation in measures for the enhancement of fish and wildlife to provide for 75 percent Federal and 25 percent non-Federal sharing of separable first costs at projects not substantially complete on the date of enactment. However, Section 906(e)of WRDA 1986, as amended by Section 107(b) of WRDA 1992, sets forth various conditions and associated cost sharing when the Secretary of the Army recommends fish and wildlife enhancement in reports to the Congress. See paragraph 6-14.a - c.

(3) Assurances required for future water supply should be reasonable but in accordance with Section 4 of Public Law 92-222 need not be a binding contract in strict conformance with the requirements of Section 221 of the River and Harbor Act of 1970 (Public Law 91-611). However, see paragraph 18-2.a.

f. Use of Other Federal Funds. Project sponsors sometimes wish to meet their cost sharing responsibilities in connection with a Corps project not with local funds, but with funds they have received from the Federal Government. The use of Federal funds by non-Federal sponsors to satisfy any part of the non-Federal cost share is prohibited, in principle, because such use of Federal funds is not generally authorized. District commanders should carefully examine the sources of local project funding. The Corps can accept the use of Federal funds by the non-Federal sponsor only if the statute under which the funds were provided to the sponsor allows the use of the funds for cost sharing. This policy applies to any intended use of Federal funds by the non-Federal sponsor to either acquire lands, easements, or rights-of-way; or perform construction in advance of a Federal project; or perform or assure performance of relocations; or to satisfy cash contributions to construct a project. This policy also applies to Section 215 (Public Law 90-483, as amended) projects, and project work performed inder provisions of Section 104 and 204(e) of Public law 99-662. The burden is on the sponsor to demonstrate that acceptable authorization exists. The sponsor can meet this burden by providing the Corps with a letter from the Federal agency that administers the statute in question, approving the use of the funds to satisfy the Corps' non-Federal cost sharing requirements. District commanders should also investigate sources of Federal funding that may be connected to providing a local cooperation requirement other than a cash contribution. Sponsors may, for example, request credit for resources (e.g., LERRD) purchased with Federal funds. The same general cost sharing prohibition applies: a sponsor cannot

receive cost sharing credit for such resources unless the Federal granting agency verifies in writing that such credit is expressly authorized by statute. (ER 1165-2-131)

g. Project Cooperation Agreement (PCA) Process. Once a project is authorized for construction, the budget/appropriations process drives the PCA process. Current policy dictates that PCAs will not be executed until: (1) the project document has been approved by HQUSACE; (2) the project is budgeted as a new construction start or construction funds are added by Congress, apportioned by OMB, and their allocation approved by ASA(CW); (3) documentation of compliance with the National Environmental Policy Act (NEPA) and other associated environmental laws and statutes in the PCA checklist has been furnished; and (4) the draft PCA has been reviewed and approved by ASA(CW).

(1) Budgeted New Construction Starts. PCA issues (e.g., items of local cooperation, cost sharing allocation, credit, sponsor coordination and understanding of PCA language requirements, etc.) are to be an integral part of the project document in each stage of report development. During the Reconnaissance Phase, the Project Manager will coordinate with the prospective sponsor, communicating the requirements of study and project cost sharing under WRDA 1986, as amended. During the Feasibility Phase, the full implications of local cooperation requirements are discussed with the sponsor within the context of the current model PCA. The first draft PCA is prepared by the Project Manager in conjunction with the non-Federal sponsor in the latter stages of the Feasibility Phase prior to the feasibility review conference (FRC). Ideally, once the draft PCA has been reviewed as part of the FRC, the PCA would then require only minor changes once the project is authorized and budgeted as a construction new start.

(2) Congressional Adds. After each MSC has coordinated with HQUSACE (CECW-B) on its recommended implementation plan for work added by the Congress, the Project Manager will document what the final project report will be, what it will cover, and the schedule for development of the complete detailed decision document and PCA package through submittal to HQUSACE and ASA(CW). Once agreement is worked out, the Project Manager will follow the same PCA submission procedures as in 10-1.f(3) below.

(3) Execution. Once a project has been funded by Congress as a new construction start, the Project Manager shall begin final negotiations with the local sponsor and submit the draft PCA package (i.e., transmittal letter with draft PCA, financing plan, and current approved project document) to HQUSACE (CECW-A). In the district's transmittal, the Project Manager reaffirms that the draft PCA and financing plan reflect the project as approved by ASA(CW) in the OMB-cleared Chief's Report or subsequent report so approved and cleared. Any changes to the last ASA(CW) cleared report must be fully documented by the Project Manager in the transmittal memorandum. If a Limited Reevaluation Report (LRR) is required due to a time lag in the economic analysis, it should precede any PCA submission. HQUSACE staff will review the PCA package for policy compliance with the basic detailed decision document and prior ASA(CW) instructions, and legal sufficiency. For PCA packages found to be in compliance, CECW-A will prepare the draft DCW transmittal memo to ASA(CW) and forward it to the ASA(CW) for approval to execute. For PCAs with outstanding issues, HQUSACE will return the PCA to the MSC for resolution before the PCA can be approved for execution. Upon resolution, CECW-A will transmit the PCA to ASA(CW) for approval to execute.

(4) Forecast Final Cost Estimate. All Civil Works projects are managed, planned, and executed under the Life Cycle Project Management System (LCPM) (ER 5-1-11). Consistent with ER 5-1-11, the forecast final cost estimate to be entered into PCAs for all specifically authorized new starts (including separable elements, resumptions, and unstarted projects previously funded for construction) will be based on the most current cost estimate prepared in accordance with the Micro-Computer Aided Cost Estimating System (M-CACES) in the Code of Accounts format. The ASA(CW) will not execute any PCA for a new construction start which does not have an M-CACES cost estimate presented in the Code of Accounts format. District and division commanders must ensure that the financing plan and PB-2a accompanying the PCA package that are submitted to HQUSACE, are based upon the appropriate cost estimate as described above. District and division commanders must also ensure that M-CACES cost estimates are completed for projects proposed for authorization (in feasibility reports) and projects for which construction capabilities are expressed in any particular fiscal year. Feasibility reports that recommend a project must include the project's baseline estimate (i.e., fully funded: escalated for inflation through construction) which is the fully-funded M-CACES estimate developed for the recommended scope and schedule. Final approval of the project baseline estimate lies at the division and will become fixed in value at the time the division commander issues the public notice.

(5) Disclosure of Lobbying Activities. Section 319 of the Department of the Interior and Related Agencies Appropriations Act for Fiscal Year 1990 amends Title 31 of the United States Code by adding Section 1352 entitled, "Limitation on use of appropriated funds to influence certain Federal contracting and financial transactions". Section 1352 affects, among other things, Federal contracts, grants, and cooperative agreements, that are entered into after December 23, 1989. All PCAs executed subsequent to December 23, 1989, for all specifically authorized and Continuing Authorities projects, together with all feasibility studies, Section 204 and Section 215 Agreements, and water supply and recreation contracts, will require an accompanying signed Certification Regarding Lobbying, and if applicable, a completed Disclosure Form. These forms must be thoroughly discussed with the non-Federal sponsors prior to submission of the final PCA to HQUSACE, or in the case of Continuing Authorities, prior to final approval of the PCA. Signed certificates and, if necessary, disclosure forms will be attached to the PCA prior to execution by the appropriate Department of the Army official and must be kept on file by the executing office for later submission to HQUSACE, if requested.

h. Credit for Non-Federal Sponsor Indirect Costs. The policy for crediting the costs associated with the non-Federal sponsor's efforts towards implementation of a project is generally established in OMB Circular A-87 and ER 1165-2-131.

(1) Specifically, credit will be allowed for all reasonable, allocable and allowable costs incurred or accrued by the non-Federal sponsor in connection with its responsibilities associated with the project. This includes the actual cost of efforts to acquire lands, easements. rights-of-way and provision of relocations and disposal areas (i.e., LERRD) required for the project, either 5 years prior to or any time after execution of the PCA. These creditable costs include the necessary engineering and design, actual project management costs as well as the actual costs of establishing and maintaining management systems necessary to conduct non-Federal LERRD

responsibilities. Where non-Federal interests actually undertake construction of all or part of the authorized project under a specific statutory authority allowing construction of features of authorized projects, or construction under the provisions of Section 215 of the Flood Control Act of 1968, as amended, and Sections 104 and 204 of WRDA 1986, Section 206 of WRDA 1992 and Section 211 of WRDA 1996, or for hazardous and toxic waste investigations when deemed warranted by the government and the sponsor, the sponsor's reasonable, allocable and allowable costs associated with engineering, design, construction, supervision, administration, inspection and investigation as well as the costs of these functions themselves, would be eligible for credit. The approval of such a request would be formalized in a separate agreement prepared in accordance with the requlations that govern the implementation of such actions. Only those actual associated costs stipulated above are eligible for credit and are to be included in total project costs and costs shared based on project purposes. However, the one exception to this rule is that any costs encountered by the non-Federal sponsor in auditing the Federal records on the project to assure that their funds were properly used are allowed to be included in the total project cost and cost shared.

(2) Costs incurred and/or accrued by the non-Federal sponsor which complement Federal project responsibilities for construction of the project are not creditable. Such costs include but are not limited to: participating in and attending meetings to formally develop and negotiate the PCA; efforts related to developing a financing plan and costs associated with actually obtaining and managing local funds; review of the engineering and design documents related to the construction of the project; a construction inspector specifically appointed or hired by the non-Federal sponsor to oversee construction; and attending meetings to discuss the progress of construction.

(3) While PCAs executed by non-Federal sponsors and the Federal Government urge close cooperation and joint management of a project throughout its design and construction, and indeed the sponsor has the prerogative of conducting such activities in any way they see fit, it is the reponsibility of the Federal Government's Contracting Officer to assure that design and construction of a project takes place in compliance with the plans and specifications and in a timely and efficient manner. This approach is significantly different from the approach taken in crediting the non-Federal sponsor for their efforts in connection with conducting the feasibility study (i.e., all negotiated costs for efforts performed by the non-Federal sponsor up to the issuance of the division commander’s notice, including but not limited to: labor (direct and indirect), overhead, supervision and administration, travel, costs associated with attendance at meetings (both locally and in Washington, if necessary), are included in total project cost and cost shared). This distinction must be made clear to non-Federal sponsors in the earliest stages of PCA negotiation (during feasibility), in order to avoid confusion and erroneous expectations as a project progresses toward construction.

i. Credits for Work-in-Kind Performed by Non-Federal Sponsors. Construction may not be performed by non-Federal sponsors on Civil Works projects except pursuant to Section 215 of the 1968 Flood Control Act, as amended; Section 104 of WRDA 1986, as amended (for flood control); Section 211 of WRDA 1996 (for flood control); Section 204 of WRDA 1986, as amended (for harbor projects); Section 4 of the Flood Control Act of 1944, as amended (for recreation facilities); Public Law 84-826, as amended (for beach erosion control projects); Section 206 of WRDA 1992 (for shoreline protection); or other limited

or project specific authority (e.g., Section 211(e)(2)(B) of WRDA 1996). This prohibition applies not only to construction items, but also to preconstruction engineering and design; engineering and design during construction; and construction management. The approval authority for performance of work-in-kind by non-Federal sponsors is the ASA(CW). Any credit afforded a non-Federal sponsor for approved work-in-kind is limited to the lesser of the following: (1) actual costs that are auditable, allowable, and allocable to the project; or (2) the Government's estimate of the cost of the work; or (3) in the case of certain 104 credits, the estimated reduction in the cost of the remaining project construction. Audit requirements of the following regulations must be followed, as appropriate: ER 1165-2-29; ER 1165-2-120; ER 1165-2-18; ER 1165-2-131; and, ER 1165-2-124. In affording credit to non-Federal sponsors for work-in-kind, price levels shall not be adjusted. This requirement applies whether the work-in-kind is performed prior to, or after, the award of the initial Government construction contract. Not only shall actual costs not be adjusted for price levels, but also any estimated cost or cost reduction that is the basis for a credit shall be computed using the same price levels as those in effect at the time the non-Federal work is performed. Furthermore, any credit approved by the ASA(CW) for Section 104 work performed prior to 17 November 1986 shall not subsequently be adjusted for price levels.

j. Provision of Non-Federal Cash for Construction. Non-Federal sponsor's funds for construction of Civil Works projects and separable elements should be made available and obligated in a timely fashion such that Federal funds are not inappropriately substituted for non-Federal funds. Methods for computing and collecting the non-Federal sponsors' annual cash contributions are provided in ER 1165-2-131 (Appendix B) and Project Management Guidance Letter (PMGL) No. 11 (revised 18 Dec 1992). Appendix B (of ER 1165-2-131) procedures are to be applied to all Civil Works projects and separable elements except where the Government is already bound to do otherwise by contractual agreements with non-Federal sponsors. For Appendix B projects and separable elements, proportional Federal/non-Federal cash funding of fiscal obligations for construction is required. This means that the non-Federal sponsor's funds must be made available and obligated so that, at any point in time, the ratio of cumulative obligations of non-Federal funds to cumulative obligations of all funds is the same as the currently estimated ratio of ultimate obligations of non-Federal funds to ultimate obligations of all funds. The non-Federal sponsor's cash share in a given fiscal year is derived from an estimate for the non-Federal sponsor's overall cash share, and is not affected dollar-for-dollar by changes in the estimated amount of credits for LERRDs in that fiscal year. However, credits afforded for work by a non-Federal public entity at a Federal water resources project authorized under Section 104 (General Credit for Flood Control) of WRDA 1986 (for the flood control project purpose), under Section 215 (Reimbursement for non-Federal Expenditures) of the Flood Control Act of 1968, and under any authorized work-in-kind are applied dollar for dollar against cash requirements. In the event that a non-Federal sponsor fails to make available the funds required, the division commander should immediately notify CECW-B of such failure.

10-2. Real Estate Requirements and Acquisition for Multiple Purpose Reservoir Projects.

a. Requirements. Real estate requirements are governed by the Joint Policies of the Departments of the Interior and Army, which is published in 27 F.R. 1734, 22 February 1962. This policy provides that fee title is acquired to lands needed for the dam site,

construction areas, and permanent structures. Further, for the reservoir itself, land is acquired in fee up to the maximum flowage line (the top of controlled storage, including flood control, plus a reasonable freeboard to safeguard against the adverse effects of saturation, wave action and bank erosion). Where this is insufficient to provide a minimum of 300 feet horizontally from the conservation pool (all planned storage except that which is exclusively for flood control) fee acquisition is increased to that extent. Fee title is also required for separable areas used for recreation (At multiple purpose reservoir projects Federal participation in recreation facilities may extend to separable lands); access to the lake; and land required for fish and wildlife mitigation and enhancement. Easement interests may be acquired in lieu of fee title for areas in the upper reaches of the project above the conservation pool if financially advantageous and not required for fish and wildlife or recreation purposes. Also, easements are generally acceptable for rights-of-way for the relocation of public highways, public utilities, and railroads. Lands downstream from the dam may be acquired in fee or easement for operational purposes. A real estate interest will be obtained in those areas downstream of a spillway where spillway discharge could create or significantly increase a hazardous condition. (ER 1110-2-1451; Chapter 2, ER 405-1-12)

b. Acquisition. Section 103(i) of WRDA 1986 (Public Law 99-662) assigns responsibility for lands, easements, rights-of-way, relocations dredged material disposal areas (LERRD) to non-Federal interests (subject to cost sharing limits). Interpretation of the Act, however, allows for several possibilities as to which partner (Corps or non-Federal sponsor) actually carries out acquisition of the required real estate interests or holds title to those interests. The possibilities range from non-Federal interests performing all aspects of required acquisitions to acceptance of their request that the Federal Government perform all real estate acquisition for the project. Provided the Corps and the sponsor agree, the Corps may acquire the required lands, easements, rights-of-way and dredged material disposal areas on behalf of the sponsor, subject to advance receipt of payment from the sponsor. The authority for Corps acquisition stems from the project authority itself and the Civil Functions Appropriations Act of 1938, approved 19 July 1937 (50 Stat. 515, 518; 33 U.S.C. 701h) which authorizes the Secretary of the Army to receive states and political subdivisions funds to be expended in connection with funds appropriated for authorized flood control projects, whenever the expenditures may be considered as advantageous to the public interest. Acquisition generally starts at the damsite and moves progressively upstream. Required real estate interests for authorized fish and wildlife mitigation shall be acquired before any project construction commences or concurrently with real estate interests for other project functions, whichever ASA(CW) deems appropriate. Project lands may be acquired from landowners by purchase, condemnation or donation. In most cases the sponsor (or the Corps, if the Corps has accepted the effort) should be able to negotiate an agreement satisfactory to the landowners. Prior to closing, title evidence is reviewed, title clearance is completed and an inspection is made of the premises. At closing, a deed to the sponsor (or the United States) is accepted and payment of the purchase price is made to the landowner. If agreement with the owner cannot be reached on a mutually acceptable price or if a title defect cannot be readily resolved, condemnation proceedings will be filed by the sponsor in the appropriate state court (or, if the Corps is acquiring the land, the United States Department of Justice institutes condemnation proceedings in Federal District Court). The landowner will be paid or reimbursed for expenses incurred by the landowner in

conveying his or her property to the sponsor or the United States, such as recording fees, mortgage prepayment penalties, and transfer taxes. Generally, mineral rights will not be acquired unless development thereof would interfere with project purposes. However, mineral rights not acquired will be subordinated to the Federal Government's right to regulate their development in a manner that will not interfere with project purposes. Following project authorization and appropriation of construction funds, public meetings are conducted in the vicinity of the project to discuss the project, the acquisition program and acquisition schedule, and to afford landowners an opportunity to comment. (Chapters 2 and 5, ER 405-1-12)

c. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646), as amended. This legislation provides for uniform and equitable treatment of all persons displaced from their homes, farms, and businesses as a result of land acquisition for Federal and Federally-assisted projects. The Act authorizes reimbursement for actual moving expenses and losses of personal property resulting from moving for a person displaced from his or her residence by such a project. In lieu of actual expenses, such person may elect a fixed payment for a dislocation allowance according to a schedule established by the Department of Transportation. Actual reestablishment expenses not to exceed $10,000 may be recovered by a displaced small business, farm, or non-profit organization. Likewise, business or farm operations may be reimbursed for actual expenses of moving and losses to personal property, or they may be eligible to choose a fixed payment in lieu of a payment for actual moving or related expenses. Such fixed payment shall equal the average annual net earnings of the operation, as computed in accordance with the implementing regulations, which shall be not less than $1,000 nor more than $20,000. A replacement housing payment is also provided to enable the displaced person to be relocated in a comparable replacement dwelling. This payment (up to $5,250 for tenants and $22,500 for homeowners) is in addition to the purchase price paid for the property acquired for the Federal project. These costs are not included in the project benefit-cost ratio, but they are allocated to reimbursable purposes. (ER 1165-2-117; Chapter 6, ER 405-1-12)

d. Special Federal Authorities and Policies Pertinent to LERRD Responsibilities.

(1) Relocation of Public Highways, Public Utilities, Railroads and Pipelines. Lands necessary for a project are acquired subject to outstanding easements for public highways, public utilities, railroads and pipelines. However, when there will be a taking of these easements, the owner must be compensated. Federal courts have held that when the Federal Government acquires public highways and public utilities, the measure of compensation may be the cost of providing substitute facilities where necessary. Conversely, where there is no further necessity for such a facility, the Federal Government is only required to pay nominal consideration for the right-of-way. When privately-owned roads, pipelines and railroads, are required it may be in the best interest of the Federal Government to provide for relocating them since relocation may be the least costly alternative. A relocated facility should serve the owner in the same manner and reasonably as well as does the existing facility. However, substitute roads can be constructed to the standards which the state or municipality would use in constructing a new road taking into consideration geography and projected traffic not including project induced traffic. In project planning, Corps determination of needed relocations will be based on the foregoing, and related sponsor costs

for their accomplishment will count toward the value of project LERRD. At request of the state or political subdivision, a substitute road may also be constructed to even higher standards than as provided above if the state or political subdivision pays the added cost prior to initiation of construction. (ER 1165-2-117; Appendix Q, EFARS)

(2) Relocation of Cemeteries. The relocation and/or protection of cemeteries is premised on acquisition of a real estate interest and extinguishment of the legal right of the next-of-kin to visit and preserve the burial grounds of their ancestors and relatives. It is the policy of the Corps of Engineers to respect the wishes of the next-of-kin as to the removal and reinterment of bodies. Ordinarily, just compensation for the acquisition of an existing cemetery site will consist of furnishing a new site comparable to the old site, plus disinterment and reinterment of the bodies, and transferring monuments and other facilities from the old to the new site. All costs would be considered part of the LERRD responsibility. Should the cemetery be protected in place, by construction of a levee or similar structure, and access preserved, costs would be considered part of project construction, and cost shared accordingly. (Appendix Q, EFARS)

(3) Reestablishment of Towns. In certain cases, Congress has authorized relocation of specific communities. However, there is no general authority vested in the Secretary of the Army (by way of Federal legislation or Federal court decisions) to pay the cost of physically relocating a town. Recognizing that project requirements dictate the acquisition of private property within the project, the Federal Government can participate in financing the cost of comparable streets and utilities in a new town in the event the governing body of the town and its citizens decide that a new town will, in fact, be established. If no new town is to be established, the Federal Government has no legal authority to pay other than a nominal consideration for the streets and utility systems in the old town since no substitute facilities would be necessary. Traditionally, community relocation issues were treated following project authorization. However, the new policy is to address these issues during preauthorization planning. This will assure the community that the Corps is aware of their concerns and will outline the respective roles of the Corps, the project sponsor, and community in the authorizing documents. (Appendix Q, EFARS)

10-3. Real Estate Requirements for Single-Purpose Flood Control Reservoir and Non-Reservoir Projects.

a. Requirements. No construction contract is awarded until a valid right of possession has been obtained to the entire project area, or for a usable segment thereof. The minimum interests in real estate which the non-Federal sponsor must obtain are given below. In addition to these estates in lands, appropriate real estate interest must be acquired by the sponsor in any area where project operations will effect a taking within the meaning of the Fifth Amendment of the U.S. Constitution. (Chapters 2 & 12, ER 405-1-12)

(1) Flood Control and Shore Protection Projects. Fee title, or permanent easements, for levees, walls, other permanent structures, channel rectification works, and adequate access thereto. Permanent easements for lands in reservoir areas of flood control only projects which do not provide conservation pools, spoil disposal and borrow areas required for future maintenance work, and adequate access thereto. Permit, or temporary easements, for spoil, work and borrow areas required during construction, and adequate access thereto.

(2) River and Habor Projects. Fee title for lock site and for all other permanent structures. Permanent easements for right-of-way for the waterway improvements. Permanent easements in lands required for the erection and maintenance of aids to navigation. (For improvements which are part of the Inland Waterway System, real estate requirements are similar, but the responsibility therefore is entirely Federal.)

(3) Separable Recreation Lands. Federal participation in recreation facilities at non-reservoir projects and dry dams must be within the project lands (required for purposes other than recreation) for which fee title is available. Fee title is also required for any separable recreation lands needed for access, parking health and safety.

b. Relocations Assistance. The provisions of the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended, described in paragraph 10-2c, are applicable to acquisitions for all types of Federal projects. Whether acquisitions are actually accomplished by the Corps (see below) or the project sponsor, the provisions of the Act must be followed and the related costs counted as part of project LERRD costs.

c. Condemnation on Behalf of Local Interests. Under the provisions of Acts of Congress approved 29 June 1906 (33 U.S.C. 592), 8 August 1917 (33 U.S.C. 593), 18 July 1918 (33 U.S.C. 594) and 18 August 1941 (33 U.S.C. 701c-2), the Secretary of the Army may cause proceedings to be instituted, in the name of the United States, for acquisition by condemnation of real estate interests which non-Federal entities undertake to furnish free of cost to the United States. The Chief of Engineers may request such action on behalf of the non-Federal sponsor if the non-Federal sponsor lacks condemnation authority or cannot meet the construction schedule, or if the measure of just compensation is different under local law and Federal law. (Chapter 12, ER 405-1-12)

d. Special Federal Authorities and Policies Pertinent to LERRD Responsibilities.

(1) Evacuation in Lieu of Levees. Section 3 of the 1938 Flood Control Act, dated 28 June 1938 (Public Law 761, 75th Congress), authorizes the Chief of Engineers to substitute evacuation in lieu of authorized levees or floodwalls for a portion or all of the areas proposed to be protected. A sum not exceeding the amount saved in construction costs may be expended for evacuation of the locality eliminated from protection, including rehabilitation of the persons evacuated. Where this authority might be used, the evacuation effort substituting for levee construction would be treated as a nonstructural element of the project, and cost shared accordingly. (See paragraph 13-10.b.)

(2) Other. The special authorities and policies cited in paragraph 10-2.d for multiple purpose reservoirs are also applicable to other Corps projects to such extent as there may be analogous situations and possibilities.

10-4. Relocations. The term "relocation", with the exceptions noted below, means providing a functionally equivalent facility to the owner of an exisiting utility, cemetery, highway, railroad, or other public facility when such action is authorized in accordance with applicable legal principles of just compensation. A "relocation" is also providing a functionally equivalent facility when such action is

specifically provided for, and is identified as a relocation, in the authorizing legislation for a navigation project or any report referenced in the authorizing legislation. Providing a functionally equivalent facility may take the form of alteration, lowering, raising, or replacement and attendant removal of the affected facility or part thereof. The non-Federal sponsor is required to perform or assure the performance of the relocation. For a relocation other than a utility relocation, the value of the relocation is creditable against the non-Federal sponsor's required additional 10 percent payment under Section 101(a)(2) of WRDA 1986, as amended. For a utility relocation, the non-Federal sponsor's actual costs in performing or assuring the performance of the utility relocation are creditable against the non-Federal sponsor's required additional 10 percent repayment under Section 101(a)(2) of WRDA 1986, as amended. In practice, under the terms of the PCA, the cost of the relocation will be the basis for computing non-Federal sponsor credit for all relocations.

a. Flood Control Projects. (Generally applicable also to projects for other purposes, except navigation.)

(1) Highway Bridges. Alteration of highway bridges necessitated by a flood control project (channel realignments, widening, etc.) is considered part of the sponsor's LERRD responsibility. However, alterations to provide for the continued structural integrity of highway bridge foundations, piers, or abutments that are to remain in place should be included as part of basic project construction (e.g., when channel deepening would extend below existing bridge piers and consequential reinforcement, under-pinning or other reconstruction of the piers are the only alterations required), and cost shared accordingly.

(2) Railroad Bridges.

(a) Alterations/Relocations. Alterations or modifications to existing railroad bridges necessitated by changes in the configuration of the channel at the existing crossing will be considered part of the project construction cost and cost shared accordingly. As needed, this may include alteration of foundations for a bridge that will remain in place, relocation of the existing superstructure to new foundations, complete reconstruction of the bridge, temporary detours, and approaches thereto, including trackage that must be altered/modified to suit. Alterations or relocations of other trackage or railroad facilities required for the project, but not related to a railroad bridge change, are to be performed or arranged for by the project sponsor as part of the sponsor's LERRD responsibility.

(b) New Railroad Bridges. The cost of new railroad bridges required because of project construction in fast land or new channel alignments (i.e., where there is no counterpart existing crossing) will be designated in the authorizing document as part of project construction costs, and cost shared accordingly. However, if not authorized by Congress, a new bridge and its approaches on fast land are considered a part of the relocation of the track that crossed the fast land, and such costs are categorized as a LERRD item.

(3) Utilities. Utility relocations required for a project are to be performed at 100 percent non-Federal expense, as part of the sponsor's LERRD responsibility. However, construction of the segments of relocated utilities that pass under or through the line of protection to be provided by the project may be incorporated in Corps

plans for construction of the structures in the line of protection, subject to sponsor contributions equal to the related contract costs.

(4) Removals. The cost of removal of facilities (i.e., those not being relocated from lands needed for the project development) are considered to be part of project construction costs, and cost shared accordingly. However, the cost of acquiring such facilities, so that they may be removed, is part of the sponsor's LERRD responsibility.

b. River and Harbor Projects.

(1) Highway and Railroad Bridges. Bridge alteration costs are project construction costs to be assigned partially to the bridge owner and partially to the navigation project, using the procedures of the Truman-Hobbs Act (as described in ER 1165-2-25). The portion of bridge alteration costs so assigned to the navigation project are considered to be part of the general navigation features (GNF), and are cost shared accordingly. In the case of new bridges, required because of construction of new navigation channels that would otherwise intercept existing highway or railroad routes, all costs are considered to be part of GNF.

(2) Relocations and the Navigation Servitude. A relocation must occur when a facility or part of a facility must be altered, lowered, raised, or removed to allow for the construction of a navigation project and the owner of the facility is entitled to a substitute facility due to just compensation principles. Just compensation principles generally require a substitute facility when the facility's owner has a real property interest in the land on which the facility is located, there is a public necessity for the service provided by the facility and market value has been too difficult to find, or the application of market value would result in injustice to the owner or public. This definition focuses on the issue of just compensation as between the facility owner and Federal Government and takes into account rights the Federal Government has within the navigation servitude. Therefore, the owner of a facility within the navigation servitude has no compensable real property interest with regard to the Federal Government for the portion of the structure within the navigation servitude and the owner of the facility within the servitude is not entitled to a substitute facility when compelled to remove the facility because it is an obstruction to the Federal navigation project.

(3) Deep-Draft Utility Relocations. "Deep draft utility relocations" are handled differently and are only applicable to projects authorized at a depth of greater than 45 feet and applicable only to utilities located within the navigation servitude. A deep draft utility relocation is defined as providing a functionally equivalent facility to the owner of an existing utility serving the general public when such action is not a "relocation" as defined in paragraph 10-4. In accordance with Section 101(a)(4) of WRDA 1986, as amended, one-half of the cost of the deep draft utility relocation shall be borne by the utility owner and one-half shall be borne by the non-Federal sponsor. Actual costs of deep draft utility relocations borne by the non-Federal sponsor up to 50 percent of the total cost of the utility relocation will be creditable against the non-Federal sponsor's additional 10 percent share. The Corps might compel deep draft utility relocations if confronted with reluctant utility owners. However, such involuntary deep draft utility relocations would be for the purpose of facilitating project construction and would not serve to change the statutory requirement for 50/50 cost sharing between the non-Federal sponsor and the utility owner. Therefore, in those cases

where the utility owners are compelled to relocate under permit conditions, the non-Federal sponsor is responsible for one-half of the cost of these deep draft utility relocations. Administrative and any legal costs incurred by the Corps to compel deep draft utility relocations would be shared 50/50 between the non-Federal sponsor and the utility owner.

(4) Removals. The cost of removal of facilities (i.e., those not being relocated) which are located on fastlands are considered to be part of GNF costs, to be cost shared accordingly. However, the cost of acquiring such facilities, so that they may be removed, is part of the sponsor's LERRD responsibility. Where there is an obstruction to a navigation project that is within the navigation servitude, and that obstruction does not fit within the definition of a relocation as discussed in paragraph 10-4 or a deep draft utility relocation as presented in paragraph 10-4.b.(3), the obstruction will be removed at owner cost to accommodate the navigation project. If facilities exist which are partially located on fastland and partially subject to the navigation servitude, a reasonable allocation of costs will be made between owner costs and relocation or GNF costs as appropriate.

(5) Removal Responsibility. Where the non-Federal sponsor has the capability to compel the owner of a facility obstructing a navigation project to remove the facility solely at owner cost, the non-Federal sponsor will exercise this capability. The capability of the non-Federal sponsor to successfully compel the removal of facilities at owner cost will be jointly assessed by the Corps and the non-Federal sponsor. Factors in this assessment will include the legal authorities available to the non-Federal sponsor and their strength, the applicability of the non-Federal sponsor's authorities to the Federal navigation project and the record of success in exercising the non-Federal sponsor's authorities. The non-Federal sponsor may also elect to directly negotiate with the owner of a facility obstructing a navigation project for the removal of the facility in lieu of exercising any non-Federal sponsor or Corps authorities to compel the facility removal at owner cost. However, any payments or reimbursements by the non-Federal sponsor to the facility owner for the removal of the facility would not be creditable against the non-Federal sponsor's required additional 10 percent repayment under Section 101(a)(2) of WRDA 1986, as amended. In the event it is determined that the non-Federal sponsor does not have the capability to compel the owner of a facility obstructing a navigation project to remove the facility at owner cost and the non-Federal sponsor does not elect to directly negotiate with the facility owner for the removal of the facility, the Corps will exercise its rights under the navigation servitude and any applicable Corps permit conditions to require the owner to perform the removal of the facility at the owner’s expense.

(6) Accounting for Removal Costs. When a facility is removed at owner cost, the facility removal cost and any cost to replace the facility at a new location (for example at a greater depth) will be an owner cost. The administrative and legal cost to the non-Federal sponsor or the Corps of requiring the owner to remove the obstruction will be considered GNF costs and shared accordingly. Corps regulatory program funds will not be used for accomplishing removals or permitting owner replacements of removed facilities. Costs to the owner of a facility for its removal and any owner replacement costs, including any costs voluntarily paid or reimbursed by the non-Federal sponsor, will be accounted for as associated costs of the project and are not shared GNF costs nor non-Federal sponsor costs for lands,

easements, rights-of-way or relocations. Owner removal and replacement costs are economic costs of the project that must be reflected in the calculation of net national economic development benefits. Where necessary, the Corps may also have the option to remove the obstruction itself. The costs to the Corps of removing the obstruction will be considered costs of the GNFs of the project and shared accordingly. In the event a court determines that the owner of a facility within the navigation servitude is entitled to payment of just compensation as a result of a removal action, that compensation amount will be considered a cost for lands, easements, and rights-of-way, which the non-Federal sponsor will be required to pay in accordance with Section 101(a)(3) of WRDA 1986, as amended. If the court also determines the appropriate measure of just compensation is provision of, or payment based on, a substitute facility, this will be considered a relocation, which the non-Federal sponsor will be required to provide in accordance with Section 101(a)(3) of WRDA 1986, as amended.

10-5. Water Quality Requirements. State water quality certification or a waiver thereof is required by the Clean Water Act of 1977 prior to discharge of dredged or fill material into waters of the United States. (See paragraph 3-5)

10-6. Accomplishment of Construction Work.

a. Use of Contractors. It is Corps policy to accomplish Federal civil works improvement by contract with private construction firms through competitive bidding to the greatest extent possible. Contracts are advertised and administered in accordance with the Federal Acquisition Regulation (FAR) and as further defined in the Department of Defense Supplement (DFARS), Army Supplement (AFARS) and Engineer Supplement (EFARS).

b. Construction Management Support Services. Contracting with private firms to perform construction management services is appropriate under certain circumstances, such as, when adequate numbers of Corps personnel are not available or when specific technical expertise must be obtained. Surveying and materials testing services are examples of supportiveness which lend themselves to contracting out. The management functions of all Civil Works field offices is to be retained as an internal function and not delegated to private contractors. See ER 415-2-100 for detailed guidance on staffing of Civil Works projects.

c. Use of Government Plant and Hired Labor. Work is accomplished with Government owned plant and hired labor when it is of a type in which contractors are not interested; where advertisement of the work resulted in procurement of unacceptable bids and suitable government plant existed and was utilized as the basis of the Government estimate; or when it requires special equipment or qualifications for doing the work which are not generally available to the contracting industry. Bank revetment work with special Government-owned plant is an example of the latter case. Public Law 95-269 provides that the Secretary of the Army, acting through the Chief of Engineers, carry out projects for river and harbor improvements by contract or otherwise in the manner most economical and advantageous to the United States. The Act provides for carrying out dredging and related work by contract when this work can be accomplished at reasonable prices and in a timely manner. In this regard, Public Law 95-269 provides that dredging or related works of river and harbor improvement shall be done by contract if: (1) the contract price is less than 125 percent of the cost of doing the work

by government plant; or (2) in any other circumstance, if the contract price is less than 125 percent of a fair and reasonable estimated cost of a well-equipped contractor doing the work. Public Law 95-269 further provides for the reduction of the existing fleet of Federally-owned dredges to a fully operational minimum fleet of technologically modern, efficient dredges to meet emergency and national defense requirements. The Act also provides that the Secretary of the Army shall maintain a sufficient number of Federally-owned dredges to insure the capability of the Federal Government and private industry together to carry out projects for improvements of rivers and harbors. (ER 1110-2-1302, ER 1130-2-520, EFARS)

d. Contracting with Small and Small Disadvantaged Business. Contracting with small business concerns is governed by the provisions of the FAR. (FAR, 19.0)

e. Buy American Act. Part 25 of the FAR and supplements govern the implementation of the Buy American Act (41 U.S.C. 10a-d) and its application to civil works construction contracts. New rules have made Trade Agreement Acts such as the North American Fair Trade Act (NAFTA) applicable to the Corps of Engineers. These recent changes are reflected in FAR Part 25.407(d).

f. Construction Quality Management. Part 46 of the FAR and supplements require the use of a Quality Management System consisting of Contractor Quality Control (CQC) and Government Quality Assurance (QA) for fixed price construction contracts where the contract amount is expected to exceed the small purchase limitation. CQC is the contractor's inspection system used to ensure that work performed under the contract is performed in conformance with contract requirements. QA is the system through which the government assures that the CQC system is working and that the contract quality requirements are fulfilled. (ER 1180-1-6)

10-7. Reservoir Clearing. The general objective in clearing reservoir areas is to hold such clearings to a minimum compatible with project purposes in order to effect an over-all reduction in construction costs. All areas which are potential hazards in achieving primary project purposes should be cleared in accordance with established guidelines. Clearing and disposal of cleared material must comply with all local and state laws applicable in the area where the project is located.

10-8. Use of Dredged Material. It is Corps policy to secure the maximum practicable benefits through the use of material dredged from navigation channels and harbors, provided such use is in the public interest. Such use of suitable non-contaminated dredged materials can include creation of wetlands, nourishment of beaches, erosion control of river banks, and land reclamation. In accordance with Section 150 of Public Law 94-587 up to $400,000 may be expended by the United States to create a wetland area from dredged material (paragraph 20-5). However, since this authority does not require cost sharing, it will not be used. Section 145 of Public Law 94-587, as amended, authorizes the placement of sand obtained from dredging operations onto adjacent beaches if requested by states, if deemed to be in the public interest, and if increased disposal costs are provided 100 percent by the state, or are shared (50-50) when certain criteria are met (paragraph 12-22). Section 204 of WRDA 1992, as amended, authorizes the Secretary of the Army to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands. Project implementation is conditioned on non-Federal interests entering into a cooperative

agreement to provide 25 percent of the cost associated with project construction and agreeing to pay 100 percent of operation, maintenance, repair, replacement, and rehabilitation costs. Utilization of dredged material for other uses may also be undertaken provided extra cost to the United States is not incurred. However, under Section 207 of WRDA 1996, the Secretary of the Army may select (and cost share incremental costs in accordance with Section 204(c) of WRDA 1996), with the consent of the non-Federal interest, a disposal method that is not the least-cost option if the Secretary determines that the incremental costs of such disposal method are reasonable in relation to the environmental benefits. If it is evident during the initial planning of dredged operations that additional costs would be incurred, non-Federal interests will be given reasonable opportunity to finance the additional costs. Prior to enactment of WRDA 1996, non-Federal interests normally provided without cost to the United States all suitable areas for initial and subsequent disposal of dredged material, including all necessary retaining dikes, bulkheads, and embankments therefor. However, under Section 201 of WRDA 1996, dredged material disposal areas are part of a navigation project's GNFs and are no longer required to be provided by non-Federal interests. Also see paragraph 12-21 discussion of land enhancement from placement of dredged material and restriction on Ocean Dumping. The right to remove material deposited in a disposal area was not included in many older Corps dredged material disposal easements. Where the Government does not own fee title to a disposal area or has not included the right to remove in its existing easement, the removal of previously deposited material may require the acquisition of an additional interest, or credit for such interest in the case of a sponsor-owned facility. (ER 1130-2-520)

10-9. Housing of Project Personnel. It is Corps policy that government housing for permanent duty stations at Civil Works projects not be provided. Such government housing is not constructed or acquired unless justified and approved by HQUSACE on an exception basis. Employees are not required to occupy government quarters as a condition of employment unless specifically determined necessary and approval obtained.

10-10. Special Statutory Authority for Relocations and Alterations. Section 111 of the River and Harbor Act of 1958, as amended, provides authority for replacing, relocating, or reconstructing any structure or facility owned by an agency of government and utilized in the performance of a government function when threatened or adversely affected by construction of a project. This authority does not modify any existing requirement of local cooperation.

10-11. Disposal of Land at non-Local Cooperation Projects Stopped During Construction. Prior to recommending deauthorization of projects stopped during construction it is the policy of the Corps to conduct a study of the status of land acquisition of the project and recommend an appropriate method of land disposal. Recommendations may include, among other things, that: tracts be acquired because of hardships, desires of others, or other compelling reasons; tracts still in open condemnation be revested to former owners; authority be obtained for revestment of tracts to former owners; relocations of highways, railroads, and utilities be concluded; or lands be retained in public ownership. Disposal other than in accordance with the Federal Property and Administrative Services Act of 1949 will be dependent on special legislation providing therefor. (See paragraph 11-10.)

10-12. Transfer of Completed Local Cooperation Projects to non-Federal Interests. Under the terms of the PCA, when the Government determines that an entire project, or functional portion thereof, is complete, the Government provides written notice to the non-Federal sponsor of such determination and furnishes an Operations, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) Manual to the non-Federal sponsor. The non-Federal sponsor is then responsible for the OMRR&R of the project, or functional portion. After completion and notice to the non-Federal sponsor, authority is considered to expire for expenditure of Federal funds for construction of additional improvements on the project or for maintenance thereof.

10-13. Project Cost Increase Limitations. Section 902 of WRDA 1986, as amended by Section 3.b of Public Law 100-676, provides that, excluding the impacts of general price increases and any project additions otherwise authorized, the total project costs for any project authorized in WRDA 1986 and all subsequently authorized projects may not exceed the authorization limit by more than 20 percent. Procedures for calculating this limit are described in Appendix P of ER 1105-2-100. A construction contract can not be awarded if the estimated total project costs after bid opening exceed the Section 902 limit (unless and until the limit is modified by law). Also, no reimbursement can be made to a non-Federal sponsor if subsequent to contract award, total project costs exceed the Section 902 limit (unless the limit is modified).

10-14. Appraisal of Lands Containing Hazardous,Toxic, and Radioactive Wastes (HTRW) on Local Cooperation Projects. Regardless of whether or not the land required for a local cooperation project is in the non-Federal sponsor's possession, or whether or not HTRWs exist on or beneath the property, ER 1165-2-131 (paragraph 12.c) is the basic guidance for appraising land values for credit. The credit amount shall be based on an approved appraisal using the principles outlined in the Uniform Appraisal Standards for Federal Land Acquisitions under the assumption that the lands are clean. Therefore, regardless of whether the non-Federal sponsor paid a nominal price or an exhorbitant price and whether the lands are actually clean or contain HTRW, the credit appraisal should assume clean lands. The cost of HTRW cleanup is not a factor in the appraisal (or credit) nor are any cleanup costs to be included in the fair market value of the land or in the estimate of total project cost.

CHAPTER 11

OPERATIONS, MAINTENANCE, AND PROJECT MANAGEMENT

11-1. Resource Management of Project Lands and Facilities.

a. Management Objectives. The developed and natural resources at Civil Works projects are the public property of both present and future generations. Corps resource management activity is directed toward the continued enjoyment and maximum sustained use by the public of lands, waters, forests, other vegetative cover, and associated recreational resources, consistent with their aesthetic and biological values, and to allow such other new and innovative uses of the project that are not detrimental thereto. Projects administered by the Corps have resource use objectives, based on the expressed preferences of the residents of the region served, the needs of the ecosystem in which the project occurs, and on the capabilities of the natural and man-made resources of the project. Maintenance and administration of recreation areas, where they remain under Corps jurisdiction, is part of the overall management objective to preserve and protect the quality of project resources. Major considerations, in addition to management of recreation facilities, include: (ER 1130-2-540, ER 1130-2-550, ER 1165-2-400)

(1) Protection of project visitors and employees.

(2) Conservation and protection of project resources, including enforcement of land use requirements to prevent conflict between uses.

(3) Prevention of visual and physical encroachments upon project lands and waters.

(4) Preservation and enhancement of the aesthetic integrity of banks and shorelines and retention of access for public use.

(5) Prevention or elimination of unauthorized structures and habitation on project lands or on the water surface.

(6) Compatibility between recreation uses and equipment employed in recreation activity and established water quality standards.

(7) Environmental improvement through vegetative management.

(8) Interim use of project lands for appropriate agricultural practices to optimize recreation and fish and wildlife benefits.

(9) Monitoring of public recreation use and recreation technology being used to insure that management practices and future recreation developments are consistent with discernible public preferences and needs.

(10) Encouragement of local officials to adopt and enforce zoning and building codes to: control private developments adjacent to any project reservation; and to avoid resultant problems in water pollution from septic tank drain fields or sewage disposal, visual pollution due to poor siting or design, solid waste disposal on public areas, or use of project roads for access to private property.

b. Visitor Centers. It is the policy of the Corps to plan,

develop, manage and operate Visitor Centers at water resource development projects. Visitor Centers educate and inform the public with regard to the history and mission of the Corps, its role in water resources development, the project, its purposes, benefits and costs. Visitor Centers are further operated to ensure the public is provided with the information necessary for the safe use and enjoyment of Corps projects. (ER 1130-2-550)

c. Public Access. Appropriate access to the project will be provided for the general public except in areas which are restricted for security or safety reasons. (ER 1130-2-550)

d. Shoreline Management Policy. It is the policy of the Corps to protect and manage shorelines of all Civil Works water resource development projects under Corps jurisdiction in a manner which will promote the safe and healthful use of these shorelines by the public while maintaining environmental safeguards to ensure a quality resource for use by the public. The objectives of all management actions will be to achieve a balance between permitted private uses and resource protection for general public use. Public pedestrian access to and exit from these shorelines shall be preserved. Corps management practices are directed toward gaining the maximum benefit for the general public. (ER 1130-2-406)

e. General Use of Public Recreation Areas. Public use areas on Civil Works projects are available for use by all members of the general public on a first-come, first-served basis. Corps operated group camp areas may be managed on a reservation system. (ER 1130-2-550)

f. Use Fees. See Chapter 17, paragraph 17-5.d.

g. Law Enforcement. States, local governments, and Federal law enforcement agencies retain statutory authority and responsibility to enforce the law at Civil Works projects. Section 234 of the Flood Control Act of 1970 provided that the Secretary of the Army may cause to be issued citations for aggravated cases of refuse dumping and other violations of the rules and regulations under Chapter III, Title 36, CFR. Division commanders have been authorized to designate Civil Works installations wherein the citation authority will be implemented. Oral and written warnings will be used in minor cases to the maximum extent possible. There is no authority for Corps personnel to take an offender into custody. Weapons will not be carried or used for citation enforcement. Federal, state, and local law enforcement agencies, as applicable, retain the authority and responsibility to enforce all laws. Section 120 of Public Law 94-587, as amended, authorizes the Chief of Engineers to enter into agreements with states and their political subdivisions for the purpose of obtaining increased law enforcement services at projects. (ER 1130-2-550, USACE Supplement to AR 190-29)

h. Forest Management. Public Law 86-717 requires that projects be developed and maintained to encourage, promote, and assure adequate and dependable future resources, including supplies of forest products. Multiple-use forest management, including sustained yield timber production, should be maintained unless a reasonable determination is made that such a program is incompatible with recreation, conservation, or other beneficial uses of the project. Corps land managers have discretion to determine whether timber harvesting is practicable with other beneficial uses of the land, and whether it would yield the maximum benefit and improve such areas.

Vegetation, living or dead, will be removed only with justification such as urgent disease control, urgent insect pest control, fire hazard reduction, wildlife management practice, removal for construction of recreational facilities or other specific essential uses. (ER 1130-2-540)

i. Wildlife and Fisheries Management. Section 3 of the Fish and Wildlife Coordination Act (Public Law 85-624) provides for the use of Civil Works projects for conservation, maintenance and management of fish and wildlife resources and wildlife habitat. This is accomplished through licensing of lands and waters to state wildlife agencies or by cooperative agreement with the Secretary of the Interior under terms of a General Plan. The General Plan must be approved jointly by the Secretary of the Army, the Secretary of the Interior and the head of the State wildlife agency. Licensees may plant or harvest crops, either directly or by share crop agreement, to provide food and/or wildlife habitat. Proceeds from the sale of crops may be used to further fish and wildlife uses in accordance with project management plans. Proceeds not used for this purpose will be paid to the United States at the expiration of each five-year period. (ER 1130-2-540)

j. Sanitation and Pollution Control. Sanitation for public use of Corps projects will be in accord with all Federal, state and local laws. Solid waste disposal and the control of air and water pollution will be in accordance with Executive Order 12088 on prevention, control and abatement of air and water pollution at Federal facilities. OMB receives a report on the prevention, control, and abatement of environmental pollution of Federal facilities annually. Section 107 of Public Law 93-251 permits Federal participation in the costs of local sewage treatment plant installations as warranted to provide for treatment of the additional sewage resulting from the operation of facilities (including recreation) at Corps projects. All potable water at Civil Works projects will meet or exceed the minimum standards prescribed by the Safe Drinking Water Act. (ER 200-2-3)

k. Soil Erosion Control. Erosion of project lands will be controlled as practicable to prevent land despoilment, improve project aesthetic appeal and extend the project life through reduced siltation.

l. Distribution of Rental Receipts. Under Section 7 of the Flood Control Act of 1941 (Public Law 77-228), as amended, the Corps shall pay 75 percent of the annual rental receipts from the leasing of project land under its jurisdiction to the state in which the leased properties are located.

m. Restrictions on Seaplane Operations. Seaplane operations on all or portions of lakes under the jurisdiction of the Corps may be prohibited or restricted by district commanders to protect all authorized uses of the project and the safety of all users. (ER 1130-2-550)

n. Private Exclusive Use. See Chapter 17, paragraph 17-6.c.

11-2. Responsibility for Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R). Responsibility for OMRR&R of Civil Works projects has been established by the general requirements of River and Harbor and Flood Control laws and administrative policy. Also, under Section 103(j) of WRDA 1986, non-Federal sponsors are responsible for

the OMRR&R of any new cost shared projects and/or modifications to portions of existing projects accomplished under Section 103 of WRDA 1986. However, local sponsors are not responsible for OMRR&R of those portions of existing projects that are not modified under Section 103 of WRDA 1986.

a. Navigation.

(1) Completed Projects. Authorizations for most existing completed navigation improvements established that operation and maintenance (O&M) is solely a Federal responsibility to be accomplished at Federal cost.

(2) Uncompleted Projects. It is general policy to recommend that improvements for commercial navigation be maintained by the Federal Government. The Federal Government is responsible for the costs of O&M of the "general navigation features" (GNF) of commercial navigation projects, except that in the case of a deep-draft harbor, the local project sponsor shall be responsible for an amount equal to 50 percent of the incremental cost of O&M for depths greater than 45 feet (Section 101(b) of WRDA 1986, Public Law 99-662). The non-Federal sponsor is responsible for the OMRR&R of all public berthing areas; public terminals, wharves, and transfer facilities; and dredged material dikes, bulkheads, spillways and embankments necessary for the project, except as provided under Section 201 of WRDA 1996 (see paragraph 11-2.a(4) below). The U.S. Coast Guard is responsible for OMRR&R of all aids to navigation. At projects having commercial and recreational features, the non-Federal sponsor is responsible for 100 percent of the OMRR&R cost allocated to recreation.

(3) Emergency Clearing and Snagging. Section 3 of the River and Harbor Act of 1945 provided continuing authority for limited emergency clearing and snagging of navigation channels of non-vessel debris (amended by Section 915(g), WRDA 1986). A limit per project is not specified; however, in any given year a maximum of $1,000,000 may be used nationwide. Section 3 actions are approved on a case-by-case basis by HQUSACE (CECW-O).

(4) Emergency removal of wrecks (i.e., vessels or other similar obstructions) is authorized by Section 20 of the River and Harbor Act of 1899, as amended, and is handled as an operational activity subject to the October 1985 Memorandum of Agreement with the U.S. Coast Guard (Appendix E, paragraph 6g). A limit per wreck is not specified; however, in any given year a maximum of $500,000 may be used nationwide. Section 20 actions are approved on a case-by-case basis by HQUSACE (CECW-O). Paragraph 12-16, Wreck Removal, contains further discussion of this authority. Wreck removal actions are approved on a case-by-case basis by HQUSACE (CECW-O).

(5) Dredged Material Disposal Facilities (DMDF).

(a) Prior to WRDA 1996 (on or before 12 October 1996), provisions and preparation of disposal areas for initial construction and subsequent O&M were the responsibility of non-Federal interests, unless authorizing legislation provided otherwise. All necessary disposal area retaining works were to be provided by local interests. Subsequent to WRDA 1996 (after 12 October 1996), land-based and aquatic DMDF associated with the construction and O&M of all Federal navigation harbors and inland harbors (but not the inland navigation system including the Atlantic Intracoastal Waterway and the Gulf

Intracoastal Waterway) are considered to be general navigation features (GNF) of a project and subject to cost sharing (for both construction and O&M) in accordance with procedures set forth in Section 101 of WRDA 1986. The Federal share of construction of DMDF associated with the O&M of Federal harbor projects, Federal DMDF O&M costs, Federal costs of dredging and disposal of contaminated sediments that are in or that affect the maintenance of a Federal navigation channel and Federal costs of mitigation for storm damage and environmental impacts resulting from Federal maintenance activity are eligible O&M costs under Section 210 of WRDA 1986 and are reimbursed from the Harbor Maintenance Trust Fund. The use of a DMDF designed, constructed, managed or operated by a private entity is not precluded if, consistent with economic and environmental considerations, the use of such facility is the least-cost environmentally acceptable alternative.

(b) On Federal projects without a non-Federal sponsor, mosquito control programs are generally a Federal responsibility. When, however, non-Federal regulations impose project operational requirements that create conditions conducive to mosquito propagation, control programs are their responsibility. Section 148 of Public Law 94-587 calls for using appropriate management practices to extend the capacity and life of disposal areas. Section 401(c) of Public Law 92-500 provides that when the Chief of Engineers deems it to be in the public interest, others may be permitted to use dredge material disposal areas under Corps jurisdiction, subject to an appropriate charge. Section 217 of WRDA 1996 provides for DMDF partnerships: (a) the Secretary of the Army may, at the request of a non-Federal interest, provide additional capacity at a DMDF being constructed by the Secretary; (b) the Secretary of the Army may permit the use of any DMDF managed by the Secretary by a non-Federal interest; and (c) the Secretary of the Army may implement opportunities for public-private pertnerships in the design, construction, management, or operation of DMDFs in connection with construction or maintenance of Federal navigation projects (see paragraph 6-4.a(5) for further conditions and cost sharing).

(6) Environmental Dredging. There are two distinct authorities in Section 312 of WRDA 1990, as amended by Section 205 of WRDA 1996 (P.L. 104-303), as described below, under which the Secretary of the Army is authorized to remove and/or remediate contaminated sediments from the navigable waters of the United States. The authorities of Section 312, as amended, will not be used to remove or remediate contaminated sediment which are classified as hazardous, toxic and radioactive wastes (HTRW) (i.e., sediments within the boundaries of a site designated by the U.S. Environmental Protection Agency (EPA) or a state for a response action (either a removal action or remedial action) under the Comprehensive Environmental Compensation and Liability Act (CERCLA; 42 U.S.C. 9601 et seq), or if they are part of a National Priority List (NPL) site under CERCLA. Environmental cleanup of such sites is the primary responsibility of EPA and Civil Works funds will not be used for cleanup activities. However, direct assistance to EPA will continue to be provided on a reimbursable basis for environmental cleanup activities including cleanup dredging and related studies. Sediments beneath the navigable waters, which are not classified as HTRW and proposed for removal and remediation under the authorities of Section 312, as amended, shall be tested and evaluated for their suitability for disposal in accordance with the appropriate guidelines and criteria adopted pursuant to Section 404 of the Clean Water Act (CWA) of 1972 and/or Section 103 of the Marine Protection and Sanctuaries Act (MPRSA) of 1972 and supplemented by the

Testing Manuals.

(a) Section 312(a). Implementation of this section may be considered where the contaminated material is located outside and adjacent to a Federal navigation channel and contributes to contamination of material in the Federal navigation channel and it can be demonstrated that the costs of removal and remediation, as appropriate, of the contaminated sediment are economically justified based on savings in future O&M costs. Savings in future O&M costs are those associated with reduction in dredging and disposal costs through the reduction of contaminated sediment input into the navigation channel (e.g., reduction of contaminated sediment may allow continuation or resumption of open water disposal, remediation, and elimination of the need for more costly confined disposal). Implementation of this section will require agreement by a non-Federal sponsor to provide all costs related to disposal of contaminated sediment. Under this policy, disposal costs are considered those costs not directly related to removal (dredging), remediation (treatment), and transport of the material to reasonably proximate disposal sites; and includes those costs associated with lands, easements, rights-of-way, retaining dikes, bulkheads, embankments, excavation of subaqueous pits, capping/liner requirements, fish and wildlife mitigation associated with the disposal area, and maintenance and management of the disposal area. The dredging, transport, disposal, and remediation must be environmentally acceptable pursuant to all applicable Federal statutes and regulations.

(b) Section 312(b). Removal and remediation of contaminated sediment from the navigable waters of the United States for the purposes of environmental enhancement (restoration) and water quality improvement may be considered for implementation if requested by an appropriate non-Federal sponsor and if it is consistent with current program and budget priorities in effect at the time of consideration. Implementation of Section 312(b) will require agreement by a non-Federal sponsor to provide 50 percent of the costs of removal and remediation. In addition, all costs related to the disposal of contaminated sediment are a non-Federal responsibility. Disposal costs are considered those not directly related to removal (dredging), remediation (treatment), and transport of the material to reasonably proximate disposal sites; and includes those costs associated with lands, easements, rights of way, retaining dikes, bulkheads, embankments, excavation of subaqueous pits, capping/liner requirements, fish and wildlife mitigation associated with the disposal area, and maintenance and management of the disposal area. A project under Section 312(b) authority may include removal and disposal of contaminated sediment, removal and remediation of contaminated sediment, or remediation of contaminated sediments in place.

(7) Dredged Material Management Studies. The policy in the following paragraphs regarding development and financing of studies required for dredged material management at existing Federal navigation (harbor and inland harbor) projects is applicable to all Federal navigation projects maintained by the Corps which are eligible for reimbursement of O&M costs from the Harbor Maintenance Trust Fund (HMTF). The policy is not applicable to the inland waterways subject to the waterways user fuel taxes under Public Law 95-502, as amended.

(a) Study Authorities. Dredged material management plan (DMMP) studies for existing Federal navigation projects shall be conducted pursuant to existing authorities for individual project O&M

as provided in public laws authorizing specific projects, and as may be supplemented by general authorities relating primarily to beneficial uses of dredged material. Where DMMP studies disclose the need to consider expanding or enlarging existing projects, such studies may only be pursued under specific study authority or under Section 216 of the Flood Control Act of 1970.

(b) Management Plans. DMMPs for existing Federal navigation projects or groups of interrelated projects shall identify specific measures necessary to manage the volume of material likely to be dredged over a 20-year period. In those cases where two or more Federal projects are physically interrelated (share a common disposal area or a common channel) or are economically complementary, one DMMP may encompass that group of projects. Non-Federal permitted dredging within the related geographic area shall be considered in formulating DMMPs to the extent that disposal of material from these sources affects the size and capacity of disposal areas required for the Federal project(s).

(c) DMMP Study Financing. The cost of DMMP studies for continued maintenance of existing Federal navigation projects are O&M costs and shall be federally funded and reimbursable from the HMTF subject to the following:

-- Project sponsors, port authorities and other project users, are partners in dredged material management and must pay the costs of their participation in the DMMP studies including participation in meetings, providing information and other coordination activities.

-- Budgeting priority for the navigation purpose is limited to the least cost plan that is consistent with sound engineering practice and meeting environmental standards established by Section 404 of the CWA of 1972 or Section 103 of the MPRSA of 1972, as amended (i.e., the "base plan"). Therefore, the cost for any component of a DMMP study attributable to meeting local or state environmental standards that are not provided for by the requirements of Federal laws and regulations, shall be a non-Federal cost, and not be recoverable from the HMTF.

-- Study activities related to dredged material manangement for the Federal project but not required for continued maintenance dredging and dredged material disposal, will not be funded from the HMTF and will not be included in DMMP studies unless funded by others. Such activities would include contamination source identification and studies leading to the control of non-point sources of pollution.

-- Studies of project modifications needing Congressional authorization, including dredged material management requirements related to the modification, will be pursued as cost shared feasibility studies with General Investigation funding. Where the need for such modifications are identified as part of DMMP studies, O&M funding for the study of the modification should be terminated and a new feasibility study start sought through the budget process under the authority of Section 216 of WRDA 1970.

(d) Costs for beneficial uses that are consistent with and part of the base plan are O&M costs and the cost of studies pursuant to these beneficial uses are a Federal cost, recoverable from the HMTF. However, study costs for beneficial uses which are not part of the base plan, beyond those reconnaissance level studies needed to identify these potential uses as part of DMMP studies, are either a

non-Federal responsibility or are a shared Federal and non-Federal responsibility depending on the type of beneficial use (i.e., restoration and protection of environmental resources; placement of material on beaches).

(e) Where there is a feasibility study for modification of an existing Federal navigation (harbor and inland harbor) project and a need for dredged material management planning for the maintenance of the existing Federal navigation project being modified, the costs of dredged material management and disposal studies will be allocated between the existing project and the feasibility study for the project modification. Costs will be allocated by first identifying all costs that would be associated with planning for dredged material management for the existing authorized Federal project at existing depths and widths. These costs will be allocated to maintenance of the existing project and be funded from the O&M, General, appropriation at 100 percent Federal cost. Increments of dredged material management study costs above those required for planning for continued maintenance of the existing project, which are associated with disposal of dredged material from construction of the project modification or increments of new maintenance cost attributable to the project modification, will be shared 50-50 with the non-Federal sponsor as feasibility study costs. The definition of the required dredged material management studies and the allocation of costs of these studies between the existing project and the feasibility study must be a carefully coordinated effort involving planning and operations elements and the non-Federal sponsor. While the costs for dredged material management are allocated between O&M and the feasibility study, the dredged material management studies will be conducted as a unified study within the context of the feasibility study.

b. Flood Control.

(1) WRDA 1986 does require that the non-Federal sponsor(s) pay for, and be responsible for, the cost of project OMRR&R. The general policy is that the non-Federal sponsor shall operate, maintain, repair, replace and rehabilitate (OMRR&R) the project and that any agreement made during PCA negotiations with more local involvement is satisfactory and within policy guidelines. Corps reservoir projects, both multiple-purpose and single purpose flood control (dam) projects, undertaken prior to 1986 are operated and maintained by the Federal Government. WRDA 1986, enacted 17 November 1986, provides that, for new reservoir (dam) projects, non-Federal interests shall be responsible for OMRR&R requirements related to the flood control function. In the case of modification to an existing Corps operated and maintained reservoir, interpretation of the Act allows for several possibilities as to which partner (Corps or non-Federal sponsor) actually OMRR&Rs the project for flood control. The possibilities range from a non-Federal sponsor performing all these functions to a request by the non-Federal interests to have the Federal Government perform project OMRR&R. The use of an incremental approach to determine sharing of the flood control OMRR&R costs would be equitable. The Federal Government should pay the flood control OMRR&R costs of the existing reservoir and the non-Federal sponsor is to pay for the increment of costs introduced by the modification. Non-Federal sponsors for flood control and multipurpose dams constructed under the provisions of WRDA 1986 should be fully prepared by the Corps to accept their responsibility for OMRR&R:

(a) During the feasibility phase, all project OMRR&R and dam safety requirements should be identified and discussed with the non-

Federal. The non-Federal must be made aware of the project design, the expected function of each project element, the requirements of operation, and all state and other Federal requirements. A turnover plan that establishes responsibilities and a definite point for the turnover of the project to the non-Federal should be documented in the Management Plan and in the feasibility report.

(b) In the PED phase, the responsible Corps commands should hold necessary meetings between the non-Federal, the state, and other Federal agencies to refine all criteria and requirements of project design, construction and OMRR&R. The non-Federal must be made aware that after transfer of the project, the Corps is in a supporting role with respect to dam safety and will only participate in inspections and review performance data.

(c) In the construction phase, the responsible Corps commands should schedule and coordinate visits to the site for the non-Federal and state representatives to observe construction of significant and critical features of the project. During these visits, the non-Federal should be briefed on the construction records and reports.

(d) The turnover of the project to the non-Federal will occur after the first periodic inspection which will be conducted and documented by the Corps with participation by the non-Federal. Future periodic inspections will be conducted by the non-Federal with a representative of the Corps. The following items will be included in the turnover plan and be completed prior to project turnover: OMRR&R Manual; initial dam safety training for the non-Federal; the emergency identification, emergency operations and repair, inundation maps and the Federal portion of the notification subplans of the Emergency Action Plan (EAP); instrumentation, monitoring and surveillance plans; periodic inspection schedule; and, appropriate review and certification by the State. Responsible Corps commands should monitor the performance of these projects by reviewing yearly instrumentation records and by the observations of the Corps representative participating in the scheduled inspections.

(2) Flood control works such as levees, channel improvements, and emergency repair work under Section 5 of the 1941 FCA (often referred to as Public Law 84-99) authority are OMRR&R'd by non-Federal interests. There is one exception: channel improvements specifically authorized under the Flood Control Act of 1938 are a Federal O&M responsibility.

(3) Projects for snagging and clearing for flood control under Section 208 of the Flood Contol Act of 1954 and emergency bank protection under Section 14 of the Flood Control Act of 1946, as amended, require O&M by non-Federal interests.

c. O&M Controls, Flood Control Projects. Section 208.10, Title 33, CFR contains regulations for the O&M of local flood protection works approved by the Secretary of the Army in accordance with authorities contained in Section 3 of the Flood Control Act of 22 June 1936 (49 Stat. 1571), as amended and supplemented. District commanders are to keep informed as to the extent of compliance with the local O&M requirements through the Inspection of Completed Works Program, and analysis of semi-annual reports required to be submitted by the operating and maintaining agency. (ER 1130-2-530)

d. Flood Control (Mississippi River and Tributaries). Local responsibility is limited to regular levee maintenance, but this is

defined by law to consist only of mowing grass and weeds, local drainage and minor repairs of main river levees. The Federal Government is responsible for extraordinary maintenance of levees and all maintenance of structures other than levees.

e. Shore Protection Projects (including Hurricane and Storm Damage Reduction). Maintenance is a non-Federal responsibility. Federal participation may be provided for a specified period in periodic nourishment when nourishment has been selected and adopted in lieu of more extensive construction, and such Federal participation is adopted as part of the recommended project. (ER 1165-2-130)

f. Other Projects. Except for the OMRR&R on fish and wildlife enhancement lands, the non-Federal sponsor is responsible for 100 percent of the OMRR&R cost for all non-navigation projects. On fish and wildlife enhancement lands, the non-Federal sponsor is responsible for 25 percent of the OMRR&R costs.

g. Requirements of Project Cooperation for Cost Shared Projects. During the negotiation of a PCA, the non-Federal sponsor should be made aware of activities it will be required to undertake in the performance of its O&M responsibilities, including the estimated annual cost to perform those OMRR&R functions. Non-Federal sponsors should be made aware that the estimated annual OMRR&R cost will be refined as the final project design is completed and will be adjusted accordingly after the project is transferred for OMRR&R. (See, also, paragraph 13-8.)

11-3. Major Rehabilitation. Major rehabilitation shall consist of either one or both of two mutually exclusive categories, i.e., reliability or efficiency improvement.

a. Reliability.

(1) Rehabilitation is a major project feature restoration consisting of structural work on a Corps operated and maintained facility, such as a lock, dam, hydropower plant, etc., intended to improve reliability of an existing structure, the result of which will be a deferral of capital expenditures to replace the structure.

(2) Rehabilitation will be considered as an alternative when it can significantly extend the physical life of the feature and can be economically justified by benefit-cost analysis. The work will extend over at least two full construction seasons and will require at least $5.1 million in capital outlays if initially funded before 1 October 1994. For inland navigation projects initially funded in Fiscal Year 1997, the reliability threshold will increase to $8.2 million.

b. Efficiency Improvement. The efficiency improvement category will enhance operational efficiency of major project components. Operational efficiency will increase outputs beyond the original project design. Efficiency improvement will require at least $1.03 million in capital outlays on a component which does not exhibit reliability problems.

c. Threshold Considerations. The threshold amounts listed for the reliability and efficiency improvement categories shall be adjusted annually according to the Administration's economic assumption published each year as guidance in the Annual Program and Budget Request for Civil Works Activities of the Corps of Engineers

(i.e., "Budget EC"). In determining whether project work falls within the dollar thresholds set forth in paragraphs 11-3.a(2) and 11-3.b above, the dollar value of work on separate projects shall not be aggregated, even if within the same river or waterway system.

11-4. Correction of Design or Construction Deficiencies. Occasionally a project may require modification after project completion because of a deficiency detected in the original Federal engineering design or construction of the project. A design or construction deficiency is a flaw in the Federal project that interferes significantly with the project's authorized purposes or full usefulness as intended by Congress at the time of initial construction. A design deficiency may be patent and readily observable or latent and remain hidden for years after completion of the project. Work required to correct a design or construction deficiency can be accomplished under existing project authority without further congressional authorization if the proposed corrective action meets all the following criteria: (ER 1165-2-119)

a. It is required to make the project function as initially intended by the designer in a safe, viable and reliable manner.

b. It is not required because of changed conditions.

c. It does not change the authorized scope, function, or purpose of the project.

d. It is incrementally justified by current economic considerations or otherwise needed and justified for safety reasons.

e. It is not required because of inadequate local maintenance.

f. If corrective measures are proposed and adopted that involve cost sharing, there is a non-Federal sponsor willing to enter into a project cost sharing agreement to cover the cost sharing requirements (using the same percentage as specified in WRDA 1986 for the project purpose(s)).

11-5. Dam Operations Management. Corps of Engineers dams are managed in accordance with the safest and most effective criteria and procedures that can practicably be established. Projects are inspected at appropriate intervals for signs of weakness or distress by trained personnel. A Dam Safety Plan is prepared for each dam consisting of: an emergency notification procedure; a description or list of conditions leading to emergency situations and way of dealing with them; reservoir de-watering procedure; dam failure inundation maps; a listing of location, types, and quantity of emergency repair materials and equipment; details outlining responsibilities for inspection and execution of emergency repairs; and a list of contractors available within a reasonable distance of the dam. (ER 1130-2-530)

11-6. Dam Safety Assurance. This program provides for modification of completed Corps dam projects when detailed studies indicate that safety improvements are warranted in light of present day engineering standards and knowledge. The program facilitates upgrading of dams and related facilities constructed or operated by the Corps when new hydrologic or seismic data or changes in state-of-the-art design or construction criteria make upgrading necessary for safety purposes. The indicated modifications must be within the Chief of Engineers discretionary authority to rectify, or a specific congressional

authority must be obtained. Generally, existing authorities are sufficient to permit improvements to a project for safety purposes if such improvements do not alter the scope or function of the project or substantially change any of its specifically authorized purposes. Primary examples of project features eligible for upgrading under this program are: enlarging existing or constructing new facilities to provide adequate flood discharge capability; raising the dam height to provide adequate freeboard allowance; and increasing structural stability of the dam foundation or structure to withstand hydraulic and/or seismic loading. Modifications based on changes in state-of-the-art design or construction criteria require thorough documentation. Other modifications to correct conditions that may threaten the integrity of a dam are accomplished as part of major rehabilitation or routine maintenance. The Dam Safety Assurance Program is also designed to upgrade dams built by the Corps and turned over to local interests to operate and maintain; however, additional authorization may be required for such projects. (ER 1110-2-1155)

11-7. Changes in Water Control Plans. Authorities for the allocation and regulation of reservoir storage in projects operated by the Corps are contained in project authorization acts. Some modifications to approved water control plans may be undertaken to provide more efficient use of the project. It is the policy of the Chief of Engineers that reservoir regulation procedures be evaluated continually. The objective of this policy is to improve water management in light of changing conditions. However, proposed changes, including those required to maintain instream flow needs, must be carefully reviewed in conjunction with the authorizing legislation to determine the extent of the change which may be undertaken. Further, PL 101-640 requires that any change to a water control plan, regardless of purpose, must be developed with full public involvement. Water control plans may be modified to add a purpose for which the Congress has granted general authority to all Corps reservoirs. Such purposes are limited to: recreation (PL 78-534); municipal and industrial water supply (PL 85-500); fish and wildlife conservation (PL 85-624); water quality control (PL 92-500); and threatened and endangered species preservation (PL 93-205). The addition of any other purpose would require congressional authorization. (To the extent practical, without adverse impacts on Federal project functions, other adjustments to suit locally-desired objectives may be considered and proposed contingent upon suitable non-Federal fees or contributions.) Often, proposals for changes of this type involve increases in the length of time waters are stored at various levels in the reservoir. Such proposals may require acquisition of a greater interest in reservoir lands on which flowage easements were initially obtained. The cost of those additional land takings along with all other benefits and costs should be considered in the decision to change reservoir regulation. If such lands are leased, amendments to the lease may be required. (ER 1110-2-240, ER 1165-2-119).

11-8. Mitigation of Damages Resulting from Construction and Operation of Project. The Federal Government is not normally held responsible for damages incidental to Civil Works activities within areas subject to the Navigation Servitude. Normally, as a condition of project authorization, local interests are required to hold and save the United States free from damages due to construction, operation, and maintenance of the project works. Section 9 of Public Law 93-251 states that such requirement does not include damages due to the fault or negligence of the United States or its contractors. While the Federal Government may be liable for damages resulting from the

negligence of a government employee, no recovery is allowable resulting from the exercise of a discretionary function by a government official. The Chief of Engineers has discretionary authority under certain conditions to provide remedial work to correct certain adverse conditions resulting directly from a Civil Works project. This includes any destructive erosion of lands beyond Federal property limits around reservoir boundaries. The Office of Counsel should be consulted on the applicability of this authority to individual cases. (33 U.S.C. 633, 701(q))

11-9. Use of Corps Reservoir Flowage Easement Lands. Flowage easement lands present a difficult challange. The Corps has only purchased certain rights associated with periodic water storage on the property and does not exercise the absolute control associated with ownership in fee. Therefore, the Corps ability to plan for developing and using flowage easement lands in the master planning process is limited. Though easement provisions may vary, ER 405-1-12 sets forth the current flowage easement requirements. It provides that no structure for human habitation shall be constructed or maintained on the land, that no other structure shall be constructed or maintained on the land except as may be approved in writing by the Corps, and that no excavation shall be conducted or landfill placed without Corps approval. Under the standard flowage easement, the land use decisions under the purview of the district commander are approval for structures other than for human habitation, and approval of excavations or landfill placements. Final approval authority for release of the restriction on human habitation rests with the ASA(CW). Guidance on considerations in making the land use decisions and recommendations for flowage easements is presented in the following paragraphs. This guidance applies to decisions on future land use and does not apply to corrective actions for unpermitted encroachments on flowage easement areas.

a. Structures Other Than for Human Habitation. Approval for structures other than for human habitation rests with the district commander. However, to ensure national and regional consistency in policy application, any approval action must be coordinated with the division commander before it is finalized. The following criteria should be used for evaluating the approval of these structure on flowage easement lands.

(1) Compatibility with Project Operations. The structure must be compatible with project operations. Therefore, any proposal which would result in a significant increase in debris or sedimentation in the reservoir will not be approved. Any proposed structure for the production or storage of highly volatile, hazardous, toxic, or water reactive materials will not be approved.

(2) Compatibility with Floodplain Management. In accordance with the requirements of the national policies on floodplain management, any non-residential structure (building), including such structures as barns and storage buildings, must be elevated above the 100-year flood plain or floodpool or floodproofed watertight to or above the 100-year flood level. Also the landowner must demonstrate that there is no practical alternative to location of the structure other than within the floodpool or flood plain. Certain types of development are compatible with periodic low velocity inundation including parking lots and other paved surfaces, field recreation facilities (backstops, goalpost, etc.) and open type structures (picnic shelters). These kinds of developments would generally be approved unless their construction reduced the flood control storage

capacity of the project or considerations of safety or property damage preclude the approval (e.g., inadequate warning time to evacuate people from a recreation area).

(3) Excavation or Landfills. The primary consideration in approving excavations or landfill placements is the preservation of the flood storage capacity of the project. Therefore, landfill placements will not be approved unless substitute flood storage is provided. Proposals for excavation and grading of flowage easement areas will not be approved if they result in loss of flood control storage. Approval authority for excavations and landfills rests with the district commander. However, to ensure national and regional consistency in policy application, any approval action must be coordinated with the division commander before it is finalized.

c. Release from Restriction on Human Habitation. Generally, the restriction on human habitation will not be recommended for release. Human habitation below the flood control or navigation pool elevation places an undue limitation on the Congressionally authorized operation of the project. However, if it can be demonstrated that the release will not result in a significant threat to human life, health, or safety, and will not place or suggest any restriction on the operation of the project, the release may be approved under certain conditions. As with other structures, such developments must meet the requirements of national policy on flood plain management as set forth in Executive Order 11988 and its implementating regulations. Executive Order 11988 requires consideration of alternatives which avoid the flood plain whereever practical. Therefore, any landowner requesting relief from the restriction on human habitation in a flood plain or project pool must also demonstrate that there is no practical alternative to the location of the habitable structure. In addition to satisfying these requirements, if there is any threat to human life, the proposal for release of the human habitation restriction will not be recommended for approval. However, if it can be demonstrated that there would be adequate warning time to evacuate the structure in the event of a flood that would inundate the site and that non-flooded egress out of the project area (offsite) then it may receive approval. Proposals for release of human habitation restriction must be submitted through the Major Subordinate Command to HQUSACE for approval by the ASA(CW). The human habitation restriction is a property right acquired by the Federal Government which must be released by a deed, including the provision for adequate compensation for the disposal, in accordance with ER 405-1-12.

11-10. Granting Use of Civil Works Project Real Estate. Lands and waters of Civil Works projects frequently can, without detriment to the primary project purposes, also be used to provide many other forms of public and private benefits. Such uses may take place either under Corps management or by third parties under the following authorities:

a. 10 U.S.C. 2667 provides for the lease of real and personal property which is not excess or required for public use. Leases are limited to five-year terms unless the Assistant Secretary of the Army (Installations and Logistics) determines that a longer lease term will promote the national defense or will be in the public interest. Agricultural and grazing leases are examples of leases issued under this authority.

b. 16 U.S.C. 460d provides for lease of real property at water resources development projects when it is determined to be in the public interest. Generally, these leases are for commercial

concessions and recreational purposes. This authority is also used for licenses for fish and wildlife purposes.

c. 43 U.S.C. 961 provides authority to grant easements on Government lands for electric power and communication lines.

d. 10 U.S.C. 2669 provides authority to grant easements for gas, water and sewer pipelines.

e. 10 U.S.C. 2668 provides authority to grant various types of easements for rights-of-way.

f. 30 U.S.C. 185 provides authority to grant easements for fuel-carrying pipelines and related facilities.

g. 10 U.S.C. 4777 provides authority for ferry landings, bridges and livestock crossings.

h. 40 U.S.C. 319 provides for easements for rights-of-way or other purposes.

i. The general administrative power of the Secretary of the Army allows for use of Army real property by a license or permit.

11-11. Disposal of Civil Works Project Real Estate. Power to dispose of real estate belonging to the United States is vested in Congress (Article VI, Section 3, clause 2 of the Constitution) and no Corps real estate will be sold or otherwise disposed of without authority of Congress. The major portion of real estate disposal actions performed by the Corps is predicated on authority derived from the Federal Property and Administrative Services Act of 1949 (Public Law 152, 81st Congress), as amended (40 U.S.C. 471, et seq.), and the rules, regulations and delegations of authority issued by the General Services Administration (GSA) thereunder. For example, GSA has delegated to the Secretary of the Army the authority to dispose of real property that has an estimated value of $15,000 or less. However, absent specific delegation from GSA or specific authorization by Act of Congress to dispose of project lands, lands excess to project requirements must be turned over by the Corps to GSA for disposal in conformance with the 1949 Act. Some general examples of specific disposal authority are:

a. 10 U.S.C. 2571(a) authorizes the transfer, without reimbursement, of real estate between the Army, Navy, Air Force and Coast Guard.

b. Specific authority exists for transfers to the Tennessee Valley Authority, Federal Prison Industries, Inc., the Veterans Administration, the Department of Transportation, the National Weather Service, and to the District of Columbia.

c. 16 U.S.C. 505a, 505b authorizes the interchange of national forest lands and lands under the control of the military departments.

d. 33 U.S.C. 558b authorizes the exchange of Government-owned excess fee-owned land and easement interests for land or interests in land required for river and harbor project purposes. 33 U.S.C. 558b-1 extends this authority to flood control projects.

e. 49 U.S.C. 2215 provides for disposal of lands for airport

development.

f. 33 U.S.C. 578 provides for the conveyance of land which is part of a water resources development project to a state, political subdivision thereof, port district, port authority, or other body created by a state for the purpose of public port or industrial facility development. As a matter of policy, only lands within a navigation project will be made available for conveyance for these purposes.

g. Public Law 84-999 provides authority for the sale of lots for cottage development and use.

11-12. Pest Management Programs.

a. Administration. HQUSACE assigns responsibilities, issues guidance, and exercises management controls to assure compliance with prescribed pest management procedures at Corps reservoir projects. Objectives are to attain an acceptable level of pest control while providing for the safety of the environment, the public, and pest management personnel. Division commanders coordinate with EPA regional offices and assure compliance with guidance and regulatory requirements. District commanders may approve and supervise implementation of pest management plans.

b. Annual Pest Management Plans. Field project managers prepare and submit detailed annual plans, including anticipated use of pesticides, to their district offices for review and approval.

c. Training, Personnel Protection and Surveillance. All personnel directly involved in pesticide application must be properly trained prior to making applications. Specialized training and/or certification is required for restricted use pesticide applicators. Personnel whose duties include supervision of pesticide applications must have a practical knowledge of applicable Federal and state regulations. Health and safety practices and procedures, including the use of personal protective equipment and clothing where appropriate, are required. Pesticide applicators also receive medical surveillance, which at a minimum consists of annual physical examinations. (ER 1130-2-540, EP 1130-2-540)

d. Documentation. Pesticide application data is promptly recorded and retained at project offices. (ER 1130-2-540, EP 1130-2-540)

11-13. Acceptance of Donations of Materials.

a. The Act of 24 April 1888 (33 USC 591) authorizes the Secretary of the Army to accept donations of lands or materials required for maintenance or prosecution of works for the improvement of rivers and harbors for which provision has been made by law. This authority has been delegated to the Chief of Engineers. Division commanders are delegated authority to accept unconditioned donations of such materials not to exceed a value of $5,000. Acceptance of donations of lands has not been delegated by the Secretary of the Army.

b. Section 203 of the Water Resources Development Act of 1992 authorizes the Corps to accept contributions from groups and individuals in connection with carrying out water resources projects, for environmental protection and restoration or for recreation. The

Corps may accept and use contributions to provide for operation and/or maintenance of recreation areas and the protection and restoration of natural resources at water resource development projects. Cash, funds, materials, and services may be accepted, but real estate can not be accepted. (ER 1130-2-500, Chapter 11)

c. Section 225 of the Water Resources Development Act of 1992 authorizes the Corps to develop and implement a program to share the cost of managing recreation facilities and natural resources at water resource development projects. The Corps is authorized to enter into cooperative agreements (Challenge Cost Share Agreements) with non-Federal public and private entities to provide for operation and/or management and development of recreation facilties and natural resources where such facilities and resources are being maintained at complete Federal expense. Funds, materials, and services may be accepted in conjuction with this program. (ER 1130-2-500)

11-14. Discontinuation of Maintenance of Projects. Some waterways and harbor improvements constructed years ago may no longer be needed or used for the purposes for which originally intended, because of changed physical and economic conditions. Efforts are made to transfer the projects to appropriate state or local agencies for maintenance where obsolete waterways serve local purposes such as recreation or as sources of municipal or industrial water; or where local developments have grown up along the navigation pools. Where Federal improvements are not justified or no longer serve their authorized purpose, the Corps will recommend discontinuation of maintenance to Congress. Pending arrangements for disposition, they are maintained as economically as possible to ensure that public health and safety are not endangered. Obsolete harbor improvements, which no longer have importance for commercial or recreational traffic, are not maintained by the Federal Government.

11-15. Operation and Maintenance Resumption after Suspension of Substantial Curtailment of Maintenance.

a. Suspended or substantially curtailed maintenance defines a situation where a conscious decision has been made in the past to suspend, stop, or curtail normal Federal maintenance practices for a project or specific feature(s) of a project. This decision may not have been from a study or a document but may reflect budget realities of competing needs of scarce resources, benefits diminished or gone at the project, or environmental compliance constraints. Presently the project dimensions or capacities are diminished enough to require a special one-time funding to bring the project up to a level of performance to accrue benefits for authorized purposes.

b. The reinstatement of Federal O&M budgetary support in authorized projects with suspended or substantially curtailed maintenance requires: (1) reaffirmation of Federal interest; (2) determination that the proposed maintenance is engineeringly, economically, and environmnetally sound; and, (3) approvals.

11-16. Monitoring Coastal Projects. In the planning, design, construction and O&M of coastal projects, elements of uncertainty about the performance and ultimate effectiveness of the project works are always present in some degree because of the complex and forceful processes at work. Monitoring of completed, in-place projects is a means of achieving new insights for future application in development of other projects. The Corps O&M budget generally includes provision for undertaking intensive monitoring programs at a select few Corps

projects -- shore protection and navigation. Where the shore protection project is Construction, General funded, no funds will be used to undertake monitoring. (Proposals for new projects should include, as part of the recommended project authority, provision for accomplishment of monitoring efforts foreseen as desirable.) The Waterways Experiment Station (WES) will provide technical advice on program preparation and execution to Corps districts. (ER 1110-2-8151)

11-17. Energy Conservation. Energy conservation goals were established by the Office of the Assistant Secretary of Defense (Logistics and Material Management) in Defense Energy Program policy Memorandum 86-3. FOAs have been directed to meet the energy conservation goals.

11-18. Environmental Compliance, Pollution Prevention and HTRW Site Restoration.

a. General.

(1) Corps Projects and Facilities. This paragraph (11-18) addresses the Corps policies and responsibilities for proper environmental stewardship of Corps operated and maintained Civil Works projects and facilities. Elements of the Corps Environmental Management System are presented. Policy guidance is contained in ER 200-2-3, Environmental Compliance Policies, dated 30 October 1996.

(2) Sponsor Projects. This paragraph (11-18) does not apply to projects operated and maintained by sponsors. While the environmental laws apply equally to projects and facilities irrespective of who operates them, this paragraph (11-18) includes Corps regulations, procedures and processes that are not imposed on others.

(3) Outgrants. All real estate outgrants have a provision that requires the grantee to protect project property against pollution of its air, ground, and water. Disposal of any toxic or hazardous materials on the premises is specifically prohibited. All laws, regulations, conditions or instructions affecting the grantee’s use of land issued by the Environmental Protection Agency, or any Federal, state, interstate or local governmental agency having jurisdiction are made a condition of the outgrant. Periodic compliance inspections are performed to assure the grantee’s compliance with all environmental provisions. If noncompliance is found with an environmental provision that is potentially a regulatory violation, the lessee must be notified in writing. The appropriate regulatory agency will determine if there is a violation, and when compliance is achieved. (See ER 405-1-12, paragraph 8-99.e(3)(d))

b. Environmental Compliance.

(1) Policy. The Corps will be a proactive facility leader in attaining and sustaining compliance with environmental standards established in applicable Federal, DOD, DA, state, and local laws and regulations. Locks, dams, dredges, campgrounds and property under Corps control and facilities under lease or license, such as marinas, oil and gas exploration and extraction areas, and grazing lands, must be managed to be compatible with the environment.

(2) The Environmental Compliance Program.

(a) Environmental Compliance Assessments. The purpose of Environmental Compliance Assessments is to identify and correct noncompliance. Environmental Compliance Assessments, conducted on a regular basis, provide a picture of compliance levels and corrective action requirements. Environmental Compliance Assessments are a proactive approach to assuring that potential environmental protection and compliance issues are promptly identified. Once identified, the full range of specialties within the Corps can be called on to assist in their resolution. Deficiencies are prioritized and corrective actions taken as routine maintenance work or programmed in the Civil Works budget process.

(b) The Environmental Assessment and Management (TEAM) Guide and the Environmental Review Guide for Operations (ERGO). These manuals are the foundation of a comprehensive program to achieve, maintain, and monitor compliance with applicable environmental laws and regulations, and to implement good management practices. The TEAM and ERGO manuals contain checklists of Code of Federal Regulations, Engineer Regulations, and Management Practices that show legal requirements and specific operations or items to review at Civil Works projects and facilities. The manuals are divided into categories or "protocols" to assist in the evaluation of such items as: air emissions, cultural resources, hazardous materials and waste, natural resources, pesticides, solid waste, wastewater, underground storage tanks and toxic substances. They are designed for on-site personnel to use for internal (self) assessments or for district teams, contractors, and others to use for external assessments.

(c) Annual Assessments. Annual external or internal assessments are performed to evaluate environmental compliance and to give necessary feedback so supervisors can organize, direct, and control environmental compliance and protection activities. A multidisciplinary approach is essential to resolving environmental issues because most activities that affect the environment must be assessed from various perspectives to achieve the most effective environmental management. TEAM/ERGO assessments: enhance Corps environmental compliance at Federal, state and local levels; improve Corps environmental management; build supporting budget requirements; and, assure supervisors that their environmental programs will be implemented effectively according to Corps goals and objectives.

c. Enforcing Environmental Regulations. Managing Corps projects and facilities includes accepting responsibility for compliance with applicable environmental regulations. The EPA and other Federal and state agencies are charged with enforcing environmental regulations. An effective TEAM/ERGO assessment program will help to reduce risks and liability.

d. Pollution Prevention.

(1) Policy. As in the case of environmental compliance, pollution prevention is one of the four pillars of the Army Environmental Strategy. It is Corps policy that:

(a) The Corps will comply with all applicable Federal, state, and local environmental laws and regulations.

(b) Pollution shall be prevented or reduced at the source. Wastes and by-products that cannot be prevented shall be recycled. Pollutants that cannot be recycled shall be treated to minimize environmental hazards. Disposal or other release into the environment

shall be employed only as a last resort and shall be conducted in an environmentally safe manner.

(c) Pollution prevention plans shall be prepared, maintained, and used as a basis for pollution prevention at each Corps project or facility. Corps operations and activities shall incorporate pollution prevention practices on a life-cycle basis.

(d) Corps personnel shall practice pollution prevention.

(2) The Pollution Prevention Program.

(a) Executive Order (EO) 12856. Signed by the President on 3 August 1993, EO 12856 "Federal Compliance With Right-to-Know Laws and Pollution Prevention Requirements", sets a goal of fifty percent reduction in toxic chemical releases by 1999. The Secretary of Defense issued a directive on 11 August 1994, subject: Comprehensive Pollution Prevention Strategy, which incorporates the requirements of several EOs, including EO 12856, as well as recommendations from the Deputy Under Secretary of Defense (Acquisition Reform). Civil Works projects and facilities subject to the Emergency Planning and Community Right to Know Act of 1986 (EPCRA) reporting requirements must develop and implement pollution prevention program plans as an ongoing process.

(b) EPCRA. Starting in calendar year 1994, Corps Civil Works facilities, as do all Federal facilities, are required to comply with the reporting requirements of EPCRA. The basic philosophy of EPCRA is to get the community involved with emergency planning by letting them know what kinds of danger they can be exposed to based on the kinds of chemicals, the quantities of those chemicals, and the possible effects of those chemicals on the population during an unforeseen incident. It requires that detailed information about the nature of hazardous substances in or near communities be made available to the public. In addition to informing the public, certain EPCRA reports are submitted directly to the EPA. Whenever possible, EPA expects the facility to use information already in existence, such as permit information and monitoring data already being collected and used by the facility for compliance with other environmental, health, and safety activities.

(c) EPCRA Reporting. EPCRA contains several different reporting and planning requirements. Whether a facility must comply with a particular section of EPCRA, for example: Sections 302, 304, 311, 312, 313, is based on certain thresholds for storage, use, manufacturing, processing, or release of listed chemicals. Because each section of EPCRA has discrete thresholds and chemical lists, most facilities are likely to be subject to one or more sections of EPCRA.

e. HTRW Site Restoration.

(1) Policy. HTRW considerations at Corps operated and maintained projects and facilities are generally anticipated to be of a localized nature. Examples of HTRW situations may include unanticipated discovery of HTRW sites, contaminated discharges, and illegal disposal of HTRW materials on project lands. Corps policy is to work closely with appropriate Federal, state, and local agencies to address completely its responsibilities for HTRW situations.

(2) HTRW Guidance. When HTRW sites are discovered at a Corps operated project or facility, the affected area must be secured and protected until the contaminants are identified and site safety and health programs and plans are put into effect. HTRW considerations of appropriate post-response monitoring will be included in the project O&M Manual. ER 1165-2-132, Hazardous, Toxic, and Radioactive Waste (HTRW) Guidance for Civil Works Projects, is a reference for this topic.

CHAPTER 12

NAVIGATION

12-1. The Federal Interest. Federal interest in navigation is established by the Commerce Clause of the Constitution, and subsequent court decisions, defining the right to regulate navigation and improvement of the navigable waterways. The navigable waters are important to the nation as a major means of commercial transportation and as a part of national defense. The merits of Civil Works projects for improvement of navigation are currently measured against a single Federal objective--national economic development--in accord with the Water Resources Council's (WRC) Principles and Guidelines (P&G).

a. Project Scope. Navigation improvements are directed and authorized by congressional legislation or other action. Over the years, these actions have circumscribed the scope of improvements to include providing waterway channels, anchorages, turning basins, locks and dams, harbor areas, protective jetties and breakwaters--with adequate dimensions for safe and efficient movement of vessels. Not included are facilities such as docks, terminal and transfer facilities, berthing areas, and local access channels, which have traditionally been the responsibility of local interests.

b. Project Beneficiaries. Federal improvements must be in the general public interest and must be accessible and available to all on equal terms. Although federally-provided general navigation facilities may serve them, improvements are not made to provide navigation access to privately-owned facilities (including commercial marinas) or access to restricted membership yacht clubs and similar establishments not open to the general public on equal terms, nor are improvements undertaken to enhance and primarily benefit land development schemes, waterway cargo transfer and lightering facilities, or to provide barge fleeting areas.

c. Navigation Servitude. The Corps role in navigation is heavily influenced by the common law principle of navigation servitude, essentially the public's right of way to reasonably free use of all streams and water bodies for navigation. Federal concern does not extend, however, to providing unrestricted use of unlimited, obstructionless water areas.

d. Federal Funding. Until passage of the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662), commercial navigation improvements were constructed, operated and maintained by 100 percent Federal funding (except for land and relocations requirements). Such projects authorized by that Act, and subsequently, may involve local cost sharing. Non-Federal cost sharing for recreational navigation projects has always been the norm. (See paragraph 6-4.c)

e. Improvements by Others. There is no general authority available to the Chief of Engineers whereby a grant or contribution of Federal funds can be made for navigation features or navigation benefits of a non-Corps project to be constructed by another agency or by local interests. The Chief of Engineers cannot reimburse, or in any way credit, local interests for their expenditures on navigation improvements which they undertake prior to the approval and adoption of a Corps project, unless specifically authorized by the Congress to

do so (project proposals will not recommend such reimbursement). There are, however, certain general authorities under which local interests may receive reimbursement for work they accomplish on a Corps project after it is authorized (See paragraphs 8-6 and 12-26).

f. Federal Assumption of Operation and Maintenance (O&M). Specific authorization by Congress is required to assume Federal maintenance of channel improvements provided by others which extend beyond the limits of the authorized project. Section 204(f) of WRDA 1986, as amended, as implemented by ER 1165-2-124, provides the basis for the Federal assumption of maintenance of navigation (harbor) projects constructed by non-Federal interests. Section 204(f) generally provides that a non-Federal project must be approved by the Secretary of the Army for Federal assumption of maintenance prior to construction. In view of the provisions of Section 204(f) and in recognition of budget constraints, the Corps of Engineers will no longer seek authorization for Federal maintenance of existing non-Federal navigation projects. Only assumption of maintenance under the provision of Section 204(f) will be considered. This policy does not apply to the study of improvements (deepening or widening) of existing non-Federal projects and recommendations for authorization for construction of these improvements with subsequent Federal maintenance.

12-2. Navigable Waters of the United States. Federal jurisdiction over navigation extends to all navigable waters of the United States (U.S.). The definition of "navigable waters of the U.S." is derived from a history of judicial decisions and interpretations, along with administrative determinations of the Corps and legislative actions which may declare certain specific waters to be non-navigable (33 U.S.C., Chapter I). The Corps defines navigable waters as "...those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Corps jurisdiction is limited to lands below the ordinary high water mark in non-tidal waters and land below the mean high tide line in tidal waters. In non-tidal waters the extent of this jurisdiction is also limited horizontally to the bed and bank of the navigable stream. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity." (33 CFR 329) The jurisdictional limits of Corps interest with respect to navigation and with respect to other Corps regulatory responsibilities are not consistent. (See paragraph 22-4)

12-3. National Economic Development (NED) Benefit Evaluation, Navigation. Chapter II of the P&G contains NED benefit evaluation procedures for specific types of projects. The relevant procedures for navigation projects are: Section VI, Inland Navigation; Section VII, Deep-Draft Navigation; Section VIII, Recreation; and, Section IX, Commercial Fishing. The economic principles, legislation, and policies to be considered in all navigation studies are summarized below.

a. Priority Outputs. In considering funding for studies and project implementation, commercial navigation benefits are a priority output, while recreation navigation benefits are not. By Act of 10 February 1932 (47 Stat. 42, 33 U.S.C. 541), Congress expanded the definition of waterborne commerce to "include the use of waterways by

seasonal passenger craft, yachts, house boats, fishing boats, motor boats and other similar watercraft, whether or not operated for hire." However, "waterborne commerce" is not exactly the same thing as "commercial navigation" for priority output purposes.

b. NED Benefits. NED benefits are expressed in monetary units. The conceptual basis for determining those values is willingness to pay. Generally the costs of and return from commercial activities are readily quantifiable. The benefits of commercial navigation projects are (1) reduced cost of transportation through use of vessels (modal shift), safer or more efficient operation of vessels and use of larger and more efficient vessels (channel or lock improvements), and use of new or alternate vessel routes (new channels or port shift); (2) reduced cost or increased net return to producers from new sources or markets (shift of origin or destination); and (3) increased production through new or induced commodity movements (industrial production) or greater production opportunity (commercial fishing and offshore minerals). The benefits of recreation navigation projects are reduced cost of recreation (usually delay cost or boat damage cost avoided) and willingness to pay for recreation experiences.

c. NED Costs. The requirement is to identify all costs, with and without the considered navigation improvements. The facilities to accommodate and service vessels or load and unload cargo or passengers usually required to achieve the navigation benefits are a non-Federal responsibility. Their cost is an associated cost that must be accounted for in the evaluation. The preferred accounting is as an NED cost. Associated costs may be handled by the self-liquidating cost concept. That is, facility costs are assumed liquidated by user charges. The concept may be used only if estimated benefits are net of the associated costs. Associated costs must always be shown. Pursuant to WRDA 1986, Federal user charges will be assessed for use of certain waterways (fuel tax) and harbors (harbor maintenance tax), and project sponsors may assess local user fees to recover their cost share. These fees do not reduce the NED cost of the project.

d. Economic Justification. Economic justification is determined by comparison of NED benefits and costs. In addition to NED, the P&G specifies three other accounts for evaluating effects, one of which, regional economic development (RED), is also measured in economic terms. Some or all benefits specific to a region may be at the expense of other regions, and these are recognized as transfers. Such transfers result in no additional benefits contributory to project justification from a national (NED) perspective.

e. Net NED Benefits. Reports should include information and data for a number of alternative plans and plan scales sufficient to satisfactorily define both the upper and lower portions of the net benefits curve. So that the relationship between costs and benefits is evident, either the total benefits and total cost curves or the incremental benefits and incremental cost curves, shall be displayed. The relationship between costs and benefits thus determined and displayed serves as the basis for comparisons of the efficiencies of various plans, including the locally preferred plan if it differs from the Federally supportable plan (NED plan or granted exception to the NED plan).

f. Sensitivity and Risk Analyses. The P&G contain a general

requirement to analyze risk and uncertainty (Chapter I) and specify certain sensitivity analyses for inland and deep-draft navigation (Chapter II). The general requirement is to identify all assumptions, predicted variables, estimated values, and parameter values which are critical to the report recommendation, and the value of each critical factor where the recommendation would change or feasibility would be questioned. The specific analyses which are or may be required address assumptions as to traffic projections, rates or vessel operating costs, and vessel fleet composition or characteristics. Waterway studies are also required to address modal shift, alternate discount rates, and cost recovery fees. Whenever benefits are dependent on the size and life of a resource, as in commercial fishing, sensitivity analyses may be needed.

g. System Analysis. Systems analysis is required in almost all navigation studies. The P&G emphasizes systems considerations and requires evaluation of all reasonable alternatives. P&G procedures specifically require system analysis for inland waterways, and the requirement is implicit in the deep-draft requirement for multiport analysis.

h. Identification of Alternatives. The P&G have a general requirement that all studies formulate and evaluate alternative improvement plans; the aim is to provide a basis for determining the completeness, effectiveness, acceptability, and especially the efficiency of the recommended plan.

12-4. Priority Outputs, Cost Sharing, and Certain Kinds of Fishing Activities. Certain types of fishing have been legislatively or administratively defined as commercial fishing for project cost sharing purposes. These may or may not be commercial navigation for priority output purposes. These special cases are as follows:

a. Charter Fishing Craft, Head Boats, and Similar Recreation-Oriented Commercial Activities. Section 119 of the River and Harbor Act of 1970 (Public Law 91-611), states, "The Chief of Engineers, for the purpose of determining Federal and non-Federal cost-sharing, relating to proposed construction of small-boat navigation projects, shall consider charter fishing craft as commercial vessels." This Act applies only to cost allocation and cost apportionment and does not involve project formulation or evaluation. Evaluation of charter fishing benefits must be based on change in net income of the operator for commercial navigation benefits to be claimed. This change in net income measure of benefits is appropriate only for existing vessels using harbor facilities. Benefits may be evaluated in accordance with procedures for recreational boats, but such benefits are then recreation benefits. A combination of commercial and recreation benefits may apply if the boat operator's income does not capture all increase in value of the recreation opportunity.

b. Subsistence Fishing. Subsistence fishing is not a high priority output. When allocating costs, subsistence fishing is placed in the commercial fishing category, however. Subsistence fishing is defined as fishing activity carried out by those at or below the minimum subsistence level to obtain food. The minimum subsistence level is as defined by the Department of Commerce. The appropriate evaluation procedure depends on site-specific conditions. The basic requirement is to identify benefits based on willingness to pay.

Evaluation based on changes in net income is preferable since subsistence fishing is not recreation.

c. Cruise Ships. Section 230 of WRDA 1996 directs the Corps of Engineers to categorize all benefits generated by cruise ships as commercial navigation benefits. Benefits of navigation improvements affecting cruise ships arise from more efficient ship operations and increased tourism or enhanced tourism experience. Prior to WRDA 1996, efficiency improvement was classified as commercial navigation and improved tourism was classified as recreation. Consistent with Section 230 of WRDA 1996, economic benefits generated by cruise ships are to be categorized as commercial navigation benefits for project justification and cost sharing purposes.

12-5. Cost Sharing and Project Cooperation for Navigation. For waterway projects included within the definition of the "Inland Waterway System," all requirements for project development are Federal. Federal participation in other navigation projects, based on the cost sharing provisions of WRDA 1986, as amended, is limited to sharing costs for design and construction of the general navigation features (GNF) consisting of breakwaters and jetties, entrance and primary access channels, turning basins, anchorage areas, structures designed to protect the channel from shoreline erosion, locks, and land-based and aquatic dredged material disposal areas. Non-Federal interests are responsible for and bear all costs for: provision of the necessary lands, easements, rights-of-way, and relocations (LERRs); and, local service facilities (LSF) such as terminal facilities, dredging in berthing areas and interior access channels thereto. They must agree to hold and save the United States free from damages due to project construction and maintenance. For relocations of utilities within the navigation servitude in projects greater than 45 feet (deep draft utility relocations), one-half of the cost of the relocation shall be borne by the utility owner and one-half shall be borne by the non-Federal sponsor. Non-Federal sponsors may also be required to provide at least one public terminal open to the use of all on equal terms and compel the removal of obstructions to the project when they have the authority to compel the removal at owner cost. Additional local cooperation may be required because of special benefits such as land enhancement from placement of dredged material, betterment in bridge changes, and special limited-interest facilities.

a. Studies. The cost sharing provisions of WRDA 1986 require non-Federal participation (50 percent) in the costs for preauthorization feasibility studies, except for studies of waterways included within the definition of the "Inland Waterways System." Studies of waterways not so exempted (because not clearly included in that definition), may be accomplished at 100 percent Federal cost if approved, in each case, by HQUSACE, based on recommendations and rationale submitted by the division commander. In any such instance, the resulting feasibility report, based on the reasons accepted for exempting the study from cost sharing, will recommend inclusion of the waterway in the system subject to fuel tax. For cost shared studies, the non-Federal share is to be paid during the period of study.

b. Preconstruction Engineering and Design (PED). PED is cost shared at the same percentage as applies to construction of the GNF. The Federal Government finances the non-Federal share, with adjustments in funding arrangements for the first year of project construction providing for non-Federal reimbursement.

Table 12-1, Non-Federal Share, Studies, PED

Preconstruction Work	Commercial Navigation	Recreational Navigation	Inland Waterways
Reconnaissance Study	-0-	-0-	-0-
Feasibility Study	50%	50%	-0-
PED	--------(See Construction)---------		

c. Construction, Operation, and Maintenance. Sections 101, 102, and 103 of WRDA 1986, as amended, specify the cost sharing for commercial harbor, inland waterway, and recreational navigation projects, respectively.

(1) Harbors. Section 101, as amended, requires the project sponsor to bear a percentage share of harbor construction costs for project components that are cost-shared (general navigation features, mitigation), that varies according to the range of water depths where the work is done (20 feet or less, greater than 20 feet but not in excess of 45 feet, and greater than 45 feet). This variable cost share is paid during construction. In addition, Section 101 requires the sponsor to pay 10 percent of the construction costs that are cost-shared, on completion of construction or over time with interest, up to 30 years. Credit against this 10 percent contribution is allowed for the value of lands, easements, rights-of-way, relocations, and the non-Federal sponsor share of deep-draft utility relocations.

(2) Waterways. Waterways that are determined to be "inland waterways" for the purpose of Section 102 are exempt from cost sharing, and construction and O&M are 100 percent Federal. Waterways that are not "inland waterways" are cost shared as commercial or recreational harbors depending on project purpose.

(3) Recreation. Section 103 sets fixed percentages for the non- Federal share of construction and O&M costs for recreation projects (50 and 100 percent, respectively). These cost shares apply to recreational navigation projects, and the joint and separable costs allocated to recreation in other navigation projects.

Table 12-2, Non-Federal Share, Construction, Operation and Maintenance

	Commercial Navigation (Cost Assignable to Project Depth:)			Recreatn Navigatn	Inland Waterways
	to 20' (to 6.10 meters(m))	>20' to 45' (>6.10m to 13.72m)	>45' (>13.72m)		
Construction					
GNF, incl Mit.	10%+10%1/	25%+10%1/	50%+10%1/	50%	-0-
Aids to Navigation	-0-	-0-	-0-	-0-	-0-
LSF	100%	100%	100%	100%	-0-
LERR	100%	100%	100%	100%	-0-
Operation and Maintenance					
GNF, incl Mit.	-0-	-0-	50%	100%	-0-
Aids to Navigation	-0-	-0-	-0-	-0-	-0-
LSF	100%	100%	100%	100%	100%

1/ This additional 10% of GNF may be offset by creditable LERR.

12-6. Navigation Project for General Versus Restricted Interest.

Section 2 of the River and Harbor Act of 5 June 1920 provides that the Chief of Engineers in recommending navigation improvements shall make a determination of the general versus the special interest in an improvement, and recommend an appropriate sharing of costs between Federal and non-Federal interests. The cost sharing prescribed by WRDA 1986 will be the basis for such recommendations. The determination of Federal interest requires consideration of the number of properties served by a proposed project and/or project modification and the types of ownerships of such properties.

a. Single-Owner Situations. The Corps will not recommend any Federal cost participation in construction or expansion of a Federal navigation project (or any other type of Federal water resources project) where the improvement would serve (for the forseeable future) only property owned by a single individual, commercial/business enterprise, corporation, or club or association with restrictive membership requirements. This situation exists when restrictive conditions of any sort afford a single property owner the exclusive present and future enjoyment of the project benefits. A principal example of opportunity for such exclusive enjoyment of benefits would be where one owner controls all the land giving access to the improvement; single land ownership creates the possibility of the owner so structuring and constraining uses thereof that all net benefits of related improvements can be caused to devolve upon and be reserved to the owner. Only economically justified improvements would be recommended as a Federal project, and if the considered improvements are so justified the interest which would be solely benefited should undertake them as a business expense. The Corps may recommend Federal cost participation in the construction and expansion of a Federal water resource development project where the project would serve only property owned publicly by a single state (including the District of Columbia and territories and possessions of the United States), county, municipality, or other duly appointed public entity. Table 12-3 summarizes single-owner situation policy for proceeding for a variety of Federal project purposes and types of improvements. (ER 1165-2-123)

Table 12-3, General Policy for Proceeding with Proposed Projects (1) In Single Owner Situations (2)

Federal Project Purpose and Types of Improvement	Ownership of Single Property Served: Public(3)	Private	
	Non-Federal	Nonprofit	For Profit
Flood Control			
Structural measures(4)	Yes(5)	No	No
Nonstructural measures(6)	Yes(5)	No(7)	No(7)
Storm Damage Reduction(8)	Yes(5)(9)	No	No
Navigation	Yes(10)	Yes(11)	No
Ecosystem Restoration	Yes(12)	N/A	N/A
Emergency Streambank and Shoreline Protection (Section 14 Authority)	Yes	Yes(13)	No

(1a) Equally applicable to separable elements.
(1b) This table does not list other purposes such as municipal and industrial (M&I) or agricultural (Ag) water supply, hydropower, recreation or environmental enhancement, for which

single-purpose Corps projects would not be recommended single-owner issues could arise in connection with separable elements for these purposes in multiple-purpose proposals only to the extent that the non-Federal share of assigned costs is less than 100 percent and then only in cases where the sponsor is not a public entity.

(1c) Other than for work under the Section 14 authority, as indicated, this table does not relate to Corps emergency activities.

(2) Includes such things as trailer parks, apartment houses, and industrial development sites wherein, although many parties may have an interest, the lands involved are owned by an individual, or by a single company, corporation, or partnership. (Land is not considered to have multiple ownership simply because it is titled in a corporation with stockholders.)

(3) This table does not apply to Federally-owned property or facilities; Corps costs of improvements to Federally-owned property are entirely (100 percent) reimbursable by the Federal agency that owns the property.

(4) Measures which alter the flood regime.

(5) Proposed projects for flood control and storm damage reduction that would protect public facilities which are separable portions of larger protection plans must have such separable portions presented separately in budget requests so that they compete for new starts as reconnaissance studies and construction projects.

(6) Measures which reduce or avoid flood damages without significantly altering the nature or extent of flooding.

(7) Unless part of a larger plan for nonstructural measures (solely or as an element of a combined structural-nonstructural project proposal) which benefits multiple owners collectively.

(8) If benefits consist solely of land loss prevention (i.e., no buildings or facilities subject to damage), recommendations for Federal participation will not be made regardless of number of owners.

(9) May be recommended where formulated and justified in accordance with policies applicable to hurricane and storm damage reduction.

(10) Includes ferry lines that are publicly owned and operated (terminal and vessels).

(11) Unless multiple users (beneficiaries) have formed a nonprofit cooperative to minimize facility costs.

(12) Such as cases where multiple users (beneficiaries) form a non-profit cooperative to minimize facility costs. Fish and wildlife habitat restoration projects are normally required to be implemented on lands that either are, or become, public (Federal and/or non-Federal) lands.

(13) Section 14 projects may protect private nonprofit facilities such as hospitals and schools.

b. Initial Single(Non-Public)- Owner, Later Multiple-Owner Situations. Federal participation may be recommended in a significant increment of improvement for navigation when the improvement would initially serve property owned by a single individual, commercial/business enterprise, corporation, or club or association with restrictive membership requirements but a reasonable prospect exists for the improvement to later serve multiple properties with multiple owners. A significant increment is defined as one involving

major increases in project length, depth, or width.

(1) Basis for Recommendation. The test for reasonable prospect is controlled by factors such as availability, ownership, and suitability of adjacent waterfront land for development and location by other industries and users; availability of land transport and other essential services; the area's economic potential; intent of land owner and/or the potential developer; and the determination that no restrictive conditions exist that would prohibit the proposed improvement from serving/benefiting two or more single-owner properties (and property owners) in the forseeable future.

(2) Special Cost Sharing. The project will be recommended for development with cost sharing and other local cooperation in accordance with regular requirements (i.e., as specified in WRDA 1986). There shall be a further requirement that, when the project is in service, local interests shall contribute annually, until such time as multiple properties/owners are served by the general navigation facility, 50 percent of the annual charges for interest and amortization of the Federal first cost of the improvement, exclusive of aids to navigation, and 50 percent of operations and maintenance costs solely associated with the improvement. The requirement for annual contributions may end when the Secretary of the Army determines that the improvement is actually serving/benefiting at least two properties that are owned by at least two different owners.

c. Progressive Development. The Federal interest is satisfied and the regular cost sharing requirements apply where the improvement serves/benefits two or more properties having different owners or one publicly-owned property at the outset or if new properties/owners would be served immediately after project completion. A principle of progressive development also applies. Progressive development includes nominal incremental extension "end of the line" situations where part of the improvement is a last project increment serving the last non-public property or property owner. The last property/property owner served may be "at the end" in terms of length, depth, or width, necessitating some project investment in that service alone. This is treated as a multiple-owner situation unless disproportionate incremental investment is required.

12-7. Transfer and Lightering Facilities, Barge Fleeting Areas. Non-Federal interests are responsible for provision of mooring facilities for the convenience of individual users or that are associated with localized operations. Facilities for the purpose of transfer of cargo between vessels and barge fleeting areas are a non-Federal responsibility. The Coast Guard sets regulations for lightering and designates those areas set aside for that purpose. Barge fleeting areas are defined as mooring areas or temporary anchorages used for assembling tows; making barge transfers between tows; transferring supplies; awaiting arrival of additional barges; or serving as a barge holding area. Consideration will be given to providing barge mooring at Federal cost when it can be demonstrated that such facility is required and necessary for safe and efficient use of a Federal navigation project. Examples would be provision of a mooring to permit reshaping a tow for: (a) safe and efficient passage through a navigaton lock; (b) safe passage through congested Federal channel areas; or (c) safer passage crossing exposed waters. The advanced approval of HQUSACE must be obtained before such facilities are recommended at Federal cost.

12-8. Ownership of Lands Created for Port Facilities. Some navigation project proposals include the filling of adjacent lands by placement of the dredged material to provide lands suitable for development of port facilities. Often development of these lands for port use would be necessary to insure that the traffic used to justify the navigation project would occur. It is the policy of the Corps of Engineers that reports that include a proposal to fill lands for development of port facilities shall also incorporate a local cooperation requirement that the local sponsoring agency will retain fee ownership of those lands for the economic life of the project. In addition, local interests shall be required to regulate the use, growth and development of harbor facilities and limit occupancy of the subject created lands area to those industries whose activities are dependent upon water transportation.

12-9. Development of Public Port or Industrial Facilities. Section 108 of Public Law 86-645 authorizes the Secretary of the Army (notwithstanding the provisions of the Federal Property and Administative Services Act of 1949, as amended, with respect to disposal of surplus property) to convey land which is a part of a water resources development project to a state, or other public body for the purpose of developing or encouraging the development of public port or industrial facilities. Only lands within a navigation project are made available for this purpose. No action is initiated to sell lands for these purposes until interest is indicated by an eligible agency. Lands are sold at the fair market value upon a finding that the development: (1) is in the public interest; (2) will not interfere with the O&M of the project; and (3) will serve the objectives of the project. (ER 405-1-12)

12-10. Aids to Navigation. The installation and maintenance of primary navigation aids (buoys, lights, daymarks, regulatory signs) is the responsibility of the U. S. Coast Guard, Department of Transportation. The Coast Guard regulates all public and private aids to navigation for uniformity and conformity with the "lateral system" of buoyage as described in 33 CFR 60-79 (14 U.S.C. 89).

a. Funding. All costs for aids to navigation associated with Federal navigation projects are borne by the Coast Guard; however, estimated costs are included in calculations to determine project benefit-cost ratios.

b. Dredging Buoys. The Corps is responsible for temporary navigation aids which are required for construction or maintenance operations, such as dredging buoys and certain regulatory signs in the vicinity of locks and dams. All Corps aids to navigation must conform to Coast Guard standards. (ER 1130-2-520)

c. Permit Requirements. The Corps has issued a nationwide general permit for aids to navigation installed by or approved by the Coast Guard (33 CFR 330.5(a)(11)).

12-11. Waterway User Charges.

a. Fuel Tax. Section 202 of the Inland Waterways Revenue Act of 1978 (Public Law 95-502) imposes an excise tax on fuel used by certain commercial cargo vessels using specified inland or intracoastal waterways of the United States. This law was amended 17 November 1986, by Section 1404 of WRDA 1986 (Public Law 99-662),

increasing the tax schedule and adding the Tennessee-Tombigbee Waterway to the original list of taxable waterways. The Inland Waterways Tax applies only to those segments of the inland waterways specified in Section 206 of Public Law 95-502 as amended, and are differentiated from coastal harbors, Great Lakes channels and harbors, and deep-draft segments of certain inland rivers. The fuel tax schedule became effective on 1 October 1980, at which time the tax was 4 cents per gallon increasing to 10 cents per gallon on 1 October 1985 on fuel used in commercial transportation on specified inland waterways. WRDA 1986 established a new schedule:

Before 1990.....	10	cents	per	gallon.
During 1990.....	11	"	"	"
During 1991.....	13	"	"	"
During 1992.....	15	"	"	"
During 1993.....	17	"	"	"
During 1994.....	19	"	"	"
During 1995(and beyond).....	20	"	"	"

The Inland Waterways Fuel Tax does not apply to deep-draft (draft of more than 14 feet) ocean-going vessels; passenger vessels; state or local government vessels used in official business, movements of LASH and SEABEE barges, or recreation craft.

b. Inland Waterways Trust Fund. Section 1405 of WRDA 1986 amended Sections 203 and 204 of Public Law 95-502 which originally established the Inland Waterways Trust Fund (IWTF). Expenditures from the fund may be made available, as provided by appropriation Acts, for making construction and rehabilitation expenditures for navigation on those Inland Waterways described in Section 206 of Public Law 95-502 as amended. It is the policy of the Corps that these projects be cost shared 50 percent from the IWTF. It is the responsibility of the Secretary of the Treasury to manage the trust fund and make money available as authorized by law. The responsibility for administering the Inland Waterways Fuel Tax is with the Internal Revenue Service (IRS). Inquiries from outside the Corps should be referred to the Legislation and Regulations Division, Office of the Chief Counsel, at the Internal Revenue Service, Washington, D.C. 20224.

c. Inland Waterways Users Board. Section 302 of WRDA 1986 established an Inland Waterways Users Board of eleven members, representing both shippers and primary users, to be selected by the Secretary of the Army. The Users Board is to make recommendations to the Secretary regarding construction and rehabilitation priorities and spending levels on the commercial navigational features and components of the inland waterways and inland harbors of the United States. The Users Board report is filed annually with the Secretary and with the Congress, and is to make recommendations for the following fiscal year. The first meeting of the Inland Waterways Users Board was held on 15 July 1987.

d. Tolls. Effective October 1, 1994, tolls for the use of the U.S. portion of the St. Lawrence Seaway were rescinded (Public Law 103-331).

e. Harbor Maintenance Fee (HMF). Section 1401 and 1402 WRDA of 1986 amended Chapter 36 of the Internal Revenue Code of 1954 (relating to certain other excise taxes) and imposed a fee on the use of any port upon which has been made a Federal expenditure for

construction, maintenance, or operation since 1977. Although legislated as a "tax" for enforcement purposes, the HMF is viewed by the Administration as a fee to recover the costs of port and harbor maintenance by the Corps of Engineers. In keeping with this view, the implementing regulations have made "Federal expenditure" synonymous with Corps of Engineer expenditure. The fee went into effect on 1 April 1987, and is administered by the U.S. Customs Service (Department of the Treasury). The fee, 0.04 percent of the value of the commercial cargo loaded or unloaded at a port subject to the fee, was increased to 0.125 percent under Section 11214 of the Omnibus Budget Reconciliation Act of 1990 (Public Law 101-580). The fee is paid by the shipper in the case of exports and domestic ocean cargo, and by the receiver in the case of imports. There are a number of exemptions to the law, mostly pertaining to certain shipments to and from Alaska, Hawaii, and U.S. possessions and the U.S. mainland. The responsibility for administering the regulations is with the U.S. Customs Service. Inquiries from outside the Corps should be referred to the Director, Users Fee Task Force, U.S. Customs Service, 1301 Constitution Avenue N.W., Washington, D.C. 20229. The March 31, 1998 decision by the Supreme Court in U.S. Shoe Corporation vs. The United States, found the HMF unconstitutional as applied to exports. Collection of the ad velorum tax on exports was halted on April 25, 1998 although collections continue on imports and domestic cargo.

f. Harbor Maintenance Trust Fund. Section 1403 of WRDA 1986 established in the U.S. Treasury a trust fund to be known as the Harbor Maintenance Trust Fund consisting of such amounts as may be collected by the Harbor Maintenance Fee, transferred to the trust fund by the St. Lawrence Seaway Development Corporation, or appropriated by Congress. Section 210 of WRDA 1986 authorizes to be appropriated out of the Harbor Maintenance Trust Fund such sums as may be necessary to pay 100 percent of the eligible operations and maintenance costs of the U.S. portion of the Saint Lawrence Seaway, and not more than 100 percent of the eligible O&M costs assigned to commercial navigation of all harbors and inland harbors within the United States. The WRDA 1990 (Public Law 101-640) increased this authorization to 100 percent of the eligible Corps of Engineers expenditures as well. The WRDA 1996 added the costs of construction of dredged material disposal facilities for O&M of Federal navigation projects, the Federal O&M costs of disposal facilities, dredging and disposal costs of contaminated sediments in or affecting the maintenance of Federal channels, and mitigating for the impact of Federal O&M activities as eligible costs for the Harbor Maintenance Trust Fund.

g. Port or Harbor Dues. Section 208 of WRDA 1986 permits non-Federal sponsors of Federal navigation projects to recover the non-Federal sponsor's share of the cost of construction, operation and maintenance, and provisions for emergency response services. The decision to levy dues, as well as establishment of the dues, is the responsibility of the sponsor. There are some requirements and restrictions on the dues that may be levied, and on what vessels are subject to the dues. A process of public participation is required prior to establishment of the schedule of dues. The non-Federal sponsor must submit specific information, including the proposal for collection of dues, to the Secretary of the Army. The Secretary must then transmit the required information for publication in the Federal Register. The role of the Secretary is to assure that the public involvement process allows opportunity for public review and input. The responsibility of the Corps under Section 208 is to assure that

the schedule of dues is established in a manner which allows for public input and comment. Assistance should be provided in meeting the requirements for public involvement as specified in the Section 208 of WRDA 1986 in accordance with the following specific actions:

(1) Review the material submitted by the sponsor in response to Section 208(a)(5) to determine that the required information is provided;

(2) Submit the information for publication in the Federal Register;

(3) Coordinate with the sponsor to assure that the dates of the required public meetings and dates for comments allow the necessary time from the date of publication;

(4) When the material is submitted to the Federal Register, transmit draft letters for the signature of the Assistant Secretary of the Army (Civil Works)(ASA(CW)), providing the same informtion as a courtesy to the Comptroller General, the Secretary of the Treasury, and the Federal Maritime Commission;

(5) Keep on permanent file a copy of the dues schedule established by the sponsor; and

(6) Forward a copy of the schedule to HQUSACE and to the Secretary of the Army.

h. Definition of Rehabilitation for Inland Waterway Projects. The definition of major rehabilitation relating to inland and intracoastal waterways of the United States is provided in Section 205 of WRDA 1992 and paragraph 11-3.

12-12. Navigation Data. The Navigation Data Center (NDC) located in Alexandria, Virginia is responsible for the Federal water transportation statistical programs including waterborne commerce, domestic vessels, port and waterway facilities, lock characteristics and operations and dredging.

a. Waterborne Commerce Statistics.

(1) NDC's Waterborne Commerce Statistics Center in New Orleans, Louisiana collects waterborne commerce--passenger, tonnage and vessel data--from domestic vessel operating companies engaged in commercial waterborne commerce activity (33 CFR Part 207 and 33 U.S.C. 555). Foreign imports, exports, in-transit (commodities with origin and destination outside of U.S.) and foreign vessel movements data are collected by U.S. Customs and processed by the Bureau of the Census for the Corps under interagency agreements of 1946, 1997 and 1998. U.S. Bureau of the Census processes imports and exports and the U.S. Maritime Administration processes vessel movement data and merges these with Census import and export data and Corps in-transit data to create the historic U.S./Foreign Waterborne Transportation Statistics per OMB’s 28 September 1998 directive. Archived statistical reports are available from 1915 to present.

(2) NDC is the responsible agency for compiling the Federal data and disseminating both foreign and domestic waterborne statistics for all U.S. waterborne transportation from water origin to water

destination and for each dock, waterway, channel and harbor in the U.S. NDC may assess a civil penalty to domestic operators of $2,500 per reporting violation (i.e., failure of a vessel operating company to report their waterborne commerce movements in a timely and accurate manner). Violators are also liable to a fine of $5,000 and up to two months imprisonment. Additionally the Corps may refuse service at Corps locks to such violators. (ER 1130-2-520)

(3) Release of Data: Detailed data furnished by vessel operators and others will not be disclosed, except in compilation form which will prevent identification of specific vessel operators or operations. Corps policy on release is found in 33 CFR 209.320. Government employees are subject to the sanction in 18 U.S.C. 1905 for unauthorized disclosures. Penalties may include imprisonment for not more than one year, fine of not more than $1,000 and removal from employment. Data released to other Corps, Federal, state and local government agencies, private companies, and public are done in accordance with the Freedom of Information Act (5 U.S.C. 552).

b. Lock Performance Monitoring System and Lock Characteristics. NDC compiles data for each Corps owned and/or operated lock. Included are a locks physical properties (length, depth over sill, width, type of gate, year opened, etc), its performance under various physical conditions (ice, fog, flood and accidents), and vessel traffic (lockage time, wait time, size of vessel, number of recreational vessels, etc). Cargo and passenger statistical data are obtained under the authority of 33 U.S.C. 554-555. Data should not be released if it identifies any individual vessel owner and related commerce. (ER 1130-2-520)

c. Port and Waterway Facilities. NDC inventories cargo handling, storage and transfer facilities at the nation's coastal, Great Lakes and inland ports and waterways. Data also include facility location, point of contact and identification of access roads and railroads. Current data are available electronically and in hard copy. Archived publications date to 1922. All data are in the public domain.

d. Dredging Statistics. NDC compiles data from each Corps office pertaining to Government and contract dredging. Data includes project, quantity, type of dredge, method of disposal, Government estimates, bidders, and winning bid. All data are in the public domain.

12-13. Navigation Regulations. Section 4 of the River and Harbor Act of 1894, as amended (33 U.S.C.), authorizes the Corps to publish regulations governing the use of navigable waters, except where authority is specifically delegated to another Federal agency. Regulations for specific waterways and for locks and dams are published in 33 CFR 207. Certain restricted areas are regulated in 33 CFR 334. The Coast Guard also regulates "restricted areas" in 33 CFR 165. The distinction between Corps and Coast Guard jurisdiction is outlined in the memorandum of understanding between the two agencies dated 7 May 1977 clarifying their respective responsibilities as a result of enactment of the Ports and Waterways Safety Act of 1972 (Public Law 92-340). Restricted areas for hazardous waters at dams and other Civil Works structures are defined in ER 1130-2-520.

12-14. Danger Zones. Section 1 of the Army Appropriation Act of 1919

(33 U.S.C. 3) authorizes the Corps to establish danger zones and regulate navigation in areas likely to be endangered by target practice or other military operations. Regulations for specific danger zones are published in 33 CFR 334. Danger zone regulations are generally enforced by the military commander of the affecting command.

12-15. Drift and Debris Removal. The term "drift" includes any buoyant material that could cause damage to a commercial or recreational vessel. The term "debris" includes any abandoned or dilapidated structure or any partially sunken vessel or other object that can reasonably be expected to collapse or otherwise enter navigable waters as drift. Action by the Corps in removing drift or debris from navigable waterways is generally limited to the removal and disposal from the authorized project limits and immediate adjacent waterway areas (where the material may be carried into the channel) in the interest of general navigation. Drift collection is not accomplished in the slips of piers and wharves. Material lying in the shallow areas outside of the channels or along the shore is not gathered.

a. Existing Corps Projects. Specific and limited local programs for continuing debris collection and disposal have been authorized by Congress for New York, Baltimore, and Norfolk Harbors; Potomac and Anacostia Rivers in the Washington, D.C. Metropolitan area; and San Francisco Harbor and Bay, California. These authorizations are on an individual basis, and the work is carried out as authorized at each locality as a separate, distinct project.

b. General Project Authorization. Section 202 of WRDA 1976 (Public Law 94-587) provides general authority for developing projects for the collection and removal of drift and debris from publicly maintained commercial boat harbors and from land and water areas immediately adjacent thereto. The Federal participation in the cost of any such project can be two-thirds of the cost of the project. Non-Federal interests are required to recover the full cost of drift or debris removal from any identified owner of the source of drift or debris and repair potential sources so that they no longer create a potential source of drift or debris. Non-Federal interests must also provide all needed land, easements and rights-of-way; hold and save the United States free from damages which may result from the sponsor's performance of, or failure to perform, any of its required responsibilities, and regulate the project environs to prevent creation of future sources of drift. Although WRDA 1976 provides general authority for development of drift and debris removal projects, Department of the Army does not currently support authorization of, or budgeting for such projects.

12-16. Wreck Removal. Removal of sunken vessels, or other similar obstructions is governed by Sections 15, 19, and 20 of the River and Harbor Act of 1899, as amended. Primary responsibility for removal belongs to the owner, operator, or lessee. If the obstruction is a hazard to navigation and removal is not undertaken promptly and diligently, the Corps may obtain a court judgment requiring removal, or remove the wreck and seek reimbursement for the full cost of removal and disposal. Determinations of hazard to navigation and Federal marking/removal actions are coordinated with the Coast Guard in accordance with the related memorandum of agreement between the two agencies dated 16 October 1985. Removal and procedures are outlined in 33 CFR 245. (ER 1130-2-520)

12-17. Charts, Publications and Notices. The Corps publishes navigation charts for the inland waterways, and various publications containing navigational information and Federal regulations. Public Law 85-480 authorizes publication and sale generally, and requires that charges to the public for copies cover the cost of printing. (ER 1130-2-520)

12-18. Channel Condition Surveys. Every active waterway and harbor project will be surveyed a minimum of once per year to determine the condition of the channel used by navigation traffic. More frequent surveys may be made if justified by rapid shoaling rates. District and division commanders will then take necessary action to perform maintenance dredging to the appropriate project depth based on a valid economic analysis. (ER 1130-2-520)

12-19. Project Dimensions.

a. Authorized Dimensions. The dimensions of proposed features of improvement are set forth in preauthorization planning reports and, when project authorization is referenced to such reports, those dimensions constitute limitations with respect to the authorized works. This includes depths, widths and lengths of channels, harbor maneuvering areas and anchorages, lock sizes, horizontal and vertical bridge clearances and lengths of breakwaters. Unless otherwise provided in the project authorization, channel depths specified will be construed as actual dredging limits (exclusive of overdepth dredging) and not as the draft limit of vessels to be accommodated. In planning for initial development of authorized channels, channel widths specified shall (in accordance with Section 5 of the 1915 River and Harbor Act) be understood to admit of such increases at the entrances, bends, sidings and turning places as necessary to allow for the free movement of vessels. (ER 1130-2-520)

b. Dimensions Maintained. Full authorized project dimensions are maintained for Federal navigation projects where feasible and justified. To avoid frequent redredging in order to maintain full project depths, advance maintenance dredging is performed in critical, fast shoaling areas to the extent that it would result in the least overall cost. Such additional depth dredging is exclusive of and beyond the allowable overdepth included to compensate for dredging inaccuracies. In some waterways and harbors, the current needs of navigation can be met by dredging the project channel or basin to less than the authorized depth and/or width. If a temporary reduction in width from that authorized is acceptable, removal of moderate shoaling along channel lines is deferred until essential dredging in the channel is undertaken. Only where known progressive shoaling along channel lines is unduly restrictive to navigation will its removal be undertaken prior to the normal scheduling of maintenance dredging. (ER 1130-2-520)

12-20. Dredged Material Disposal. In planning new navigation projects prior to WRDA 1996 (on or before 12 October 1996), the policy was to require non-Federal interests to provide without cost to the United States all suitable areas required for initial and subsequent disposal of dredged material and all necessary retaining dikes, bulkheads and embankments therefor, or the costs of such retaining works. Subsequent to WRDA 1996 (after 12 October 1996), land-based and aquatic dredged material disposal facilities (DMDF) associated with the construction and O&M of all Federal navigation harbors and

inland harbors (but not the inland navigation system including the Atlantic Intracoastal Waterway and the Gulf Intracoastal Waterway) are considered to be general navigation features (GNF) of a project and subject to cost sharing (for both construction and O&M) in accordance with procedures set forth in Section 101 of WRDA 1986.

a. Maintenance Dredging Provisions of the Clean Water Act (CWA) of 1977. Maintenance dredging efforts of the Corps are governed by the environmental compliance requirements and procedures set forth in 33 CFR 335-338. Section 404(t) of the CWA authorizes any state to regulate, in accordance with its laws, the discharge of dredged material in any portion of the navigable waters within the jurisdiction of the state that results from maintenance dredging involving Corps of Engineers navigation projects. District commanders obtain state water quality certification, and a permit for disposal of maintenance dredged material required by Section 404(t) unless the state elects to waive these requirements. In cases where the project authorization requires a local sponsor to provide disposal areas and state or Federal requirements call for upland disposal, disposal areas must be made available by the sponsor before dredging proceeds. On projects where there are no local sponsor requirements to provide disposal areas, and state requirements call for upland disposal and Federal requirements do not, local or state assistance in providing suitable disposal areas is sought. If such assistance is not forthcoming, the increased project cost is evaluated with other national maintenance requirements to determine the relative priority of continuing maintenance dredging at that project. No maintenance dredging is performed unless disposal activities are in full compliance with state requirements unless a waiver from those requirements is obtained pursuant to Section 404(t) and Section 511(a). Restrictions on ocean dumping have been imposed by the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972 (see subparagraph c, following).

b. Land Creation or Enhancement at Inland Harbors. Federal participation in inland waterway harbor improvements under the Civil Works program is not warranted and shall not be recommended when (1) resale or lease of lands used for disposal of excavated material can recover the cost of the improvements or (2) the acquisition of land outside the navigation servitude is necessary for construction of the improvements and would permit local interest to control access to the project. The latter case is assumed to exist where the proposed improvement consists of a new channel cut into fast land.

c. Land Creation at Harbors (Other Than Inland Harbors). Formulation and cost sharing of harbor projects that include land creation benefits must be in accordance with the following procedures.

(1) The NED Plan will be formulated using navigation benefits exclusively (Land creation will not be considered in the net benefit evaluation). Special cost sharing will be required for land creation benefits associated with this NED Plan in proportion to the magnitude of these benefits to the total benefits. The cost sharing formula by which this policy is to be applied is as follows:

(a) Assign LERR to non-Federal interests.

(b) Special non-Federal cost sharing equal to:

$$\frac{\text{Land Creation Benefits for this plan}}{\text{Total Benefits for this Plan}} \times \text{(GNF Costs)}$$

(c) Remaining GNF costs shared in accordance with Section 101 of WRDA 1996, as amended, as described in paragraph 12-6.c(1).

(d) Provide full credit for this Plan's LERR toward the 10 percent requirement of Section 101(a)(2), as described in paragraph 12-6.c(1).

(e) This computation establishes the maximum Federal share.

(2) Non-Federal requests for modification of the NED Plan formulated using navigation benefits may be allowed provided all additional implementation costs are non-Federal and the incremental navigation benefits equal or exceed the incremental O&M costs for the GNF. No additional cost sharing will be required for the land creation benefits associated with the project modifications beyond the NED Plan which are requested and paid for by non-Federal interests. The modified NED plan may be recommended for authorization, implementation, and maintenance. However, the recommendation should be worded so as to provide the authority to construct the project formulated for navigation only in the event the non-Federal sponsor later decides to forego the requested modification. The cost sharing formula by which this policy is to be applied is as follows:

(a) The non-Federal share shall be the non-Federal costs determined in paragraph c.(1)(a) above plus 100 percent of the difference between the NED Plan and the cost of the requested modified plan; or all costs not assigned to the Federal Government under paragraph c.(2)(b) below, whichever is greater.

(b) The Federal share shall be the Federal costs determined in paragraph c.(1)(a) above; or, when the modified NED Plan results in a cost for GNF that is less than the cost for GNF for the NED Plan, the Federal share of costs will be limited to the Federal percentage of the total GNF derived in paragraph c.(1) above times the cost of the GNF for the modified NED Plan.

(3) Reports proposing the creation of lands to be utilized for development of port facilities required to accommodate projected traffic shall require local interests to retain fee ownership of those lands, and to regulate the use, growth and development on such lands to those industries whose activities are dependent upon water transportation.

d. Restriction on Ocean Disposal. Section 103 of the MPRSA of 1972 (Public Law 92-532) states that, subject to certain provisions, and after notification to the Administrator of the Environmental Protection Agency, the Secretary of the Army "may issue permits, after notice and opportunity for public hearings, for the transportation of dredged material for the purpose of dumping it into ocean waters, where the Secretary determines that the dumping will not unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological systems, or economic potentialities." Ocean disposal in connection with Federal dredging projects may be authorized by the Secretary using the same procedure required for issuance of permits (see paragraph 22-2.f).

e. Ecosystem Restoration Projects. Section 204 of WRDA 1992 (Public Law 102-580)authorizes the Secretary of the Army to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands in connection with dredging for construction, operation, or maintenance of an authorized Federal navigation project. A non-Federal sponsor must agree to provide 25 percent of the cost associated with the construction, including provision of all lands, easements, rights-of-way, and necessary relocations, and 100 percent of the operation, maintenance, replacement, and rehabilitation costs.

12-21. Placement of Dredged Materials on Beaches. Section 145 of WRDA 1976 (Public Law 94-587) as amended by Section 933 of WRDA 1986 (Public Law 99-662) authorizes the Secretary of the Army, if requested by a state, to "place on the beaches of such state beach-quality sand which has been dredged in constructing or maintaining navigation inlets and channels adjacent to such beaches if the Secretary deems such action to be in the public interest and upon payment by such state of 50 percent of the increased cost thereof above the cost for alternative methods of disposing of such sand." The Corps will share the additional costs with the state (50-50) only if the beneficial NED outputs from placing the dredged material on a beach satisfactorily meet economic justification and other priority criteria generally applicable to all proposed Civil Works "new work" outlays. If those criteria are not met and the state still desires that the material be placed on state beaches, 100 percent of the additional costs involved must be provided by non-Federal interests. When the initial state request is received, a study, funded from available appropriations for the navigation project to be dredged, must be performed to establish the merit of so disposing of the dredged material and whether 50 percent of the additional costs should be Federally funded. If beach disposal is ultimately agreed to, the study costs will be considered to be part of the additional cost for such disposal. If 50 percent of the costs are to be Federally funded, the remainder of such Federal share will be funded from appropriations for the navigation project. The amounts attributable to the additional costs for beach disposal will, however, be recorded separately from the other navigation project costs--since navigation benefits do not justify them. If the state requests, the Corps may enter into an agreement with a political subdivision of the state to place the sand on the beaches of the political subdivision, with the political subdivision responsible for the additional costs of placement. Consideration must be given to the schedule of a state, or political subdivision of a state, for providing its share of funds for placing sand on its beaches, and, to the maximum extent practicable, accommodation of such schedule.

12-22. Advanced Maintenance Dredging. For the purpose of maintaining projects, division commanders may approve advanced maintenance dredging within authorized project limits to avoid frequent redredging throughout the year. Such advanced maintenance (dredging to depths or widths in excess of authorized project dimensions) can be performed in critical, fast shoaling areas to the extent it will result in the least overall cost. Project files must contain the written justification and approvals for advanced maintenance. Such additional dredging is exclusive of the allowable overdepth provided to compensate for dredging inaccuracies. Advance maintenance dredging shall not be used to provide channel dimensions for vessels that exceed design limitations of the project. Overdepth dredging may also be provided and maintained specifically for military requirements, as

authorized by Section 117 of the River and Harbor Act of 1968 (33 U.S.C. 562a). (ER 1130-2-520)

12-23. Lock and Dam Replacements. Section 4 of the River and Harbor Act approved 5 July 1884 as amended by Section 6 of the River and Harbor Act approved 3 March 1909 provides in part that whenever, in the judgement of the Secretary of the Army, the condition of any of the navigation works of the United States is such that its entire reconstruction is absolutely essential to its efficient and economical maintenance and operation, the reconstruction thereof may include such modifications in plan and location as may be necessary to provide adequate facilities for existing navigation: provided, that the modifications are necessary to make the reconstructed work conform to similar works previously authorized by Congress and forming a part of the same improvement, and that such modifications shall be considered and approved by the Chief of Engineers before the work of reconstruction is commenced. Use of the 1909 authority will be for essential repairs, rehabilitation, replacement, or reconstruction of existing navigation structures which are required for continued use of the project for authorized purposes and which do not change the authorized project in scope, scale, or location. Also included under the 1909 authority are measures to improve operational efficiency such as modernization of operating equipment. The 1909 Act authority will not be used where it is determined that the necessary reconstruction work includes improvements, additions, or betterments which constitute a change in project purpose, size, location, or increased capacity beyond that obtainable from improved operational efficiency. In recent years use of the 1909 Act authority has been rare. Extensive repair work on existing projects has been accomplished as major rehabilitation. Section 205 of WRDA 1992 (Public Law 102-580) addresses the funding of major rehabilitation modifications to enhance operating efficiency beyond the original project design.

12-24. Correction of Federal Navigation Project Induced Shore Damage. Section 111 of the River and Harbor Act of 1968 (Public Law 90-483) as amended by Section 940 of WRDA 1986 (Public Law 99-662) provides authority to "...investigate, study, plan and implement structural and nonstructural measures for the prevention or mitigation of shore damages attributable to Federal navigation works." This is subject to requirement that a non-Federal public body agree to operate and maintain the measures and, in the case of real property acquired in conjunction with nonstructural measures, to operate and maintain the property for public purposes in accordance with regulations prescribed by the Corps. The costs for implementing measures under this authority will be shared by non-Federal interests in the same proportion as the costs for the project causing the shore damage were so shared. (In the case of a navigation project comprised of a number of authorized modifications, costs for Section 111 measures will be cost shared in accordance with the cost sharing for the specific modification or modifications to which the cause of shore damage can be traced.) When adopted, the plan for Section 111 measures is considered to constitute a modification to the related navigation project. When the Federal share of the construction costs on this basis for suitable mitigation measures would exceed $2 million (based on bids, or Corps estimates prior to obtaining bids) the measures may not be undertaken pursuant to the Section 111 authority; specific congressional authorization is required in such circumstances. The Section 111 authority applies to both public and privately owned shores located along the coastal and Great Lakes shorelines damaged by

Federal navigation projects. Exercise of the Section 111 authority to provide mitigation measures with the authorized Federal cost sharing is not mandatory. Normally, the degree of the mitigation is the reduction of erosion or accretion to the level which would prevail without the influence of navigation works at the time navigation works were accepted as a Federal responsibility. It is not intended that shorelines be restored to historic dimensions, but only to lessen the existing shore damage or prevent subsequent damages by action based on sound engineering and economic principles when equitable and in the public interest. This authority is not utilized to construct, maintain, modify or change an authorized shore protection project or an authorized shore damage mitigation element of a navigation project, or for river bank erosion or vessel-generated wave wash damage. (ER 1105-2-100)

12-25. Federal Project Development by Others. WRDA 1986 (Public Law 99-662) includes special provisions under which non-Federal interests may undertake work on a navigation project, both study and construction, for which they may obtain either credit (study), reimbursement (construction), or Federal assumption of O&M.

a. Study. Section 203 of WRDA 1986 permits a non-Federal interest to undertake a study of a harbor or inland harbor improvement for the purpose of getting the work authorized by Congress. The study is submitted to the Secretary of the Army, who transmits it to Congress, with recommendations, within 180 days of receipt from the non-Federal interests. If the proposed work becomes an authorized Federal project, a portion of the non-Federal study costs (the equivalent of the Federal share of study costs had the study been accomplished by the Corps) will be credited against the local share of the costs of construction, as the project is built. (ER 1165-2-122)

b. Construction. The authority for non-Federal construction of harbor and inland harbor projects by non-Federal interests is contained in Section 204 of WRDA 1986, as amended, in Sections 204(a) through (g).

(1) Section 204(a). This subsection authorizes a non-Federal interest to undertake navigational improvements in harbors or inland harbors. Projects constructed under this subsection are not considered to be Federal projects unless the Federal Government later assumes responsibility for O&M after project construction is completed pursuant to subsection 204(f) (See paragraph 1.f.). For any project constructed in accordance with subsection 204(a), the non-Federal interest is fully responsible for all construction costs incurred and for obtaining all necessary permits. (ER 1165-2-124)

(2) Section 204(b). This subsection allows the non-Federal interest to contract with the Corps of Engineers to have the Corps undertake studies and engineering for projects which the non-Federal interest will construct under subsection 204(a). The studies, conducted at the expense of the non-Federal interest, can be used (under subsection 204(d), in addressing the requirements for obtaining the appropriate permits required under the Secretary's authority as well as support for a request for Federal O&M under subsection 204(f). (ER 1165-2-124)

(3) Section 204(c). This permits the Corps to turn over to non-Federal interests Corps studies initiated before 17 November 1986

(either finished or unfinished), so that the study information may be used in the permitting process. If the transferred Corps study is complete, it can be used (under subsection 204(d) in addressing the requirements for obtaining the appropriate permits required under the Secretary's authority as well as support for a request for Federal O&M under subsection 204(g). (ER 1165-2-124)

(4) Section 204(d). This subsection states that if the Corps of Engineers has completed a study and engineering for an improvement to a harbor, including the filing of a Final Environmental Impact Statement, and the non-Federal interest has requested and received such study and engineering from the Secretary pursuant to subsection (b) or (c) of Section 204, the non-Federal interest is authorized to carry out the improvement. Any improvement implemented in accordance with subsection (d) of Section 204 shall be deemed to satisfy the requirements for obtaining the appropriate permits required under the Secretary's authority, subject to a finding that (1) the applicable regulatory criteria and procedures have been satisfied and that (2) regulatory requirements and environmental conditions have not changed since the studies were completed. This provision only applies to satisfying the permits under the Secretary's authority. (ER 1165-2-124)

(5) Section 204(e). Section 204(e)(Reimbursement) of WRDA 1986 permits a non-Federal interest to construct an authorized Federal project improvement with subsequent reimbursement for the Federal share of project costs. In order to qualify for reimbursement, the proposed work must be construction of a project specifically authorized by Congress or be a separable element of such a project (Section 204(e)(Reimbursement) is not applicable to projects undertaken under the continuing authority program). It must be primarily for the benefit of commercial navigation and must currently satisfy the same economic and environmental criteria that would be applied for Federal implementation. Since construction responsibility will rest with the non-Federal interests, all Federal and non-Federal permits must be obtained. The Corps must approve the plans of construction and monitor the project as it is being built. Only work started after an agreement is reached between ASA(CW) and the non-Federal interests is eligible for reimbursement. No reimbursement shall made unless and until the ASA(CW) has certified that the work for which reimbursement is requested is complete and has been performed in accordance with applicable permits and the approved plans. However, ASA(CW) certification can be made upon completion of physical construction, even if there are claims outstanding. The amount eligible for reimbursement will be limited to the cost of completed construction, including all settled claims at the time of certification. Unsettled claims would be a non-Federal responsibility. (ER 1165-2-120)

(6) Section 204(f). This subsection allows the Secretary to approve as many as two proposals whereby a non-Federal interest would undertake all or part of an authorized Federal project as the agent of the Secretary by utilizing its own personnel or by procuring outside services, so long as the costs of doing so will not exceed the cost of the Secretary undertaking the project. (ER 1165-2-124)

c. Construction Authority Applicable to Navigation. The Corps regulations implementing both Section 204(e)(Reimbursement) of WRDA 1986 and Section 215 of the Flood Control Act of 1968, which provides

general authority for credit or reimbursement of limited non-Federal construction work on congressionally authorized water resources development projects of all kinds (paragraph 8-6), have much in common. As it is the most recent legislation, and the one that specifically makes provision for non-Federal construction of a complete or separable element of a Federal navigation project, the Section 204(e) (Reimbursement) authority is considered the one applicable to non-Federal navigation works of such scope. Hence, for any item of proposed non-Federal construction that would constitute complete construction of a Federal navigation project or a separable element thereof, provision for credit or reimbursement of non-Federal interests for the Federal share of project costs will generally be considered only under the Section 204(e)(Reimbursement) authority. For non-Federal navigation works of similar scope undertaken pursuant to Section 215, agreements will ordinarily provide that only credit against the non-Federal share of future project costs will be afforded.

d. Federal Assumption of O&M. Section 204(e)(O&M) of WRDA 1986 gives the Secretary of the Army responsibility for O&M of any project constructed by non-Federal interests under Section 204(a), Section 204(d), or Section 204(e)(Reimbursement) of WRDA 86, provided that before construction, the Secretary determines that the proposed work is economically justified and environmentally acceptable. The Secretary must also certify that the work has been completed in accordance with applicable permits and acceptable design standards. Further guidance on Section 204(e)(O&M) is provided in ER 1165-2-124. Federal O&M responsibilities for authorized Federal projects subject to Section 204(e)(Reimbursement) are addressed in ER 1165-2-120.

12-26. Navigation versus Hurricane and Storm Damage Reduction (HSDR). Measures which contribute to the increase in net income of commercial navigation activities or result in a decrease in commercial transportation costs will be evaluated and cost shared as navigation (harbor) measures. This includes measures to prevent wave induced damages to commercial vessels while berthed at docks, piers, and slips, and that incidentally prevent wave induced damages to the commercial docks, piers, and slips. Measures to prevent wave induced damages to non-commercial (recreational) vessels while berthed at docks, piers, or slips and measures to prevent wave induced damages to docks, piers, slips and other shoreline facilities, are to be evaluated and cost shared under the HSDR provisions of Sections 103(c)(5) and 103(j) of WRDA 1986. Measures to provide for safe and efficient movement of commercial and recreational vessels into and within a harbor and measures to prevent loss and damage to vessels in transit will continue to be evaluated and cost shared as navigation (harbor) measures. This policy does not provide any Federal interest in the construction of docks, terminal or transfer facilities, or berthing areas.

a. Application of Policy for Harbors. The above policy applies to existing berthed vessels and shoreline facilities and to vessels and facilities that would exist in the future without-project condition at the project or an alternate location. For vessels that would not be present at any location in the without-project condition, but would be present in the future as a result of the project, benefits are only evaluated as commercial or recreational navigation benefits, as appropriate.

b. Application of Policy for Multiple Purpose Facilities. Where measures are formulated to serve both HSDR and navigation, an allocation of multiple purpose joint costs must be made and the joint costs shared in accordance with the purpose to which they are allocated along with any specific costs for features which serve only one purpose. This cost allocation must include operation, maintenance, repair, replacement, and rehabilitation responsibility under the HSDR purpose. No cost allocation is required where a measure is formulated to serve a single purpose but results in incidental benefits, provided that the single purpose feature maximizes net benefits. For example, a breakwater formulated to provide HSDR, which is part of a NED plan, may produce incidental navigation benefits but would be cost shared as an HSDR feature. Conversely, a breakwater formulated to provide reductions in transportation costs and/or increased net income to commercial navigation activities may produce incidental HSDR benefits but would be cost shared as a navigation feature.

CHAPTER 13

FLOOD DAMAGE REDUCTION

13-1. The Federal Interest. Congress, in the Flood Control Act of 1936, established as a nationwide policy that flood control (i.e., flood damage reduction) on navigable waters or their tributaries is in the interest of the general public welfare and is therefore a proper activity of the Federal Government in cooperation with the states and local entities. The 1936 Act, as amended, and more recently the Water Resources Development Act (WRDA) of 1986, specify the details of Federal participation. They have established the scope of the Federal interest to include consideration of all alternatives in controlling flood waters, reducing the susceptibility of property to flood damage, and relieving human and financial losses.

13-2. Flood Plain Management. Flood plain management (FPM) is a continuing process, involving both Federal and non-Federal action, that seeks a balance between use and environmental quality in the management of the inland and coastal flood plains as components of the larger human communities. The flood damage reduction aspects of flood plain management involve modifying floods and modifying the susceptibility of property to flood damages. The former embraces the physical measures commonly called "flood control;" the latter includes regulatory and other measures intended to reduce damages by means other than modifying flood waters. By guiding flood plain land use and development, flood plain regulations seek to reduce future susceptibility to flood hazards and damages consistent with the risk involved and serve in many cases to preserve and protect natural flood plain values.

a. Flood Plain Management Services. The Corps is authorized by Section 206 of the Flood Control Act of 1960, as amended, to provide information, technical planning assistance, and guidance to aid states, local governments, and Indian Tribes in identifying the magnitude and extent of the flood hazard and in planning wise use of the flood plains. Direct response and assistance of this kind are provided upon request through the Flood Plain Management Services Program. The Corps also provides support for the National Flood Insurance Program to the Federal Emergency Management Agency on a reimbursable basis under interagency agreement. (ER 1105-2-100)

b. Executive Order (EO) 11988. This EO requires the Corps to provide leadership and take action to: (1) avoid development in the base (100-year) flood plain unless it is the only practicable alternative; (2) reduce the hazards and risk associated with floods; (3) minimize the impact of floods on human safety, health and welfare; and (4) restore and preserve the natural and beneficial values of the base flood plain. In this regard, the policy of the Corps is to formulate projects which, to the extent possible, avoid or minimize adverse impacts associated with use of the base flood plain and avoid inducing development in the base flood plain unless there is no practicable alternative for the development. (ER 1165-2-26)

c. Modification of Federal Facilities. In planning or modifying Federal facilities on flood plains and in disposing of Federal lands and property, the Corps will follow the Flood Plain Management Guidelines (43 FR 6030), 10 February 1978, issued by the Water Resources Council pursuant to EO 11988.

13-3. Flood Related Planning Policy. It is the policy of the Corps of Engineers to consider in the planning process all practicable and relevant alternatives applicable to flood damage reduction. No one alternative will be pre-judged superior to any other. Consideration will be given both to measures intended to modify flood behavior (structural measures) and those intended to modify damage susceptibility by altering the ways in which people would otherwise occupy and use flood plain lands and waters (nonstructural measures). The fundamental goal is to develop, define and recommend a robust solution that has public and institutional support (having appropriately determined how well an economical plan can be made to function, how capable are the responsible interests to operate and maintain it, and how safe will be the people who will depend on it). (ER 1105-2-100)

a. Structural Measures. These include dams and reservoirs, levees, walls, diversion channels, bridge modifications, channel alterations, pumping, and land treatment. All such measures reduce the frequency of damaging overflows.

b. Nonstructural Measures. These include flood warning and preparedness; temporary or permanent evacuation and relocation; land use regulations including floodway delineation, flood plain zoning, subdivision regulations and building codes; flood proofing; area renewal policies; and conversion to open space.

13-4. Design Flood Criteria. The Corps policy in design of flood damage reduction projects is to provide an optimum degree of protection consistent with safety of life and property. The Corps seeks an economically efficient degree of protection and land use in agricultural areas, and acceptable reduction of risks and preservation of environmental values in protecting other rural and urban areas. Definitions for certain significant storms and floods, and for terms that relate flood magnitude to project performance, have been adopted as follows:

a. Standard Project Storm (SPS). The SPS is a hypothetical storm having the most severe flood-producing rainfall depth-area-duration relationship and areal distribution pattern that is considered reasonably characteristic of the region in which the drainage area is located. It is developed by studying the major storm events in the region, excluding the most extreme. Development of the SPS may involve transposition and adjustment of a large storm from its observed location to the locality of concern (EM 1110-2-1411). When that is the case, studies are to be coordinated through CECW-EH for review by the Hydrometeorological Section of NWS.

b. Standard Project Flood (SPF). The SPF is the discharge hydrograph resulting from the SPS. SPF for projects east of the 105th meridian may be developed using EM 1110-2-1411. For projects located west of the 105th meridian, use 50 percent of the Probable Maximum Flood (PMF) for SPF.

c. Probable Maximum Precipitation (PMP). Theoretically, the PMP is the greatest depth of precipitation for a given duration that is physically possible over a given size storm area at a particular geographical location during a certain time of the year. Development of the PMP considers all storms of record and the observed precipitation is increased by maximizing the moisture inflows to the storm system. Generalized depth-area-duration and seasonal

relationships for the continental U.S. are published by the National Weather Service in a series of hyrometeorological reports .

d. Probable Maximum Flood (PMF). The PMF is the flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the drainage basin under study. A PMF is developed from PMP. Assumptions concerning rainfall losses, snowmelt runoff, channel efficiency, etc. are adjusted to produce the largest flood reasonably possible. The PMF is used to design high hazard structures (top of dam, outlet and spillway capacities) where failure cannot be tolerated.

e. Inflow Design Flood (IDF). The IDF for a dam is the flood hydrograph used in the design or evaluation of a dam and its appurtenant works (ER 1110-8-2(FR)). In some older documents, this may be referred to as the spillway design flood. The upper limit of the IDF is the PMF.

f. Project Performance. The analysis will quantify the project reliability and performance by explicitly incorporating the uncertainties associated with key hydrologic, hydraulic, and other engineering variables. This reliability and performance will be reported as the protection for a target percent chance exceedance flood with a specified reliability. For example, the proposed project is expected to contain the one-half percent (0.5 percent) chance exceedance flood, should it occur, with a ninety percent (90%) reliability. This performance may also be described in terms of the percent chance of containing a specific historic flood should it occur. To fully define how a project is expected to function requires describing project impacts at several flood levels and locations. There is no minimum level of performance or reliability required for Corps projects; therefore, any project increments beyond the NED plan represents explicit risk management options. It is, therefore, vital that all participants understand the performance, reliability and costs of the NED plan, as well as, increments and decrements of the plan, in order to fully participate in an informed decision-making process.

13-5. Risk-Based Analysis. The risk-based analysis framework is defined as an approach to evaluation and decision making that explicitly, and to the extent practical, analytically, incorporates considerations of risk and uncertainty. These risks and uncertainties arise from measurement errors, short data records, and from the innate variability of complex physical, social, and economic situations, particularly those dealing with future occurrences. Because it captures and quantifies the extent of the risk and uncertainty in the various planning and design components of an investment project, this approach has been found very useful. Each of the components can be examined and conscious decisions made reflecting an explicit tradeoff between risk and costs. Risk-based analysis can identify which plans are more robust and can be used to compare plans in terms of their likely physical performance and economic success.

13-6. Structural Measures. Different types of structural flood damage reduction measures have different primary and secondary impacts on flooding. Plan formulation and impact assessment should take into account all impacts, and residual flooding from all sources. (The dominant flooding may be from a different source under without and with project conditions.) In project planning, both the primary beneficial effects and the secondary effects of the alternatives must be borne in mind and appopriately accommodated.

a. Reservoirs. Reservoirs regulate floods downstream from the dam by temporarily storing some part of the flood volume and releasing it later. The impact downstream is to lower flood stages, increase the duration of flooding, and shift the flood to a later time. It is normal for dam and reservoir projects to effect some control on, and lower flood stages for, all magnitudes of floods. This is especially true of dams with ungated spillways. The amount of control and effectiveness will, however, decrease when flood volumes exceed the storage reserved for flood control. For the large flood, dams with gated spillways may exert lesser control on downstream flood stages than comparable ungated dams. Reservoir releases downstream can raise groundwater levels in fields adjacent (and even more distant) to the river and rapid change in stages can exacerbate bank caving. Downstream of dams, uncontrolled tributaries will continue to contribute to flooding, causing stage reductions to become less and less farther downstream. (Tributary flooding may then assume increased significance.) Channel capacities downstream of dams may increase over time; however, farther downstream, especially below a tributary carrying heavy sediment loads, channel capacity may be reduced. (Reservoir regulation tends to shift channel rating curves upward--less flow at a given stage--especially upstream of tributaries.) Upstream of a dam, sediment deposition can be expected to occur mostly in upper pool areas, decreasing the flood control effectiveness over time and raising flood stages and ground water levels around the pool.

b. Channel Enlargements. Channel enlargement will act like a negative reservoir, raising flood stages downstream, shortening flood durations and shifting the flood to an earlier time. Flood stages will be lower in the enlarged channel reach for all floods including those exceeding the channel capacity, if the channel is not excessively long. (Long, oversize channels may have increased flood stages in the lower part of the channel.) With main stem flooding reduced, direct overbank flooding from tributaries may assume increased significance. How flows from upstream and from tributaries are collected, controlled, and transitioned into the enlarged channel can greatly influence the project's beneficial impacts. Some control is generally required to direct overbank flow into the channel. Erosion and considerable attendant damage may occur upstream of the enlarged channel unless there is appropriate hydraulic control; the same applies where tributaries enter. All artificially enlarged channels will tend toward a new equilibrium state where sediment inflow and carrying capacity are in balance; the trend may be to a smaller or larger channel than the one constructed. Whatever the trend, it may be so slow as to be hardly noticeable, may occur at some intermediate rate, or may take place suddenly with one dramatic large flood.

c. Levees and Floodwalls. Levees and floodwalls are constructed to exclude flood waters from the protected area, up to a certain magnitude of flood. Unlike reservoirs and channel enlargements, the flood control effectiveness of a levee or floodwall will cease abrubtly if a flood should overtop it. Interior runoff impeded by the structure may cause interior flooding if there are not proper provisions for interim storage behind it or discharge past the barrier. Potential effects outside a levee, upstream and downstream, are too complex and too site dependent to generalize otherwise, but generally the constriction of flow area caused by the structure will raise flood stages upstream. Within the levee reach, flood stages may be increased or decreased depending on whether the structure forms a hydraulically long or short constriction. A levee may reduce valley

storage enough to cause the same impacts downstream as a channel.

13-7. Nonstructural Measures. Section 73 of Public Law 93-251 expresses Congressional policy and, in effect, endorses Corps practice that consideration shall be given to nonstructural measures in the planning and formulation of all flood damage reduction plans. Nonstructural measures are defined as those which reduce or avoid flood damages, without significantly altering the nature or extent of flooding, by changing the use made of flood plains or accommodating existing uses to the flood hazard. Examples of nonstructural measures are flood proofing, flood warning/preparedness, temporary or permanent evacuation, and regulation of flood plains. These measures are considered separately, in combination and as incremental elements of plans which may include structural measures also. Economic justification can be based on combined flood damage reduction and other (e.g., recreational) benefits. Nonstructural plans should be formulated without preconception as to what would constitute an acceptable minimum level of protection. The level of protection may vary in order to achieve a more coherent and cohesive plan. The level of protection is a Corps decision; individual owners may decide whether to participate. Plans that would leave occupied buildings inaccessible during a flood are normally not recommended. The separable costs allocated to recreation and fish and wildlife shall not exceed the costs for flood damage reduction.

13-8. Definition of the Flood Control Plan. The Federal flood control project is comprised of two obvious elements: the physical aspects of improvement recommended and the associated requirements of local cooperation. The intended flood control plan (i.e., the outputs from the Federal project) may, however, be dependent upon other elements as well. The assumptions made about how the Federal project improvements will function may depend upon other assumptions about the continued effectiveness of already existing non-Federal developments that shape or control flows (whether specifically intended for flood control, or not). They may reflect the assumed existence of other non-Federal developments planned but not yet in place. It is critical that the non-Federal sponsor, responsible for operation and maintenance (O&M) of the Federal project, understand the importance of all the elements that go together to make the plan function. A complete description of a plan includes all structural, nonstructural, legal, and institutional features, both proposed and existing, that contribute to the intended flood control outputs. The outputs of the plan, and of individual elements if they have separable outputs, should be quantified in understandable physical, economic and environmental terms. The operating requirements should be developed for each element requiring operation (e.g., statement of the trigger that will say it is time to close a gate and the amount of time it will take to close it). Finally, there should be explication of the overall resources required to operate and maintain the plan, i.e., manpower, equipment, cost. The requirement for definition of the plan in these terms begins in the preauthorization feasibility phase and ends with preparation of the O&M manual furnished to the non-Federal sponsor when the project is turned over (See paragraphs 10-12, 11-2.c).

13-9. Drainage. Section 2 of the Flood Control Act of 1944 redefined flood control to include "channel and major drainage improvements." Section 403 of WRDA 1986 modified this by inserting after "drainage improvements" the following: "and flood prevention improvements for protection from groundwater-induced damages."

a. Major Outlets. Legislative recognition that the provision of major drainage outlets is an essential part of and complement to flood damage reduction improvements, is interpreted to permit major drainage improvements of natural waterways and their tributaries, and of existing artificial waterways. Major outlets are designated as those for the drainage from an organized or contemplated drainage district, groups of drainage districts, or local governmental unit such as county, town, or city. Normally, the Federal project for an outlet drainage channel will consist of works in a natural stream or existing artificial waterway. However, new artificial drainage channels may be constructed under the Federal program wherever that procedure would be technically more effective, environmentally sound, and would be more economical than improvement of existing drainage courses. (The costs of major drainage outlets are included with costs for other project flood control elements and cost shared accordingly.)

b. Agricultural. In agricultural areas, collection of drainage water is considered a local responsibility. This includes such work as ditching, diking, and grading on farms and within local drainage districts or governmental units. Federal outlets works may "tie" into such local works.

c. Urban. Flood damage reduction works in urban areas are the adjustments in land use and the facilities designed to reduce flood damages in urban areas from overflow or backwater due to major storms and snowmelt. They include structural and other engineering modifications to natural streams or to previously modified natural waterways. In urban or urbanizing areas, provision of a basic drainage system to collect and convey the local runoff to a stream is a non-Federal responsibility. Water damage problems may be addressed under the flood control authorities downstream from the point where the flood discharge is greater than 800 cubic feet per second for the 10 percent flood (one chance in ten of being exceeded in any given year) under conditions expected to prevail during the period of analysis. Drainage areas of less than 1.5 square miles shall be assumed to lack adequate discharge to meet the above criterion. Exceptions may be granted in areas of hydrologic disparity producing limited discharges for the 10 percent flood but in excess of 1800 cfs for the one percent flood. (ER 1165-2-21)

d. Groundwater. Section 403 of WRDA 1986 defines flood control to include measures for the prevention of groundwater-induced damages. Study and analysis of this expanded definition of flood control has not produced a satisfactory classification system for defining Corps interest in a groundwater-induced damage prevention program. Accordingly, budget and authorization support is not available at this time for a generic program of groundwater-induced damage prevention. Individual cases involving urban groundwater-induced flooding believed to have merit within the general context of traditional flood damage reduction should be referred to CECW-P prior to implying any Corps interest to potential sponsors.

13-10. Project Cooperation and Cost Sharing. WRDA 1986, superseding previous legislative provisions, and as amended by WRDA 1996, established the basic requirements for non-Federal participation in Federal flood damage reduction projects. Separable costs of recreation features included in structural and nonstructural flood damage reduction projects are cost shared 50-percent Federal/50-percent non-Federal.

a. Structural Measures. For structural projects (or structural components of a project combining both structual and nonstructural elements) non-Federal interests must:

(1) Provide a cash contribution equal to 5 percent of total project costs;

(2) Provide all lands, easements, rights-of-way, relocations (except alterations to railroad bridges and approaches thereto including constructing new railroad bridges over flood control channels constructed in fast lands or new channel alignments which are assigned as construction costs), and dredged material disposal areas (referred to as LERRD);

(3) Provide an additional cash payment when the sum of items (1) and (2) is less than 25 percent of total project costs (35 percent for projects authorized, or reauthorized after formal deauthorization, after 12 October 1996) (if the sum of items (1) and (2) should exceed 50 percent of total project costs, local contributions in excess of 50 percent will be reimbursed by the Federal Government);

(4) Operate, maintain, repair, replace, and rehabilitate the project after completion (referred to as OMRR&R);

(5) Hold and save the United States free from damages due to the construction or subsequent maintenance of the project, except any damages due to the fault or negligence of the United States or its contractors;

(6) Prevent future encroachments which might interfere with proper functioning of the project;

(7) For any project for local flood protection, participate in and comply with applicable Federal flood plain management and flood insurance programs (i.e., the National Flood Insurance Program), pursuant to Section 402, Public Law 99-662, as amended, (Note: Item (7) is applicable to projects designed for the primary benefit of specific localities; for projects such as large reservoirs designed to provide widespread benefits of varying significance to disparate jurisdictions thoughout an extended area or region, it may be omitted) and, prepare a flood plain management plan designed to reduce the impacts of future flood events in the project area within one year of signing a project cooperation agreement (PCA), and implement such plan not later than one year after completion of construction of the project; and,

(8) Provide guidance and leadership to prevent unwise future development in the flood plain.

b. Nonstructural Measures. The non-Federal costs for nonstructural measures (as complete projects or as components of a project combining both structural and nonstructural elements) will be limited to 25 percent of total project costs (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996) for such measures. Non-Federal interests are required to provide all LERRD. If the cost of LERRD should be less than 25 percent of total costs (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996) for the nonstructural measures, non-Federal interests shall pay the difference in cash. If

LERRD costs are in excess of 25 percent (35 percent for features/projects authorized, or reauthorized after formal deauthorization, after 12 October 1996), the difference will be reimbursed by the Federal Government. Non-Federal interests are responsible for all related OMRR&R. They are also required to participate in and comply with applicable Federal flood plain management and flood insurance programs and prepare and implement a flood plain management plan. (The 5 percent cash contribution required for structural components is not required for nonstructural components, nor are non-Federal interests required to contribute any cash for which they may be responsible during the period of project construction, as they might be in connection with structural components.) Nonstructural measures adopted as part of a project, regardless of why so included (e.g., to achieve mitigation of secondary impacts of structural measures), shall, for cost sharing purposes, be treated as a nonstructural components of the project.

c. Special Cases. Special local requirements, cost sharing or otherwise, may be recommended in order to provide equitable and practical Federal/non-Federal cooperation.

(1) Projects providing windfall-type benefits of "unconscionable" magnitude to a few beneficiaries are considered to warrant special and equal cost sharing, usually as a cash contribution, from the responsible local entity, in addition to other requirements of cooperation. Sub-allocation of this added cost is the responsibility of the local entity.

(2) Local interests are assigned the cost of covering flood control channels when provision of the cover is not required for safety or when it decreases net National Economic Development (NED) flood damage reduction benefits. (ER 1165-2-118)

(3) Special items of construction may be assigned to the Corps or to local entities, depending on practical considerations of construction procedures, safety, and efficiency, if provided for in the project authorization.

d. Regulation of the Flood Plain. Responsibility for adoption and enforcement of regulations for flood plain management is entirely local. In the absence of a Federal project the Corps cannot require local interests to implement flood plain regulations (for instance, where feasibility studies result in conclusion that regulation is the most appropriate or only feasible response to the flood problem). However, before construction of any Federal project for local flood protection, or any Federal project for hurricane or storm damage reduction, or separable element thereof, including projects developed under Section 103, Section 205, and Section Section 208 of the Continuing Authorities Program, that involves Federal assistance from the Secretary of the Army (and for which the Secretary and the non-Federal interest enter into a project cooperation agreement (PCA) after 12 October 1996), non-Federal interests are required to agree to participate in and comply with applicable Federal floodplain management and flood insurance programs (e.g., the National Flood Insurance Program which requires the adoption of land use control measures to prevent construction in the floodway or construction of permanent structures in the balance of the flood plain with first floors below the 100-year flood level). Within one year after the date of signing a PCA for construction of a project to which the aforementioned requirement applies, the non-Federal interest is required to prepare a flood plain management plan (FPMP) designed to reduce the impacts of future flood events in the project area, and to

implement such FPMP not later than one year after completion of construction of the project. To promote prudent flood plain management at the non-Federal level, it is Corps policy to encourage a non-Federal sponsor to develop its FPMP during the preparation of the feasibility study. A non-Federal sponsor's FPMP should implement measures, public expenditures, and policies to reduce loss of life, injuries, damages to to property and facilities, public expenditures, and other adverse impacts associated with flooding, and to preserve and enhance natural flood plain values and should address measures which will help preserve levels of protection provided by the Corps flood damage reduction or hurricane or storm damage reduction project. Also, local interests may be required to adopt and enforce other, special regulations if they are necessary to protect the Federal investment or to achieve expected project benefits (e.g., preservation of channel capacity by adoption of regulations controlling channel encroachments, preservation and reservation of ponding areas, etc.). In general, the local sponsor should adopt flood plain management programs necessary to ensure wise use of flood plains in, as well as adjacent to, the project area. (ER 1105-2-100).

13-11. Single Owner Properties. The Corps will not recommend adoption of a Federal project, or include as a separable element in a recommended structural project plan, flood control improvements which would solely benefit the private property of a single owner. (See Table 12-3 and paragraph 12-7.a) The Corps may recommend Federal cost participation in the construction of a flood control project where the project would serve/benefit property owned publicly by a single state (including the District of Columbia and territories and possessions of the United States), county, municipality, or other duly appointed public entity. (ER 1165-2-123)

13-12. Credit for Compatible Non-Federal Works. The non-Federal sponsor of a Corps flood control project may, pursuant to Section 104 of WRDA 1986 (Public Law 99-662), receive credit toward the sponsor's costs for required local cooperation for compatible flood control works constructed in advance by non-Federal interests. Basically this is limited to such works undertaken by non-Federal sponsors while Federal preauthorization studies for the Federal project are in progress. (ER 1165-2-29)

a. Work accomplished prior to completion of the reconnaissance phase of the preauthorization studies is not eligible.

b. Thereafter, credit may be afforded if, before the work is undertaken, the non-Federal sponsor applies for and receives conditional assurance from the Corps that the work can reasonably be expected to be recommended for credit. (This procedure must be completed prior to project authorization.)

c. The work must subsequently be completed by the non-Federal sponsor; a Federal project must ultimately be authorized by Congress; the completed non-Federal work must still be a relevant element of whatever final plan for the Federal project is adopted; and the Federal project must actually be undertaken.

d. In completion of the feasibility phase of preauthorization studies, the non-Federal works for which credit applications have been favorably acted upon will be included as elements of at least one of

the alternative plans under consideration for recommendation as a Federal project; in evaluation of the alternatives, such non-Federal works, whether completed or not, will not be assumed part of the "without" project condition.

e. Proposed crediting will be addressed in feasibility report recommendations.

f. Credit for completed compatible work may be given after the PCA is approved against all requirements of local cooperation for the Federal project, except against the basic 5 percent cash contribution; the creditable work will be valued as the lesser of the actual non-Federal costs or the estimated cost for the work if accomplished as part of Federal project construction; if such value exceeds the final value of the local cooperation requirements against which credit can be given, non-Federal sponsor is not entitled to reimbursement for any such excess.

13-13. Flood Insurance. The National Flood Insurance Program (NFIP) is available to protect the individual in participating communities from extreme financial loss in the event of a disasterous flood. Under the NFIP (Public Law 90-448, as amended) insurance is subsidized, up to an amount specified, on properties in areas designated as hazardous by the Federal Emergency Management Agency (FEMA). The land use control measures required of communities to gain and maintain eligibility for flood insurance are complementary to other flood plain management efforts. Section 202 of Public Law 93-234 states that no Federal officer or agency shall approve any financial assistance for acquisition or construction purposes after July 1, 1975, for use in any area identified by FEMA as an area having special flood hazards unless the community in which such area is situated is then participating in the NFIP. Section 402 of WRDA 1986 expands the prohibition against Federal participation in flood hazard areas by including "Federal participation in construction of local flood control projects"; and Section 14 of WRDA 1988 amended Section 402 to extend prohibition to "hurricane and storm damage reduction projects." Throughout the planning, engineering, and construction process, coordination, investigations and responsibilities of the parties involved must be identified to ensure that the necessary technical data is developed and available for the community to maintain active participation in the NFIP.

13-14. Evaluation of Economic Benefits for Flood Damage Reduction. Flood plain management, including flood control and prevention, can contribute to the NED objective by improving the net productivity of flood prone land resources. This occurs either by an increase in output of goods and services and/or by reducing the cost of using the land resources (improvement in economic efficiency). The benefit standard is the willingness of users (benefiting activities) to pay for each increment of output from a plan. (P&G, Chapter II)

a. Evaluation Procedure. Each flood plain management plan under consideration is evaluated on a with and without basis. The without condition is that most likely to occur without the specific plan and gives proper recognition of the effect of existing and authorized plans, laws, policies and the flood hazard on the probable course of development. The adoption and enforcement of appropriate land use regulations pursuant to the Flood Disaster Protection Act of 1973 (Public Law 93-234) and compliance with EO 11988 and EO 11990 are assumed, both with and without a Corps plan. For purposes of evaluating structural components of a plan, rational economic use of the flood plain is assumed. Economic rationality assumes that users

of the flood plain will attempt to maximize returns, and take actions with full knowledge of the flood hazard unless constrained by laws or policies as mentioned above. Benefits and costs are evaluated under prices existing at the time of submission of the report to HQUSACE.

b. Flood Damage Reduction Benefits. NED benefits are categorized according to their effect as inundation reduction benefits, intensification benefits, or location benefits. Inundation reduction benefit is the value of reducing or modifying the flood losses to the economic activity using the flood plain without any plan. Inundation reduction benefits are usually measured as the reduction in the amount of flood damages or related costs (those which would be voluntarily undertaken by economically rational individuals to reduce damages). Intensification benefit is the value of more intensive use of the land (e.g., a shift from lower to higher value crops or higher crop yields). Location benefit is the value of making flood plain land available for a new economic use (e.g., where a shift from agricultural to industrial use occurs).

c. Benefits from Evacuation or Relocation. NED benefits resulting from evacuation and relocation plans consist of: benefits from the new use of the flood plain; reduction of externalized flood damages (damages absorbed by non-flood plain occupants); and benefits accruing to off-flood-plain properties adjacent to open space. In addition, non-monetary values such as increases in significant environmental outputs on the evacuated flood-prone lands may be considered in establishing justification for evacuation and relocation plans.

d. Land Development Benefits. Land development, as used here for policy purposes, is defined as the conversion of primarily vacant land (land without significant structural improvements) to more valuable (economically defined) use as a result of a flood damage reduction project. Benefits for land development are usually categorized as "location" benefits and are equivalent to the net change in land value. An example would be the conversion of farmland to residential land as a result of provision of flood protection. Land development does not include cases where land use is the same with or without the flood damage reduction project but would be used more intensively (intensification). It also does not include cases where land use would change without the project and project benefits are achieved through savings in future flood proofing costs or prevention of damages to future development. The following general policy principles apply to the consideration of land development benefits at structural flood damage reduction projects.

(1) Project or separable increments of projects that achieve only land development (location) benefits do not address the prioity purpose of flood damage reduction and, therefore, have a low budget priority. Federal participation in these projects or separable increments will not be recommended.

(2) The NED plan will be formulated to protect existing development and vacant property that is interspersed with existing development. All project benefits, including land development benefits for interspersed vacant property, will be included for project formulation and justification. The NED plan may also provide protection of vacant property that is not interspersed with existing development if it can be demonstrated that the vacant property would

be developed without the project and benefits are based on savings in future flood proofing costs or reduction in damages to future development.

(3) If no project or separable project increment can be economically justified to protect existing development, interspersed vacant property and/or property that would be developed without the project, there is ordinarily no budgetary interest in expanding the area of protection to achieve land development (location) benefits even if net benefits are increased and economic justification can be achieved.

(4) A limited exception to policy principles (1) through (3) above can be considered in the case where the cost of protecting existing development can be substantially reduced if some vacant property that is not interspersed with existing development is included in the protected area. This situation typically exists where an existing levee or floodwall is being raised to provide a higher degree of protection. These exceptions will be considered on a case-by-case basis. Compatibility with EO 11988 still must be demonstrated. It also must be clear that the primary objective of the project is not land development but the minimization of the cost of protecting existing development.

e. Benefit Determination Involving Existing Levees. Problems have often arisen in the benefit evaluation of flood damage reduction studies when there are existing levees of uncertain reliability. Specifically, the problem is one of engineering judgment but has implications for benefit evaluation: engineering opinion may differ or be uncertain on the ability of the levees to contain flows with water surface elevations of given heights. This may lead to difficulty in arriving at a clear, reasonable and agreed upon without project condition.

(1) General. Investigations for flood damage prevention involving the evaluation of the physical effectiveness of existing levees and the related effect on the economic analysis shall use a systematic approach to resolving indeterminate, or arguable, degrees of reliability. Reasonable technical investigations shall be pursued to establish the minimum and, to the extent possible, the maximum estimated levels of physical effectiveness. Necessary information and summary of analyses shall be included in report presentations of plan formulation and shall be documented in appropriate supporting materials.

(2) Sources of Uncertainty. Studies involving existing levees will focus on the sources of uncertainty (likely causes of failure). Other than overtopping, levees principally fail due to one or a combination of four causes: surface erosion, internal erosion (piping), underseepage, and slides within the levee embankment or foundation soils. Reasonable investigations, commensurate with the level of detail suitable to the planning activity underway, shall determine the condition of existing levees with respect to the factors that can lead to failure, if this information does not already exist.

(3) Performance Record. Existing levees either have or have not failed during previous flood events or have shown evidence of distress such as various degrees of piping, underseepage and sloughing. Information regarding their performance is relevant and vitally important in forming judgments regarding future performance. However, it should not be assumed that because a levee has passed a

flood of a given frequency it will always do so in the future or vice versa, assuming the levee has been repaired.

(4) Reliability.

(a) Reliability judgments should be based solely on physical phenomena. The question to be answered is: what percent of the time will a given levee withstand water at height "x"? This means that considerations such as degree of protection, induced damages, induced flood heights, potential for increased risk of loss of life due to false sense of security, etc., are not included. These considerations will be dealt with separately during the plan formulation process.

(b) The purpose of reliability determination is to be able to estimate the without-project damages. Its purpose is not to make statements about the degree of protection afforded by the existing levees. Major subordinate commands (MSC) and district commands (DC) making reliability determinations should gather information to enable them to identify two points on the existing levees. The first point is the highest vertical elevation on the levee such that it is highly likely that the levee would not fail if the water surface elevation were to reach this level. This point shall be referred to as the Probable Non-failure Point (PNP). The second point is the lowest vertical elevation on the levee such that it is highly likely that the levee would fail. This point shall be referred to as the Probable Failure Point (PFP). As used here, "highly likely" means 85+ percent confidence. As defined, the PNP will be at a lower elevation than the the PFP. When there are unresolved uncertainties or differences of opinion, consideration should be given to having the range of uncertainty extend from the lower of arguable PNPs to the higher of the PFPs. Because of lack of information or other reasons, if the PFP cannot be determined then the PFP shall be the low point in the levee where the levee is first overtopped. When determining the low point in the levee, MSC and DC shall assume that closure actions have taken place.

(5) Benefit Evaluation Procedure. Even if no degree of protection is claimed for an existing levee, it does, most likely, provide some benefits. Assessment of these benefits must be in some degree arbitrary in the absence of illuminating engineering or statistical analyses. The function of identifying the probable failure and non-failure points is to create a range of water surface elevations on the levee over which it may be presumed that the probability of levee failure increases as water height increases. The requirement that as the water surface height increases the probability of failure increases, incorporates the reasonable assumption that as the levee becomes more and more stressed it is more and more likely to fail. If the form of the probability distribution is not known, a linear relationship is an acceptable approach for calculating the benefits associated with the existing levees. For benefit evaluation, assume all flood damages will be prevented below the PNP; and no damages will be prevented above the PFP.

f. Restoration of Market Values. Valid estimates of restored market value are difficult and costly to make in typical flood control project evaluations. Therefore, no resources should be used in efforts to quantify restoration of market values for flood control projects.

13-15. Flood Emergency Operations and Disaster Assistance.

a. Corps of Engineers Authority. Emergency activities pursuant to Section 5 of Public Law 77-288, as amended by Public Law 99, 84th Congress, Section 206 of the Flood Control Act of 1962 and Section 302 of WRDA 1990, and others, includes the following work whenever and wherever required: preparation for emergency response to any natural disaster; flood fighting and rescue operations; post flood response; emergency repair and restoration of flood damaged or destroyed flood control works such as levees; emergency protection of Federally authorized hurricane and shore protection works being threatened; and the repair or restoration of Federal hurricane or shore protection structures damaged or destroyed by wind, wave, or water action of other than an ordinary nature. The authority under Section 5, as amended, was expanded by Section 82 of Public Law 93-251, which authorized providing emergency supplies of clean water to any locality 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. Public Law 95-51 further amended Section 5 to provide the Secretary of the Army authority to provide emergency water supplies in areas determined to be drought distressed. Authorized emergency activities are financed from an Emergency Fund authorized by Section 5, to be replenished on an annual basis. (ER 11-1-320, ER 500-1-1)

(1) The provision of advance flood damage reduction measures by the Corps is supplemental to state and local community efforts, rather than replacements for them. Corps protective and preventive measures will generally be of a temporary nature designed to meet an imminent flood threat. Permanent rehabilitation work to protect against the threat of future disasters will be considered separately from advance measures. A declaration of a state of emergency or written request by the governor of a state is a prerequisite to furnishing advance measures. Local interests are required to remove temporary works provided as advanced measures.

(2) It is Corps policy that local assurances and appropriate requests for assistance will be obtained. Local cooperation for accomplishment of advance measures and rehabilitation works require local assurances to (a) provide without cost to the United States all lands, easements and rights-of-way necessary for the authorized emergency work; (b) hold and save the United States free from damage due to the authorized emergency work; and (c) maintain and operate all the rehabilitation work after its completion. Additional features of local participation should also be considered, as appropriate, and included in the assurance agreement; e.g., the removal of emergency flood damage reduction measures, after their purpose has been served, is a local responsibility.

(3) Requests for providing emergency supplies of clean water due to contamination or drought are considered separately from the flood and coastal storm emergency activities. Requests for assistance due to a contaminated source must be made in writing by the governor of the state affected. Assistance for contaminated source situations is limited to 30 days. Applications from drought distressed areas may be presented by individuals or political subdivisions who must agree to the terms deemed necessary by the Secretary of the Army. Assistance is limited to Federally owned equipment and Federal manpower for implementation.

(4) Under Section 5, as amended, emergency funds may be expended directly by the Corps for authorized purposes. However,

there is no authority under Section 5 whereby local interests may be reimbursed for any of their costs for emergency operations accomplished on their own behalf. Also, Section 5 authority and funds are not used in lieu of other appropriate Corps continuing authorities.

(5) After a flood event, the Corps may perform emergency work on public and private lands and waters for a period of 10 days following a governor's request for assistance. This work must be 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 health and safety, and temporary restoration of essential public facilities and services.

b. Other Disaster Assistance. Disaster assistance beyond Corps statutory authority will conform to the provisions of AR 500-60 which pertains primarily to military assistance. In the event of Presidential declaration of a major disaster, or emergency declared by the Director, Federal Emergency Management Agency (FEMA), assistance to state and local governments is provided in essential response and recovery operations when and as directed by the President through FEMA under the provisions of The Robert T. Stafford Disaster Relief Act (42 U.S.C. 5121 et seq). The Corps fully responds to all requests from the FEMA Director or Regional Director. (ER 11-1-320, ER 500-1-1)

13-16. Use of Storage Allocated for Flood Damage Reduction and Navigation at Non-Corps Projects. Section 7 of the Flood Control Act of 1944 requires the Secretary to prescribe regulations for the use of storage allocated for flood control or navigation at all reservoirs constructed wholly or in part with Federal funds. During the planning and design phases, project owners consult with the Corps regarding the quantity and value of space to reserve in the reservoir for flood damage reduction and/or navigation. (ER 1110-2-241, EM 1110-2-3600)

13-17. Provision of Flood Protection at Urban Renewal Projects. The inclusion of flood protection at urban renewal projects must be in accordance with the WRC Principles and Guidelines (P&G).

13-18. Construction of Flood Control Projects by Non-Federal Interests. Section 211 of WRDA 1996 provides authority for non-Federal sponsors to undertake the design and construction of federally authorized flood control projects without Federal funding, and to be eligible to be reimbursed an amount equal to the estimate of the Federal share, without interest (or inflation), of the design and construction cost of the project or separable element thereof. The Energy and Water Development Appropriations Act of 1998 provides additional guidance on Section 211 of WRDA 1996 regarding notification of the Committees on Appropriations of the House and Senate on scheduling of reimbursements.

a. General. Reimbursement for the construction of any authorized flood control project undertaken by a non-Federal sponsor pursuant to Section 211 of WRDA 1996 is contingent upon approval by the Secretary of the Army of the plans for construction and the Secretary’s determination, after a review of studies and design documents, that the project or separable element thereof, is economically justified and environmentally acceptable. This approval must be obtained prior to the initiation of construction of the work for which the reimbursement request will be made. Further, prior to initiating negotiations for a reimbursement agreement for the

construction of any project pursuant to Section 211 of WRDA 1996, the Secretary of the Army must notify the Committees on Appropriations of the House and the Senate. This notification must include the total commitment and the reimbursement requirements that the Administration intends to support in future budget submissions. Budgetary and programmatic priorities will be taken into account when reviewing plans submitted by non-Federal sponsors. Only projects or separable elements of projects which have been specifically authorized by Congress will be considered eligible for reimbursement under this provision. Reimbursement of non-Federal sponsor work under Section 211(e) of WRDA 1996 will not be considered for the Continuing Authorities Program projects.

b. Non-Federal Requirements. All projects pursued under the authority of Section 211 must be planned, designed and constructed in accordance with appropriate Federal criteria, standards and policies, including the appropriate National Environmental Policy Act (NEPA) documentation, and construction must comply with all applicable Federal and state laws and regulations. The non-Federal sponsor will normally be required to develop the design, engineering plans and specifications for the construction it proposes to undertake. In addition, the non-Federal sponsor must conduct NEPA investigations, prepare appropriate NEPA documents, conduct all public and agency coordination, and obtain all necessary Federal and state permits. The Corps may undertake these efforts if funds are provided by the non-Federal sponsor and if such work does not delay the completion of other Corps assignments. Further, funds for activities undertaken by the Corps district offices which are necessary for the successful completion of a Section 211 project or separable element thereof, and construction of the sponsor proposed work including, but not limited to, design, review of project economics, environmental assessments, determination of LERRDs requirements, auditing, permit evaluations, and inspections, must also be provided by the non-Federal sponsor. The non-Federal sponsor must provide all LERRDs and shall perform or ensure performance of all relocations that the Corps determines are required for the construction, operation and maintenance of the project. The value of LERRDs provided by the non-Federal sponsor that are required for the project will be determined in accordance with standard valuation procedures as contained in the model PCA for structural flood control projects. In addition, the non-Federal sponsor will be responsible for the operation, maintenance, repair, replacement and rehabilitation of the project in accordance with regulations or directions prescribed by the Corps and shall perform all other items of sponsor cooperation required by the project authorization.

c. Section 211 Agreement. In the development of a Section 211 agreement, the normal procedures for processing and reviewing a PCA will be used. The decision document approved by the Secretary must be included as support for the Section 211 agreement. Negotiations for proceeding with a project under Section 211 are to be accomplished at the district level once approval to initiate the negotiations has been received.

d. Reimbursement. Reimbursements pursuant to Section 211(e)(1) of WRDA 1996 cannot occur until the flood control project, or separable element thereof, has been constructed. Reimbursements are subject to appropriations Acts. Any eligible reimbursable Federal share of costs associated with studies or design efforts conducted by non-Federal sponsors after authorization and prior to construction will be included in the final auditing of the total project costs upon completion of the construction of a project or separable element

thereof. Any reimbursement desired by a non-Federal sponsor for studies or design it accomplished prior to authorization must be specifically identified and requested in the authorizing document.

CHAPTER 14

SHORE PROTECTION

(NOTE: Storm damage reduction policies are currently undergoing Administration/Congressional review, and the policies in this chapter will be updated when this review is completed).

14-1. Beach Erosion Control.

a. Federal Interest. Before 1930, Federal interest in shore erosion problems was limited to the protection of Federal property and improvements for navigation. At that time, an advisory "Board on Sand Movement and Beach Erosion" appointed by the Chief of Engineers was the prinicipal instrumentality of the Federal Government in this field. The need for a central agency to assemble data and provide engineering expertise regarding coastal protection was recognized by Congress with creation of the Beach Erosion Board authorized by Section 2 of the River and Harbor Act approved 3 July 1930 (Public Law 520, 7lst Congress, 33 U.S.C. 426). The board was empowered to make studies of beach erosion problems at the request of, and in cooperation with cities, counties, or states. The Federal Government bore up to half the cost of each study but did not bear any construction costs unless Federally-owned property was involved. An Act of Congress approved 13 August 1946 (Public Law 727, 79th Congress) established a policy of Federal aid in construction costs where projects protected publicly-owned shores. An Act approved 28 July 1956 (Public Law 826, 84th Congress) amended that basic beach erosion legislation to authorize Federal participation in the protection of private property if such protection was incidental to the protection of publicly owned shores, or if such protection would result in public benefits. The River and Harbor Act of 1962 (Public Law 87-874) increased the proportion of construction costs borne by the Federal Government and made the total cost of studies a Federal responsibility. An Act approved 7 November 1963 (Public Law 88-172) abolished the Beach Erosion Board, transferred its review functions to the Board of Engineers for Rivers and Harbors, and established the Coastal Engineering Research Center. The Water Resources Development Act (WRDA) of 1986 (Public Law 99-662) recognizes hurricane and storm damage reduction (HSDR) and/or recreation as the primary purposes of beach erosion control (BEC) projects, alters the proportion of construction costs that may be borne by the Federal Government, and reduces the Federal cost participation in feasibility studies to 50 percent. (ER 1165-2-130)

b. Definitions. Under existing shore protection laws Congress has authorized Federal participation in the cost of restoring and protecting the shores of the United States, its territories and possessions. The intent of this legislation is to prevent or control shore erosion in order to reduce damage to upland developments caused by wind- and tidal-generated waves and currents along the Nation's coasts and shores, and lakes, estuaries, and bays directly connected therewith. Such adverse effect extends only the distance up tributary streams where it can be demonstrated that the dominant causes of erosion are ocean tidal action (or Gulf of Mexico and Great Lakes water motion) and wind-generated waves. Shore protection legislation does not authorize correction of erosion at upstream locations caused by stream flows. Shore or beach erosion is primarily the result of persistent littoral processes and by the battering action of waves occurring during storms. Shore or beach erosion damages include both losses to upland development--land and structures--and losses of

recreational uses (however, see paragraph 14-2). The mitigation of shore erosion caused by Federal navigation works is discussed in paragraph 12-25.

(1) Restoration and Protection. The term "restoration" was substituted for "improvement" in the amendment of July 28, 1956 (Public Law 826, 84th Congress, 70 Stat. 702) so that the basis for Federal concern became "restoration and protection" as opposed to creation of new lands (House Report No. 2544 and Senate Report No. 2691, 84th Congress). Accordingly, Federal participation in restoration is limited to the historic shoreline. It does not provide for Federal cost sharing in extending a beach beyond its historic shoreline unless required for protection of upland areas.

(2) Public Use. The term "public use", particularly of private property, means recreational use by all on equal terms and open to all regardless of origin or home area. Prohibited is any device for limitation of use to specific segments of population, such as local residents, or similar restrictions on outside visitors, directly or indirectly. This definition allows a reasonable beach entrance fee, uniformly applied to all, for use in payment of local project costs. Normal charges made by concessionaires and municipalities for use of facilities such as bridges, parking areas, bath houses and umbrellas are not construed as a charge for the use of the Federal beach project, as long as they are commensurate with the value of the service they provide and return only a reasonable profit. Fees for such services must be applied uniformly to all concerned and not as a prerequisite to beach use. Lack of sufficient parking facilities for the general public (including non-resident users) located reasonably near and accessible to the project beaches or lack of public pedestrian rights-of-way to the beaches at suitable intervals would constitute de facto restriction on public access and use of such beaches, thereby precluding eligibility for Federal assistance.

(3) Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) for Beachfills. The following definitions apply for OMRR&R for beach fills which are recommended for authorization with continuing Federal construction participation in periodic nourishment. It is recognized that the non-Federal responsibilities at existing projects may vary from these definitions. Also, these definitions do not deal with hardened structures (e.g., groins, bulkheads, sea walls, and revetments) which may be features of shore protection projects. For projects constructed since enactment of WRDA 1986, the non-Federal sponsor is responsible for all activities related to the OMRR&R of hardened structures, including terminal groins which may be included in beach fill projects. There is no Federal continuing construction responsibility associated with hardened structures.

(a) Operations. This is the non-Federal sponsor's continuing oversight activities to assure that the beach design section provides storm damage reduction and promotes and encourages safe and healthful public enjoyment of the recreational opportunities provided by the beach fill. Operation activities include protection of dunes, prevention of encroachments, monitoring of beach design section conditions, provision of life guards and beach patrols, and trash collection (see ER 1110-2-2902 for more details). Operations are a non-Federal sponsor responsibility and there is no Federal financial participation in operations activities.

(b) Maintenance, Repair, Replacement, and Rehabilitation. For beach fill there is, generally, no meaningful distinction between maintenance, repair, replacement, and rehabilitation. A beach fill project is designed to provide a certain level of erosion and storm surge protection to landward facilities through the sacrifice of project fill material. The protection provided depends on the crown elevation and the amount and characteristcs of sacrificial sand maintained within the project design section. The project function depends on maintenance of the horizontal and vertical dimensions of the project design section. Preservation of this design section can be achieved through a combination of the following activities which generally describe the non-Federal sponsor responsibility for maintenance, repair, replacement, and rehabilitation under the terms of the project cooperation agreement (PCA):

(1) Grading and shaping the beach and dune using sand within the project design section.

(2) Maintenance of dune vegetation, sand fencing and dune cross-overs.

(c) Continuing Project Construction (Periodic Nourishment). The following activities may be classified as continuing project construction and may be shared as periodic nourishment under the terms of the PCA:

(1) Placement of additional sand fill to restore an advanced nourishment berm.

(2) Placement of additional sand fill on the projet to restore the design section.

c. Cost Sharing. Federal participation in shore protection projects(excluding HSDR projects designed to protect against storm wave action and/or tidal inundation only without providing any shoreline protection and/or beach erosion control) is based on shoreline ownership, shore use, and type and incidence of benefits. Non-Federal interests are responsible for providing all lands, easements, rights-of-way, relocations and dredged material disposal areas (LERRD). The non-Federal costs for LERRD are credited against the sponsor's total responsibility for sharing construction costs (determined as a weighted percentage), and any excess LERRD costs will be reimbursed to the sponsor after initial project construction is completed. Lands, easements, and rights-of-way (LER) needed for the placement of shore protection project features that prevent the loss of the land itself have no value for crediting purposes since such land is lost in the absence of the project. However, the real estate market may not reflect this and a non-Federal project sponsor may in fact incur costs in acquiring requisite interests. Accordingly, a non-Federal sponsor will be credited for actual costs or for the net reduction in total market valuation of the parcels (from which interests for the project must be drawn) assuming no Federal project compared to assuming the project is in place (i.e., including consideration of special benefits to the property owners), whichever is least. Non-Federal interests must pay 100 percent of the OMRR&R) costs assigned to non-Federal shores.

(1) Federal Shores. Costs assigned to protection of Federally-owned lands and shore are 100 percent Federal if the Federal agency owning the land and shore requests protection. It is

inappropriate that projects wholly for protection of Federal lands (for example, military installations and National Park Service lands) compete for funding under the Corps civil works program in with studies and projects requested by non-Federal public agencies. The Corps should not be placed in the position of defending the programs of another Federal agency before the Office of Management and Budget and the Congress. Costs or work specifically to protect lands controlled by another Federal agency will usually be borne by that agency. The Corps will accomplish such work on a reimbursable basis upon request (See Chapter 23). An exception would be a case wherein the lands in question involve only a minor, but integral, part of the overall protection frontage. In such a case, protection would be included to assure a complete overall project, with the related costs assigned as 100 percent Federal. If, upon request, funding could not be obtained from the Federal agency concerned, this segment of the project would be funded from project appropriations. Another exception would be a case where the other Federal agency lands comprise part of the alignment of the least cost plan for providing protection.

(2) Non-Federal Shores.

(a) Privately Owned and Used. Costs assigned to privately-owned undeveloped lands and to developed lands where the use of the shore is limited to private interests are 100 percent non-Federal. Federal aid to private shores owned by beach clubs and hotels is incompatible with the intent of Public Law 84-826. Actual use of their beaches is subject to the limitation of club membership or to being a guest at the hotels, even though the clubs or hotels may indicate that membership or guest privileges are open to all on equal terms. Usually, these establishments are operated for private profit or to restrict beach use. They exclude all members of the general public except for membership or paying guests. It is considered that their facilities, including parking facilities therefor, are not open to the general public. However, protection of such private shores may sometimes be included when determined essential to a complete overall project. The related costs would be assigned, 100 percent, to the non-Federal project sponsor. If the upland part of a segment of beach is privately owned and used, that segment will be assigned 100 non-Federal responsibility for project work, both below and above the mean high tide line.

(b) Privately Owned and Publicly Used. Costs assigned to prevention of damage to privately-owned developed lands, where use of the shore meets criteria for public use, are 35 percent non-Federal.

(c) Publicly Owned and Used. Costs assigned to non-Federal public lands and shores used for parks and recreation purposes are 50 percent non-Federal. In the case of non-Federal public lands developed for other purposes and subject to hurricane or storm damages, the assigned costs may be 35 percent non-Federal.

(3) Shores Combining Categories. Where a shore protection project encompasses more than one category of ownership and use, the non-Federal share of project costs will ordinarily be expressed as a composite percentage of total project costs derived by weighting the appropriate cost sharing percentages for the given categories (as above) by the linear feet of project shoreline within those categories. This is where the initial construction costs are reasonably uniform for the entire project; where they are not, the project shoreline will be first subdivided into segments that are

relatively uniform in costs and a weighted percentage calculated from the total costs, from all segments, assigned to each category.

d. Periodic Nourishment. No Federal contribution toward maintenance of a shore protection project is authorized. However, the Act of 1956 (Public Law 84-826) provides that Federal participation may be made toward periodic beach nourishment when it is found to comprise a more suitable and economical remedial measure for shore protection than retaining structures such as groins. Periodic nourishment (if not specifically authorized on another basis) is to be considered "construction" for funding and cost-sharing purposes. Corps participation in periodic beach nourishment (sand replacement) is limited to the period specified in authorizing documents. Section 934 of WRDA 1986 allows extension of the authorized period to 50 years from the date of initiation of construction, if it is determined that, based on current evaluation guidelines and policies, the existing project is economically justified. Preauthorization reports will generally recommend Federal assistance in periodic nourishment for the economic life of the project. Nourishment costs will be shared in the same percentages as initial project installation costs were shared.

(1) Replacement of Dunes. Prior to WRDA 1986, many shore protection projects were formulated with two separate purposes: BEC and HSDR. Different cost sharing and local cooperation requirements applied to these two purposes. Beach berms were generally cost shared as erosion protection measures. The Federal Government participated in periodic nourishment. Protective dunes, on the other hand, were cost shared as HSDR features based on their use for storm surge and wave damage protection. The local sponsor was responsible for all OMRR&R, including placement of additional sand to restore the dune section. WRDA 1986 established the single unified purpose of HSDR. Accordingly, where protective dunes are included as part of the HSDR project, the Corps will recommend authorization for continued Federal participation in periodic nourishment of the protective dune. The rationale for this policy is that the protective dune, along with the protective beach, is part of the sacrificial storm damage reduction system where loss of material from the system is anticipated. The replacement of dune vegetation following periodic nourishment and replacement of dune cross-overs, however, is a non-Federal responsibility. This policy does not extend to HSDR levees which do not function as sacrificial systems, or to hard features (e.g., groins, revetments, seawalls). Also the non-Federal sponsor has sole responsibility for maintenance, including maintenance of dune vegetation, sand fencing, and grading and reshaping the dune to the design section with available material.

(2) Recognition of Costs in Non-Federal Sponsor Financing Plan. The continuing requirement for periodic nourishment for beach fill projects must be reflected in the schedule of estimated Federal and non-Federal expenditures. This schedule is furnished to the non-Federal sponsor to prepare the sponsor's financing plan and statement of financial capability. The assessment of the non-Federal sponsor's financial capability must include a demonstration of the sponsor's capability to meet its share of periodic nourishment costs. The sponsor must also understand that, while an "average" periodic nourishment cycle is estimated, the need for periodic nourishment is most often associated with replacement of erosive losses that occur during storm periods. Therefore, the local sponsor should demonstrate the financial capability to respond quickly to periodic nourishment requirements. This may involve establishing a contingency fund or emergency response account.

e. Project Formulation. Shore protection projects are formulated to provide for hurricane and storm damage reduction. On this basis any enhancement of recreation that may also result is considered incidental. Such recreation benefits are NED benefits, however, and are included in the economic analysis. Additional beach fill, beyond that needed to achieve the hurricane and storm damage reduction purpose, to better satisfy recreation demand would be a separable recreation feature requiring separable 50-50 cost sharing.

14-2. Recreation. Shore protection projects (particularly those featuring beachfill) are innately conducive to beach and shoreline recreation activities. Provided that hurricane and storm damage reduction benefits combined with incidentally generated recreation benefits limited to an amount equal to the hurricane and storm damage reduction benefits are sufficient in themselves for economic justification, the Corps will propose undertaking the project as a HSDR project (all recreation benefits are included in computation of the overall benefit-cost ratio). If, in this limiting initial evaluation, a greater amount of recreation benefits is required to be combined with hurricane and storm damage reduction benefits in order to demonstrate economic justification, the project is characterized as being primarily for recreation. As such, it will not be proposed by the Corps as a Federal undertaking, since recreation developments are not accorded priority in Civil Works budget decisions. For the same reason, separable recreation elements in a shore protection project will not be recommended.

14-3. Hurricane and Abnormal Tidal Flood Protection.

a. Federal Interest. Before enactment of WRDA 1986 (Public Law 99-662), Federal interest in projects to protect against hurricane and abnormal tidal flooding was established case-by-case based on specific Congressional authorizations for Corps construction of such projects. Although project works were usually similar to beach erosion control works, hurricane protection projects were viewed as being more like flood control projects. The 1986 Act, however, authorizes Federal participation in HSDR projects and establishes cost sharing for that category of projects. WRDA 1988 prohibits expenditure of Federal funds on construction of HSDR projects unless the community in which the project is located is then participating in the National Flood Insurance Program (NFIP). Other than the magnitude of storms considered there are now no real distinctions between shore protection measures for hurricane, storm or tidal induced flooding and erosion. (ER 1165-2-130)

b. Definition. Hurricane and tidal flooding result from abnormal rises in tidal levels due to storms and from the in-rush of waters as a result of waves.

c. Cost Sharing. Federal participation in HSDR projects is usually determined in the same way as for beach erosion control projects--based on shoreline ownership, shore use, and type and incidence of benefits as covered in paragraph 14-1.c. In the event a HSDR project, in whole or part, provides protection from storm wave action and/or tidal inundation only without providing any shoreline protection and/or beach erosion control, construction costs are usually 65 percent Federal, unless the lands protected are Federal, in which case construction costs are usually 100 percent Federal.

14-4. Lake Flood Protection.

a. Federal Interest. The extent of Federal interest in projects to protect against lake flooding (e.g., the Great Lakes) is not explicitly defined by legislation. Congressional authorizations for Corps construction of such projects on a case-by-case basis (e.g., Great Salt Lake, Utah) is establishing the Federal concern.

b. Definition. Lake flooding results from storm-induced inundation superimposed on the ordinary fluctuation of the lake level, or inundation from abnormal rises in static water level due to climatological changes (e.g., extended periods of abnormal precipitation, temperatures and/or humidity) or tectonic changes.

14-5. Evaluation. Shore protection projects may derive economic benefits from HSDR, land losses prevented, and increased recreation values. Benefits are measured as the differences in these values under conditions expected with and without the project.

14-6. Project Cooperation.

a. Project Sponsor. Formal assurances of project cooperation must be furnished by a municipality or public agency fully authorized under state laws to give such assurances and financially capable of fulfilling all measures of project cooperation.

b. Requirements. Project cooperation requirements for all types of shore protection projects (e.g., HSDR, BEC) are the same. The sponsor must agree to:

(1) Provide to the United States all necessary LERRDs determined by the Government to be necessary for the construction (including periodic nourishment), OMRR&R of the project.

(2) Provide or pay to the United States the cost of providing all retaining dikes, waste weirs, bulkheads, and embankments, including all monitoring features and stilling basins, that may be required at any dredged or excavated material disposal areas required for the construction (including periodic nourishment), and OMRR&R of the project.

(3) Contribute in cash, during project construction, the appropriate percentage of project construction cost, the percentage to be in accordance with existing law and based on shore ownership and use at the time of implementation, provided that credit will be given for the value of LERRDs.

(4) Contribute in cash the appropriate percent of the cost of periodic nourishment, where and to the extent applicable (up to 50 years), as required to serve the intended purpose(s).

(5) Hold and save the United States free from all damages arising from the construction (including periodic nourishment), and OMRR&R of the project and any project related betterments, except for damages due to the fault or negligence of the United States or its contractors.

(6) OMRR&R the completed project, or functional portion of the project, at no cost to the United States in accordance with applicable

Federal and state laws and specific direction prescribed by the United States.

(7) Grant the United States the right to enter, at reasonable times and in a reasonable manner, upon land which the local sponsor owns or controls for access to the project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project.

(8) Maintain public ownership and public use of the shore upon which the amount of Federal participation is based for so long as the project remains authorized.

(9) Provide and maintain necessary access roads, parking areas, and other public use facilities open and available to all on equal terms.

(10) Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project to the extent and in such detail as will properly reflect total project costs.

(11) Perform, or cause to be performed, such investigations for hazardous substances as are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. 9601-9675, on all lands necessary for project construction, and OMRR&R.

(12) To the maximum extent practicable, OMRR&R the project in a manner that will not cause liability to arise under CERCLA.

(13) Assume complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located on any lands necessary for the construction, and OMRR&R of the project.

(14) Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR 24 Part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, and OMRR&R of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

(15) Comply with all applicable Federal and state laws and regulations, including Section 601 of the Civil Rights Act of 1964, Public Law 88-352, and Department of Defense Directive 5500.11 issued pursuant thereto as well as Army Regulation 600-7, entitled Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army.

(16) 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 flood plain and in adopting such regulations as may be necessary to prevent unwise future development and ensure compatibility with protection levels provided by the project.

(17) At least annually notify affected interests of the limitations of the protection afforded by the project.

(18) Participate in and comply with applicable Federal flood plain management and flood insurance programs, and, for any project for HSDR, prepare a flood plain management plan (FPMP) designed to reduce the impacts of future flood events in the project area within one year of signing a project cooperation agreement (PCA), and implement such plan not later than one year after completion of construction of the project.

(19) Prevent future encroachments which might interfere with proper functioning of the project.

(20) Specific cases may also warrant assigning other additional local responsibilities, such as providing appurtenant facilities required for realization of recreational benefits.

14-7. Technical and Engineering Assistance on Shore Erosion. Section 55 of 1974 (Public Law 93-251) authorizes the Secretary of the Army, acting through the Chief of Engineers, to provide technical and engineering assistance to non-Federal public interests in developing structural and nonstructural methods of preventing damages attributable to shore and streambank erosion.

14-8. Emergency Protection.

a. Section 14 of the Flood Control Act of 1946 (Public Law 79-526), as amended. Provides authority for the Secretary of the Army to undertake emergency measures to prevent erosion damages to endangered highways, public works, and non-profit public facilities (paragraph 15-3). (ER 1105-2-100)

b. Section 5 of the Flood Control Act of 1941 (Public Law 72-228), as amended. Provides authority to provide emergency protection of Federally-authorized and constructed hurricane and shore protection works being threatened; and to repair and restore, at 100 percent Federal cost, Federally-authorized and constructed hurricane or shore protection structures 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. (ER 500-1-1) Conditions under which the Corps will repair and rehabilitate beach fills, and the limitations of the work that will be undertaken, are set forth in the following paragraphs.

(1) Completed Project. To be eligible for Section 5 funds, a beach fill project must be completed or must be a completed functional element of a larger project. A beach fill project or functional element is considered to be complete when it has been formally transferred to the non-Federal sponsor for OMRR&R. Public Law 84-99 funds will not be used for uncompleted projects that are eroded by storm events before they are formally transferred to the non-Federal sponsor. Uncompleted projects that are eroded by storm events before they are formally transferred to the non-Federal sponsor will be restored to their design dimensions using Construction, General, funds. Costs will be shared by the non-Federal sponsor as project construction costs under the terms of the PCA.

(2) Extraordinary Storm. To be eligible for use of Section 5 funds, a beach fill project must be substantially eroded by wind, wave, or water action of other than an ordinary nature. It is difficult to precisely define an "extraordinary" storm. Therefore, the determination of whether a storm qualifies as extraordinary will be made by the Director of Civil Works in consultation with the Assistant Secretary of the Army for Civil Works (ASA(CW)). The severity of the storm will be discussed in the Project Information Report which accompanies the Project Approval/Funding Request to the Director of Civil Works. The report should include a description of the damaging storm(s) in relation to established parameters for coastal storms including shoreline recession, storm surge elevation and duration, wave height, and wave interval. To the extent possible a frequency should be estimated for these paramenters to provide a basis to assess the storm's severity. A description of the storm in relation to established classification systems should also be presented.

(3) Adequate Functioning. Under the provisions of Section 5, as amended, and existing policy implementing the legislation (ER 500-1-1), funds are to be used to restore adequate functioning of the structure for storm damage protection. For a beach fill project, the degree of project restoration eligible for funding under Section 5 versus periodic nourishment to be accomplished under the terms of the PCA will be decided on a case-by-case basis by the Director of Civil Works in conjunction with the ASA(CW). The need for funding under Section 5 will be based on an assessment of the risk to life and property and the need for immediate action. In no case, however, will a beach fill project be restored with Section 5 funds beyond it pre-storm condition. Considerations in making the assessment on degree of restoration required will be discussed in the Project Information Report and include the following:

(a) Pre-Storm Conditions. The pre-storm condition of the project must be described. A beach fill project is designed to a certain level of erosion protection. In some cases, particularly where a protective dune is included, it also provides storm surge and wave damage protection. These design paramenters are generally expressed as a frequency or probability. The pre-storm condition of the project with respect to its ability to meet its design parameters should be described. If the pre-storm condition of the project was not at a level that would have provided the design level of erosion, storm surge, or wave protection, the volume of material in the pre-storm condition needed to restore a project to its design profile should be estimated. Replacement of this volume of material would not be eligible for funding under Section 5. Information should also be presented on the nourishment history of the project, including the estimated nourishment cycle and the date of the last nourishment.

(b) Remaining Protection. The degree of erosion and storm surge protection remaining is an important factor in assessing the degree of restoration required. The severity of the event that would cause significant damages with the remaining project should be described. An assessment of the remaining property subject to damage should also be presented.

(c) Storm Season. Section 5 funds are to be used to restore adequate functioning of a project to provide protection against future storms. Therefore, an assessment of the risk of a subsequent damaging storm is an important consideration in the use of emergency funds and

should be discussed in the Project Information Report. Damaging coastal storms are more frequent during certain seasons (e.g., the late summer and early fall hurricane season on the Gulf and east coast). The need for immediate emergency action and the extent of immediate restoration required will be influenced by whether the storm causing the damage occurs early or late in the storm season. If it is late in the storm season, and the risk of a subsequent storm in the current season is low, there is no need for emergency action under Section 5. In such cases, the project should be renourished under the terms of the PCA.

(4) Combined Emergency and Periodic Nourishment. In some cases the non-Federal sponsor may wish to fully restore a beach fill project where only a partial restoration is justified under the provisions of Section 5. In these cases, a cost allocation recommendation for the complete restoration project will be made between emergency response under Section 5 (100 percent Federal cost) and periodic nourishment under the terms of the PCA. This recommended cost allocation and its rationale will be presented in the Project Information Report.

CHAPTER 15

STREAM BANK EROSION CONTROL

15-1. The Federal Interest. Remedial or corrective measures for bank erosion should be considered in studies of regulating river flows. However, except in serious cases affecting the general public welfare, and as otherwise stated below, the Federal interest is limited to bank stabilization measures required as components of flood control, navigation and other water resources developments. Costs of such components will be shared in accordance with the basic policies applicable to the project functions served. Justification may be judged in terms of economic and environmental damages prevented or improvement of economic and environmental values, whether the measures are independent or component parts of larger systems of works.

15-2. Nature of Effects. Bank erosion causes loss of land and monetary income therefrom, affects the tax base, pollutes streams, depletes reservoir storage, silts up wetlands and estuaries, and disrupts ecologic and economic activities. Control of such erosion would alleviate these effects. However, practicable remedial measures, limited to those that are economically justified, would probably have only a limited effect on the overall impact of naturally occurring bank erosion.

15-3. Special Continuing Authority.

a. Authority. Section 14 of the 1946 Flood Control Act, as amended, states that: "The Secretary of Army is hereby authorized to allot from any appropriations heretofore or hereinafter made for flood control, not to exceed $15,000,000 per year, for the construction, repair, restoration, and modification of emergency streambank and shoreline protection works to prevent damage to highways, bridge approaches, and public works, churches, hospitals, schools and other non-profit public services when in the opinion of the Chief of Engineers such work is advisable: Provided, that not more than $1 million shall be allocated for this purpose at any single locality from the appropriations for any one fiscal year." (Project size is not limited; see c. below.)

b. Applicablility.

(1) The purpose of work under this authority is to prevent flood or erosion damage to endangered highways, highway bridge approaches, and similar, essential and important public works, or non-profit public facilities. (Not to prevent loss of land per se.) In addition to major highways systems of national importance, eligible highways include principal highways, streets, and roads of significant importance to the community, such as arterial streets, important access routes to other communities and adjacent settlements, as well as roads designated as primary farm to market roads. "Public Works" means those essential facilities which serve the general public and are owned and operated by the Federal, state or local government, such as municipal water supply systems, and sewage treatment plants. "Non-profit public services" are structures or related services fully open and available to the general public such as churches, and public and private non-profit hospitals, and schools. (ER 1105-2-100) Also eligible are known cultural resources whose significance has been demonstrated by a determination of eligibility for listing on, or actual listing on, the National Register of Historic Places and/or

equivalent State register. The cultural resource must be open to all on equal terms, and meet all other Section 14 eligibility criteria.

(2) Work under this authority does not encompass repair, restoration or modification of the facility to be protected--needed because of damages already sustained by reason of progressive erosion. That kind of work, and the related costs therefor, remain the responsibility of the owner of such facility. Work designed solely to prevent land loss or the protection of non-essential, temporary or mobile facilities is not eligible for implementation under the Section 14 authority.

c. Project Cooperation. The flood control cost sharing established in Section 103(a) of the Water Resources Development Act (WRDA) of 1986 (Public Law 99-662), as amended by Section 202(a) of WRDA 1996 (Public Law 104-303), is applicable to projects under this authority. The project sponsor/beneficiary must provide needed lands, easements or rights-of-way for construction and subsequence maintenance of the project works and, to the extent these are new costs therefor (the values of lands already owned for purposes associated with the facilities to be protected are excluded), these are included in project costs and count toward the sponsor's minimum 25 percent cost sharing responsibility (35 percent for those Section 14 projects which are approved for construction by the division commander after 12 October 1996 unless these projects have been specifically authorized in or prior to WRDA 1996). The project sponsor must agree to maintain the completed project works. In addition to the general cost sharing requirements, the non-Federal sponsor must agree to bear all other project costs exceeding the $1 million limit on Federal expenditures.

15-4. Specific Project Authority. Other single-purpose stream bank erosion control projects are potentially possible, if specifically considered and authorized by the Congress. Section 14 of the 1946 Flood Control Act, as amended, provides clear indication of Federal interest in one form of control measures--those required to prevent damages to public works and non-profit public service facilities. The $1 million limitation set by Section 14 is considered to be not so much a limitation of that interest as it is of the extent to which Congress is willing to have the Corps of Engineers proceed without detailed Congressional oversight. Hence, where Federal costs in connection with a project to address Section 14 kinds of problems would exceed $1 million (and the sponsor could not accept the excess costs), the Corps could appropriately address a recommendation to Congress for specific authorization. Corps studies may not proceed on this basis, however, unless there is specific Congressional direction for such study. There may be other kinds of problems (other than endangered public or public-use facilities) where unchecked stream bank erosion could be construed as having potentially serious consequences affecting the general public welfare. Corps consideration of these would also be dependent upon specific Congressional authorizations.

15-5. Project Implementation. Responses to local requests for assistance under the Section 14 program (i.e., initial site inspection, coordination with local interests, identification of a potential Federal interest, and decision to initiate a study) are completed entirely at Federal expense using funds from the Section 14 Coordination Account. The study and design of Section 14 projects are conducted in a single stage, the Planning and Design Analysis (PDA), and are cost shared. The PDA consists of all planning and design

activities required to demonstrate that Federal participation in a project is warranted, and completes all activities to award the construction contract. The PDA begins with issuance of funds for initial analysis and ends (within a 12 month target time) with the division request for construction funds. HQUSACE role during the implementation process is limited to assessing the financial impact of funding requests on the Section 14 program, and the routine acknowledgement of construction funding commitment. HQUSACE monitors policy compliance and technical adequacy by way of audits at periodic program review meetings (i.e., there is no HQUSACE policy or technical review or approval during the implementation process). (ER 1105-2-100)

15-6. Technical and Engineering Assistance on Streambank Erosion. Section 55 of Public Law 93-251 authorizes the Secretary of the Army, acting through the Chief of Engineers, to provide technical and engineering assistance to non-Federal public interests in developing structural and non-structural methods of preventing damages attributable to shore and streambank erosion.

15-7. Streambank Erosion Resulting from Project Construction and Operation. See paragraph 11-8.

CHAPTER 16

HYDROELECTRIC POWER

16-1. Authority and Corps Responsibilities. Through various statutes, Congress has directed consideration of hydroelectric power in water resource development plans. The Corps formulates comprehensive plans which include development of hydroelectric power by a non-Federal sponsor. Congress has authorized projects that involved hydropower development on the basis of these recommendations.

a. General Responsibilities. The various functions of multiple-purpose water resource development projects are interrelated, and operation for individual functions is coordinated with operation for all functions. The Corps is responsible for insuring the maximum sustained public benefits from each of its projects for all desirable purposes, including power, as integral parts of comprehensive plans for the regulation, control, conservation and utilization of water resources. Consistent with the project authorizations, this is a continuing responsibility throughout the planning, design, construction, and operation phases. Particular attention is given to the operation of projects to obtain the benefits which were anticipated during the planning stages. Within the scope of projects as authorized, the Corps is responsible for determining the proper design and plan of operation for each of its projects so that maximum sustained public benefits will be obtained. Valuable assistance is obtained from other agencies on special aspects such as expected market for power and the value of the power. The Corps must review data and recommendations furnished by others and make such additional investigations as are necessary so that its responsibilities are fulfilled.

b. Additional Responsibilities. Congressional authorizations include the responsibility for the Corps to operate projects under its jurisdiction for all authorized purposes. The Corps is responsible for determining the costs and annual charges of recommended plans of improvement, allocation of those costs and charges to functions served (except where provided otherwise by law), maintaining cost accounting records, maintaining records of project operations, and furnishing others such information as required or appropriate.

16-2. Evaluation. The value of power to the users is measured by the amount that they should be willing to pay for such power. The usual practice is to measure the benefit in terms of the cost of achieving the same result by the most likely alternative means that would exist in the absence of the project. Project capacity benefits are based on the cost of the most likely alternative means of constructing a like amount of capacity financed on the same basis as the Federal project. Energy benefits are based on the expected operating costs of the most likely means of producing a like amount of energy in the absence of the Federal project. Energy benefits assume unregulated fuel prices unconstrained by existing long term contracts and may, where supported, reflect increased costs resulting from relative scarcity. Operating experience indicates that the installed capacity in excess of that considered dependable may have a value. This "intermittent" power capacity is given a value when system operation studies show such capacity has value. Simplified procedures are used for small scale hydroelectric projects (25 MW or less) so that plans for environmentally and economically sound projects may be reported in a timely fashion. (18 CFR 713.601)

16-3. Cost Sharing. In multiple-purpose reservoirs under the jurisdiction of the Corps, the Chief of Engineers is responsible for determining the costs allocated to the hydroelectric power function, except where otherwise required by law. It is Corps policy that all purposes in a multiple-purpose project should share equitably in the benefits of multiple-purpose development and that no purpose should be subsidized by other project purposes to enable sale of services at lower rates. By the interagency agreement of 12 March 1954, the Federal agencies, Departments of the Interior, Army, and Federal Power Commission (now Federal Energy Regulatory Commission (FERC)) have accepted the Separable Costs-Remaining Benefits (SCRB) method of cost allocation, as a preferred method of distributing project costs. This method permits equitable allocations of project costs to power for use as a basis for establishing power rates.

a. When development of the power function is funded out of project appropriations, the cost (including OMRR&R) allocated to power is fully repaid to the U.S. Treasury by revenues collected by the marketing agency. This is in accord with existing law (see paragraph 16-5) as referenced in subsection 103(c)(1) of WRDA 1986.

b. When development of the power function is funded up-front by a non-Federal sponsor (the preferred option), the allocated investment cost will be recovered by the sponsor under a tri-party agreement between the sponsor, the Corps and the appropriate Federal marketing agency, either through receipt of the developed power or (if specifically authorized by Congress) by repayment from revenues collected by the marketing agency through sale of the power. The allocated share of Corps project OMRR&R costs funded from project appropriations will be repaid to the U.S. Treasury accordingly, either by assessments to the sponsor as costs are incurred or out of the power revenues collected by the marketing agency.

c. A non-Federal sponsor will be required to contribute 50 percent of preauthorization feasibility study costs, during the course of studies.

16-4. Coordination with Other Agencies.

a. The FERC. The FERC, in carrying out its functions under the Federal Power Act, is concerned with all the elements involved in determining power values. The Corps collaborates with the FERC in evaluating power benefits on the basis of unit power values developed by that agency. The Corps Hydroelectric Design Center in the North Pacific Division works closely with FERC on development of power values and can provide assistance, upon request, to Corps FOAs.

b. Others. Federal, state and local agencies which would have an interest in the power function or the possible effect of the contemplated plan, are consulted. Views of interested and affected agencies are considered and covered in Corps reports. Representatives of the marketing agency are consulted.

c. Project Rewind and Uprating. Consultation with other agencies is required for rewind and uprating of hydroelectric generators carried out in the maintenance, rehabilitation, and modernization of existing generating facilities at water resources projects. The Secretary of the Army shall provide affected state, tribal, and Federal agencies with a copy of the proposed determinations that the proposed actions are economically justified and financially feasible; will not result in significant adverse

affect on other project purposes; will not result in significant adverse environmental impacts; will not involve major structural or operational changes in the project; and will not adversely affect the use, management, or protection of existing Federal, state, or tribal water rights. If the agencies submit comments, the Secretary shall accept those comments or respond in writing to any objections raised to the proposed determinations. (Section 216 of WRDA 1996)

16-5. Marketing of Corps-Produced Power.

a. Under the provisions of Section 5 of the Flood Control Act of 1944 (Public Law 534, 78th Congress) and other acts, power developed at projects under the jurisdiction of the Chief of Engineers, which is surplus to project needs, is turned over to the Secretary of Energy for marketing. Law requires that the Secretary of Energy shall transmit and dispose of Federal power and energy so as to encourage the most widespread use at the lowest possible rates to consumers, consistent with sound business principles. It also provides that, in the sale of power, preference is given to public bodies and cooperatives. Agencies of the Department of Energy which market the power are: The Bonneville Power Administration, Southwestern Power Administration, Southeastern Power Administration, the Western Area Power Administration and the Alaska Power Administration. Rates for sale of power to recover allocated costs are established by the marketing agency of the Department of Energy and approved by the FERC. The marketing agency is required to so establish the rates as to recover the cost of producing and transmitting the power, including repayment of the Federal investment, over a reasonable period of years (50 years is established by the Secretary). (ER 1130-2-510)

b. If development of the power is funded by a non-Federal sponsor, the power must still be marketed by the appropriate Federal marketing agency pursuant to Federal law. Repayment of the sponsor's investment will be pursuant to a tri-party agreement between the sponsor, Corps and marketing agency (the period of recovery should not exceed 50 years).

c. Marketing of power produced from FERC licensed power plants at Corps projects is the responsibility of the licensee. The Corps and the Federal marketing agencies are not involved in the related marketing arrangements. See paragraph 16-9.

16-6. Pumped Storage Power. Possibilities for pumped storage developments are investigated in pre- and postauthorization planning studies for the optimum development of water resources. Where potentials exist, the engineering and economic aspects are reported to a degree consistent with the nature and scope of the report.

a. Integral Facilities. Integral facilities (usually a conventional powerhouse with reversible units) are considered in reports and recommended as a part of a Federal project when such facilities are justified and represent the best development of the site. Adjoining plants (usually detached plants using the reservoir for an afterbay) which are similarly qualified, and the operations of which would have a significant interrelation with other project operations, may also be included in the recommended plan.

b. Adjoining Plants. Reports also take note of other possible adjoining pumped storage plants which might be developed near a Federal project but which do not appear to require operation as an integral part of the proposed Federal project. They are not generally included as part of a Federal plan. Non-Federal interests may wish to consider the construction of adjoining plants that could be operated relatively independently of Federal project operations. Such action requires application to the FERC for license under the provisions of the Federal Power Act. The potential effect of such proposals on Federal project operations is considered incidental to processing of license applications. Non-Federal interests may, however, be furnished readily available information concerning such possibilities to facilitate their preparation of applications for licenses.

16-7. Provision for Future Power. Under continuing Congressional authorities, penstocks and other facilities adapted to possible future use in the development of power may be installed in any dam when approved by the Secretary of the Army on the recommendation of the Chief of Engineers and FERC. The decision to recommend provisions for future power requires consideration of the additional cost involved, the probability of future installation and other factors concerning the potential and feasibility of the power development and marketability of its output. The investigation should indicate the minimum provisions, if any, required to avoid precluding future development. If the minimum provision is a block-out at a dam to accommodate future hydropower installation, then it is good engineering practice to incorporate a block-out in the design and construction of the authorized project in coordination with FERC. Field level coordination is undertaken with FERC concerning economic feasibility and with the appropriate Department of Energy marketing agency for hydropower provision other than a block-out. The actual costs for this type of provisions plus interest (compounded, at the initial Corps project construction rate) shall, if power is ultimately developed, be included in the investment costs allocated to that function and subject to repayment (see paragraphs 16-3a and b). If the power is developed under FERC license (see paragraph 16-9), an equivalent amount will be assessed to the licensee as a precondition. This is separate from the charge assessed by FERC for use of the Federal dam as required by the Federal Power Act.

16-8. Control of Releases from Power Plants.

a. Effects of Releases. Reservoir releases to provide peak power service may result in a substantial change in the regimen of a stream. In some cases, the change from relatively steady rates of flow to frequent fluctuation may cause undesirable effects. Fluctuation may reduce the benefits from other reservoir functions, such as recreation, pollution abatement, and water supply.

b. Mitigation. Positive means to prevent or reduce adverse effects are considered in planning and project operation phases. Tangible and intangible benefits may be obtained with measures such as: modification in power output; location of a re-regulating reservoir downstream; or acquisition of additional interest in lands.

c. Minimum Releases. Determination of the project power capabilities will involve consideration of rates and volume of minimum releases required for downstream purposes. Consideration of downstream effects will also include requirements for limiting the range and rate of stage and discharge fluctuations. Continued attention is given to the effects of releases downstream and to

possibilities for modifications in project operations which will have beneficial results.

16-9. Non-Federal Development at Corps Projects. Non-Federal hydroelectric power developments may be constructed at Corps projects through FERC licensing procedures (paragraph 24-12). As a general policy, development of suitable non-Federal hydropower at Corps projects is encouraged. In evaluating proposals for such non-Federal development, total power potential of a site must be considered. This potential can be developed in stages as the local and regional demand for electric power dictates. However, the first stage design and construction should include provisions for future expansion of power facilities compatible with the total power potential of the site and other project uses. The Corps in reviewing an application for permit will not object to issuance of a preliminary permit by FERC for a feasibility study of hydropower development at Corps projects. FERC is informed of any planned or concurrent Corps hydropower study covering the same site as the applicant's study, but the status of Corps studies should not be an impediment to non-Federal hydropower development at Corps sites:

a. Potential New Project (No Existing Dam). Where potential apparently exists, possible development of hydroelectric power should be evaluated in Corps reconnaissance phase studies of new project proposals. Such studies are entirely at Federal expense; if the evaluation effort supports a conclusion that hydropower development could be justifiable, the reconnaissance studies will have the further goal of identifying a non-Federal sponsor willing to costs share, 50-50, project feasibility studies including hydropower. Upon completion of feasibility studies in which hydropower development is considered and found feasible, the resulting preauthorization report will not recommend Federal development of the power unless it would be impractical for non-Federal interests to develop it. Any recommendation for Federal development will be founded on recognition that priority for such development is afforded only to developments for which a non-Federal sponsor willing to fund the investment costs during the period of construction (with later repayment out of power revenues) is available.

b. Addition of Hydropower at Existing Dams. Where Federal development of hydropower is specifically authorized as an element of a Corps project, FERC will not issue a license. Arrangements for construction, including non-Federal financing, are reserved to the Corps. In the absence of any specific hydropower provisions in the project authorization, FERC licensing procedures have proven to be the choice of non-Federal sponsors. (Such licensing is consistent with Corps policy subject to provisions expressed in ER 1130-2-510.)

c. Special Studies. Special studies, such as those undertaken pursuant to Section 216 of the 1970 Flood Control Act, that identify hydropower potential from the reformulation of an existing project, should also identify a non-Federal sponsor for development of that potential. Studies will be programmed and cost shared in the same way as studies responsive to Congressional directives (changes in existing authorized project purposes, so as to include hydropower, require Congressional authorization).

16-10. Corps Developments at Non-Corps Sites. The Corps has no general legislative authority to construct hydroelectric facilities at non-Federal dams. However, under specific congressional authorities, the Corps has constructed multiple purpose projects which have

included hydropower development at other (non-Corps) Federal agency sites. The New Melones project on the Stanislaus River in California is an example of such an instance. The project was constructed by the Corps for the Bureau of Reclamation. Marketing of power from this project is accomplished, as from Corps developments at Corps projects, by the Department of Energy--in this case through the Western Area Power Administration.

CHAPTER 17

RECREATION

17-1. Authorities.

a. Section 4 of the Flood Control Act of 1944, as amended. This Act authorized the Chief of Engineers "...to construct, maintain, and operate public park and recreational facilities at water resource development projects under the control of the Secretary of the Army, and to permit the construction, maintenance, and operation of such facilities." It also provides that the water areas of projects shall be open to public use generally for boating, fishing, and other recreational purposes, and ready access to and exit from areas along the shores of such projects shall be maintained for general public use when in the public interest.

b. The Federal Water Project Recreation Act of 1965 (Public Law 89-72), as amended. This act established development of the recreational potential at Federal water resources projects as a full project purpose.

(1) Section 2(a) specifies that benefits for recreation should be included in the economics of a contemplated project, provided that non-Federal public entities agree (letter of intent) to participate in the recreation development. All purposes share in the savings from multiple-purpose development.

(2) Section 3(b) provides for inclusion, in recommendations for project authorization, of land acquisition to preserve the recreation potential of the project for a 10-year period, when no local sponsor can be found. (It is current policy, however, that lands will not be acquired to preserve their potential for recreation if there is not a willing local sponsor at the time of project construction.)

(3) Section 6(e) excepts certain other sections of the Act from applying to specified projects including local flood control, beach erosion, small-boat harbor and hurricane protection projects.

(4) Section 9 limits the cost allocated to recreation and fish and wildlife enhancement (excepting special types) to no more than 50 percent of the sum of the allocations to all project purposes.

(5) The Act further requires beneficiaries to bear part of the costs of installing and all the cost for managing recreation developments at Federal water resources projects. It also sanctions collection of use fees for services by non-Federal agencies administering the recreation resources of Federal projects. (ER 1130-2-400, ER 1165-2-400)

c. The Water Resources Development Act of 1986 (Public Law 99-662). This Act defines the basis for sharing the financial responsibilities in joint Federal/non-Federal development, enhancement and management of recreation and fish and wildlife resources at Federal water resource development projects.

d. The Water Resources Development Act of 1990 (Public Law 101-640). Section 313 of this Act provides that any maintenance, repair, rehabilitation, or reconstruction which results in a change in configuration of a structure should be carried out in a manner which,

to the maximum extent practicable, will not adversely affect any existing recreational use even if the recreational use was not an authorized purpose. If the recreation uses are adversely impacted, they may be restored or alternatives provided for comparable recreational use. Costs incurred shall be allocated to recreation and shall be payable by the beneficiaries of the recreation.

e. The Water Resources Development Act of 1992 (Public Law 102-580). Section 203 of this Act authorizes the Secretary of the Army to accept contributions of cash, funds, materials, and services from anyone except project sponsors for a water resources project for environmental protection and restoration or for recreation. Section 225 authorizes the Secretary of the Army to develop and implement a program to accept contributions of funds, materials, and services from non-Federal public and private entities to be used in managing recreation facilities and natural resources.

17-2. Natural Resources Management Program Mission.

a. The Army Corps of Engineers is the steward of lands and waters at Corps water resources projects. Its natural resources management mission is to manage and conserve those natural resources, consistent with ecosystem management principles, while providing quality public outdoor recreation experiences to serve the needs of present and future generations.

b. In all aspects of natural and cultural resources management, the Corps promotes awareness of environmental values and adheres to sound environmental stewardship, protection, compliance and restoration practices.

c. The Corps manages for long-term public access to, and use of, the natural resources in cooperation with other Federal, state and local agencies as well as the private sector.

d. The Corps integrates the management of diverse natural resources components such as fish, wildlife, forest, wetlands, grasslands, soils, air, and water with the provision of public recreation opportunities. The Corps conserves natural resources and provides public recreation opportunities that contribute to the quality of American life. (ER 1130-2-540, ER 1130-2-550)

17-3. Development of Outdoor Recreation Facilities. Outdoor recreational facilities are provided at Corps reservoir projects and at certain non-reservoir projects subject to requirements of local cooperation. However, if a recreation feature could be built at the same location without the Corps reservoir or non-reservoir project and not lose any of its utility or value, it can "stand alone" and the Corps should not participate in its development. In formulating water resource plans for reservoir projects, consideration is given to alternative scales of recreation development ranging from minimum facilities to optimum development. In the absence of a recreation cost sharing agreement with a non-Federal sponsor, Federal provision of recreation facilities at reservoirs is limited to the minimum needed for public health and safety. Such "minimum facilities" should not exceed provision of a turnaround, guard rails, barriers, and minimum sanitary facilities at existing road ends. All costs for such minimum facilities will be allocated to project purposes and shared with non-Federal sponsors on the same basis as those purposes. No facilities are provided at non-reservoir projects or at flood control impoundments creating incidental minor pools in the absence of local

participation. Recommendations for cost shared recreation development shall not exceed the scale for which a qualified non-Federal sponsor will furnish a written letter of intent of participation. Cost shared recreation development is also limited to those facilities included in the approved facilities list contained in ER 1165-2-400. Non-Federal sponsors must furnish their share of costs during the course of development; subsequent payment over time is not acceptable. Recreation developments at Corps water resources projects shall be available for the general public use on an equal basis. (ER 1105-2-100, ER 1165-2-400)

a. Recreation Development at Non-reservoir Flood Damage Reduction and Navigation Projects. Recreation facilities at non-reservoir projects, including new non-reservoir (non-lake) structural flood control projects (i.e., channel and/or levee and floodwall projects, and dry bed reservoirs) and harbor projects, must comply with the following policies.

(1) Recreation developments must be within the lands acquired for the basic project, except for separable lands required for access, parking, potable water, sanitation and related developments for health, safety and public access. The cost of lands provided by non-Federal interests for the basic project are not included for recreation cost sharing purposes. Fee title to land is required for recreation development. However, in the case where the basic non-reservoir project and its associated lands would provide a recreation opportunity but the approved interest in the land acquired for the basic project is not sufficient to allow for recreation use of the land or to allow for development of recreation facilities, increasing the interest in real estate (e.g., from permanent easement to fee) may be included as part of a cost shared recreation development, and credit for recreation cost sharing for any incremental costs of increasing the real estate interest in land within the boundary acquired for the basic non-reservoir project is permitted. The non-Federal sponsor for the recreation development would provide the land in fee for the recreation development and receive appropriate credit for the increment of value above the value of the real estate interest approved for the basic project. This policy does not apply to the provision of increased real estate interest for recreation development for temporary construction easements or for permanent easements for disposal and borrow areas and Federal participation in the recreation development of these areas will not be recommended. Operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) costs are the responsibility of the non-Federal sponsor.

(2) Recreation will not influence formulation of the structural project which must attain a benefit/cost ratio greater than unity without recreation. Non-lake structural flood control projects are to be formulated to assure identification of the National Economic Development (NED) flood control project. Recreation features at non-lake structural flood control projects must be incrementally economically justified. However, nonstructural flood reduction projects can be justified on the basis of their combined NED effects including recreation benefits. Section 73 of Public Law 93-251 provides that all benefits associated with new uses of flood plain lands, including recreation, are to be fully considered when evaluating nonstructural measures.

(3) The level of recreation development at a structural project may not increase the Federal project cost by more than 10 percent without approval of the Assistant Secretary of the Army (Civil Works) (ASA(CW)) prior to issuance of the district commander's report. Recreation development at nonstructural projects is not limited to the above 10 percent constraint applicable to structural type projects. Separable recreation costs at nonstructural projects shall be in conformance with Section 9 of Public Law 89-72.

(4) Recreation development, including separable lands required for public access, health, and safety, are cost shared on a 50 percent basis between Federal and non-Federal public interests.

(5) Appropriate facilities for cost sharing should be in accordance with the approved list in ER 1165-2-400 which includes the approved list of recreation facilities that may be cost shared at new non-lake projects. Recreation facilities that are not on the approved list, are more elaborate than permitted, do not meet the "stand-alone" principle, exceed the ten percent limit rule, are not on lands required for the basic flood control project, or cannot be economically justified, may be recommended as the locally preferred plan. The cost of planning and implementation of facilities provided as the locally preferred plan must be financed entirely by the non-Federal sponsor and cannot be included in the benefit/cost ratio, and will not be credited against the sponsor's share of cost shared facilities. In the case where there is a locally preferred flood control plan that includes a greater land base than required by the NED flood control plan (extending the project beyond the real limits of the NED flood control plan), the Federal Government can participate in the recreation development of the locally preferred plan but such participation will be limited to appropriate facilities shown on the approved list in ER 1165-2-400 and can not exceed ten percent of the Federal share of the cost of the structural NED flood control plan.

(6) While most recreational facilities at Corps non-lake projects would "stand alone", the Corps will participate in facility development to provide access to and along the project features. The development of these facilities should not involve extensive structural modification of the terrain and may include rest areas and picnic facilities. Ideally these facilities would be a part of a larger non-Corps recreation plan (e.g., a regional trail system) or provide access to other non-Federal recreation facilities or areas.

(7) Except for jetty sport fishing facilities, no funds are to be spent planning or developing recreation facilities at harbor projects.

b. Shore Protection Projects. Federal participation in shore protection projects is limited to construction and sharing in the costs of construction for hurricane and storm damage reduction (HSDR) measures, based on ownership of shorefront properties and the extent of public use (see Chapter 14). In connection with these projects, any associated recreation facilities developments are entirely non-Federal responsibilities except on Federally-owned shores. (ER 1165-2-130)

c. Facilities at Jetties, Groins and Breakwaters. Corps policy is to operate and maintain (O&M) these structures for their navigation and shoreline protection functions in a manner that does not enhance or encourage recreational or other public use, unless a non-Federal entity has sponsored recreation. Where non-Federal

interests do not choose to sponsor and cost share in related recreation facilities, the Corps is authorized to provide "minimum facilities for public health and safety." (ER 1130-2-520)

d. Facilities at Completed Projects. When available, funds for cost shared recreation development at completed projects and correction of sanitary deficiencies are obtained from the Operations and Maintenance General (O&MG) account. Currently, priority is not accorded to budgeting O&MG funds for new cost shared recreational developments. Under Section 926(b) of WRDA 1986 (Public Law 99-662), the Corps has sufficient authority to acquire additional lands for public park and recreation purposes. Were such lands provided by local interests, the value of those lands would be credited towards the local share of development costs. Just as for recreation developments in connection with initial project implementations, expenditure of Federal funds for the addition of recreation at completed projects would require that a non-Federal public agency enter into an agreement with the Corps to pay for not less than 50 percent of the cost of development and assume operations, maintenance and replacement responsibility for the new facilities. Upgrading sanitary facilities to meet Federal and state health standards may be undertaken at 100 percent Federal cost where existing recreation areas are managed directly by the Corps.

e. Reallocation of Reservoir Storage for Recreation. Many projects, including those for which recreation facilities may have been included under general provisions of the Flood Control Act of 1944, as amended, do not have separable storage costs for recreation. In these circumstances recreation is an authorized project purpose but it is secondary, as far as storage operation is concerned, to project functions for which the storage was formulated. Any reallocation of reservoir storage to provide more stable recreation levels that would have a significant effect on other authorized purposes, or that would involve major structural or operational change, requires Congressional authorization. Costs reallocated to recreation will be established as the highest of the benefits or revenues foregone, replacement costs, or the updated cost of the storage, will be treated as a separable cost, and will be subject to non-Federal cost sharing. (ER 1105-2-100)

f. Plan for Future Recreation Facilities. Optimally, each primary or major recreation area is initially developed to a level of two-thirds of its expected ultimate potential. Master plans are maintained and updated showing facilities planned for future development to meet the ultimate project recreation potential, to achieve maximum consistency with authorized plans, and to insure that planned future development is fully responsive to current recreation and resource management policies. Lands designated for future recreation development may be utilized for appropriate interim uses until needed. (ER 1130-2-550, ER 1165-2-400)

g. Recreation Development at Ecosystem Restoration Projects. The Corps may participate in the provision of cost shared outdoor recreation facilities at single purpose ecosystem restoration projects and projects under the authorities of Section 1135 of WRDA 1986 (Project Modifications for Improvement of the Environment), Section 204 of WRDA 1992 (Projects for Protection, Restoration, and Creation of Aquatic and Ecologically Related Habitats, including Wetlands), and Section 206 of WRDA 1996 (Aquatic Ecosystem Restoration Projects), subject to compliance with three major criteria: (1) philosophy and checklist; (2) economic justification; and, (3) the ten percent limit rule.

(1) Philosophy and Checklist.

(a) Philosophy. The Federal interest, for the purpose of Federal investment, is determined from the nature of the benefits derived from a facility or activity. Recreation at ecosystem restoration projects should not only be compatible, but also enhance the visitation experience by taking advantage of the natural values. The social, cultural, scientific, and educational values should be considered within the framework of the ecosystem restoration project purpose. For example, while educational values, through such things as nature study and interpretive signs, can be an integral part of ecosystem restoration projects, this does not mean it is appropriate to build recreation/visitor facilities that overwhelm the natural values. The recreational experience should build upon the ecosystem restoration objective and take advantage of the restored resources rather than distract from them.

-- Formulation. Ecosystem restoration projects should be formulated to address significant resources and must be justified through a determination that the combined monetary and non-monetary value of the last increment of benefits or losses prevented or replaced exceeds the combined monetary and non-monetary cost of the last added increment of the ecosystem restoration measure. Recreation development will not influence that formulation. Ecosystem and recreation projects proposed for construction at existing Corps projects should be consistent with the approved Master Plan.

-- Recreation Development. Recreation development at an ecosystem restoration project should be totally ancillary (see paragraph 5-8.e). Recreation facilities may be added to take advantage of the education and recreation potential of the ecosystem project, but the project cannot be specifically formulated for a recreation purpose. The recreation potential may be satisfied only to the extent that recreation does not diminish the ecosystem restoration purpose. Where an ecosystem restoration project provides critical habitat for a Federally listed threatened or endangered species, recreation facilities at that project should be precluded in the critical habitat and limited to only those facilities needed for minimum health and safety and/or natural resources interpretation. Where appropriate, recreation at ecosystem restoration projects should be designed for day use only, precluding the need of extensive night lighting. Whenever conflicts occur between the ecosystem restoration purpose and recreation, ecosystem restoration shall have priority. Plans should seek to optimize public use in harmony with the objectives of the restoration project over the period of analysis. Without a non-Federal sponsor to cost share recreation, ecosystem restoration projects should not encourage public use.

-- Vendibility. If recreation benefits are vendible (type usually provided by private enterprise), then the facility should be provided by others.

-- Stand-alone Principle. Simply stated, if a recreation feature could be built at the same location without the ecosystem restoration project and not lose any of its utility or value, it stands alone. When facilities stand alone, the Corps should not participate in their development.

-- Access, Health and Safety. While most facilities at ecosystem restoration projects would "stand-alone" (without Corps

participation) the Corps will participate in facility development to provide access to and along the project features. The development of these facilities should not involve extensive structural modification of the terrain and may include rest areas and picnic facilities. Ideally these facilities would be a part of a larger non-Corps recreation plan such as a regional trail system or provide access to other non-Federal recreation facilities or areas.

(b) Check List of Recreation Facilities. Corps regulations, ER 1165-2-400 and ER 1105-2-100, include a checklist of facilities which may be provided in recreation developments at all types of Corps water resource projects. The referenced list is all encompassing and it includes not only facilities that can be cost shared, but those minimum facilities that may be included at lake projects as a part of the joint cost as well as those that can be constructed by others at non-Federal expense. This list is applicable for lake projects (reservoirs) and the associated recreation experience. Approved recreation facilities which may be cost shared at new ecosystem restoration projects will also be identified on the aforementioned checklist when the ERs are updated. Exceptions to the approved recreation facilities must be fully justified and approved by CECW-P prior to submitting the project report. The scope of the recreation development must also be appropriate. Facilities to be cost shared are limited to standard designs consistent with the natural environment of the surrounding area but should not include embellishments such as decorative stone work planters, elaborate designs or be ostentatious. Recreation development for projects identified in paragraph 17-3.g above must be provided on the lands needed and acquired for the basic ecosystem restoration project, except that additional recreation land may be acquired if needed for access, parking, potable water, sanitation and related development for health, safety and public access.

(2) Economic Justification. Reports recommending recreation development will clearly present the formulation and justification of the recreation plan to be recommended for Federal implementation. Federal participation should be limited to support development that capitalizes on the recreation potential afforded by the ecosystem restoration project. Incremental justification of recreation features will be demonstrated in the report. The addition of recreation to the plan will not influence formulation of the basic ecosystem restoration project which must produce monetary and/or non-monetary benefits which justify the monetary and/or non-monetary costs without recreation. The report will include a description of the competing recreation facilities, their existing and expected future use with and without the project, and the unfulfilled demand for the recreation facilities as identified in such documents as the Statewide Comprehensive Outdoor Recreation Plan. Recreation benefits, costs and cost sharing must be shown separately.

(3) The Ten Percent Limit Rule. The level of financial participation in recreation development by the Corps at an otherwise justifiable project may not increase the Federal cost of the ecosystem restoration project by more than ten percent without prior approval of the ASA(CW). The policy to limit the Federal share in recreation development was first established in a 2 June 1996 memorandum from the ASA(CW). The purpose of the policy is to allow concentration of scarce Civil Works funds on high priority features rather than recreation development. The ten percent limit should be viewed as an upper limit on Federal cost sharing and not as a goal for expenditures. The cost of recreation facilities to be cost shared would normally be less than the ten percent limit.

(4) Locally Preferred Plan. A non-Federal sponsor for recreation development may desire to include recreation facilities that are not on the checklist, are more elaborate than permitted, do not meet the "stand alone" principle, exceed the ten percent limit rule, are not on lands required for the basic ecosystem restoration project, or cannot be economically justified. Such facilities may be recommended as the locally preferred plan only if they are compatible with the ecosystem restoration purpose. Cost of planning and implementation of facilities provided as the locally preferred plan must be financed by the non-Federal sponsor, cannot be included in the benefit/cost ratio, and will not be credited against the sponsors share of cost shared facilities. Another application of this principle concerns the case where there is a locally preferred ecosystem restoration plan that includes a greater land base than required by the recommended ecosystem restoration plan, extending the project beyond the real limits of the ecosystem restoration plan. In this case, the Federal Government can participate in recreation development of the locally preferred ecosystem restoration plan. However, Federal participation in recreation development will be limited to those facilities shown on the checklist and cannot exceed ten percent of the Federal share of the cost of the recommended ecosystem restoration plan, and all lands must be provided by the non-Federal sponsor.

17-4. Recreation Use Projection and Benefit Evaluation.

a. Projections. Projected recreation attendance is based upon regional use models, specific site use models, attendance at similar projects and/or the capacity of the project where excess demand can be demonstrated. The same methods are used to estimate recreation use displaced by the project. (See P&G paragraph 2.8.9)

b. Benefit Evaluation. Benefits arising from recreation opportunities created are measured in terms of willingness to pay for each increment of supply provided and considers both recreation gains and losses. There are three generally acceptable procedures to evaluate proposed projects: travel cost; contingent valuation; and unit day values. The procedure used depends upon the size of the recreation benefit created, displaced, or transferred by the project and the nature of the recreation activities affected. (See P&G paragraphs 2.8.2 and 2.8.10). When the unit day value method is applied, for activities such as swimming, picnicking, hiking, bicycling, skiing, boating, and most warm water fishing, the range of values for "general recreation activities" should be used. Certain specialized activities may be assigned higher values. Examples of such "specialized activities" include big game hunting, white water canoeing, specialized nature photography, wilderness pack trips and similar activities for which opportunities are limited and intensity of use is low. Values for both the "general recreation activities" and the "specialized activities" are updated annually (and made available in Economic Guidance Memorandums issued by HQUSACE).

17-5. Cost Participation. Non-Federal participation is required in the development and administration of recreation opportunities provided at Corps projects. Public Law 89-72, as amended, and as supplemented by WRDA 1986 defines the basis for sharing of financial responsibilities in joint Federal/non-Federal development, enhancement, and management of recreation and fish and wildlife resources of Federal multipurpose water projects. Long established policy precludes cost sharing development of new recreation facilities at completed water resources projects. (ER 1165-2-400, ER 1105-2-100) However, new recreation facilities or improvements to existing

facilities to increase visitation may be added at existing Corps owned and operated reservoir and lock and dam projects where such recreation work is on Corps-owned project lands (or on project lands dedicated to this purpose) and is an authorized purpose of, but not a separable element of, a project for which construction was initiated between June 9, 1965 and April 30, 1986. In implementing the aforementioned recreation facilities under the Construction General (CG) Program, the model Project Cooperation Agreement (PCA) for Recreation Cost-Shared in Accordance with Public Law 89-72 must be used, but only after construction funds have been appropriated and allocated for the planned recreation features.

a. Cost Allocation. Recreation costs for multiple-purpose reservoirs, including reservoirs created by navigation improvements, are allocated by using the Separable Costs-Remaining Benefits (SCRB) method. Costs allocated to recreation at non-reservoir projects are confined to the specific incremental costs of the added lands and facilities. The added cost of modifying the design for maintenance, repair, rehabilitation, or reconstruction to protect recreational uses at Civil Works projects, or for alternative provision of recreation facilities, will be allocated to recreation and will be cost shared in accordance with Section 103 of WRDA 1986.

b. Cost Apportionment.

(1) Reservoirs. The Federal Government assumes joint costs allocated to recreation and not more than one-half of the separable first costs of construction of recreation facilities, including one-half of the cost of any project lands acquired specifically for recreation. The non-Federal entity must assume: a) at least one-half of the separable first cost of post-authorization planning and construction of recreation facilities, including project land acquired specifically for recreation and b) all costs and full responsibility for the operation maintenance, replacement, and management of recreation lands and facilities.

(2) Non-Reservoir Projects. Reports proposing recreation facilities in accordance with paragraph 17-3.a will recommend that the non-Federal entity provide fee title (other than for access roads, for which easements may suffice) to project lands required for development and control of the recreation areas. If these are lands needed to support the basic project functions, they are not allocated to recreation. However, any separable lands (that is, additional lands needed for public access, health and safety), or increase in real estate interest in land within the boundary acquired for the basic non-reservoir project (e.g., from permanent easement to fee), are credited towards the non-Federal sponsor's 50 percent share of the recreation development costs. Where the appraised value of separable lands or increase in real estate interest so provided amounts to less than 50 percent of the total first cost of the recreation development, the non-Federal sponsor must make additional contributions sufficient to bring the non-Federal share to at least that level. This additional contribution may consist of the actual cost of carrying out an agreed-upon portion of the development, a cash contribution at the time of construction or a combination of both. The non-Federal entity must OMRR&R without expense to the Federal Government the recreational areas and all installed facilities.

(3) Revenue Producing Facilities. There is no apportionment to the Federal Government for revenue producing facilities such as golf courses, swimming pools, riding stables, and marinas.

c. Payment. Traditionally, non-Federal interests have been afforded the option of furnishing their share of separable recreation costs by cash payment during construction, provision of lands or facilities, by long-term payment with interest (at reservoirs), or a combination of these. Currently, up front financing (payment during the course of development) is required for any part of the local share of responsibility that is to be contributed in cash.

d. Use Fees and Day Use Fees. 16 USC 4601, as amended, provides that fair and equitable fees will be assessed the users of specialized sites, facilities, equipment or services provided at substantial Federal expense. Entrance or admission fees are not charged at Corps projects. Use fees are charged for the use of single user unit campsites, group use campsites, developed day use facilities, special facilities (e.g., group picnic shelters, amphitheaters, multipurpose courts, etc.), special event permits, and reservation services. Fees will be charged for the use of certain boat launching ramps and designated, developed swimming beaches in Corps operated day use recreation areas. Fees will not be charged for drinking water, wayside exhibits, roads, scenic drives, overlook sites, picnic tables, toilet facilities, surface water areas, undeveloped or lightly developed shore land, or general visitor information. Day user fees will not be charged for the use of visitor centers. Use fees are comparable with fees charged by other Federal and non-Federal agencies for similar facilities or services. Fee revenues collected at Corps projects are deposited into the Corps special account in the U.S. Treasury for use in authorized recreation activities. All persons 62 years of age or older, bearing a Golden Age Passport, receive a 50 percent reduction in the normal use fee at Corps projects. Golden Age Passports are issued for a one time $10 fee and are valid during the lifetime of the bearer. Facilities provided at Corps projects are to be open to all on equal terms and require a uniform fee schedule to all users. Persons eligible to receive Federal disability benefits may be issued a Golden Access Passport, which also provides a 50-percent reduction in use fees. (ER 1130-2-550)

17-6. Special Recreation Facility Considerations.

a. Commercial Concessions. Concessions are planned where warranted. Development is accomplished through lease arrangement with non-Federal interests.

b. Trails.

(1) Project planning shall consider the incorporation of trails for nature study, hiking, self-propelled bicycle, horseback riding, snowshoe, cross-country ski, and access by fisherman and hunters. When practicable, such trails are located to tie into existing hiking trails and metropolitan bicycle trails. (EM 1110-2-410) Also see "National Trails System" in Chapter 24.

(2) Trails For Use by Off-Road Vehicles. Executive Order (EO) 11644, "Use of Off-Road Vehicles on the Public Lands", dated 8 February 1972 as amended by EO 11989, dated 24 May 1977 established policies and provides for procedures to ensure that the use of off-road vehicles on public land is controlled to protect the resources, promote safety of all users, and minimize conflicts among

the various uses. Where a demand exists, consideration is given to providing separate specific trails for snowmobiles, trail bikes, and similar motorized vehicles. Such trails are located to minimize damage to soil, vegetation, or other resources of the public lands, to minimize harassment of wildlife or disruption of wildlife habitats, and to minimize conflicts with other existing or proposed recreation uses. Full public participation is sought through public meetings in the process of designation of areas or trails for off-road vehicles. (ER 1130-2-550, EP 1130-2-550)

c. Private Exclusive Use. Water and land areas at Corps projects are maintained for the benefit of the general public. Since the early l960's, the permanent siting of floating cabins, cottages and non-transient mobile homes and trailers for private exclusive use at project areas has been discouraged. However, Section 6 of Public Law 97-140 established a moratorium until 31 December 1989 on enforced removal of certain existing private exclusive use type structures and Section 1134 of the WRDA of 1986 (Public Law 99-662) extended the moratorium, indefinitely, for all such leased or permitted structures that existed on 17 November 1986 (date of the Act) if certain conditions (detailed in the Act) are met. Present policy stresses procedures for management based on regional, project or site specific considerations. These established procedures are applicable to all new, expanded or existing developments. Division commanders' regional plans pertaining to private exclusive use are in effect for each respective division. (ER 1130-2-540)

d. Alchoholic Beverages. The sale of alcholic beverages on Corps projects by lessees is permitted only in accordance with state and local laws and regulations in those facilities where such service is traditionally found. Bar facilities are permitted only if offered in connection with other approved activities. Advertising of such beverages outside of buildings is not permitted. Carry-out package sales of hard liquor is prohibited. (ER 1130-2-550)

e. Gambling. It is the policy of the Corps to prohibit gambling on all leased premises, such as slot machines, video gambling machines, or other casino-type devices that would detract from a family atmosphere. However, District Commanders may allow the sale of state lottery tickets, in accordance with state and local laws and regulations, as long as the sale of tickets constitutes a collateral activity, rather than primary activity of the lessee. In addition, nonprofit organizations may be allowed to conduct some games of chance, such as raffles, games or sporting events, under special use permits in conjunction with special events on Corps lands, if permissible under state laws and regulations. (ER 1130-2-550)

17-7. Protection of Recreational Uses at Civil Works Projects. A project may have been constructed to serve only one purpose, but over the years, recreational use of the structures may have evolved. As the project ages, maintenance, repair, rehabilitation or reconstruction may become necessary. The cost effective method of rehabilitation may result in a structure unsuited to the recreation which has evolved. Section 313 of WRDA 1990 provides that any maintenance, repair, rehabilitation, or reconstruction which results in a change in configuration of a structure should be carried out in a manner which, to the maximum extent practicable, will not adversely affect any existing recreational use even if the recreational use was not an authorized purpose. If recreational uses are adversely impacted they may be restored or alternatives provided for comparable recreational use. Costs incurred shall be allocated to recreation and shall be payable by the beneficiaries of the recreation.

a. Work Under Major Rehabilitation Program. For work proposed under the Major Rehabilitation Program, the rehabilitation report required by ER 1130-2-500 should contain a discussion of any recreation use associated with the project structures and impact of the proposed work. If recreation use would be lost, alternative plans to accommodate the recreation may be considered. If recreation benefits are greater than the added costs, and there is a non-Federal sponsor willing to provide the required cost sharing, provision for the recreation use may be recommended as part of the rehabilitation to be undertaken. The report will be forwarded to HQUSACE for review and approval, and will include a letter of intent from a non-Federal sponsor, a financing plan, and a draft PCA. The PCA will be prepared for signature of the ASA(CW). If a sponsor is unwilling to provide the required project cooperation, the rehabilitation report should be submitted recommending the most economical rehabilitation without the provision for recreation. the required analysis will be funded as a part of the Major Rehabilitation Program.

b. Recurring Maintenance Work. For recurring maintenance work, submission of the report required by ER 1130-2-500 is not normally required. If recreation use associated with the project structures would be impacted by the proposed work, submit a letter report which provides the required information concerning the recreation use. The report should be accompanied by a letter of intent from a non-Federal sponsor, a financing plan, and a draft PCA. The letter report should be prepared with O&M General funds and submitted for review and approval to CECW-O.

c. Cost Sharing. The added cost of modifying the design for maintenance, repair, rehabilitation or reconstruction, or for alternative provision of recreation facilities, will be allocated to recreation and will be cost shared in accordance with Section 103 of WRDA 1986, which requires the non-Federal sponsor to pay 50 percent of the separable cost allocated to recreation, and to pay the cost of OMRR&R of the recreation facilities. A PCA will be required containing the standard requirements for recreation cost sharing and responsibilities. The PCA and financing plan will be reviewed by CECW-A and submitted to the ASA(CW) for approval.

d. Mitigation. If a potential non-Federal sponsor at a project for which maintenance, repair, rehabilitation or reconstruction was initiated since 1 May 1988, requests mitigation for recreation use lost, the district will submit a written request to undertake a study to CECW-O. The request will describe briefly the extent of the proposed analysis and, if known, the extent of effort which may be required, as well as the cost of the analysis. The analysis should not exceed a cost of $10,000. If approved by HQUSACE, an analysis will be undertaken to determine whether the maintenance, repair, rehabilitatiion, or reconstruction caused a loss of recreation use. If a plan to mitigate the loss of recreation use is economically justified and supported by a non-Federal sponsor who is willing to provide the required cost sharing, it may be recommended for undertaking as a new start under this authority. A report, including a financing plan and PCA, will be submitted to CECW-O for review and approval by the ASA(CW). Costs for work undertaken for such mitigation will be funded from O&M General, and will be monitored at HQUSACE to ensure that expenditures are within the limit of $2,000,000 per year.

CHAPTER 18

WATER SUPPLY AND QUALITY MANAGEMENT

18-1. The Federal Interest. National policy, defined by Congress, has been developed over a number of years and is still being clarified and extended by legislation. This policy recognizes a significant but declining Federal interest in the long range management of water supplies and assigns the financial burden of supply to users.

18-2. Water Supply.

a. Water Supply Storage. Municipal and industrial (M&I) water supply is considered the primary responsibility of the municipalities or other non-Federal entities. However, M&I storage space may be recommended for inclusion in any Corps reservoir pursuant to the Water Supply Act of 1958 (Title III, Public Law 85-500), as amended. If such storage space is economically justified and represents the least cost alternative, it may be added to any project at any time. However, modification of existing projects for this purpose which would severely affect the project, its other purposes, or its operation, requires Congressional authorization. An agreement covering all costs allocated to present use and future water supply must be negotiated, and submitted to HQUSACE for approval and execution by the Assistant Secretary of the Army for Civil Works (ASA(CW)), prior to initiation of project construction. The legislation provides that allocated costs must be reimbursed by the water users within the life of the project but not to exceed 30 years after project completion; current administative policy for new constuction starts, however, requires that all construction costs allocated to water supply be repaid during the period of construction. Federal interest rates are as defined in Section 932 of WRDA 1986 (Public Law 99-662). Storage in existing projects assigned to M&I prior to enactment of WRDA 1986 (17 November 1986) and not yet covered under an agreement as of that date shall be repaid within 30 years of the plant-in-service date (which includes a 10-year interest free period for water supply) at the interest rate defined in the Water Supply Act. Water supply agreements are for water supply storage space only. The Federal Government makes no representation with respect to the quantity or quality of water and assumes no responsibility for the treatment or availablity of the water.

b. Permanent Rights to Storage. Public Law 88-140 grants permanent rights to use storage to local interests when they have paid the costs of including the storage in the project under an agreement with the Government. Their rights to use the storage continue as long as the storage is physically available, taking into account equitable reallocations as necessitated by sedimentation. They must also agree to continue to pay their share of annual operation and maintenance (O&M) costs allocated to the water supply storage, together with their share of the costs allocated to any necessary repair, reconstruction, rehabilitation, or replacement of any features which may be required to operate the project. Storage space for raw water is provided. Surplus water agreements executed under the authority of Section 6 of the 1944 Flood Control Act do not provide permanent right to the storage.

c. Modification of Completed Projects. Reallocation of reservoir storage that would have a significant effect on other authorized purposes or that would involve major structural or operational changes requires Congressional approval. Procedures for

this type of agreement are the same as for provision of water supply storage as part of original project construction. The cost for such storage will normally be established as the higher of either benefits or revenues foregone, replacement cost, or the cost of storage in the Federal project. The interest rate used for discounting future benefits, revenues or costs is the current rate used for project evaluations--see paragraph 5-7.f(3). The cost of storage is determined by computing costs, at the time of construction, by the use of facilities cost allocation method, and then updating such costs to present day price levels by use of a combination of the Engineering News Record Construction Index and the Corps of Engineers Construction Cost Index. Any specific costs of construction allocated to the new water supply storage must be repaid during the period of construction. The cost associated with the storage space may be repaid over a 30-year period from the date the storage is available--which generally will be the date the agreement is signed by ASA(CW). Interest on unpaid balances shall be at the rate specified in Section 932 of WRDA 1986. Prior to recommending a reallocation of storage in a project, the district commander shall provide an opportunity for public review and comment. This shall be documented and included as part of any request for reallocation approval.

d. Surplus Water.

(1) Authority. Under Section 6 of the 1944 Flood Control Act (Public Law 78-534), the Secretary of the Army is authorized to make agreements for surplus water with states, municipalities, private concerns, or individuals at such prices and on such terms as he or she may deem reasonable. These agreements may be for domestic, municipal, and industrial uses, but not for crop irrigation, from surplus water that may be available at any reservoir under the control of the Department of the Army.

(2) Surplus water is defined as either:

(a) Water stored in a Department of the Army reservoir that is not required because the authorized use for the water never developed or the need was reduced by changes that occurred since authorization or construction; or

(b) Water that would be more beneficially used as municipal and industrial water than for the authorized purpose and which, when withdrawn, would not significantly affect authorized purposes over some specified time period.

(3) Requirements and Restrictions.

(a) Surplus water declarations will only be made when related withdrawals will not significantly affect authorized purposes.

(b) Surplus water agreements shall be accompanied by a brief letter report similar to reallocation reports (reference paragraph 4-32 d.(1)) and shall include how and why the storage is determined to be surplus.

(c) Surplus water agreements will normally be for small amounts of water and/or for temorary use as opposed to storage reallocations and permanent right to that storage. Normally, surplus water agreements will be limited to 5 year periods.

(d) Use of the Section 6 authority should be encouraged only where non-Federal interests do not want to buy storage because the need of the water is short term or the use is temporary pending the development of the authorized use.

(e) The views of the affected state(s) will be obtained, as appropriate, prior to entering into any agreement under Section 6.

(f) The annual price deemed reasonable for this use of surplus water is to be determined by the same procedure used to determine the annual payment for an equivalent amount of reallocated storage plus an estimated annual cost for operation and maintenance, repair, replacement, and rehabilitation. The total annual price is to be limited to the annual costs of the least cost alternative, but never less than the benefits foregone (in the case of hydropower, revenues forgone).

(g) Declaration of surplus irrigation water in the 17 western states will require appropriate coordination/consultation with the Department of the Interior (Bureau of Reclamation).

(h) For certain small withdrawals (including a group of separate users at a specific project), under Section 6 authority, a standard minimum charge or standard unit charge should be established and applied for all of the numerous withdrawals. All proposals for establishment of such standard charges must be submitted to HQUSACE (CECW-A) for approval.

e. Interim Use Of Water Supply for Irrigation. Section 931 of WRDA 1986 provides that, for any reservoir project constructed and operated by the Corps, the Secretary of the Army is authorized to allocate storage which was allocated in the project for M&I water supply, and which is not under agreement, for interim use for irrigation purposes. In accordance with Subsection 103(c)(3) of WRDA of 1986, the cost to the local sponsor shall be 35 percent of the original project investment allocated to M&I water supply (for the block of storage to be used for irrigation). The period of analysis for computing the annualized payments shall be 30 years, with the payment based on the original project interest rate as established by the Water Supply Act of 1958. The non-Federal sponsor shall also be responsible for 100 percent of OMRR&R costs allocated to the storage space being put under agreement. The term of the agreement for this interim use shall not exceed five years. An option for incremental five year extensions is allowed in the basic agreement only if it provides for recalculation of annual OMRR&R costs at the end of each 5-year increment. Agreements for such interim use of water supply storage for irrigation are subject to the same reporting and submission requirements as those for water supply agreements. Future sponsors for M&I use of the storage space shall not receive any credit, in consequence of the interim use payments, toward repayment of project water supply investment costs.

f. Seasonal Operation for Water Supply. Congress has not granted general authority for including storage space in Corps projects for seasonal M&I use, either as withdrawals or to improve groundwater supplies. Where not specifically authorized, seasonal operation of a project for water supply may be conducted, consistent with authorized project purposes and law. Seasonal storage can be accomplished under the deviation from water control plan authority as described in ER 1110-2-240. There can not be a continuing or recurring deviation from approved water control plans. In the case of

a continuing or recurring change, the water control plan must be changed and the required approval obtained from HQUSACE. Pricing policy for changes in project operations requires that non-Federal interests be responsible for payments/repayments equalling the following:

(1) Any new construction costs and new operations costs (100 percent);

(2) A share of joint-use project operation, maintenance and replacement cost, based on use-of-facilities storage allocation;

(3) Benefits foregone;

(4) Compensation to others for losses in their operations (may be the same as (3) above); and

(5) An amount equal to one-half the savings to the benefited non-Federal interests (least cost alternative minus the specific costs of the modification listed in (1) through (4) above).

g. Single Purpose Water Supply. Single-purpose water supply projects will not be recommended as Federal projects by the Corps. A proposed project which includes M&I water supply will be defined as a single-purpose water supply project where less than 20 percent of the anticipated NED benefits are attributable to flood control, navigation, environmental restoration, and/or agricultural water supply. (This definition does not apply to proposed modifications to existing projects.) An exception is possible if separable, economically justified storage is required to realize flood control, navigation, environmental restoration, and/or agricultural water supply benefits. In this case, at least 10 percent of the total NED benefits must be attributable to these purposes for the project to be considered multi-purpose.

h. Withdrawal and Conveyance Systems. Releases through a dam, into the stream, are frequently used to convey water from an impoundment to downstream users. It is the user's responsibility to protect the releases made for it from intervening diversion or consumption. The feasibility report must present the evaluation of alternative water supply measures, which must consider the costs of all facilities needed to withdraw and convey water from the various sources to user's system, the impact on project justification of both including or not including these facilities, and the ability and willingness of potential water users to pay for the delivery system. Withdrawal and conveyance facilities may be incorporated as components of Federal projects when they are essential components of plans for effective development and use of water resources for flood control, M&I water supply, agricultural water supply (irrigation), navigation, hydroelectric power production or other purposes in which Federal interest resides. (This provision does not extend to inclusion of local water distribution systems.) If, prior to initiation of project construction, one or more users can be found to enter into an agreement for repayment of conduit costs, the conduit may be included as part of the dam structure. These costs will be identified as

specific water supply costs with 100 percent of the investment and OMRR&R costs being repaid by the user.

i. Agricultural Water Supply (Irrigation). The Corps may include irrigation storage in reservoirs outside the 17 western states provided that non-Federal interests bear 35 percent of reservoir costs allocated to irrigation. Non-Federal interests requesting irrigation capacity as a project purpose should provide a firm expression of intent to use and pay for the requisite storage, should obtain, as necessary, water rights or their equivalent, from the state, and possess legal power to enter into an agreement with the Federal Government.

j. Agreement Approvals. Approval authority for water supply storage space agreements is laid out in ER 1105-2-100, Table 4-5.

18-3. Water Quality Enhancement and Management.

a. Water Quality Standards. The Federal Water Pollution Control Act of 1948 (Public Law 845, 80th Congress), as amended in 1956, 1961, 1965, 1970, 1972, 1977 and 1987, established the basic tenet of uniform state standards for water quality. The Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500) strongly affirms the Federal interest in this area. "The objective of this act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." While the Act is to be administered by the Environmental Protection Agency (EPA), the primary responsibility for its implementation, including the provision of adequate water quality standards, is to remain with individual states. However, state standards must meet EPA established guidelines, and are subject to EPA approval or revision. Prior to 1986 (see paragraph 18-3(c)), pursuant to Subsection 102(b)(3) of Public Law 92-500, the need for, the value of, and impact of storage for water quality was to be determined by the Administrator of EPA and set forth in Corps reports to Congress proposing authorization or construction of any reservoir including such storage.

b. Completed Reservoir Projects. Although water quality legislation does not require permits for discharges from reservoirs, downstream water quality standards should be met whenever possible. When releases are found to be incompatible with state standards they should be studied to establish an appropriate course of action for upgrading release quality, for the opportunity to improve water quality in support of ecosystem restoration, or for otherwise meeting their potential to best serve downstream water quality needs. Any physical or operational modification to a project (for purposes other than water quality) shall not degrade water quality in the reservoir or project discharges. (EM 1110-2-1201, ER 1110-2-8154)

(1) Changes in Water Control Plans for Water Quality Management. Authorities for allocation and regulation of reservoir storage in projects operated by the Corps are in the acts authorizing the projects. Proposed changes in water control plans must be carefully reviewed to determine the extent of change which may be undertaken consistent with the authorizing legislation. (With some

specific exceptions, revised plans for purposes not encompassed by the existing project authority require new Congressional authorization.) Further Congressional authorization is not required to add water quality functions if the related revisions in regulation would not significantly affect operation of the project for the originally authorized purposes. (EM 1110-2-3600, ER 1110-2-240, ER 1165-2-119)

(2) Modification of Completed Projects to Meet Water Quality Needs. Recommendations for modification of a project for water quality reasons (involving alteration of original project purposes or addition of environmental restoration as a project purpose), if they are to be adopted, must be presented in a feasibility report and submitted to Congress for specific authorization of such modification. Evaluation of benefits from such modifications and allocation of costs to the basic purposes served (and, hence, cost sharing as appropriate to those purposes) will be in accordance with policy for new projects as discussed in paragraph 18-3c.

c. New Projects. Pursuant to Subsection 103(d) and Section 1135 of WRDA 1986, as amended, water quality enhancement provisions may be included in new Corps reservoir developments to the extent that the related benefits can be identified with basic project purposes as listed in Subsections 103(a),(b),(c)and Section 1135: flood control, hydroelectric power, municipal and industrial water supply, agricultural water supply, recreation, hurricane and storm damage reduction, aquatic plant control, and fish and wildlife. The need for and the value of storage for regulation of streamflow for these purposes, as well as for navigation and fish and wildlife, is determined by the Corps. The value of storage for water quality and streamflow regulation for such purposes shall be included with the other monetary and non-monetary benefits of project development for these purposes in the determination of project justification. Costs associated with water quality enhancement and streamflow regulation shall be allocated to the purposes that are served by these provisions (listed in Subsections 103(a)(b)(c), navigation, and fish and wildlife). If conjunctive use of the same storage serves more than one of these basic purposes, allocation to streamflow regulation with a suballocation to the basic purposes may be appropriate. As a condition of authorization for projects which incorporate provisions for streamflow regulation, states or other qualified sponsors shall normally be required to furnish assurances that they will protect regulated low flow releases against withdrawals or diversions to other uses when Federal cost sharing is provided for the purpose served.

18-4. Water Rights Involved in Project Development.

a. Definitions. Water rights in some states are a form of real property, protected by state and Federal laws. In other states, water may be considered part of the public trust and subject to use under state regulatory laws. Depending on the State law in the locale, water rights may originate in ownership of riparian lands or be acquired by statutorily-recognized methods of appropriation. Riparian lands are those which immediately adjoin a river. Riparian water rights are the right to use, on that land, an amount of water considered "reasonable:" that amount which allows maximum use by a

riparian landowner without unreasonably impairing other riparian owners. Appropriation systems, predominant in the western states, permit use of a carefully designated amount of water, regardless of land ownership or place of use. Allocations among users are made by temporal priority. Differences between the two basic systems, however, are being overshadowed by state permit systems which require all water users to obtain finite determinations of their water rights.

b. Effects on Projects. States have wide powers to legislate the use of property within their borders, except these powers are restricted by several paramount Federal powers granted under the Constitution. Civil Works water resource projects are built under Congressional authorization and usually are not subject to concurrent authorization by state agencies. In particular cases, such as those involving inter-basin transfers, interstate compacts, or Supreme Court allocations, projects must be designed to recognize water rights claimed by the residents of an affected state. Congress has also established policies which protect and recognize certain state-created rights, such as Section 1 of the Flood Control Act of 1944, which subordinates use of water for navigation purposes to beneficial consumptive uses of the streams in the western states. Water rights may also be affected by authorized projects in which Congress has made a quantified allocation of waters between the involved states.

c. Effects of Regulated Flows. Water resource projects, by their very nature, often have significant effect on the quantity and timing of flows in a river system. Whether such actions constitute an injury to private water or other property rights for which the Federal Government or a non-Federal project sponsor must pay compensation depends on whether its actions come within the Government’s rights under the navigation servitude. This will depend on the degree of interference, the navigability of the stream, and other related factors. Careful consideration is given to the existence of lawful water uses in the downstream areas. Encroachment on those uses is avoided as much as possible.

d. Acquisition of Water Rights. Downstream waters made available by a project are subject to allocation under state laws. The parties desiring to use the waters impounded by a reservoir must acquire the necessary water rights under the provisions of state laws, and regulations, and resolve conflicts among users at the local or state level. The Corps provides flow regulation service or storage space within the reservoir to water users as authorized and is not involved in adequacy or timing of the acquisition of water rights.

e. Legal Sources. United States v. Cress, 243 U.S. 316(1917); United States v. Kansas City Life Ins. Co. 339 U.S.799 (1950); Wyoming v. Colorado, 353 U.S. 953(1957); Arizona v. California, 373 U.S. 546(1963); Turner v. Kings River Conser. Dist. 360 F. 2d184 (9th Cir. 1966).

18-5. Emergencies.

a. Water Supply. Section 5 of Public Law 77-228, as amended by Section 82 of Public Law 93-251 provides the Chief of Engineers with discretionary authority 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. Work under this

authority requires a request from the governor of the state where the source of water has become contaminated and is normally limited to 30 days. Loss of water source or supply is not correctable under this authority. Public Law 95-51 further amended Section 5 to provide the Secretary of the Army authority under certain statutory conditions to construct wells and to transport water to farmers, ranchers, and political subdivisions within areas the ASA(CW) determines to be drought distressed. A written request for assistance may be made by any farmer, rancher or political subdivision within a distressed area. Corps assistance will only be considered when non-Federal interests have exhausted reasonable means for securing necessary water supplies (within the limits of their financial resources) including assistance from other Federal agencies. Evaluations of requests for assistance are to be tempered by the fact that Corps assistance is supplemental to state and local efforts. Long term solutions to water supply problems are the responsibility of state and local interests. This authority is not to be used to provide drought emergency water assistance in cases where a livestock owner has other options. Those options include raising funds from private sources through a loan, and by selling all or part of the herd, even though the sale may be at deflated prices, to purchase water or facilitate relocation of the animals to an area where water is available. Federally-owned equipment must be used to the maximum extent possible. Assistance can be provided to transport water for consumption. The cost of transporting water is provided by the Corps; however, cost of purchasing and storing water is the non-Federal interest's responsibility. In addition, assistance can be provided to construct wells. Federal costs for well construction must, however, be repaid. (ER 500-1-1 and ER 11-1-320)

b. Water Supply Planning. The Department of the Army has absorbed emergency water supply functions which formerly were a responsibility of the Department of the Interior. The transfer will enable the Corps to develop, nationwide, emergency plans and preparedness programs for water. The transferred responsibilities will complement previously held authorities and will permit more comprehensive and efficient management of water as a scarce resource during an emergency. (Paragraph 28-2.a)

c. Water Quality. Emergency or unusual conditions have developed in past years on rivers and waterways as a result of accidental spills of pollutants and extreme, short-term low flows. The Corps has adequate authority under existing laws to regulate projects in the public interest under emergency conditions, with one possible exception. In very rare instances, water supply under agreement might be the only water in storage available for immediate release. In those instances it is necessary to obtain the cooperation of the water supply owner to make releases. Approval of HQUSACE is required to deviate from the approved water control plans.

d. Drought Contingency Plans. Water control managers will continually review and adjust water control in response to changing public needs. Many areas of the country face chronic or serious drought conditions. Preparation of drought contingency plans is, for

Corps projects with controlled reservoir storage, a part of the Corps overall water control management activities. Existing authority (Section 6 of the Flood Control Act of 1944) is adequate to permit temporary withdrawal of water from Corps projects to supplement normal supplies in time of drought. Under Section 6 of the Flood Control Act of 1944, the Secretary of the Army is authorized to make agreements with states, municipalties, private concerns or individuals at such prices and on such terms as he may deem reasonable for domestic and industrial uses for surplus water (see paragraph 18-2.d) that may be available in any reservoir under the control of the Department of the Army. In providing such surplus water, the preferred approach is for a state or subdivision of a state to enter into an agreement with the Secretary of the Army and agree to act as wholesaler for all of the water requirements of individual users. This places the local government in a position to help their citizens during difficult times and minimizes the potential for problems that could arise if the Secretary had to determine who was entitled to shares of surplus water based on assessment of local needs. Such withdrawals require a fee for the service provided, even in the case of a declared national disaster area. (ER 1110-2-1941)

CHAPTER 19

ENVIRONMENTAL RESTORATION AND PROTECTION

19-1. Introduction. This chapter has been significantly revised to reflect the increased emphasis being placed upon ecosystem restoration and protection within the Corps of Engineers (Corps) Civil Works Program. In particular, this chapter attempts to clarify the linkages among the various environmental statutes and the programs and policies established by recent Water Resources Development Acts (WRDAs), such that the Corps role in ecosystem restoration and protection is more clearly defined. Ecosystem restoration and protection is the concept or "umbrella" under which the Corps' more traditional environmental responsibilities involving, e.g., wetlands, fish and wildlife resources, and endangered species, are to be implemented. Each of these traditional environmental topics are discussed and their relationship to ecosystem restoration and protection established. In addition to examining these more traditional environmental policies and their relationship to ecosystem restoration and protection we also discuss the application of ecosystem principles in our more traditional mission areas of flood control and navigation, i.e., the beneficial use of dredged material and the modification of project features and/or their operations to benefit the environment.

19-2. Ecosystem Restoration and Protection in the Civil Works Program. The Corps began seriously considering environmental issues following the passage of the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190), as amended, which required that all Federal agencies prepare a statement describing the environmental impacts of any proposed activity on the natural and social resources within a project area. (see also paragraphs 3-2 and 25-2; ER 200-2-2; ER 1105-2-100, Chapter 2; and, 40 CFR 1500-1508) since the initial response to NEPA's requirements, the Corps Civil Works Program has matured to now include projects whose purpose is to restore and/or protect significant environmental resources. Within the Civil Works Program, one of the project purposes considered for inclusion in the budget are projects whose purpose is the restoration of degraded ecosystem functions and values, including the ecosystem's hydrology, plant and animal communities, and/or portions thereof, to a less degraded ecological condition (see current Corps annual budget guidance; ER 1105-2-100, Chapter 4, Section VIII). Budgetary priority is to be given to cases where Corps projects have contributed to the degradation of the ecosystem or where the modification of existing Corps projects is the most cost-effective means of restoring the resources of the degraded ecosystem.

19-3. Corps Focus in Ecosystem Restoration and Protection. Corps activities in ecosystem restoration and protection will concentrate on engineering solutions to water and related land resource problems. The Corps principal focus in ecosystem restoration will be on those ecological resources and processes that are directly associated with, or are directly dependent upon, the hydrologic regime of the ecosystem(s) and/or watershed(s) in which they are found. There will be instances where components of an ecosystem restoration plan are better addressed by other agencies through their missions and programs; however, given the dependent nature of ecosystem components it would be prudent to collaborate, to the extent permitted by our authorities, with other agencies in the implementation of ecosystem restoration activities. Those ecosystem restoration activities that involve modification of hydrology or aquatic substrates are most likely to be appropriate for Corps initiatives and include ecosystems classified as wetlands, riparian and other aquatic systems. Budget

limitations require the Corps to focus its restoration efforts on those initiatives most closely tied to the Corps traditional mission areas of flood control and navigation and its areas of expertise; however, it is emphasized that collaborative efforts with other agencies will allow limited appropriations to be focused in areas of identified ecosystem restoration need. Generally, it will not be appropriate for the Corps to conduct ecosystem restoration activities on upland, terrestrial sites unless they are closely linked to water and related land resources projects in the Corps Civil Works Program. Ecosystem-based restoration will be authorized in the same manner that flood damage reduction and navigation projects are authorized, i.e., by individual study authorities, by Congressional resolutions, or by favorable studies initiated under Section 216 of the River and Harbor and Flood Control Act of 1970 (Public Law 91-611). Ecosystem-based restoration can also be pursued under Section 1135 of WRDA 1986, and/or the authority of Section 204 of WRDA 1992 for the beneficial use of dredged material, and/or Section 206 (Aquatic Ecosystem Restoration) and Section 210 (Environmental Protection and Restoration) of WRDA 1996 (See also paragraphs 19-22 through 19-35 below, ER 1105-2-100, and the current guidance on Section 1135, Section 204, Section 206 and Section 210, respectively).

19-4. Restoration and the Ecosystem Approach. Corps activities to meet natural resource restoration and stewardship objectives will be conducted using an ecosystem approach while maintaining the traditional Corps watershed focus on water and related land resources. An ecosystem is a dynamic and interrelated complex of plant and animal communities, including humans, and their associated non-living environment. Ecosystems occur at spatial scales that range from local through regional to global. Restoration is the process of implementing measures to return a degraded ecosystem's functions and values, including its hydrology, plant and animal communities, and/or portions thereof, to a less degraded ecological condition. The goal of restoration is to return the study area to as near a desired natural condition as is justified and technically feasible. Consideration of ecosystems within (or encompassing) a watershed provides a useful organizing tool to approach ecosystem-based restoration planning as watersheds are physically and hydrologically distinct. The ecosystem approach consists of restoring and/or protecting the structure and function of an ecosystem, or parts thereof, recognizing that all its components are interrelated. The ecosystem approach also recognizes and seeks to address the problems of habitat fragmentation and the piecemeal restoration and mitigation efforts that have been previously applied in dealing with the Nation's natural resources. Further, the ecosystem approach also recognizes that existing and planned infrastructure is a legitimate feature of the human environment and should co-exist and benefit (restore and protect) the natural features of the ecosystems in which they are placed. Projects should also be conceived and operated in a more comprehensive, holistic context. This means including the activities of other Federal, state, tribal and local agencies and considering aquatic (including marine and estuarine), wetland and closely associated terrestrial complexes, in order to provide the potential for long-term survival as productive and sustainable ecosystems. In recognition of the principles of the ecosystem approach the Corps, along with 13 other Federal agencies, signed a MOU “To Foster the Ecosystem Approach” in December of 1995. The MOU states it is the policy of the Federal Government to “ ... provide leadership in and cooperate with activities that foster the ecosystem approach to natural resource management, protection and assistance. Federal agencies will use their authorities in a manner that facilitates an ecosystem approach. Consistent with their authorities, Federal

agencies will administer their programs in a manner that is sensitive to the needs and rights of landowners, local communities, and the public and will work with the public to achieve common goals".

19-5. Federal and Ecosystem Restoration Objectives. The Federal objective in water resources planning, as defined within the Water Resources Council's Principles and Guidelines (P&G), is to contribute to National Economic Development (NED) in order to alleviate problems and/or realize opportunities related to water and related land resources, consistent with protecting the Nation's environment. The P&G allow for the formulation of alternative plans which reduce net NED benefits in order to address other Federal, state, local and international concerns not fully addressed by the NED plan. The P&G state that the NED plan is to be selected unless the Secretary of the Army grants an exception when there are overriding reasons for selecting another plan, such as Federal, state, tribal, local and international concerns, or the provision of significant environmental outputs, such as ecosystem restoration. Consistent with the analytical framework established in the P&G, alternative plans to address ecosystem restoration should be formulated, and measures for restoring ecological resources recommended, based upon their projected monetary and nonmonetary benefits. These ecosystem restoration measures do not need to exhibit net NED benefits, but should be judged on the basis of both nonmonetary and monetary outputs consistent with the procedures outlined in paragraph 19-21.a and the P&G selection criteria (P&G, 1.10.2), and be offered for consideration and budget support.

19-6. Collaboration with Other Agencies. The collaborative efforts of multiple Federal agencies as well as nonfederal interests will often be necessary to achieve ecosystem restoration goals. Successful restoration at the landscape level will depend on program coordination and integration among those agencies responsible for management decisions on separate ecosystem components. Corps ecosystem restoration efforts should complement and be complemented by the various authorities and activities of other Federal and state agencies, Native American tribes and private groups, such that common management and restoration objectives are identified early in the study process. The Corps will, in some instances, lead in the development of alternative restoration plans, and in other instances, play only a supporting role. Collaborative partnerships provide the means to more efficiently use limited dollars and resources among participants. Major Subordinate Commands (MSCs) should encourage and develop partnerships with Federal and state agencies and tribal and nongovernmental organizations in the accomplishment of restoration studies and project implementation and financing. It is particularly important that potential cost-sharing partners understand the Corps ecosystem restoration program philosophy. The Corps now focuses more on ecosystems and the restoration and protection of their associated plant and animal communities rather than on recreation oriented (hunting and fishing) outputs. The use of recreation-oriented outputs are still legitimate in an ecosystem restoration project; however, recreation benefits should be considered "add-on" and their generation should not in any way jeopardize the production of ecological outputs anticipated from the ecosystem restoration project. (See also paragraph 5-8.e)

19-7. Authorities Supporting Ecosystem Restoration. The Federal involvement in environmental quality, including ecosystem restoration, is supported in law, Executive Order, and International treaties. Consequently, the Corps Civil Works Program's involvement in the protecting and restoring the quality of environmental resources is also broadly supported, but not limited to, the following examples:

a. Fish and Wildlife Coordination Act of 1958, as amended.

b. Federal Water Project Recreation Act of 1965, as amended.

c. National Environmental Policy Act of 1969, as amended.

d. Coastal Zone Management Act of 1972, as amended.

e. Clean Water Act of 1972, as amended.

f. Marine Protection, Research and Sanctuaries Act of 1972, as amended.

g. Endangered Species Act of 1973, as amended.

h. Water Resources Development Acts of 1986, 1988, 1990, 1992, and 1996.

i. Coastal Wetlands Planning, Protection, and Restoration Act of 1990 (Title III of Public Law 101-646).

j. Executive Order 11990, "The Protection of Wetlands".

k. Executive Order 11991, "Relating to Protection and Enhancement of Environmental Quality ".

m. Numerous International Conventions on the Conservation of Habitat and Migratory Birds dating from 1929 through 1989.

19-8. Environmental Authorities within WRDAs. Environmental authorities with direct applicability to the Civil Works Program are found within the various WRDAs and include the following:

a. Section 906 of WRDA 1986 (Public Law 99-662) establishes a comprehensive mitigation policy for water resources projects, including:

(1) Subsection 906(a) authorizes mitigation activities to be done either before the start of construction or concurrently with the initiation of project construction. Mitigation measures will generally be scheduled for accomplishment concurrently with the initiation of construction of other project features. Should there be circumstances warranting accomplishment of mitigation activities as the first or the last element of project construction, the prior approval of HQUSACE will be required before proceeding.

(2) Subsection 906(b) authorizes the Secretary of the Army to provide for fish and wildlife mitigation resulting from any water resources project under his or her jurisdiction, whether completed, under construction or to be constructed without specific Congressional authorization. Such mitigation activities may include the acquisition of lands, or interests therein, except for certain limitations. The limitations are:

(a) Land acquisition will be on a willing seller basis if, on 17 November 1986, 10 percent or more of the project is physically completed.

(b) Acquisition of water or interests therein will be on a willing seller basis.

(c) Up to $30,000,000 may be obligated in any fiscal year to study and implement fish and wildlife mitigation under this authority, with a single project limit of $7,500,000 or 10 percent of total project costs (including the mitigation), whichever is greater. The authority of subsection 906(b), however, does not apply to fish and wildlife enhancement activities and because of policy and budget restrictions has been limited to projects under construction or to be constructed. (See ER 1105-2-100, Chapter 4, Section VIII)

(3) Subsection 906(c) requires that fish and wildlife mitigation costs be allocated among the purposes which caused the need for the mitigation activities and that they be cost shared to the same extent as other costs for such project purposes are shared, except where contracts were previously signed with non-Federal interests prior to enactment of WRDA 1986.

(4) Subsection 906(d) requires that all subsequent reports to Congress will contain either a determination by the Secretary of the Army that such projects will have negligible adverse impacts on fish and wildlife resources or they will contain specific mitigation recommendations to address fish and wildlife losses. Such plans will mitigate impacts to bottomland hardwood forests in-kind to the fullest extent possible. The requirement to justify mitigation measures was not rescinded, as the amount of mitigation recommended is still dependent upon the development of justifiable and cost effective mitigation measures. (See paragraph 19-21a below)

(5) Subsection 906(e) provides that when the Secretary of the Army recommends fish and wildlife enhancement measures in reports to Congress the first costs shall be Federal when:

(a) The benefits are determined to be national in character - including benefits for species identified by the National Marine Fisheries Service (NMFS) as of national economic importance; species subject to treaties or international convention to which the United States is a party, and anadromous fish; or

(b) The recommended enhancement is designed to benefit species listed as threatened or endangered by the Secretary of the Interior (under the terms of the Endangered Species Act, as amended; 16 U.S.C. 1531, et seq.); or

(c) The recommended enhancement activities are located on lands managed as a national refuge. If the benefits do not so qualify, 25 percent of first costs of enhancement shall be provided by non-Federal interests during implementation. In either event, the non-Federal share of subsequent operations, maintenance, and rehabilitation (OMR) costs for fish and wildlife enhancement shall be 25 percent. (See also paragraph 6-14) The authority of subsection 906(e), however, is not being implemented because of policy and budget restrictions (See ER 1105-2-100, Chapter 4, Section VIII).

b. Section 907 of WRDA 1986 (Public Law 99-662) authorizes the Secretary of the Army, in the evaluation of the costs and benefits of a water resources project, to consider the benefits attributable to

measures included in a project for the purpose of environmental quality, including environmental improvements and fish and wildlife enhancement, to be at least equal to the costs of such measures. (See also paragraph 19-23)

c. Section 908 of WRDA 1986 (Public Law 99-662) provides that the Secretary may undertake mitigation prior to project construction funding using appropriated mitigation funds. Monies so used must be repaid to the mitigation fund established under Section 906(b) from the first appropriation for construction. Section 908 has not been implemented since normal project funding would allow for the accomplishment of mitigation features as an early project implementation item, thus there was no need to establish a separate mitigation fund.

d. Section 1135 of WRDA 1986 (Public Law 99-662), as amended, authorizes the Secretary of the Army to modify the structures and operations of water resources projects constructed by the Corps to improve the quality of the environment consistent with authorized purposes; and to undertake measures for restoration of environmental quality where the construction or operation of a water resources project built by the Corps has contributed to the degradation of the quality of the environment and such measures do not conflict with the authorized project purposes. (See also paragraphs 19-29 through 19-35).

e. Section 306 of WRDA 1990 (Public Law 101-640) authorizes the Secretary of the Army to include environmental protection (i.e., measures undertaken to protect and preserve elements of an ecosystem's structure and functions against degradation) as one of the primary missions of the Corps. Guidance on this provision of WRDA 1990 has not been specifically developed, as the guidance on ecosystem restoration is believed to account for the requirements of this provision.

f. Section 307(a) of WRDA 1990 (Public Law 101-640) establishes a "no net loss of wetlands" and an "increase in the quality and quantity of the Nation's wetlands" as goals of the Corps Civil Works water resources development program. (See also paragraphs 19.10 through 19.13).

g. Section 203 of WRDA 1992 (Public Law 102-580) authorizes the Secretary of the Army to accept contributions of cash, funds, materials and services from persons, including governmental entities, but excluding the project sponsor, in connection with the implementation of a water resources project for environmental protection and restoration purposes or for recreation. (See paragraph 11-13.b and ER 1130-2-500, Chapter 11)

h. Section 204 of WRDA 1992 (Public Law 102-580),as amended, by Section 207 of WRDA 1996 authorizes the Secretary to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging conducted for construction, operation, or maintenance of an authorized Federal navigation project. (See also paragraphs 19-22 through 19-28 below).

i. Section 206 of WRDA 96 (Public Law 104-303) authorizes the Secretary to carry out projects for aquatic ecosystem restoration and

protection if the Secretary determines that the project will improve the quality of the environment, is in the public interest, and is cost-effective. (See paragraph 19-36 below and the most recent guidance on the Section 206 program)

19-9. Ecosystem Restoration Relationship to Traditional Environmental Topics. Thus, as can be seen from the discussion of authorities above, there is a large body of legislation that supports the Corps role in ecosystem restoration. Following are discussions that cover a number of traditional environmental topics and how they relate to ecosystem restoration and protection.

19-10. Consideration of Wetland Resources Within the Civil Works Program. Wetlands represent an ecosystem that has generated vast political, social and scientific interest. Many wetlands are important natural resources contributing significant benefits to both the natural and human environments because they are transition areas between purely terrestrial and aquatic ecosystems. As transitional areas wetlands possess features of both aquatic and terrestrial systems. Consequently wetlands are generally areas of great natural productivity, hydrologic utility, and biodiversity, providing natural flood control, and contributing to improved water quality, flow stabilization of streams and rivers and habitat for fish and wildlife resources. Wetlands can also contribute to the production of agricultural products and timber and provide numerous recreational, scientific and aesthetic resources of national interest. Because of the regulatory program established under Section 404 of the Clean Water Act, as amended, a legal definition of wetlands has been developed that defines wetlands as " ... areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas." (33 CFR 328.3; see also paragraph 3-5 and Chapter 22)

19-11. Wetland Policy. The Corps recognizes that certain wetlands constitute a productive and valuable public resource. Their unnecessary alteration or destruction is discouraged as contrary to the public interest as these wetlands perform functions important to the public interest. Wetlands which perform important public interest functions include:

a. Wetlands which provide significant natural biological functions, including food chain production, general habitat, and nesting, spawning, rearing, and resting sites for aquatic or land species;

b. Wetlands set aside for the study of the aquatic environments or as sanctuaries or refuges;

c. Wetlands, the destruction or alteration of which, would detrimentally affect natural drainage characteristics, sedimentation patterns, salinity distribution, flushing characteristics, current patterns, or other environmental characteristics;

d. Wetlands which are significant in shielding landward areas from wave action, erosion, or storm damage. Such wetlands are often associated with barrier beaches, islands, reefs and bars;

e. Wetlands which serve as valuable storage areas for storm and flood waters;

f. Wetlands which are groundwater discharge areas that maintain minimum base flows important to aquatic resources and those which are prime natural recharge areas. Prime recharge areas are locations where surface and groundwater are directly interconnected; and

g. Wetlands which through natural water filtration processes serve significant water purification functions.

19-12. Administration’s Wetlands Plan. The Administration announced its wetlands policy on 24 August 1993. This policy is based upon five principles including the adoption of the interim goal of no overall net loss of the Nation’s wetlands and the long term goal to increase the quality and quantity of the Nation’s wetland base in a manner similar to that described in Section 307 of WRDA 1990. The five principles are as follows:

a. Support for the interim goal of no net loss of the Nation's remaining wetlands and the long-term goal of increasing the quality and quantity of Nation's wetlands base;

b. Regulatory programs must be efficient, equitable, flexible and predictable and administered in a manner that avoids unnecessary impacts upon private property;

c. Non-regulatory programs, such as advanced planning and wetlands restoration, are vital elements of meeting the wetlands goals;

d. The Federal Government should expand partnerships with state, tribal and local governments and the private sector and approach wetlands protection and restoration in an ecosystem/watershed context; and

e. Federal wetlands policy should be based upon the best scientific information available. It was further stated that the restoration of drained or otherwise degraded wetlands would be key to achieving this goal, thus it can be seen that the Civil Works water resources program has a unique opportunity to make a significant contribution to the President’s wetland goals through the development and implementation of ecosystem restoration and protection projects and through its regulatory functions.

19-13. Executive Order (EO) 11990, Protection of Wetlands. This EO directs the Corps, along with other executive branch agencies, to provide leadership and take action to minimize the destruction, loss or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands in carrying out its Civil Works activities. The EO sets forth several major requirements that Federal agencies are required to comply with before undertaking any new construction in wetlands. They are:

a. Prior to undertaking an action in wetlands, determine whether a practicable alternative to the action exists (if a practicable alternative exists, the action should not be undertaken in wetlands).

b. If the action must be undertaken in wetlands, include all practical measures to minimize harm to wetlands which may result from such use.

c. Preserve and enhance the natural and beneficial values of the wetlands; and

d. Involve the public early in the decision-making process for any action involving new construction in wetlands.

The key requirement of the EO is determining whether a practicable alternative to locating an action in wetlands exists. This requires the identification and evaluation of alternatives that could be located outside of wetlands, i.e., alternative sites; other means that would accomplish the same purpose(s) as the proposed action, i.e., alternative actions; and, no action. If there is no practicable alternative to locating an action in wetlands, the EO requires that the action include all practical measures to minimize harm to the wetlands and preserve and enhance the natural and beneficial values, i.e., the provision of appropriate and justified mitigation. Provision for Corps compliance with this EO is its incorporation within Corps planning guidance, as part of the required specific and general environmental compliance considerations for every planning investigation undertaken. (See also ER 1105-2-100, Chapter 7)

19-14. Section 150 of the Water Resources Development Act of 1976 (Public Law 94-587). This provision authorizes the Chief of Engineers to plan and establish wetland areas in connection with the dredging required for authorized water resources development projects where the increased cost of such wetland areas will not exceed $400,000. This provision does not include any requirement for non-Federal cost-sharing and has been supplanted with the partnership principles established by WRDA 1986 and Section 204 of WRDA 1992 (See also paragraphs 19-22 through 19-28 and the most recent guidance on Section 204). Therefore, Section 150 authority will not be pursued.

19-15. Section 307 of the Water Resources Development Act of 1990 (Public Law 101-640). Section 307(a) of WRDA 1990 establishes,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 and a long-term goal to increase the quality and quantity of the Nation's wetlands, as defined by acreage and function. The Corps shall utilize all appropriate authorities, including those to restore and create wetlands, in meeting the interim and long-term goals, e.g., the Section 1135 Program, the Section 204 Program, the Ecosystem Restoration Program, the Natural Resources Management Program, the Regulatory Program, etc. in an effort to support this provision of WRDA 1990 and the President’s wetland goals as discussed above.

19-16. Consideration of Fish and Wildlife Resources in the Civil Works Program. Fish and wildlife resources were initially of concern as being representative of those natural resources most conspicuously utilized by humans, primarily hunting and fishing. Originally defined to include only those living natural resources such as terrestrial and aquatic animal populations, the description of fish and wildlife resources now includes their required habitat, including the vegetation, necessary to satisfy feeding, nesting and resting requirements, along with the necessary soil, moisture and temperature conditions to sustain the required vegetative communities. Clearly, our growing knowledge of the linkages among animal and vegetative

communities along with the relationships to their physical conditions represents a greater recognition and appreciation of complex natural ecosystems. Perhaps equally or more important to our growing knowledge of ecosystems, is how our activities have and will potentially impact these resources in the future. Today, the sustainability of many fish and wildlife resources are threatened on numerous fronts ranging from unwise land use and development to contamination from pollutants. There are opportunities within the Corps Works Program that should be recognized and alternative solutions examined in the development of new and the rehabilitation of older water resources projects using the principals of ecosystem restoration and protection described above in paragraphs 19-2 through 19-6 and within the most recent guidance on ecosystem restoration. Additionally, efforts undertaken in implementing the Fish and Wildlife Coordination Act, the Endangered Species Act, the Clean Water Act, discussed below, and the environmental provisions of several WRDAs, discussed above in paragraph 19-8, support the Corps ecosystem restoration and protection goals and ultimately the fish and wildlife resources of the nation.

19-17. Fish and Wildlife Coordination Act (FWCA) of 1958 (Public Law 85-624; 16 U.S.C. 661-666). The FWCA directs that equal consideration be given to fish and wildlife resources and that measures to conserve these resources are incorporated, along with other project features, into water resources development projects. Further, the Act requires the Corps to give full consideration to the recommendations, including those for mitigation, of the USFWS, the NMFS and those of the appropriate state agencies. Funds are transferred to the USFWS in accordance with a 1982 Transfer Funding Agreement with the Department of the Interior, which requires a coordination act report be developed and included in any feasibility study of a proposed water resources project with the potential to impact fish and wildlife resources. The FWCA, in Section 662(h), exempts new impoundments of less than ten surface acres or land management and use activities carried out by Federal agencies on Federal lands from its provisions. Each of the important provisions of the FWCA are summarized below.

a. Section 661 provides, in part, that fish and wildlife conservation shall receive equal consideration with other project purposes and be coordinated with other features of water resources development programs through effective planning, development, maintenance and coordination of fish and wildlife conservation and rehabilitation features.

b. Section 662 describes the compliance responsibilities of Federal agencies, with the exception, in subsection 662(g), that projects or separable project units that had obligated sixty percent of their estimated construction costs, as of 12 August 1958, are exempt from the requirements of the FWCA.

(1) Subsection 662(a) provides that whenever the waters of any stream or other body of water are proposed to be impounded, diverted, the channel deepened, or otherwise controlled or modified, including the issuance of permits to conduct such a modification, the Corps shall consult with the USFWS and/or the NMFS as appropriate, and the agency administering the fish and wildlife resources of the state. This consultation shall consider conservation of fish and wildlife resources with the view of preventing loss of and damages to such resources as well as providing for their development and improvement in connection with such water resources development. Additionally,

although not a requirement of the FWCA, full consideration should also be given to the potential for collaboration with the programs of the USFWS, the NMFS and the appropriate state fish and wildlife agencies in order to more efficiently utilize the financial and technical resources of the parties involved in a manner similar to the process established under the Coastal America Partnership to which the Corps is a signatory; both the original MOU, dated 16 April 1992 and the most recent MOU, dated 12 July 1994.

(2) Subsection 662(b) provides that any reports and recommendations of the fish and wildlife agencies shall be included in authorization documents for the construction or for the modification of water resources projects. The Corps shall give full consideration to the reports and recommendations of the fish and wildlife agencies, and include such justifiable means and measures for fish and wildlife mitigation and/or enhancement as the Corps finds should be adopted to obtain maximum overall project benefits and that are consistent with the principals of ecosystem restoration and protection.

(3) Subsection 662(c) authorizes the modification or additions of structures and operations to water resources projects not substantially completed as of the date of the Act and to acquire lands for the conservation of fish and wildlife resources. For projects authorized prior to the date of enactment, such modifications or land acquisition shall be compatible with the basic project purposes; the costs shall be an integral part of the cost of such projects; and the costs allocated to fish and wildlife conservation may be cost shared by a non-Federal interest. However, prior to any land acquisition a report must be provided to Congress and the acquisition authorized in accordance with subsection 663(c).

(4) Subsection 662(d) requires that the planning, construction or installation, and maintenance of such means and measures adopted for fish and wildlife conservation purposes shall be an integral part of the cost of such projects. The costs associated with improvements for fish and wildlife conservation shall not extend beyond those necessary for land acquisition; facilities as recommended in project reports; modification of the project; and/or modification of project operations. These costs shall not include the operation of fish and wildlife facilities.

(5) Subsection 662(e) authorizes the Corps, if construction is to be conducted by the Corps, to transfer general investigation, engineering, or construction funds to the USFWS and/or the NMFS, as appropriate, to conduct all or part of the investigations necessary to carry out the provisions of Section 662(a). This requirement, along with those of subsections (a), (b), (d) and (f) are met with the execution of the 1982 Transfer Funding Agreement with the between the Corps and the Department of the Interior (USFWS). This agreement establishes procedures whereby information on fish and wildlife resources is provided to the Corps for consideration in all investigations and activities covered by the FWCA.

(6) Subsection 662(f) requires that reports to Congress include an estimate of the fish and wildlife benefits or losses for projects, including benefits for measures recommended specifically for enhancement; that part of the cost of joint-use facilities allocated to fish and wildlife; and, that part of the cost to be reimbursed by non-Federal interests.

c. Section 663 provides that in subsection 663(a) consistent with primary project purposes, project land and water areas shall be made available for conservation, maintenance, and management of fish and wildlife and their habitat by the states or the Secretary of the Interior. Use of such areas under the authority of this Act shall be in accordance with general plans as provided for in subsection 663(b) and the 1955 agreement between USFWS and the Corps. Subsection 663(c) provides that before properties are acquired to preserve and assure, for the public benefit, the fish and wildlife potentials of a project area, specific authorization must be obtained from Congress; unless, these properties are consistent with the requirements of Section 906(b) of WRDA 1986. (See also paragraph 19-8(a)(2))

19-18. The Endangered Species Act (ESA) of 1973 (Public Law 93-205). The (ESA), as amended, has a unique place within the water resources program of the Corps as it is one of the few pieces of environmental legislation that has criminal liability associated with non-compliance with its provisions. The ESA itself is divided into three principal areas. First, Section 4 requires the identification and listing of imperiled species, as well as their critical habitat. Second, and perhaps the most important provision for Corps activities, Section 7 prohibits agency actions from jeopardizing listed species or adversely modifying their designated critical habitat. Section 7 also requires agencies to undertake affirmative programs for the conservation of listed species. Finally, Section 9 prohibits all persons, including all Federal, state and local governments, from taking listed species of fish and wildlife. The important provisions of Section 7 are outlined below, with additional information provided in paragraph 25-11 and in ER 1105-2-100, Chapter 7 which provides the guidance necessary for compliance. Offsetting measures, environmental design features, or environmental protection measures for endangered species under Section 7 of ESA should be a separable element from habitat mitigation under the (FWCA) and Corps regulations for wetlands (ER 1105-2-100, para. 7-49).

a. Section 7(a) of the amended ESA, requires all Federal agencies, in consultation with the Secretary of the Interior or Commerce, to utilize their authorities in furtherance of the purposes of the ESA by carrying out programs for the conservation of endangered and threatened species protected by the ESA. Additionally, on 28 September 1994 a Memorandum of Understanding (MOU) was signed by the Acting Assistant Secretary of the Army along with six other Federal departments to establish a general framework for greater cooperation and participation among the departments in the exercise of their responsibilities under the ESA. The MOU stated that the departments " ... will work together to achieve the common goals of (1) conserving species listed as threatened or endangered under the ESA; (2) using existing federal authorities and programs to further the purposes of the ESA; and, (3) improving the efficiency and effectiveness of interagency consultations conducted pursuant to Section 7(a)(2) of the ESA." Further, Section 7 of the ESA also requires that all Federal agencies, in consultation with either the USFWS or the NMFS, shall insure that any action authorized is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction of their critical habitat.

b. Section 7(b) of the amended ESA requires the USFWS and/or the NMFS to complete the consultation within 90 days after the date it was initiated unless the Corps, the USFWS and/or the NMFS mutually agree to an extension.

c. Section 7(c) of the amended ESA, requires the Corps, on all construction projects for which no contract for construction had been entered into or for which no construction had begun as of 10 November 1978, to request of the USFWS and/or the NMFS information regarding species listed or proposed to be listed that may be in the proposed project area. If the USFWS and/or the NMFS advises that listed species may be present, the Corps shall conduct a biological assessment to identify any listed species which are likely to be affected by the project. The biological assessment shall be completed within a time period mutually agreed to by the Corps, the USFWS, and/or the NMFS, but before any contract for construction is entered into and before construction is begun. If the findings of the biological assessment determine that an endangered or threatened species or its critical habitat will be impacted, the Corps must notify the USFWS and/or the NMFS of these findings. This notification triggers the formal consultation process. Under the ESA, the finding by the Corps that a proposed construction or operational activity will negatively impact an endangered or threatened species or its critical habitat will initiate the preparation of a biological opinion by the USFWS and/or the NMFS. This biological opinion must include a summary of the information upon which the opinion is based; a detailed discussion of the proposed action's effects on the species or its critical habitat; and the opinion of the USFWS and/or the NMFS as to whether the proposed action is likely to jeopardize the continued existence of a listed species or result in the destruction or adverse modification of its critical habitat. The USFWS and/or the NMFS have basically two options, (1) to determine that the proposed action will not jeopardize the species and/or its critical habitat or (2) that the proposed action will result in jeopardy to the species and/or its critical habitat. When there is a finding of potential jeopardy, the USFWS and/or the NMFS must include in their biological opinion reasonable and prudent alternatives that would allow the project to continue.

d. Section 7(d) of the amended ESA states that after initiation of consultation required under Section 7(a) the Corps shall not make any irreversible or irretrievable commitment of resources which will have the effect of foreclosing the formulation or implementation of any reasonable and prudent alternatives to avoid jeopardizing the continued existence of any endangered or threatened species or their critical habitat.

e. Section 7(e) provides authority for the establishment of the Endangered Species Committee (composed of six cabinet level members and one state representative) that is empowered to grant an exemption from the requirements of Section 7(a) to Federal agencies, the governor of a state and/or permit applicants.

f. Section 7(h) provides the criteria to be considered by the Endangered Species Committee whether or not to grant an exemption to Section 7(a) of the ESA.

19-19. <u>The Clean Water Act of 1972, as amended (Public Law 92-500 and 33 USC 466 et. seq.</u>). The objective of the Clean Water Act (CWA) as amended, is to "... restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA goes on to state that this objective is to be achieved, in part, by providing interim water quality which provides for the " ... protection and propagation of fish, shellfish , and wildlife ...". The Corps has two primary responsibilities under the CWA, i.e., compliance with Section 401, state water quality certification, and Section 404 (b)(1), the discharge of dredged or fill materials into the waters of the United

States. (See also Chapter 3, paragraph 3-5 and ER 1105-2-100, Chapter 7; and, 40 CFR 230)

19-20. Legal Basis for Mitigation of Damages to Fish and Wildlife Resources. There are three different and substantive legal requirements as to when the Corps must provide mitigation for adverse impacts on the environment, including fish and wildlife resources as discussed in paragraph 19-16. For Corps projects involving the discharge of dredged or fill materials into the waters of the United States, the 404 (b)(1) guidelines (40 CFR 230) establish the mitigation standard for adverse impacts on the aquatic environment. The guidelines (40 CFR 230.10(d)) prohibit the discharge of dredged or fill material "... unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem." In addition, the FWCA, Section 662(b) requires that reports submitted to Congress for authorization of Civil Works projects include " ... such justifiable means and measures" of mitigation " ... to obtain maximum overall project benefits". Finally, supplementing the responsibilities and authorities of the Secretary of the Army under the Fish and Wildlife Coordination Act, Section 906, entitled "Fish and Wildlife Mitigation" was enacted in 1986 as part of the comprehensive Water Resources Development Act. Section 906(d) requires reports submitted to Congress for authorization shall contain " ... a recommendation with a specific plan to mitigate fish and wildlife losses created by such project or a determination by the Secretary that such project will have negligible adverse impacts on fish and wildlife." (See also paragraph 19-8.a(4) above). Finally, while not technically defined as mitigation, "reasonable and prudent measures" are to be provided by either the USFWS or the NMFS when a project will jeopardize the continued existence of an endangered or threatened species and/or their critical habitat under the ESA. These reasonable and prudent measures must be complied with in order to construct and/or operate a project and, because they represent a means to lessen or eliminate an impact, could be classified as a mitigation requirement.

19-21. Mitigation Principals. Damages to fish and wildlife resources will be prevented to the extent practicable through good planning and design incorporating the mitigation principles defined within Council on Environmental Quality's (CEQ) NEPA guidelines, i.e., first avoid the impact; next, minimize the impact; and, finally compensate for unavoidable damages to significant fish and wildlife resources. Measures to offset unavoidable damages to significant fish and wildlife resources will be included in projects when the cost of these measures are justified by the combined monetary and nonmonetary benefits attributable to the proposed measures. These mitigation plans are to contain the most efficient and least costly measures appropriate to reduce fish and wildlife resource losses. Mitigation of losses will be provided to the maximum extent practicable through the development and implementation of mitigation measures on project lands. If project lands cannot fulfill our mitigation requirements, then separable public lands adjacent to project lands, to the extent possible, should be considered next. Any consideration of separable private lands not adjacent to project lands should be the last option considered. Acquisition of an interest in any lands or waters for mitigation of damages to fish and wildlife resources that do not comply with the limited authority provided by Subsection 906(b) of WRDA 1986 requires specific congressional authorization (See paragraph 19-8.a(2)). Measures to mitigate project caused damages to significant fish and wildlife resources are project costs and will be allocated to the responsible (causative) purposes of the project in the same way as other project costs. Mitigation costs will also be

shared to the same extent as the other costs allocated to such purposes are shared. The mitigation costs include separable first costs (any lands and construction) and separable operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) costs.

a. Justification. The basis for justifying which fish and wildlife resources are to be mitigated should be a combination of two major factors: (1) those significant fish and wildlife resources that will be unavoidably damaged as determined by an impact assessment of various alternative plans being considered; and (2) an examination of the cost effectiveness of various mitigation alternatives designed to achieve the mitigation goals established by the impact analysis. The significance of ecological resources to be protected, restored or created must be established through their legal or institutional recognition, their scientific recognition, and/or their public recognition. (See also the P&G and ER 1105-2-100) A separate benefit cost ratio for mitigation measures will not be computed, nor should economics be used as the only basis for justification of mitigation. However, dollar values associated with user-days generated by a mitigation plan, as well as user-days lost because of project construction, are proper factors to consider. Additionally, nonmonetary values, e.g., habitat units lost and gained with each proposed mitigation measure, should be developed and considered, along with the monetary values, when selecting and determining the justification of mitigation plans. Nonmonetary benefits should be quantified in appropriate units such as, e.g., increased number of nests, habitat units, quantity and quality of acres modified (including acres of specific habitat type), diversity indices, etc. With and without project conditions should be briefly described and each additional increment of the proposed modification should have its associated quantifiable benefits documented. Nonmonetary values should also reflect the importance or significance of the affected fish and wildlife resources from local, regional and national recognition, as noted above. The objective is to maintain the integrity and viability of significant natural resources and their contributions to local and regional ecosystems rather than considering all resource losses inherently equal. This demands that the concept of ecosystem management be fully applied, i.e., planners need to be aware of the biological and physical relationships among individual species and among different species in assessing significance. Finally, mitigation plans shall be justified incrementally, i.e., when an increment or management measure is added to a plan, it should increase the plan’s net benefits.

b. Implementation. Generally, the Corps implements mitigation measures concurrently with the initiation of construction of other project features as per Subsection 906(a) WRDA 1986 (See also paragraph 19-8a(1) and ER 1105-2-100, Chapter 7). Since this requires that the Corps maintain the ability to condemn lands, reports proposing land acquisition for mitigation purposes should not contain recommendations that would preclude the Corps from exercising the power of eminent domain.

c. Operation and Maintenance. Responsibility for operation, maintenance, rehabilitation and replacement (OMRR&R) of mitigation

features is typically defined in authorizing legislation. However, since the passage of WRDA 1986, Corps policy has been for the non-Federal interest to assume 100 percent of the OMRR&R. Mitigation features should be operated and maintained by the agency that can most efficiently do the job. Reports proposing the authorization of mitigation measures should identify the agency that will subsequently be responsible for funding and managing the OMRR&R. Responsibility for funding OMRR&R rests with the agency responsible for those activities. Authorization reports should not propose that the Corps budget funds annually for transfer to other agencies for OMRR&R activities. At projects not operated and maintained by the Corps, where local interests other than the project sponsor is the managing agency for mitigation features, a lump sum payment for the Federal share of the OMRR&R (when minor) will be made to the managing agency rather than being deducted from the non-Federal contribution toward first costs. This will be covered in preauthorization planning studies, and, unless there is some legal restraint, the Corps will require the project sponsor's share of mitigation OMRR&R costs to be capitalized and turned over to the managing agency concurrently with the Federal contribution.

e. Review of Completed Projects. It is the general policy of the Corps to review completed projects for additional mitigation measures only in response to congressional authorization, other legal requirements, or through the application of Section 216 of the River and Harbor and Flood Control Act of 1970 (RHFCA 1970). This provision of the RHFCA 1970 authorizes the Corps to undertake studies to review the operation of completed federal projects and recommend project modifications " ... when found advisable due to significantly changed physical or economic conditions ... and for improving the quality of the environment in the overall public interest". (See also ER 1165-2-119, "Modifications to Completed Projects")

f. Monitoring. Post-construction monitoring of mitigation measures may be necessary, in some cases, and should be designed to evaluate whether or not the mitigation measures are working as planned following their construction. Adaptive management is a technique that should be considered for monitoring programs for projects/measures that have the potential for uncertainty in achieving their objectives. (See ER 1105-2-100, Chapter 4) The cost and duration of a mitigation monitoring program should be included in the estimate of the construction cost of the project and in appropriate reports (feasibility reports, re-evaluation reports, or other decision documents, as well as cost sharing agreements). The monitoring plan will describe the nature of the monitoring required as well as the period of time within which it will be conducted. Monitoring proposals will consider the local sponsor's ability to carry out and fund its monitoring responsibilities and specify who will actually carry out the monitoring activities. Any monitoring requirements will be clearly specified in the Project Cooperation Agreement (PCA).

(1) Monitoring for mitigation measures will be cost-shared with the local sponsor in accordance with the project purpose that caused the damages to the fish and wildlife resources.

(2) The local sponsor will assume normal O&M responsibility for the project, including any monitoring requirements specified in the PCA, upon receipt of the O&M manual. There may be instances where it would be more cost effective for Corps operational elements to conduct specified monitoring responsibilities, with appropriate non-Federal reimbursement.

g. Relationship of Mitigation to Ecosystem Restoration and Protection. As discussed above in paragraphs 19-2 through 19-6 and in paragraph 19-16 the Corps focus is upon recognizing the importance of fully functioning ecosystems. Mitigation deals, in part, with the concept of ecosystem restoration and protection by its recognition of the importance of certain features of the ecosystem. Mitigation addresses these ecosystem features by attempting to eliminate and/or lessen the impact of our water resource activities upon these features. Restoration and protection activities, on the other hand, will often utilize the same techniques as used in mitigation; however, the purpose of our activities will be to restore some ecological condition that has been degraded, either by our activities or those of others. Consequently, the procedures used to justify our activities, whether they are for mitigation or restoration purposes, will typically be the same. The only distinguishable difference between mitigation and restoration activities is when they are applied. This is further clarified in the discussions that follow on the beneficial uses of dredged material and the project modifications for improvement of the environment.

19-22. Consideration of the Beneficial Uses of Dredged Material Within the Civil Works Program. Section 204 of WRDA 1992 (Public Law 102-580), as amended by Section 207 of WRDA 1996 (Public Law 104-303), and ER 1105-2-100 recognize that clean dredged materials can be used as a resource to benefit aquatic ecosystems. Important provisions of Section 204 include:

a. Section 204(a) authorizes the Secretary of the Army to carry out projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands (hereinafter referred to as ecosystem restoration and protection projects) in connection with dredging for construction, operation, or maintenance by the Corps of an authorized Federal navigation project.

b. Section 204(b) states that projects may be undertaken upon a finding by the Secretary of the Army that the environmental, economic, and social benefits of the project, both monetary and nonmonetary, justify the cost thereof and the project would not result in environmental degradation.

c. Section 204(c) requires non-Federal interests to enter into a cooperative agreement in accordance with the requirements of Section 221 of the Flood Control Act of 1970 and provide 25 percent of the cost associated with the construction of the project including provision of all lands, easements, rights-of-way, and necessary relocations (LERR). The non-Federal sponsor must also agree to pay 100 percent of the OMRR&R costs associated with the project.

d. Section 204(d) states that project costs are limited to incremental construction costs in excess of those costs necessary to dredge the authorized navigation project in the most cost effective way, consistent with economic, engineering, and environmental criteria.

e. Section 204(e) indicates that in developing and carrying out a project for navigation involving the disposal of dredged material, the Secretary of the Army may select a disposal method that is not the least cost option if the Secretary determines that the incremental costs of such disposal method are reasonable in relation to the environmental benefits.

f. Section 204(f) establishes an annual appropriations limit of $15,000,000 for the Section 204 program.

19-23. Justification of Ecosystem Restoration Using Dredged Material. Justification is established by demonstrating that the monetary and nonmonetary benefits (outputs) of the ecosystem restoration project are greater than the incremental costs above the base plan, in a manner consistent with the justification process described for mitigation in paragraph 19-21.a above. The base plan for navigation purposes is defined as the plan that accomplishes the disposal of dredged material associated with the construction or maintenance dredging of navigation projects in the least costly manner, consistent with sound engineering practices and in compliance with all applicable Federal and state environmental standards, including those established by Section 404 of the CWA of 1972, as amended, and Section 103 of the Marine Protection, Research, and Sanctuaries Act (MPRSA) of 1972, as amended. If the ecosystem restoration project is part of the base plan, it is a navigation (harbor or inland system) construction or maintenance cost and funded accordingly. Where the ecosystem restoration project is not part of the base plan for the navigation purpose, the base plan serves as a reference point for measuring the incremental costs of the ecosystem restoration project that are attributable to the environmental purpose. Where the ecosystem restoration project involves separable increments, each increment must be justified. In the case of recommendations for new navigation improvements, where justification of the ecosystem restoration measures have been demonstrated, the incremental costs of such measures shall not be included in the overall navigation project benefit-cost ratio and navigation net benefits in accordance with Section 907 of WRDA 1986. (See also paragraph 19-8.b)

19-24. Cost Sharing of Ecosystem Restoration Using Dredged Material. Ecosystem restoration projects are funded as navigation construction or O&M costs up to the level of the base plan.

a. Non-Federal interests must agree to provide 25 percent of the incremental costs above the base plan associated with construction of the ecosystem restoration project, including provision of all LERR. No credit will be allowed for work-in-kind. Where the value of LERR exceeds the non-Federal sponsors 25 percent share, the sponsor will be reimbursed for the value of LERR exceeding the 25 percent non-Federal share. The non-Federal sponsor is responsible for the entire cost of OMRR&R associated with the project.

b. While the cost sharing policy for ecosystem restoration projects allows for reimbursement in cases where the value of lands, easements and rights-of-way exceed the 25 percent non-Federal share, the land values for most ecosystem restoration projects should be less than 25 percent of total project costs.

19-25. Environmental Monitoring of Ecosystem Restoration Using Dredged Material Projects. Allowance in project costs can be made for reasonable follow-up and monitoring studies to assure performance criteria or environmental compliance commitments are met. Monitoring costs will be considered part of construction costs and cost shared accordingly.

19-26. Procedures for Ecosystem Restoration Using Dredged Material for New Navigation Projects or Modifications (Construction). Feasibility studies for new navigation projects or modifications to existing navigation projects shall include an examination of the feasibility of using dredged material for ecosystem restoration. Ecosystem restoration measures included in specifically authorized navigation projects do not rely on the authority of Section 204 of WRDA 1992 and do not count against the annual appropriation limits of Section 204. Funding for implementation of these measures would be requested as part of the specific Construction, General (CG) funding for the new navigation project or improvement following authorization.

19-27. Procedures for Ecosystem Restoration Using Dredged Material for Existing Navigation Projects (Maintenance Dredging). Identifying opportunities for use of maintenance dredging material for ecosystem restoration projects will require the close cooperation of planning and operations elements and early coordination with potential non-Federal sponsors. In the development of dredged material management plans for each Federal project, an examination of the potential for ecosystem restoration projects using dredged material should be included. Large habitat projects using maintenance dredging material which are beyond the scope of the Section 204 program may be pursued under a specific study authority or studied under the authority of Section 216 of the River and Harbor and Flood Control Act of 1970, (PL 91-611) and be specifically authorized. (See paragraph 5-2.d)

19-28. Procedures for Ecosystem Restoration Using Dredged Material for Navigation Projects In Pre-Construction Engineering and Design (PED) or Construction. The authority of Section 204 of WRDA 1992 may be used to add ecosystem restoration measures to utilize dredged material from navigation projects in the PED or construction phases where such measures were not included in the authorized plan for the project. PED or construction funds for the basic navigation project would be utilized for the initial appraisal for these ecosystem restoration projects. Ecosystem restoration projects added during the PED phase must be carefully coordinated to be compatible with the navigation project schedule and not unduly delay the initiation of navigation project construction.

19-29. Consideration of Project Modifications for Improvement of the Environment. Section 1135 of WRDA 1986, as amended (Public Law 99-662) recognizes the potential of modifying existing Corps project structures, operations, and/or areas where the Corps project contributed to the degradation of the ecosystem for the purposes of providing environmental benefits in the public interest. Relevant provisions of Section 1135 of WRDA 1986, as amended, include:

a. Section 1135(a) which authorizes the Secretary of the Army to review the operation of water resources projects constructed by the Secretary to determine the need for modifications for the purpose of improving the quality of the environment in the public interest.

b. Section 1135(b) which authorizes the Secretary of the Army to make such modifications in the structures and operations of water resources projects which are feasible and consistent with the authorized project purposes, and which will improve the environment in the public interest.

c. Section 1135(c) which states that if the Secretary determines that construction of a water resources project by the Secretary or operation of a water resources project constructed by the Secretary has contributed to the degradation of the quality of the environment, the Secretary may undertake measures for the restoration of environmental quality at locations that have been affected by the construction or operation of the project.

d. Section 1135(d) which states that the non-Federal share of the cost shall be 25 percent and not more than 80 percent of the non-Federal share may be in-kind. Not more than $5,000,000 in Federal funds may be expended on any single modification.

e. Section 1135(g) which authorizes maximum annual appropriations of $25 million for this section.

f. Section 1135(h) which defines a “water resources project constructed by the Secretary” to include a water resources project constructed or funded jointly by the Secretary and the head of any other Federal agency.

19-30. Eligibility and Objectives for Section 1135 Projects.

a. The proposed project must modify the structures or operations of a permanent project constructed by the Secretary of the Army in response to a Corps construction authority. The scale of the proposed project modification should be reasonable with respect to the project being modified. Section 1135 may not be used to modify projects where the Corps involvement consists of works constructed under the generic Disaster Relief Acts and Section 5 of Public Law 77-228, as amended. Consideration should be given to using an authority other than Section 1135, if operational only changes are proposed which can be accomplished without additional cost.

b. The focus of the project modification should be on measures designed to achieve ecosystem restoration and protection objectives, as discussed in paragraphs 19-2 through 19-6 above, to a level that could be expected to sustain the natural carrying capacities of fish and wildlife resources. Considerations include:

(1) The emphasis of the proposed modification should be to restore or otherwise improve degraded ecosystems to their natural integrity, productivity, stability and/or biological diversity.

(2) The focus should be more toward multiple species that are representative of the biological communities being examined and not solely those of recreational and/or commercial importance. Acknowledgment of recreation-oriented outputs of an ecosystem restoration project is appropriate; however, these cannot be the primary basis for justification.

19-31. Objectives and Constraints for Section 1135 Projects.

a. The acquisition of additional lands should be kept to a minimum. As a target, land acquisition should not exceed 25 percent of total project modification cost.

b. Using the Corps engineering expertise to develop innovative solutions to ecosystem problems is encouraged; however, the accompanying design standards should reflect the legitimate risks associated with potential failure.

c. Since the purpose of any proposed modification is ecosystem restoration and protection, proposals should be designed to avoid any need for a mitigation requirement. Further, Section 1135 proposals should not be used to fulfill the mitigation requirements of the basic project or any mitigation requirements that have been incurred by the local sponsor including their use as part of a mitigation bank.

d. The proposed modification must be justified on the basis of its monetary and nonmonetary benefits exceeding the monetary and nonmonetary costs, in a manner consistent with the justification process described for mitigation in paragraph 19-21a above.

e. Modifications designed primarily to halt erosion, to control sedimentation, to add a new project purpose such as water supply, or the addition of waterborne recreation at an existing dry reservoir should not be pursued using Section 1135 authority.

19-32. Program Cost Sharing for Section 1135 Projects. The planning and design phase(s) will initially be fully funded by the Government. However, these costs shall be included as part of the total project modification costs to be shared 75 percent Federal and 25 percent non-Federal.

a. In meeting its responsibility, the non-Federal sponsor shall provide all lands, easements, rights-of-way, suitable borrow and dredged or excavated material disposal areas, and perform or ensure performance of all relocations (LERRD), required for the project modification which are not otherwise available due to the construction or operation of the existing project.

b. The value and credit for LERRD provided for the project modification by the non-Federal sponsor shall be determined as described in ER 405-1-12 and the Section 1135 program guidance. If the value of the identified LERRD represents less than 25 percent of the total project modification costs, the non-Federal sponsor shall provide, during the period of implementation, a cash contribution in the amount necessary to make its total contribution equal to 25 percent.

c. If the value of LERRD contributions exceeds 25 percent of the total project modification costs, the Government shall refund the excess to the non-Federal sponsor. However, the non-Federal sponsor shall not receive any credit for LERRD previously provided as an item of cooperation for another Federal project nor shall the value thereof be included in the total project modification costs.

d. Credit will be allowed for work-in-kind provided that these services do not result in a reimbursement by the Government and their combination with the LERRD does not exceed 25 percent of project costs.

e. Federal Aid in Wildlife Restoration Act (Pittman-Robertson) and Federal Aid in Sport Fisheries Restoration Act (Dingel-Johnson) funds, and North American Wetlands Conservation Act funds (Mitchell Bill) may not be used by states as the non-Federal share of a Section 1135 project modification.

19-33. Operation and Maintenance for Section 1135 Projects. Usually, the non-Federal sponsor shall be responsible for 100 percent of the incremental OMRR&R costs associated with the project modification. The non-Federal sponsor shall OMRR&R the project modification in a manner so that liability will not arise under the Comprehensive

Environmental Response, Compensation and Liability Act (CERCLA).

19-34. Cost Allocation for Section 1135 Projects. Costs for implementation and OMRR&R of project modifications undertaken pursuant to Section 1135 are incremental to the existing costs of the project being modified. The ecosystem restoration and protection features are in addition to authorized project purposes, and are not for mitigation. Therefore, the costs of the project modifications should not be allocated to other project purposes, but should be considered solely as ecosystem restoration and protection costs and shared in accordance with the provisions of Section 1135 of WRDA 1986, as amended. (See also paragraph 19-32 above)

19-35. Monitoring of Section 1135 Projects. Post-implementation monitoring may be warranted for some project modifications. The discussion of the recommended plan should include a description of and the rationale for any proposed monitoring. Monitoring should be limited to a 3- to 5-year period. The cost of monitoring will be included in the total project modification cost and cost shared with the non-Federal sponsor.

19-36. Consideration of Aquatic Ecosystem Restoration Within the Civil Works Program. Section 206 of WRDA 1996 authorizes the Secretary to carry out projects for aquatic ecosystem restoration and protection if the Secretary determines that the project will improve the quality of the environment, is in the public interest and is cost-effective. Section 206 projects will be accomplished in a manner generally consistent with the plan formulation and evaluation concepts outlined in paragraphs 19-2 through 19-6, above, and ER 1105-2-100. Project justification will require the use of cost effectiveness and incremental cost analysis techniques. Not more than $5 million in Federal funds may be spent at a single locality. The program is limited to $25 million in appropriations in a fiscal year. A non-Federal interest must provide 35 percent of the project cost including all LERR as well as a 100 percent of all OMRR&R costs. Funds are budgeted and appropriated at the program level, and managed at Headquarters Planning Division.

19-37. Consideration of Cultural Resources Management Within the Civil Works Program. Cultural resources management is an equal and integral component of natural resource management at operating Civil Works projects. Further, our traditional view of cultural resources as representative of only the non-living and non-renewable components of natural resources as discussed under Section 101(b) of NEPA is changing. Today, as we gain greater insights and knowledge of other cultures, we are realizing that landscape features can have significant cultural significance as well as corresponding ecosystem values. Thus, it is the policy of the Corps to identify, evaluate, and manage cultural resources that are eligible for listing in, or listed in, the National Register of Historic Places. Associated with this policy is the Corps responsibility to ensure that cultural resource management activities are consistent with Federal laws and regulations pertaining to Native American rights, curation and collections management, and the protection of resources from looting and vandalism.

a. Mandatory Center of Expertise (MCX). The Corps MCX for Curation and Management of Archaeological Collections at St. Louis manages Corps-wide curation needs assessments and design services for the curation of archaeological collections. The MCX reviews the status of Corps-wide curation of collections and associated documents and ensures USACE compliance with the provisions of the Native American Graves Protection and Repatriation Act (NAGPRA), Public Law 101-601, and 36 CFR Part 79 (Curation of Federally-Owned and Administered Archeological Collections).

b. Tribal Consultation. Consistent with NAGPRA, Public Law 95-341, American Indian Religious Freedom Act and Public Law 103-141, Religious Freedom Restoration Act of 1993, commanders are required to consult with affected tribes, groups, or individuals regarding appropriate action for project effect upon sacred sites, important to the practice of traditional Native American religion. Native American consultation topics may include access to sites, use and possession of sacred objects, freedom to worship unburdened except when government limitations meet the compelling interest test, and suitable preservation measures. Tribal consultation pursuant to cultural resource law may require Native American and/or Native Hawaiian attendance at meetings, on-site visits, and the sharing of information akin to intellectual property.

c. Cultural Resources Management Plans. In accordance with provisions of the Archeological Resources Protection Act (ARPA) of 1979, as amended, and the National Historic Preservation Act (NHPA) of 1966, as amended, district commanders ensure that Cultural Resources Management Plans (CRMP), where appropriate, are developed for subordinate USACE projects.

d. Cultural Resources Protection Policy. Commanders have the ability to restrict access to associated records that contain information relating to the nature, location or character of a prehistoric or historic resource unless the commander determines that such disclosure would not create a risk of harm, theft or destruction to the resource or to the area or place where the resource is located. In addition, requests by other agencies or persons to conduct historic or archeological investigations of any type on Corps managed or controlled lands, sites, or properties, must be in accordance with the requirements of the ARPA of 1979, as amended (Public Law 96-95). Procedures for the development of permit requests as well as review and approval of permits for these investigations can be found in ER 405-1-12. Corps land managers should note that violators of protected properties can be prosecuted under 36 CFR Part 327, 14(a), which provides protection for historic properties and public property, or ARPA.

e. Additional or more detailed information on the treatment of the cultural environment at Corps operating projects can be found in ER/EP 1130-2-540, Project Operations: Environmental Stewardship.

19-38. Cultural Resources Management in the Planning Process. Historic properties are finite, nonrenewable resources which must be taken into account in formulating recommendations for project authorization and implementation. Preservation of significant cultural resources through avoidance of effects is preferable to any other form of mitigation. As early in the planning process as is possible, alternative solutions are sought to water resources problems that avoid effects on properties that are either listed or eligible for listing in the National Register, and when such properties can be

preserved, full consideration is given to this course of action. Those actions having an unavoidable effect or no effect on National Register or eligible historic properties are fully coordinated with the appropriate State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) in accordance with 36 CFR Part 800.

a. In the multi-phased process leading to Congressional authorization and construction of a project, cultural resource considerations are characterized by the following activities.

(1) Reconnaissance Phase Studies. Cultural resources investigations during the Reconnaissance Phase of Planning are usually restricted to a literature and records review, coupled with an on-site inspection (including, when possible, field check of recorded or potential site locations) or pedestrian overview. In unusual cases, the results of the Reconnaissance Phase studies may indicate that the cost of adequately mitigating the effects of alternative plans upon historic properties could exceed one percent of the total Federal amount authorized for appropriation. In those cases, the Reconnaissance Phase Report includes a narrative on the potential need to exceed the one percent level. This narrative includes the factual basis for concern and the need or likelihood of seeking a waiver under Section 208 of the National Historic Preservation Act Amendments of 1980.

(2) Feasibility Phase Studies. In consultation with the SHPO, commands design and implement such studies as are necessary to evaluate alternative plans in terms of their relative impact on historic properties. These studies should, when conducted on a sampling basis, provide for the efficient planning of any further cultural resource investigations that may be needed prior to initiation of construction. Feasibility phase studies are normally accomplished on a sampling basis formulated within a research strategy tailored to insure adequate coverage of the environmental zones within the alternative plan impact areas. However, when considered necessary or appropriate by the district commander, a sample survey may be waived in favor of an intensive survey/inventory, approaching 100 percent coverage, during the Feasibility Phase. Again, cultural resource studies completed during this phase of planning, may indicate that the cost of adequately mitigating the effects of a selected or primary plan upon historic properties could exceed one percent of the total Federal amount authorized for appropriation. In those cases, the feasibility phase report shall include a narrative on the potential need to exceed the one percent level.

b. Preconstruction Engineering and Design Phase Studies.

(1) During the period between completion of the feasibility report and initiation of construction, intensive surveys/inventories, if required or not previously conducted, are accomplished in the area of potential environmental impact of the recommended plan or authorized project. The results of such inventories serve as the basis for formulation of plans for management of historic properties prior to or during the construction and operational stages of projects.

(2) Such inventories are accomplished within the context of an explicit research design, formulated in recognition of prior work by the Corps and others, and include such testing and other comparisons and evaluations as may be required to formulate a program which provides a defensible basis to:

(a) Seek determinations of eligibility of resources for the National Register of Historic Places.

(b) Determine when a project will have "no effect" on historic properties.

(c) Identify historic properties whose value lie only in their potential contribution to archeological, historic, or architectural research. For such properties, it may be appropriate to develop determinations of "no adverse effect" when a property's value can be substantially preserved through the conduct of appropriate research, and such research is conducted in accordance with applicable professional standards and guidelines.

(d) Determine the need to mitigate adverse project effects on National Register and eligible properties in light of their historic or architectural significance or their potential to further archeological knowledge.

(e) Develop plans and cost estimates for such mitigation or other treatment of historic properties affected by the project.

(f) Serve as the basis for negotiation of a memorandum of agreement (if no memorandum has been previously prepared) with the ACHP and the SHPO specifying actions which will be taken by the Corps of Engineers prior to or during the project construction period to mitigate adverse effects on National Register and eligible properties.

(3) Should the estimated cost of these mitigation measures exceed one percent of the total estimated Federal appropriation required for construction of a project for which Congress has not specifically authorized expenditures in excess of this amount, a waiver request is submitted in accordance with Section 208 of the National Historic Preservation Act Amendments of 1980 and procedures established in ER 1105-2-100.

c. When Civil Works planning studies include cultural resources studies of lands held in fee title by the Corps of Engineers, provisions of NAGPRA apply to cultural items covered by the Act that are discovered in the fee owned lands.

(1) Cultural items, as defined by the Act, include human remains, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony.

(2) In treating cultural items and coordinating with Native American and/or Native Hawaiian groups, Corps commands are guided by the CECW-O/CECW-P "Interim Guidance for the Native American Graves Protection and Repatriation Act, Public Law 101-601", dated 5 June 1991, subsequent Corps-wide guidance issued from HQUSACE, and 43 CFR Part 10 “NAGPRA Regulations, Final Rule”, dated 4 December 1995

19-39. Cultural Resources Management for Continuing Authority Projects. Procedures for the identification, evaluation, and mitigation of effects on historic properties within the impact area of projects planned and implemented under Continuing Authorities for flood control, navigation, streambank erosion control and shore protection are also established in ER 1105-2-100.

a. Sections 103, 107, 111, and 205. The implementation of projects under these authorities includes two planning phases (reconnaissance and feasibility), preparation of plans and specifications, and construction. Cultural resources investigations during the reconnaissance phase of planning is consistent with the overall objectives of the study as well as time and cost limitations. The purpose of this appraisal is to evaluate, document the extent of, and validate the present knowledge of historic properties which might be effected by water resource development. The review of available information may also assist in the design of more intensive investigations of the planning area and the development of cost figures for later implementation phases. The feasibility phase should complete the plan formulation process and result in the preparation of a Detailed Project Report (DPR). If the literature and records review and limited field examination conducted in the reconnaissance planning phase reveal the presence, or likely presence of historic properties within the areas of potential project effect, the Corps command conducts an intensive survey/inventory. The results of the intensive survey/inventory shall be presented in the DPR along with the proposed plan for mitigation if adverse effects on historic properties will occur.

b. Should the estimated cost of mitigation measures exceed one percent of the total estimated Federal appropriation required for construction of a project for which Congress has not specifically authorized expenditures in excess of this amount, a waiver request shall be submitted in accordance with Section 208 of the National Historic Preservation Act Amendments of 1980 and ER 1105-2-100.

c. Section 14 and 208. Projects considered pursuant to these Continuing Authorities are subject to a single planning phase prior to the preparation of plans and specifications. Because of this accelerated implementation process, all necessary literature and records reviews, intensive survey/inventory, and interagency coordination are accomplished prior to the preparation of plans and specifications. If historic preservation mitigation is required, it is completed prior to the award of contract for construction.

d. Section 14 and 208 projects are not exempt from compliance with the National Historic Preservation Act of 1966 and 36 CFR Part 800.4 through 800.6 unless such projects comply with requirements under 36 CFR Part 78 and/or occur within 30 days of a disaster or emergency, or otherwise qualify as an emergency in accordance with provisions of 36 CFR Part 800.12 "Emergency Undertakings."

CHAPTER 20

AQUATIC PLANT CONTROL

20-1. Aquatic Plant Control Program. Section 104 of the River and Harbor Act of 1958 (Public Law 85-500), as amended, and Sections 103, 105, and 712 of the Water Resources Development Act of 1986 (Public Law 99-662) authorize the Corps of Engineers to cooperate with other Federal and non-Federal (usually state) agencies in comprehensive programs for the control of obnoxious aquatic plants. (ER 1130-2-500 and EP 1130-2-500 are applicable to this Corps program.) Funds appropriated for this program are applied to three general categories of activities, as follows:

a. Planning. The planning part of the program is necessary to determine whether there is justification for Federal (Corps) involvement in an aquatic plant problem and to establish a specific plan of action for dealing with plant infestations. There are three planning studies: (1) Initial Appraisal; (2) Reconnaissance Report, and; (3) Detailed Project Report (DPR). The Initial Appraisal and Reconnaissance Report are accomplished with Federal funds. Subsequent development of the DPR must be cost shared 50 percent Federal and 50 percent non-Federal.

b. Management Operations. Where Federal involvement is determined to be appropriate, aquatic plant control operations are cost shared 50 percent Federal and 50 percent non-Federal in accordance with the DPR, Project Cooperation Agreement (PCA) and Annual Work Plan.

c. Research. The thrust of the research effort is to identify new and more efficient tools for aquatic plant control. The cost of research dealing with problems and outputs that have regional or nationwide importance is 100 percent Federal. The cost of research conducted to provide local or site specific information is cost shared 50 percent Federal and 50 percent non-Federal. The Waterways Experiment Station is the lead laboratory for the Corps Aquatic Plant Control Research Program.

20-2. Program Controls.

a. Through the use of an initial appraisal, the district will determine the need for further study. If justified, a request for authorization and funding for a reconnaissance report is forwarded through the division and HQUSACE (CECW-ON) to the OASA(CW) in a letter report. The initiation of aquatic plant control reconnaissance reports must be approved by the ASA(CW). New studies will not be initiated unless the proposed project outputs are consistent with current budget criteria for new start construction projects. A reconnaissance report must be completed and submitted through the division and HQUSACE (CECW-ON) to the OASA(CW) for review and approval. A negotiated detailed study cost sharing agreement and a letter from the local sponsor indicating a willingness and intent to sign the agreement must be included. If approved, the ASA(CW) will authorize the district to conduct a DPR addressing details of the aquatic plant problem and the proposed plan of action.

b. An Environmental Assessment and, where appropriate, an Environmental Impact Statement must be completed for any proposed control operations.

c. All herbicide applications are to be performed in compliance with applicable Federal and state laws, including Federal Insecticide, Fungicide, and Rodenticide Act of 1972, as amended, and the Occupation Safety and Health Act of 1970.

d. Non-Federal program sponsors must agree to hold and save the United States free from damages resulting from control operations.

20-3. Budget. In the annual budget process, the Aquatic Plant Control Program is presented as part of the Corps Construction, General appropriation request. There is a $12 million annual limitation on Corps expenditures for the total program.

CHAPTER 21

REGULATORY PROGRAM - PROTECTION OF THE PUBLIC INTEREST IN THE WATERS OF THE UNITED STATES

21-1. Background.

a. Regulatory Approach of the Corps of Engineers.

(1) The U.S. Army Corps of Engineers has been involved in regulating certain activities in the Nation's waters since 1890. Until 1968, the primary thrust of the Corps' regulatory program was to protect navigation. As a result of new laws and judicial decisions, the Corps' 1968 permit regulations required for the first time a full public interest review involving a balancing of the favorable impacts against the detrimental impacts as the primary basis of permit decisions.

(2) Most of the authority for administering the regulatory program has been given to the 36 district commanders and 8 division commanders. There is no administrative appeal of a district or division commander’s decision, except as provided for Federal agencies under agreements pursuant to Section 404(q) of the Clean Water Act (CWA).

(3) The Corps seeks to avoid unnecessary regulatory controls. The general permit program is the primary method of reducing the intensity of Federal regulation of minor activities.

(4) Applicants are not necessarily due a favorable decision but they are due a timely one. Reducing unnecessary paperwork and delays is a continuing Corps goal.

(5) State and Federal regulatory programs should complement rather than duplicate one another. Use of general permits, joint processing procedures, interagency review coordination and authority transfers (where authorized by law) is encouraged to reduce duplications.

b. Types of Activities Regulated.

(1) Dams and dikes in navigable waters of the United States;

(2) Other structures or work including excavation, dredging, and/or disposal activities, in navigable waters of the United States;

(3) Activities that alter or modify the course, condition, location, or physical capacity of a navigable water of the United States;

(4) Construction of fixed structures, artificial islands, and other devices on the outer continental shelf;

(5) Discharges of dredged or fill material into the waters of the United States, including incidental discharges associated with mechanized land clearing, channelization, dredging and other excavation activities;

(6) The transportation of dredged material for the purpose of dumping it in ocean waters.

21-2. Authorities to Issue Permits.

a. Section 7 of the River and Harbor Act approved 8 August 1917 authorizes the Secretary of the Army to promulgate regulations for the use, administration, and navigation of the navigable waters of the United States as public necessity may require for the protection of life and property or for operations of the United States in providing channel improvements. Procedures followed for promulgation of such regulations, although they do not involve issuance of permits, are similar to those for the permit program. (33 CFR Part 324)

(1) Danger Zones. Regulations can be prescribed for the use and navigation of any area likely to be endangered by Department of Defense (DoD) operations. The authority to prescribe danger zone regulations is exercised so as not to interfere with or restrict unreasonably the commercial fishing industry. (33 CFR Part 324)

(2) Restricted Areas. When required for the protection of life and property at DoD installations, certain areas maybe set aside and reserved, such as naval restricted areas. Reasonable regulations may be prescribed, after public notice, restricting or prohibiting the use of such areas by vessels. The Coast Guard is authorized to establish restricted areas for safety but not restricted areas for DoD facilities. (33 CFR Part 324)

b. Section 9 of the River and Harbor Act approved March 3, 1899 (33 U.S.C. 401) prohibits the construction of any dam or dike across any navigable water of the United States in the absence of congressional consent and approval of the plans by the Chief of Engineers and the Secretary of the Army. Where the navigable portions of the waterbody lie wholly within the limits of a single state, the structure may be built under authority of the legislature of that state, if the location and plans or any modification thereof are approved by the Chief of Engineers and by the Secretary of the Army. Section 9 also pertains to bridges and causeways but the authority of the Secretary of the Army and Chief of Engineers with respect to bridges and causeways was transferred to the Secretary of Transportation under the Department of Transportation Act of October 15, 1966.

c. Section 10 of the River and Harbor Act of 1899 prohibits the unauthorized obstruction or alteration of any navigable water of the United States. This section provides that the construction of any structure in or over any navigable water of the United States, or the accomplishment of any other work affecting the course, location, condition, or physical capacity of such waters is unlawful unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of the Army. The Secretary's approval authority has since been delegated to the Chief of Engineers.

d. Section 13 of the River and Harbor Act of 1899 (33 U.S.C. 407) provides that the Secretary of the Army, whenever the Chief of Engineers determines that anchorage and navigation will not be injured thereby, may permit the discharge of refuse into navigable waters. In the absence of a permit, such discharge of refuse is prohibited. While the prohibition of this section, known as the Refuse Act, is still in effect, the permit authority of the Secretary of the Army has been superseded by the permit authority provided the Administrator, Environmental Protection Agency (EPA), and the states under Sections 402 and 405 of the CWA, respectively.

e. Section 404 of the CWA authorizes the Secretary of the Army, acting through the Chief of Engineers, to issue permits for discharges of dredged or fill materials into the waters of the United

States, provided that such discharges are found to be in compliance with the guidelines published by EPA to implement Section 404(b)(1) of the CWA. Section 404(c) of the CWA authorizes the Administrator of EPA to prohibit or restrict the use of a disposal site whenever he determines that the discharge of such materials will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas, wildlife, or recreational areas.

f. Section 103 of the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972, as amended, authorizes the Secretary of the Army to issue permits for the transportation of dredged material for ocean disposal when the dumping will not unreasonably degrade or endanger human health, welfare, or amenities, or the marine environment, ecological system, or economic potentialities. The selection of disposal sites will be in accordance with criteria developed by the Administrator of EPA in consultation with the Secretary of the Army. The Administrator can prevent the issuance of a permit if he finds that the dumping of the material will result in an unacceptable adverse impact on municipal water supplies, shellfish beds, wildlife, fisheries or recreational areas.

21-3. General Policies for Evaluating Permit Applications. The following policies are applicable to the review of all applications for Department of the Army permits.

a. Public Interest Review.

(1) The decision whether to issue a permit is based on an evaluation of the probable impacts (including cumulative impacts) of the proposed activity on the public interest. Evaluation of the probable impacts which the proposed activity may have on the public interest requires a careful weighing of all those factors which become relevant in each specific case. The benefits which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detrimental impacts. The decision whether to authorize a proposed activity, and if authorized, the conditions under which it will be allowed to occur, are therefore determined by the outcome of the general public interest balancing process. That decision should reflect the national concern for both protection and utilization of important resources. All factors which may be relevant to the proposal must be considered, as must their cummulative effects. Considered are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs and, in general, the needs and welfare of the people. No permit will be granted if issuance is found to be contrary to the public interest.

(2) The following general criteria will be considered in the evaluation of every application:

(a) The relative public and private need for the proposed structure or work;

(b) Where there are unresolved conflicts respecting resource use, the practicability of using reasonable alternative locations and methods to accomplish the objective of the proposed structure or work;

(c) The extent and permanence of the beneficial and/or detrimental effects which the proposed structure or work may have on public and private uses to which the area is suited.

b. Effect on Wetlands.

(1) Some wetlands are vital areas that constitute a productive and valuable public resource. The unnecessary alteration or destruction of those areas should be discouraged as contrary to the public interest.

(2) Wetlands considered to perform functions important to the public interest are listed in Chapter 20, paragraph 20-3.

(3) Although a particular alteration of wetlands may constitute a minor change, the cumulative effect of numerous such piecemeal changes often results in a major impairment of the wetland resources. Thus, the wetland site to which a particular application relates will be evaluated with the recognition that it is part of a complete and interrelated wetland area.

(4) No permit will be granted which involves the alteration of wetlands identified as important unless the district commander concludes, based on the public interest review, that the benefits of the proposed alteration outweigh the damage to the wetlands resource and the proposed alteration is necessary to realize those benefits. In evaluating whether a particular alteration is necessary, the district commander shall consider whether the proposed activity is primarily dependent on being located in, or in close proximity to the aquatic environment or whether practicable alternative sites are available. The applicant must provide sufficient information on the need to locate the proposed activity in the wetland and must provide data to evaluate the availability of practicable alternative sites.

(5) The congressional policy expressed in the Estuary Protection Act, Public Law 90-454, and state regulatory laws or programs for classification and protection of wetlands will also be given great weight.

c. Fish and Wildlife. In accordance with the Fish and Wildlife Coordination Act, the Corps of Engineers will consult with the Regional Director, U.S. Fish and Wildlife Service, the Regional Director, National Marine Fisheries Service, and the head of the agency responsible for fish and wildlife for the state in which the work is to be performed, with a view to the conservation of wildlife resources by prevention of their direct or indirect loss and damage due to the activity proposed in a permit application. The district commander will give full consideration to these views in evaluating the application.

d. Water Quality. Applications for permits for activities which may affect water quality will be evaluated for compliance with applicable effluent limitations, water quality standards, and best management practices. Certification by the state under provisions of Section 401 of the CWA will be considered conclusive with respect to water quality considerations unless the Regional Administrator, EPA, advises of other water quality aspects to be taken into consideration. Any permit issued may be conditioned to implement water quality protection measures.

e. Historic, Cultural, Scenic, and Recreational Values. Application for permits may involve areas which possess recognized

historic, cultural, scenic, conservation, recreational, or similar values. Full evaluation of the general public interest requires that due consideration be given to the effect the proposed structure or activity may have on values such as those associated with wild and scenic rivers, registered historic places and natural landmarks, National Rivers, National Wilderness Areas, National Seashores, National Recreation Areas, National Lakeshores, National Parks, National Monuments, estuarine and marine sanctuaries, archeological resources, including Indian religious or cultural sites, and such other areas as may be established under Federal or state law for similar and related functions.

f. Interference with Adjacent Properties or Water Resource Projects. Authorization of work or structures by the Department of the Army does not convey a property right, nor authorize any injury to property or invasion of other rights.

(1) Because a landowner has the general right to protect his or her property from erosion, application to erect protective structures will usually receive favorable consideration. However, if the protective structure may cause damage to the property of others, adversely affect public health and safety, adversely impact flood plain or wetland values, or otherwise appear not to be in the public interest, the district commander will so advise the applicant and inform him or her of possible alternative methods of protecting his or her property. Such advice will be given in terms of general guidance only so as not to compete with private engineering firms nor require undue use of Government resources.

(2) A riparian landowner's general right of access to navigable waters of the United States is subject to the similar rights of access held by nearby riparian landowners and to the general public's right of navigation on the water surface. In the case of proposals which create undue interference with access to, or use of, navigable waters, the authorization will generally be denied.

(3) Where it is found that the work for which a permit is desired is in navigable waters of the United States and may interfere with an authorized Federal project, the applicant should be apprised in writing of the fact and of the possibility that a Federal project which may be constructed in the vicinity of the proposed work might necessitate its removal or reconstruction.

(4) Proposed activities which are in the area of a Federal project which exists or is under construction will be evaluated to insure that they are compatible with the purposes of the project.

g. Activities Affecting Coastal Zones. Applications for Department of the Army permits for activities affecting the coastal zones of those states having a coastal zone management program approved by the Secretary of Commerce will be evaluated with respect to compliance with that program. No permit will be issued to a non-Federal applicant until certification has been provided that the proposed activity complies with the Coastal Zone Management Program, and the appropriate state agency has concurred with the certification or has waived its right to do so. However, a permit may be issued to a non-Federal applicant if the Secretary of Commerce, on his or her own initiative or upon appeal by the applicant, finds that the proposed activity is consistent with the objectives of the Coastal Zone Management Act or is otherwise necessary in the interest of National security. Federal agency and Indian tribe applicants for Department of the Army permits are responsible for complying with the

Coastal Zone Management Act's directives for assuring that their activities which directly affect the coastal zone are consistent, to the maximum extent practicable, with approved state coastal zone management programs.

h. Activities in Marine Sanctuaries. Applications for permits in a marine sanctuary established by the Secretary of Commerce will be evaluated for impact on the marine sanctuary. No permit will be issued until the applicant provides a certification from the Secretary of Commerce that the proposed activity is consistent with the purposes of the MPRSA of 1972, as amended, and implementing regulations.

i. Other Federal, State, or Local Requirements.

(1) Processing of an application for a Department of the Army permit normally will proceed concurrently with the processing of other required Federal, state, and/or local authorizations or certifications. Final action on the Department of the Army permit will normally not be delayed pending action by other Federal, state or local agencies. Where a required Federal, state or local permit or certification has been denied before final action on the Army permit, a Corps permit will be denied without prejudice. The applicant can reinstate processing of his or her application if subsequent approval is received from the Federal, state or local agency originally denying authorization.

(2) Where officially adopted Federal, state, regional, local or tribal land-use classifications, determinations or policies are applicable to areas under consideration, they shall be presumed to reflect local factors of the public interest and shall be considered in addition to the other National factors of the public interest.

(3) A proposed activity may result in conflicting comments from several agencies within the same state. The district commander will elicit from the governor an expression of his or her view concerning the application or an expression as to which state agency represents the official state position.

(4) In the absence of overriding National interest factors, a permit will generally be issued following receipt of a favorable state determination provided the concerns, policies, goals and requirements expressed in applicable statutes and 33 CFR 320-330 have been followed and considered. Similarly, a permit will generally be issued for Federal and Federally-authorized activities; another Federal agency's determination to proceed is entitled to substantial consideration in the Corps public interest review.

(5) The district commanders are encouraged to develop joint procedures with those states and other Federal agencies with ongoing permit programs for activities also regulated by the Department of the Army. In such cases, applications for Department of the Army permits may be processed jointly with the state or with the other Federal entities, but with conclusion and decision by the district commander independent of the Federal or state agency determinations. Alternatively, the Corps may issue a general permit to eliminate regulatory duplication.

j. Safety of Impoundment Structures. To insure that all impoundment structures are designed for safety, non-Federal applicants may be required to demonstrate that the structure has been designed by qualified persons or independently reviewed (and modified as the review would indicate) by similarly qualified persons. (See 33 CFR

325).

k. Flood Plain Management. Although a particular alteration to a flood plain may constitute a minor change, the cumulative impact of such changes often results in a degradation of flood plain values and functions and results in increased potential for harm to upstream and downstream activities. In accordance with the requirements of Executive Order (EO) 11988, district commanders, as part of their public interest review, will consider alternatives that will avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of flood plains.

l. Water Supply and Conservation. Full consideration will be given to water conservation as a factor in the public interest review, including opportunities to reduce demand and improve efficiency in order to minimize new supply requirements. This policy is subject to Congressional policy stated in 101(g) of the CWA--that the authority of states to allocate water quantities shall not be superseded, abrogated or otherwise impaired.

m. Energy Conservation and Development. District commanders will give great weight to energy needs as a factor in the public interest review and will give high priority to permit actions involving energy projects.

n. Navigation. Navigation in all navigable waters of the United States continues to be a primary concern of the Federal Government and will be given great weight in the public interest balancing process.

21-4. Jurisdictional Limits:

a. The River and Harbor Act of 1899. With respect to this Act ("Navigable Waters of the United States"):

(1) Rivers and Lakes. Federal regulatory jurisdiction extends laterally to the entire water surface and bed of a navigable waterbody, which includes all the land and waters below the ordinary high water mark. (33 CFR 329.11(a)) At some point along its length, a navigable waterbody will change its character and lose its real or potential physical ability to support commerce. That upper limit point where the waterbody ceases to be a navigable water of the United States is usually termed the "head of navigation". (33 CFR 329.11(b))

(2) Ocean and Tidal Waters. The Corps regulatory jurisdiction includes all ocean and coastal waters generally within a zone three nautical miles seaward from the coast line. For bays and estuaries, jurisdiction extends to the entire surface and bed of all waterbodies subject to tidal action. This includes marshlands and similar areas insofar as those areas are subject to inundation by the mean high tidal waters. The base line (ordinary low tide line) from which the territorial sea is measured is specified in the Convention on the Territorial Sea and the Contiguous Zone. (15 UST 1606; TIAS 5639; 33 CFR 329.12)

b. The Clean Water Act of 1977. With respect to this Act ("waters of the United States") jurisdiction is more extensive than under the River and Harbor Act of 1899. (33 CFR 328)

c. Marine Protection, Research and Sanctuaries Act of 1972.

This Act defines a regulatory jurisdiction with respect to "Ocean Waters." (33 CFR 324.2)

CHAPTER 22

SUPPORT FOR OTHERS

22-1. Support for Others (SFO). SFO is Corps-performed work funded by non-Department of Defense (DoD) Federal agencies or by state, local, tribal and foreign governments, international organizations, and the private sector. (ER 1140-1-211 is applicable to this program.)

22-2. Authorities. The authorities governing the SFO program are the Economy in Government Act (31 U.S.C. 1535), 10 U.S.C. 3036(d) and the Intergovernmental Cooperation Act (31 U.S.C. 6505). ER 1165-2-30 describes special authorities for performing work for state and local governments in connection with authorized Civil Works projects.

22-3. Guidance on SFO Opportunities. The SFO program provides the Corps with opportunities to serve the Nation and enhance its capability to accomplish its assigned missions. Work accepted (see paragraph 22-4, Approval Authorities) must be consistent with Corps organizational purposes and be accomplished within manpower and resource constraints. Work which is accepted should maintain or enhance Corps ability to perform assigned missions and must not adversely impact on their accomplishment. The Corps should provide its SFO customers with a quality product, on time, and within cost (i.e., same service as mission activity beneficiaries) and provide the customer with a completed effort, using breadth of technical skills and Corps review procedures, not simply Corps manpower. SFO activities rely heavily on the design and construction talents of the private sector when feasible, and recognize that the SFO customer agency will retain responsibility for program planning and development and budgetary justification.

22-4. Approval Authorities.

a. MSC Authorities. Major Subordinate Command (MSC) commanders and heads of separate field operating activities (FOAs) are encouraged to accept reimbursable work when the following criteria are met (MSC commanders may delegate their authority to district commanders):

(1) The work can be accomplished within the existing MSC resource allocations until the next resourcing cycle occurs. If this is not possible, the MSC (or FOA) should advise CERM-M of the additional resources required to determine if a reallocation of resources is possible.

(2) The work is within the MSC's civil works boundary, unless other customer boundaries have been established.

(3) The work complies with the criteria checklist and accompanying instructions of ER 1140-1-211.

(4) ER 5-1-10, Corps-wide Areas of Responsibility, establishes procedures to follow when accepting, asigning and/or brokering work and procedures to follow when performing work outside the geographic or functional area of responsibility.

22-5. Work for State and Local Governments. Before commands can support state and local governments the requesting government must certify that it cannot obtain the services reasonably and expeditiously from private firms.

a. Work Not Involving Federal Funding Assistance. The technical services that may be provided (within the scope of the activities defined in OMB Circular A-97 Revised and DoD Instruction 7730.53) include studies and planning activities, engineering and design (including plans and specifications), construction management assistance and training. Construction management assistance is limited to: technical advice to improve state or local management capability in contract preparation, negotiating and evaluation, contract administration, quality assurance and supervision and inspection. (District commanders must concur in the certification required by paragraph 7.c. of Circular A-97 Revised.) Commands may not acquire real estate nor be the construction contracting officer for a state or local government under 31 U.S.C. 6505.

b. Work Involving Federal Funding Assistance. 10 U.S.C. 3036(d) provides authority for the Corps to serve as the construction contracting officer for a state or local government, provided the work involves Federal funding assistance and provided the department or agency providing the Federal funding does not object to the provision of these services by the Corps. The requesting entity must certify (in accordance with the procedures set forth in paragraph 7.c. in Office of Management and Budget (OMB) Circular No. A-76) that the services to be provided by the Corps cannot be procured reasonably and expeditiously by it through ordinary business channels. The services would normally be project-associated government management functions which involve the exercise of discretion in applying government authority and the use of value judgments in project management in the role of contracting officer.

22-6. Work for Private Firms. 33 U.S.C. 2314(a) provides authority for USACE to provide reimbursable support to U.S. private firms competing for or awarded a contract for work overseas. USACE laboratories are authorized to provide reimbursable services to U.S. firms in the United States.

22-7. Work on Problems of National Significance. 33 U.S.C. 2323 provides authority for the Corps to provide support to other Federal agencies or international organizations (after consultation with the State Department) to address problems of national significance to the United States.

22-8. Resourcing. All USACE costs must be provided by the customer agency. OMB provides separate full time equivalent (FTE) resourcing to USACE for the SFO program. HQUSACE allocates FTE through Civilian Force Configuration and Management (FORCON).

22-9. Categories and Examples of Work. SFO work generally falls under either environmental protection and restoration or, facilities and infrastructure. Work varies from employing one or a few of the Corps skills to using the whole range of the Corps planning, engineering, real estate, contracting, construction management, and legal skills. The majority of the work occurs in the United States but work overseas is not uncommon. The following paragraphs summarize some of the major characteristic work items.

a. Environmental Protection and Restoration. The Corps supports the Environmental Protection Agency’s (EPA's) Superfund Program by managing remedial designs and remedial actions (construction). The Corps provides a wide range of management assistance to the Department of Energy's Environmental Restoration and Waste Management Program and to the cleanup programs of about 20 other Federal agencies including agencies within the Departments of

Agriculture, Justice, Transportation and Interior.

b. Facilities and Infrastructure. The Corps supports the facilities and infrastructure missions of over 60 other Federal agencies. Overseas, this includes technical advice and infrastructure of benefit to foreign nations for the Agency for International Development, U.S. Information Agency, and State Department. In the United States, this includes flood insurance and hurricane evacuation studies and emergency response work for the Federal Emergency Management Agency; public housing renovation grant oversight for the Department of Housing and Urban Development; and design and construction for the National Park Service, Immigration and Naturalization Service, Bureau of Prisons, and Department of Energy.

CHAPTER 23

CIVIL WORKS RESEARCH AND DEVELOPMENT

23-l. Purpose and Scope. The Civil Works (CW) Research and Development (R&D) Program supports USACE's performance of CW missions and business programs. The CW R&D Program addresses CW mission-related problems to enhance the performance of all USACE elements. Typically programs focus on the highest priority problems. All USACE organizations regularly review their present and future CW missions and business programs to identify managerial, operational, and engineering problems that could be solved or improved through research and development. Research that is project-specific will not be conducted using CW R&D Program funding unless the research has a broader application.

23-2. Authorization. R&D is an integral and essential component in the overall management of Civil Works programs and functions. Therefore, special authorization is not required.

23-3. Program Development and Execution. The Director of Research and Development (CERD) manages the CW R&D Program. Oversight is based on management by mission-related objectives with appropriate delegation of authority and responsibility to USACE Laboratories and Research Performing Elements. (ER 70-l-5)

a. Program Development. Program development consists of three steps: (1) strategic directions and research needs identification, (2) program formulation, review and approval, and (3) program submission and budget defense.

(1) Strategic Directions and Needs Identification. The overall CW R&D strategic directions and priority issues are provided by the Civil Works R&D Coordinating Committee, based on the Civil Works vision and goals. The CW R&D Coordinating Committee is composed of the CW Division Chiefs or their designees. The Committee meets as required to review research directions and provide policy guidance. Based on the guidance of the CW R&D Coordinating Committee, CERD, with input from the HQ Program Monitors, Field Review Groups, and laboratory Program Managers, identifies research areas, major new initiatives, overall priorities, and funding requirements for review and approval by the CW R&D Coordinating Committee. Once approved, a guidance memorandum from CERD is sent, generally during the first quarter of the fiscal year, to laboratory Program Managers establishing the research program areas, preliminary funding, and other related guidance for the upcoming fiscal year. Laboratory Program Managers, in close consultation with the Program Monitors and Field Review Group, use this guidance memorandum to develop detailed CW R&D programs, critical milestones, and to prepare R&D program documentation.

(2) Program Review and Approval. Program Review Meetings, chaired by CERD, are conducted jointly with the lead laboratory. Participants include CERD representatives, Program Monitors, Laboratory Program Managers, Field Review Groups, Principal Investigators, and other HQUSACE and field staff where appropriate. The Program Review Meetings review the status and direction of ongoing R&D and determine, in detail, the recommended needs and priorities of R&D work units commensurate with the strategic directions, priority requirements, and funding allocation. In addition, the Program Reviews address the

overall program strategy, technology transfer, product implementation, and program justification. After Program Reviews, the Laboratory Program Managers, in close consultation with the Program Monitors, submit the annual prioritization of work units to CERD for HQUSACE review and approval. This prioritization is based on the discussions and Field review Group input during the Program review, as well as on other appropriate CW needs and business program requirements.

(3) Program Submission and Budget Defense. CERD has the primary responsibility for all subsequent program documentation requirements and for its subsequent defense to ASA(CW), OMB, and the Congress.

b. Program Execution. CERD has the overall management responsibility for the proper execution of the approved CW R&D program. Laboratory Program Managers manage the execution of the research program to ensure that program objectives, goals, and critical milestones are met. The Laboratory Program Managers, in consultation with Program Monitors and Field Review Group, are responsible for developing and periodically updating a Strategic Plan that includes a vision statement of overall R&D goals and objectives to support the established Civil Works business programs.

23-4. Current Emphasis and Program Mix. The existing base R&D Program is funded under the General Investigations Account. Additional funding is also provided for problem-specific, and usually fixed year R&D under the Operation and Maintenance (O&M), Construction General (CG), and General Expense (GE) Accounts.

23-5. Organizational Responsibilities. ER 70-l-5 prescribes the functional responsibilities and interrelationships of the field offices, research laboratories and research performing elements, and HQUSACE.

a. HQUSACE Directorate of Research and Development (CERD). The CERD is responsible to the Chief of Engineers for centralized management of the Corps R&D activities at Corps research laboratories and research performing elements. CERD, in close consultation with the CW Divisions, annually recommends a CW R&D Program, including priorities and funding, to the CW R&D Coordinating Committee. CERD defends the approved CW R&D program before the Office of Management and Budget and the Congressional Appropriations Committees.

b. Civil Works Directorate

(1) CW division chiefs appoint the program monitors to provide strategic direction, assist in structuring the R&D program, recommend work unit priorities and funding, review technical documents, assist technology transfer, and communicate field needs and concerns.

(2) The CW R&D Coordinating Committee reviews the proposed distribution of CW R&D funds within the current fiscal year and the upcoming fiscal year to determine program balance, assure future problems are properly evaluated, and determine proper emphasis. Upon completion of the review, the Committee makes specific recommendations to the Director/CW and the Director/CERD.

c. Field Commands. Each R&D Program includes a separate field review group (FRG). The FRG acts as a consultant to the CW program monitor, laboratory program manager and to CERD on the scope and conduct

of the R&D and effective implementation of R&D end-products.

23-6. Transfer of Research Results.

a. Technology transfer is an integral part of the entire R&D process. The laboratory program manager, in consultation with the program monitor(s), the field review group, and principal investigator develops a Technology Transfer Plan. This plan is a general description of the direction and approach for technology transfer of a research program. Each research program must provide for consistent transfer of products and information to the USACE field offices primarily and to other agencies including the private sector secondarily. The technology transfer process will involve active participation of all members of the USACE family to assure the products of the CW R&D Program are usable, timely, and appropriate. Appropriate implementation mechanisms to consider include PROSPECT or other long-term training courses, recommended technical revisions to ECs, EMs and ETLs, draft technical input to new or revised Engineering Guide Specifications, and development of technical/procedural guidance necessary for effective implementation of ERs and other CW policy documents.

b. The CW R&D Program shall consider transferring technology to other DoD and Federal agencies, state and local governments, and private enterprises as authorized by the Stevenson-Wydler Technology Innovation Act of 1980, as amended. It is the joint responsibility of the Directorate of Civil Works, program monitors, CERD, and the field review group to advise and assist the program manager in technology transfer to such organizations. Procedures for complying with the Act are given in AR 70-57, which gives the Office of Research and Technology Applications (ORTA) the responsibility for managing the domestic technology transfer activities. The laboratory's ORTA will assist in identifying technologies suitable for transfer through Cooperative Research and Development Agreements (CRDA), Small Business Innovation Research Program (SBIR), Patent License Agreements (PLA), and other methods for technology transfer to the domestic civilian sector. The CW R&D program manager may consider technology transfer to foreign governments. CERD will decide each foreign technology transfer after coordination with appropriate officials.

23-7. Internal and External Coordination and Information Exchange.

a. In the interest of eliminating unnecessary duplication of research efforts, Corps laboratories are charged with the responsibility for identifying R&D efforts by others that have potential application to the CW R&D Program.

b. To assure coordination of the CW R&D Program with the programs of other agencies, the Corps maintains close contacts with other Federal water resource agencies, including Bureau of Reclamation, Tennessee Valley Authority, and Bonneville Power Administration. Professional contacts with Federal Highway Administration, National Resources Conservation Service, National Marine Fisheries Service, Fish and Wildlife Service, Environmental Protection Agency, the Bureau of Mines, Federal Emergency Management Agency, National Science Foundation, and National Institute of Standards and Technology are also maintained.

c. External coordination is accomplished through the Defense Documentation Center, National Technical Information Service, and the

Water Resources Scientific Information Service. In addition, Corps technical people serve on committees which discuss each agency's programs and capabilities, and participate in professional society activities and committees.

d. Internal information exchange is accomplished by publishing the documented research effort, ETLs, EMs and special research center bulletins. The Corps maintains a Scientific and Technical Information System that is a coordinated network of research and technical libraries interfaced with other national public and private systems.

23-8. Exclusion of Non-R&D Activities from R&D Funding. Non-R&D activities such as routine data collection, training, development of manuals and standard computer programs and Scientific and Technical Information (STINFO) Centers are not funded from "General Investigations - Research and Development" fiscal category.

23-9. Research not Funded as R&D. Congress has specifically authorized programs which include R&D. R&D is funded under these specific programs (e.g., Aquatic Plant Program). When R&D is related to a specific project and is not transferable, the effort is funded by the specific project. All R&D efforts, regardless of source of funds, are integral to the CW R&D Program.

CHAPTER 24

ACTIVITIES RELATED TO PROGRAMS ADMINISTERED BY OTHER FEDERAL AGENCIES

24-1. General. Originally, Federal functions with respect to water resources development involved single-purpose projects by specific agencies with clear-cut divisions of responsibility. Successive acts of Congress have extended the functions, authorities, jurisdictions and interests of Federal agencies in different phases of land and water resources conservation and development. In view of frequent incompatability among various uses, it is important that maximum possible coordination be achieved. This is required by legislation and various Administration directives. Consideration of work for other agencies is an important factor in preparation of budgets and capabilities. Authorities and procedures for assisting agencies in accomplishing activities are discussed in Chapter 22 - Support for Others. Following are brief summaries of the policies on other agency activities that are related to Corps programs. See also Appendix D - Interagency Agreements.

24-2. Environmental Review and Coordination. The Council on Environmental Quality (CEQ) regulations (40 CFR 1500-1508) implementing the provisions of the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-190) require the Federal agency having primary responsibility for preparing an environmental impact statement (EIS) to determine whether any other Federal agencies have jurisdiction by law, a statutorily mandated consultive role, or special expertise on environmental quality issues. "Jurisdiction by law" is defined as authority to approve, deny, or finance all or part of a proposal, and encompasses permits and licenses. "Special expertise" is defined as statutory responsibility, agency mission or related program experience. Appendix II of CEQ regulations lists Federal agencies so defined. The Corps review of another agency's EIS should be specific and may address either the adequacy of the EIS or the merits of the alternatives, or both, where the Corps has jurisdiction by law (Section 10, Section 404, etc.) or special expertise (flood control, navigation, water supply, etc.). District commanders are designated as responsible NEPA officials for providing comments on other agencies EIS's except proposals requiring HQUSACE or ASA(CW) review. (ER 200-2-2)

24-3. Watershed Protection. The Natural Resources Conservation Service (NRCS), under authority of the Watershed Protection and Flood Prevention Act of 1954 (Public Law 83-566, as amended), constructs dams and implements other measures in upstream watersheds for a variety of purposes including flood control. The Corps cooperates fully with the NRCS in carrying out its program and strives to bring about coordination between the Public Law 83-566 program and the programs of the Corps. (EP 1165-2-2)

24-4. National Wild and Scenic Rivers System. The National Wild and Scenic River System was established by the Wild and Scenic Rivers Act (Public Law 90-542, as amended) to protect the environmental values of free-flowing streams from degradation by impacting activities including water resources projects. The system is administered jointly by the Forest Service, Department of Agriculture, and the National Park Service (NPS), Department of the Interior. Corps activities on the streams included in the system are subject to review by whichever of these agencies is responsible for the specific stream. Discharges into streams, impoundments, diversions, channel alterations, and other measures can alter the stream discharge,

velocity, and channel dimensions. These hydraulic changes may cause modifications to the free-flowing character of the stream, resulting in loss or diminution of its environmental values. The Wild and Scenic River Act requires consideration of the impacts and consultation with the responsible agency prior to implementation of a project.

24-5. Land and Water Conservation Fund. The NPS provides assistance to the states and territories in preparing and maintaining Statewide Comprehensive Outdoor Recreation Plans (SCORPs) under the Land and Water Conservation Act of 1964 (Public Law 88-578, as amended). Planning for recreation development at Corps projects is coordinated with the appropriate states so that the plans are consistent with public needs as identified in the SCORPs. The Corps must coordinate with the Secretary of Interior to insure that no property acquired or developed with assistance from this Act will be converted to other than outdoor recreation use. (ER 1165-2-400)

24-6. Community Development Program. Title I of the Housing and Community Development Act of 1974 (Public Law 93-383) establishes a program of community development block grants. This program is administered by the Department of Housing and Urban Development. The primary objective of the Community Development Program is the development of viable communities, including decent housing and suitable living environment and expanded economic opportunities, principally for persons of low and moderate income. Under the program, cities may undertake a wide range of activities directed toward neighborhood revitalization, economic development, and provision of improved community facilities and services. Some of the specific activities that can be carried out with block grant funds include acquisition of real property; relocation, demolition and rehabilitation of residential and nonresidential structures; and provision of public facilities and improvements such as neighborhood centers, streets, water and sewer facilities and flood and drainage facilities. In addition, block grant funds are available to pay for certain public services which are appropriate or necessary to support other block grant activities. The Corps participates in community development activities in various ways. Participation includes acting under existing authorities for flood damage reduction, beach erosion control, or navigation improvement. The Corps provides technical information and advice or, where appropriate, serves as an engineering consultant in areas of special Corps expertise.

24-7. Small Reclamation Projects. The Small Reclamation Projects Act of 1956 (Public Law 984, 84th Congress, as amended), established a program under which non-Federal organizations in the 17 contiguous western states and Hawaii can obtain loans for small reclamation projects. The Corps, in cooperation with the Bureau of Reclamation, assists in analysis and evaluation of the Federal interest when loan applications propose projects which involve flood control effects. (ER 1165-2-111)

24-8. National Recreation Areas. National Recreation Areas (NRA) at Corps reservoirs will normally be developed and managed by the Corps of Engineers in accordance with the project's authorizing legislation. A Corps project may be so located, or may be of such size and nature, that it would make a desirable addition to a major resource area being administered by another Federal agency. In such cases, the Corps may enter into an agreement under which the area will be managed as an NRA by that agency. (ER 1165-2-400)

24-9. Forest Service Lands. The policy of developing recreation as an integal part of a coordinated overall management plan includes reservoir projects of the Corps located within or partly within the National Forest System. District commanders and Forest Supervisors cooperate at all project stages in accordance with a Memorandum of Agreement, dated 13 August 1964, by the Secretaries of the Army and Agriculture. The objective is to meet the public needs of both the national forest and the water resource projects in a cost efficient manner. (EP 1165-2-2)

24-10. National Trails System. Public Law 90-543 prescribes procedures for setting up national recreation and scenic trails. National recreation trails located near urban areas may be established by the Secretary of the Interior or by the Secretary of Agriculture where lands administered by either are involved. National scenic trails, and extended trails so located as to provide for maximum outdoor recreation potential, are established by Acts of Congress. The Corps recognizes that the aesthetic attractiveness of scenic corridors available on project lands can be enhanced by incorporation of trails or trail systems. Accordingly, wherever warranted by the current or potential public use of Corps water resource projects, consideration is given in planning to the incorporation of trails. In addition, as part of coordination with NPS, the Corps must identify, evaluate, and coordinate any impacts to the National Trails System as a result of proposed or ongoing activities.

24-11. Endangered and Threatened Species. The Endangered Species Act of 1973 (Public Law 93-205), as amended (Public Laws 95-632, 96-159 and 97-304), states the policy of Congress is that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act. The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved and to provide a program for the conservation of such endangered species and threatened species. Section 7 states that all Federal departments and agencies shall, in consultation with and with the assistance of the Secretary of the Interior/Commerce, insure that any actions authorized, funded, or carried out by them do not jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat...determined by the Secretary(Interior/Commerce)...to be critical unless an exception has been granted by the Endangered Species Committee. Additional guidelines for protection of marine mammals are established in Public Law 92-522, as amended. Consultation procedures are administered by the Fish and Wildlife Service (FWS), Department of the Interior, and the National Marine Fisheries Service (NMFS), Department of Commerce. Federal agencies must request the FWS or NMFS, as appropriate, to furnish information as to whether any listed species or designated critical habitat are in the proposed project area. If the FWS/NMFS provides listed or proposed species or designated critical habitat, the agency must prepare a biological assessment to determine if the proposed project may affect the species or habitat. The biological assessment must be completed within 180 days. No construction contract will be awarded before completion of the assessment. Based on the biological assessment results and other information the agency shall initiate formal consultation with the FWS/NMFS if listed endangered or threatened species or designated critical habitat may be affected. Consultation shall be concluded within a 90-day period (or other period mutually acceptable to the agency and FWS/NMFS). During consultation, the agency shall not make any irreversible or irretrievable commitment of resources that would have the effect of

foreclosing the formulation or implementation of any reasonable and prudent alternative measures. Promptly after conclusion of consultation, the FWS/NMFS shall provide the agency with a biological opinion on how the agency's proposed action will affect the species or critical habitat and, if appropriate, shall suggest reasonable and prudent alternatives. Federal agencies are required to consider reasonable and prudent measures to protect and conserve the species and critical habitat.

24-12. Federal Energy Regulatory Commission (FERC) Licenses. Under the Federal Power Act (Public Law 280, 66th Congress), non-Federal entities are required to obtain from the Federal Power Commission (now FERC) a license for construction and operation of hydroelectric power developments affecting navigable waters, lands of the United States, or interstate commerce. The Act requires the proposed power project to be optimally related to comprehensive development plans. All applications for license are referred to the Corps and other agencies for views and recommendations concerning licensing and provisions to be included in the license or renewal if issued. Applications for FERC permits which give the applicant priority of interest in a power site pending completion of studies, but do not authorize construction, are likewise referred to the Corps. The Act also specifies that no license affecting navigation shall be issued until the plans are approved by the Chief of Engineers and the Secretary of the Army. (ER 1110-2-1454)

a. License Renewal. The United States has the right, upon the expiration of any FERC license, to take over and thereafter to operate the project under certain circumstances, if such action is in the public interest. The Corps is required to comment on license renewal applications. Although a number of licenses have recently expired, the Corps has, to date, not recommended takeover in any case to the FERC.

b. Distinction between Corps of Engineers and FERC Jurisdiction with Respect to Non-Federal Hydroelectric Project.

(1) The following procedures are currently being followed in connection with Department of Army permit responsibilities involving pre-1920 legislation:

(a) In regard to FERC licensing of projects, Corps responsibilities under Section 10 of the River and Harbor Act of 1899, for power related activities, may normally be met through the FERC licensing procedure including insertion in the license of terms and conditions in the interest of navigation. Section 4(e) of the Federal Power Act provides for approval of project plans by the Chief of Engineers and Secretary of the Army from the standpoint of interests of navigation. On 11 March 1975, the Secretary of the Army delegated the subject authority to the Chief of Engineers. On 5 September 1980, the Chief of Engineers delegated Section 4(e) approval to the respective division. The consideration for Corps approval under Section 4(e) will be limited to effects of a project on navigation.

(b) Non-Federal hydroelectric power proposals at Corps projects must satisfy public interest requirements in water resources development as required by the Federal Power Act and must meet the following Corps of Engineers general requirements:

-- Hydroelectric power development must be compatible with authorized purposes of the Federal project. Verification of compatibility may require physical and/or mathematical modeling, costs

of which should be borne by the applicant.

-- Full hydroelectric power potential of the site must be considered in planning, design and construction of a power plant.

-- Design, construction and operation of all power facilities that will be an integral part of the dam or that would affect the structural integrity of the Federal dam, including construction procedures and sequence, must be approved by the Corps.

-- In the interest of multiple-purpose water management, the Corps requires a signed memorandum of understanding (MOU) between the prospective licensee and the Corps specifying the operational procedures and power rule curves consistent with overall project management objectives. The MOU must be signed prior to start of power operation.

-- Prospective licensee must reimburse the Federal Government for the use of lands and facilities and for an appropriate part of the costs of the existing Federal project by which the head created at the Federal project makes the installation of power feasible. Assessment of these costs, development of charges therefrom, and collection of charges will be accomplished by FERC.

-- Reimbursement to the Federal Government will also be required for any additional construction costs incurred by the Federal Government as a result of installation of the power facilities. Such costs will be determined and collected by the Corps.

-- Prospective licensee must furnish electric power free of cost to the United States for operation and maintenance of the project navigation facilities. The power will be furnished at voltage and frequency required by such facilities, whether such facilities are constructed by the licensee or by the United States.

-- The prospective licensee shall furnish, operate and maintain adequate lights, signals and protective warning devices in conjunction with the pondage operation to provide for safe navigation and for the safety of persons using the public recreational facilities at the Federal project.

(c) Applications to Corps division or district commanders for approval of repairs, maintenance or modification of non-Federal hydroelectric projects authorized under River and Harbor Acts as well as special Acts of Congress prior to 1920, or requests for advice with respect thereto, should be referred to FERC for consideration in accordance with the provisions of the Federal Power Act. The applicant should be advised that the matter is being referred to the FERC for consideration and that, if a FERC license is required, Corps recommendations will be furnished to the FERC.

(2) Responsibilities under Section 404 of the Clean Water Act (CWA) of 1977 pertinent to discharge of dredged or fill material into the navigable waters at specified disposal sites will be met only through the Department of Army permit procedures. In regard to FERC cases involving Section 404, the Corps report to the FERC will specify the need for a Department of Army permit (Section 404) if, on the basis of the division and district commanders' findings, such permit is deemed necessary. A Department of the Army permit will be required for any portion of a proposed project which involves the discharge of dredged or fill material into the waters of the United States. This includes the placement of fill necessary for construction of a

project's dam and appurtenant structures.

(3) When applicable, FERC will be advised that the requirement for Department of the Army permit pursuant to Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 for the transport of dredged material from the project site for the purpose of dumping it into the ocean waters will be met only through the Department of the Army permit program.

(4) In connection with FERC licensed projects, there may be proposed nonpower water oriented activities, such as recreational development, which are associated with the overall project but may not be a part of the hydroelectric power facilities at the project. If such cases involve navigable waters, they should be reviewed from the standpoint of need for a Section 10 permit. Such Section 10 permit actions would involve consideration of the overall public interest including water quality, fish and wildlife, recreation, general environmental concerns and the needs and welfare of the people. Corps responsibilities for permit requirements under Section 10 of the River and Harbor Act of 1899 for nonpower activities affecting navigable waters at licensed FERC projects will be met only through the Army permit procedures. The Corps report by the division commanders to FERC will specify the need for such permit as deemed necessary.

24-13. Prime and Unique Farmland.

a. Farmland Protection Policy Act. This Act (Subtitle I of Title XV of the Agriculture and Food Act of 1981) is implemented under Department of Agriculture final rule effective 6 August 1984 (7 CFR 658). The final rule requires that Corps FOAs contact the NRCS for identification of prime or unique farmland which might be impacted by proposed Corps actions. Prior to taking any action that would result in conversion of designated prime or unique farmland to nonagricultural uses, the Corps must examine the potential impacts of the proposed action and, if there are adverse effects on farmland preservation, consider alternatives to lessen the adverse effects. It is within the Corps discretion to proceed with a project that would result in conversion of farmland to nonagricultural uses once the required examination has been completed. The final rule also requires the Corps to ensure that its programs, to the extent practicable, are compatible with state, local and private programs for the protection of farmlands and encourages the Corps and other Federal agencies to make the analysis of farm conversion impacts an integral part of their review under NEPA.

b. CEQ 11 August 1980 Memorandum. The Corps has considered the effects of its proposed actions on agricultural lands, through the environmental assessment process, since issuance of a 30 August 1976 CEQ memorandum. The 11 August 1980 memorandum superceded the earlier one and reinforced the prior requirement that Federal agencies analyze the effects of their proposed actions on prime and unique farmland as an integral part of their environmental assessment process under NEPA. It is the Corps position that compliance with the evaluation requirements of the Farmland Protection Policy Act (final rule) also will satisfy the assessment requirements set forth in the CEQ memorandum. Preliminary reviews and assessments will be summarized in the draft NEPA document, and the results of the completed evaluations in the final document.

24-14. Highly Erodible Lands and Wetlands Conservation. The Food Security Act of 1985 (Public Law 99-198) contains provisions designed to discourage the conversion of wetlands into non-wetland areas

(these, collectively, are commonly referred to as "Swampbuster" provisions). These provisions, implemented under Department of Agriculture (USDA) final rule effective 17 September 1987 (7 CFR 12), are administered by the NRCS. The final rule sets forth the terms and conditions under which a person, who has produced an agricultural commodity on newly converted wetlands, shall be declared ineligible for certain benefits provided by USDA. Such benefits include: commodity price support or production adjustment payments; farm storage facility loans; disaster payments; payments for storage of grain owned or controlled by the Commodity Credit Corporation; Federal crop insurance; and FmHA loans. Farmers who plant commodity crops, after 23 December 1985, on lands that were converted from a wetland to a non-wetland condition by a Corps project will trigger "Swampbuster" considerations which may lead to the cited USDA program ineligibilities. This could result in lessening of sponsor support for a project and a reduction in estimated benefits that might otherwise have been attributed to the project proposal. It could also change the with and without project assumptions used to establish environmental impacts and associated mitigation needs; this is particularly significant where habitat preservation credit is a component of mitigation plans. The Corps coordinates its flood control plans involving agricultural lands with the NRCS, and alerts project sponsors and affected farmers of their responsibilities for meeting requirements set forth in the "Swampbuster" provisions of the Food Security Act of 1985. The Act provides for certain "third party" exemptions which may be available to landowners who receive ancillary drainage benefits from Corps projects. It is the responsibility of the individual landowner, not the Corps, to request such an exemption.

24-15. Superfund Program. The Environmental Protection Agency (EPA) is assigned primary responsibility under Executive Order 12580 for implementing the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Public Law 96-510), commonly referred to as "Superfund." An interagency agreement with EPA executed 3 December 1984 (replacing an earlier agreement of 3 February 1982) provides for the Corps to assist EPA in certain ways. EPA has a three-tiered process that will determine the extent of Corps assistance. Under the process, EPA will: (1) determine whether a private entity is liable for clean-up and will approach that entity to perform the work of clean-up; if that does not develop, then (2) determine whether the state can/will do the clean-up; if not (3) determine that Federal clean-up is appropriate and request the Corps to undertake the work. The Corps will serve as contract manager as follows:

a. Review design

b. Monitor construction

c. Provide technical assistance to EPA

d. Review state plans at EPA request

The actual design and construction will be performed by contract with private firms under supervision by the Corps.

24-16. Coastal Zone Management Act (CZMA) of 1972, as amended (Public Laws 92-583 and 101-508). This Act declared a national interest in the effective management, beneficial use, protection and development of the coastal zone. It indicates that the primary responsibility for planning and regulation of land and water uses rests with the state and local governments. The Act states that Congress finds that the key to more effective protection and use of the land and water

resources of the coastal zone is to encourage the states to exercise their full authority over lands and waters in the coastal zone. The Secretary of Commerce is authorized to award Federal grants to assist the states in developing and administering land and water use management programs for the coastal zone giving full consideration to ecological, cultural, historic and esthetic values as well as to the need for economic development. Federal agencies proposing activities or development projects including civil works activities, whether within or outside of the coastal zone, that are reasonably likely to affect any land or water use or natural resource of the coastal zone, must assure that those activities or projects are consistent, to the maximum extent practicable, with the approved state programs. For non-Federal projects, a required Corps permit listed in the state's coastal management program cannot be issued until the state has concurred with the permit applicant's certification of compliance with the plan or until the state has waived its right to do so.

24-17. Coastal Barrier Resources Act of 1982 (Public Law 92-348). This act established the Coastal Barrier Resources System, consisting of 182 units of undeveloped barrier islands on the Atlantic and Gulf coasts, and prohibits Federal expenditures for construction, purchase, or stabilization projects within those units. It is administered by the Secretary of the Interior through the FWS. The intent is to protect fish, wildlife, and migratory habitats; to prevent loss of human life; and to preclude Federal expenditures that induce development on coastal barrier islands and adjacent nearshore areas. Except for maintenance of existing projects, e.g., dredging, no new Federal expenditures or financial assistance is allowed for areas within the system.

24-18. Abandoned Shipwreck Act of 1987 (Public Law 100-298). This act creates Federal authority to transfer ownership of abandoned shipwrecks to the state on whose submerged lands the wreck is located. The Department of the Interior administers the Act through regulations issued by the NPS. Exceptions are those shipwrecks on public lands of the United States, which will be kept in Federal ownership, and those on Indian lands, which will be the property of the Indian tribe owning the land rights. The Act provides Federal protection to any shipwreck which meets the criteria for elegibility for inclusion in the National Register for Historic Places. Therefore, disposal of dredged or other material on or in the near vicinity of such wrecks is prohibited.

24-19. Support to the National Flood Insurance Program (NFIP). Under interagency agreements, the Corps provides technical assistance to FEMA on a reimbursable basis in support of the NFIP. Two components of that program, the accomplishment of Flood Insurance Studies (FISs) and Limited Map Maintenance Program (LMMP) efforts, require detailed hydrologic and hydraulic analyses to determine areas of flood hazards and the degree of flood risk. Study requirements for these components are outlined in the Corps "Instructions for Flood Insurance Studies," FEMA's "Guidelines and Specifications for Study Contractors" and supplementary directives by FEMA. Another component of the NFIP, the Community Assistance Program (CAP), requires tasks which assist local officials in the administration of the NFIP for their community. Applicable tasks include surveying of additional elevation reference marks, performing community assessment visits, holding floodproofing workshops, etc. Guidance for this component is outlined in FEMA's "Community Assistance Program Manual" and subsequent directives by FEMA.

24-20. Department of Energy (DOE) Real Estate Assistance. Pursuant to a memorandum of agreement between DOE and Army, effective 26 August

1987, Corps offices assist DOE in the acquisition and management of real estate. According to this agreement, Corps offices acquire lands and interests on behalf of DOE in accordance with existing Corps procedures and in accordance with applicable laws, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646). (ER 405-1-12)

24-21. Department of Commerce (DOC) Real Estate Assistance. Pursuant to a memorandum of agreement between the DOC and the Corps, effective 6 September 1985, Corps offices assist the DOC in the acquisition of real estate for National Weather Service (NWS) installations. (ER 405-1-12)

24-22. National Estuary Program. This program was established under Section 317 of the Water Quality Act of 1987 (Public Law 100-4). Compliance requires coordination with the EPA and the designated state agency.

APPENDIX A

REFERENCES

PUBLIC LAWS (P.L.)

Chapter (Ch.) 229, 5 July 1884, River and Harbor Act of 1884.

Ch. 860, 11 August 1888, River and Harbor Act of 1888.

Ch. 907, 19 September 1890, River and Harbor Act of 1890.

Ch. 299, 18 August 1894, River and Harbor Act of 1894.

Ch. 425, 3 March 1899, River and Harbor Act of 1899.

P.L. 60-317, (Ch. 264), 3 March 1909, River and Harbor Act of 1909.

P.L. 63-291, (Ch. 142), 4 March 1915, River and Harbor Act of 1915.

P.L. 65-37, (Ch. 49), 8 August 1917, River and Harbor Act of 1917.

P.L. 66-152, (Ch. 91), 28 February 1920, Transportation Act of 1920.

P.L. 66-261, (Ch. 250), 5 June 1920, Merchant Marine Act of 1920.

P.L. 66-263, (Ch. 252), 5 June 1920, River and Harbor Appropriation Act of 1920.

P.L. 66-280, (Ch. 285), 10 June 1920, The Federal Water Power Act.

P.L. 71-520, (Ch. 847), 3 July 1930, River and Harbor Act of 1930.

P.L. 74-738, (Ch. 688), 22 June 1936, Flood Control Act of 1936.

P.L. 75-761, (Ch. 795), 28 June 1938, Flood Control Act of 1938.

P.L. 76-647, (Ch. 409), 21 June 1940, Bridge Alterations (Truman-Hobbs) Act.

P.L. 77-228, (Ch. 377), 18 August 1941, Flood Control Act of 1941.

P.L. 78-534, (Ch. 665), 22 December 1944, Flood Control Act of 1944.

P.L. 79-14, (Ch. 19), 2 March 1945, River and Harbor Act of 1945.

P.L. 79-526, (Ch. 596), 24 July 1946, Flood Control Act of 1946.

P.L. 79-727, (Ch. 960), 13 August 1946, Shores of Publicly Owned Property.

P.L. 80-858, (Ch. 771), 30 June 1948, Flood Control Act of 1948.

P.L. 81-152, (Ch. 288), 30 June 1949, Federal Property and Administrative Services Act of 1949.

P.L. 83-780, (Ch. 1264), 3 September 1954, Flood Control Act of 1954.

P.L. 84-99, (Ch. 194), 28 June 1955, Emergency Flood Control Work.

P.L. 84-826, (Ch. 768), 28 July 1956, Shores - Construction Against Erosion.

P.L. 85-480, 2 July 1958, Publications.

P.L. 85-500, 3 July 1958, River and Harbor and Flood Control Act of 1958.

P.L. 85-624, 12 August 1958, Fish and Wildlife Coordination Act.

P.L. 86-523, 27 June 1960, The Reservoir Salvage Act of 1960.

P.L. 86-645, 14 July 1960, River and Harbor and Flood Control Act of 1960.

P.L. 86-717, 6 September 1960, Forest Conservation.

P.L. 87-874, 23 October 1962, River and Harbor and Flood Control Act of 1962.

P.L. 88-172, 7 November 1963, Coastal Engineering Research.

P.L. 88-206, 17 December 1963, Clean Air Act of 1963.

P.L. 88-352, 2 July 1964, Civil Rights Act of 1964.

P.L. 88-578, 3 September 1964, Land and Water Conservation Fund Act of 1964.

P.L. 89-72, 9 July 1965, The Federal Water Project Recreation Act of 1965.

P.L. 89-80, 22 July 1965, Water Resources Planning Act.

P.L. 89-298, 27 October 1965, River and Harbor and Flood Control Act of 1965.

P.L. 89-665, 15 October 1966, National Historic Preservation Act of 1966.

P.L. 90-448, 1 August 1968, Flood Insurance.

P.L. 90-454, 3 August 1968, Estuary Protection Act.

P.L. 90-483, 13 August 1968, River and Harbor and Flood Control Act of 1968.

P.L. 90-542, 2 October 1968, Wild and Scenic Rivers Act.

P.L. 90-577, 16 October 1968, Intergovernmental Cooperation Act of 1968.

P.L. 91-190, 1 January 1970, National Environmental Policy Act of 1969.

P.L. 91-224, 3 April 1970, Water Quality Improvement Act of 1970 and Environment Quality Improvement Act of 1970.

P.L. 91-604, 31 December 1970, Clean Air Act Amendments.

P.L. 91-611, 31 December 1970, River and Harbor and Flood Control Act of 1970.

P.L. 91-646, 2 January 1971, Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970.

P.L. 92-340, 10 July 1972, Ports and Waterways Act of 1972.

P.L. 92-500, 18 October 1972, The Federal Water Pollution Control Act Amendments of 1972.

P.L. 92-532, 23 October 1972, Marine Protection, Research and Sanctuaries Act.

P.L. 92-583, 27 October 1972, Coastal Zone Management Act of 1972.

P.L. 93-205, 28 December 1973, Conservation, Protection, and Propagation of Endangered Species.

P.L. 93-234, 31 December 1973, Flood Disaster Protection Act of 1973.

P.L. 93-251, 7 March 1974, Water Resources Development Act of 1974.

P.L. 93-288, 22 May 1974, Disaster Relief Act Amendments of 1974.

P.L. 93-291, 24 May 1974, Preservation of Historical and Archeological Data.

P.L. 93-344, 12 July 1974, Congressional Budget and Impoundment Control Act of 1974.

P.L. 93-502, 21 November 1974, Freedom of Information Act Amendments.

P.L. 94-587, 22 October 1976, Water Resources Development Act of 1976.

P.L. 95-217, 27 October 1977, Clean Water Act of 1977.

P.L. 95-269, 26 April 1978, Rivers and Harbors - Improvements.

P.L. 95-341, 11 August 1978, American Indian Religious Freedom Act.

P.L. 95-367, 17 September 1978, National Climate Program Act.

P.L. 95-502, 21 October 1978, Internal Revenue Code of 1954, Amendment.

P.L. 95-563, 1 November 1978, Contracts Disputes Act of 1978.

P.L. 95-632, 10 November 1978, Endangered Species Act Amendments of 1978.

P.L. 96-95, 31 October 1979, Archeological Resources Protection Act of 1979.

P.L. 96-480, 21 October 1980, Stevenson-Wydler Technology Innovation Act of 1980.

P.L. 96-510, 11 December 1980, Comprehensive Environmental Response, Conservation and Liability Act (CERCLA) of 1980.

P.L. 96-511, 11 December 1980, Paperwork Reduction Act of 1980.

P.L. 96-515, 12 December 1980, National Historic Preservation Act Amendments of 1980.

P.L. 96-597, 24 December 1980, Appropriations Act, U.S. Insular Areas.

P.L. 97-258, 13 September 1982, The Economy Act.

P.L. 99-198, 23 December 1985, Food Security Act of 1985.

P.L. 99-499, 17 October 1986, The Emergency Planning and Community Right to Know Act of 1986.

P.L. 99-502, 20 October 1986, Federal Technology Transfer Act of 1986.

P.L. 99-662, 17 November 1986, Water Resources Development Act of 1986.

P.L. 100-17, 2 April 1987, Uniform Relocation Act Amendments of 1987 (Title IV).

P.L. 100-676, 17 November 1988, Water Resources Development Act of 1988.

P.L. 101-580, 5 November 1990, Omnibus Budget Reconciliation Act of 1990.

P.L. 101-601, 16 November 1990, Native American Grave and Repatriation Act.

P.L. 101-640, 29 November 1990, Water Resources Development Act of 1990.

P.L. 102-580, 31 October 1992, Water Resources Development Act of 1992.

P.L. 103-141, 16 November 1993, Religious Freedom Restoration Act of 1993.

P.L. 104-303, 12 October 1996, Water Resources Development Act of 1996.

EXECUTIVE ORDERS (E.O.)

E.O. 11541, 1 July 1970, Office of Management and Budget.

E.O. 11644, 8 February 1972, Use of Off-Road Vehicles on Public Lands (as amended by E.O. 11989, 24 May 1977).

E.O. 11988, 24 May 1977, Floodplain Management.

E.O. 11990, 24 May 1977, Protection of Wetlands.

E.O. 12088, 13 October 1978, Federal Compliance with Pollution Control Standards.

E.O. 12319, 9 September 1981, River Basin Commissions.

E.O. 12322, 17 September 1981, Water Resources Projects.

E.O. 12580, 23 January 1987, Superfund Implementation (as amended by E.O. 13016, 28 August 1996).

E.O. 12615, 19 November 1987, Performance of Commercial Activities.

E.O. 12856, 3 August 1993, Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements.

E.O. 12898, 11 February 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.

E.O. 13007, 24 May 1996, Indian Sacred Sites.

DEPARTMENT OF DEFENSE (DOD) DIRECTIVES/INSTRUCTIONS

DOD Directive 5500.11, Nondiscrimination in Federally Assisted Programs.

DOD Instruction 7730.53, Specialized or Technical Services Provided to State or Local Government.

ARMY REGULATIONS (AR)

AR 5-4 (OCE Supplement 1), Department of the Army Productivity Improvement Program.

AR 15-1 (HQUSACE Supplement 1), Committee Management.

AR 27-40, Litigation.

AR 37-60, Pricing for Materiel and Services.

AR 70-57, Military - Civilian Technology Transfer.

AR 190-29, Misdemeanors & Uniform Violation Notices Referred to U.S. Magistrates or District Courts.

AR 500-60, Disaster Relief.

AR 600-7, Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army.

ENGINEER REGULATIONS (ER)

ER 5-1-3, Commercial Activities Program.

ER 5-1-11, Program and Project Management.

ER 10-1-1, Mission and Command Organization of the Chief of Engineers.

ER 10-1-2, U.S. Army Corps of Engineers Division and District Offices Policies.

ER 10-1-5, Mississippi River Commission.

ER 10-1-8, US Army Engineer Waterways Experiment Station.

ER 10-1-16, US Army Coastal Engineering Research Board.

ER 10-1-23, US Army Corps of Engineers Water Resources Support Center.

ER 10-1-25, US Army Cold Regions Research and Engineering Laboratory.

ER 10-1-26, US Army Construction Engineering Research Laboratories.

ER 10-1-45, US Army Engineer Topographic Center (TEC).

ER 11-1-320, Civil Works Emergency Management Activities.

ER 11-2-201, Civil Works Activities - Funding, Work Allowances, and Reprogramming.

ER 11-2-220, Civil Works Activities General Investigation (RCS: DAEN-CWB-12).

ER 11-2-240, Civil Works Activities - Construction & Design.

ER 25-2-1, Annual Report of the Secretary of the Army on Civil Works Activities.

ER 37-2-10, Accounting and Reporting Civil Works Activities.

ER 70-1-5, Corps of Engineers Research and Development Program.

ER 200-2-2, Procedures for Implementing NEPA.

ER 360-1-1, Public Affairs.

ER 405-1-12, Real Estate Handbook.

ER 415-2-1, Policies & Practices - Clearing.

ER 415-2-100, Staffing for Civil Works Projects.

ER 500-1-1, Natural Disaster Procedures.

ER 1105-2-100, Guidance for Conducting Civil Works Planning Studies.

ER 1110-2-50, Low Level Discharge Facilities for Drawdown of Impoundments.

ER 1110-2-240, Water Control Management.

ER 1110-2-241, Use of Storage Allocated for Flood Control and Navigation at Non-Corps Projects.

ER 1110-2-1150, Engineering and Design for Civil Works Projects.

ER 1110-2-1155, Dam Safety Assurance Program.

ER 1110-2-1156, Dam Safety - Organization, Responsibilities,and Activities.

ER 1110-2-1302, Civil Works Cost Engineering.

ER 1110-2-1403, Studies by Corps Hydraulic and Hydrologic Facilities and Others.

ER 1110-2-1451, Acquisition of Lands Downstream from Spillways for Hydrologic Safety Purposes.

ER 1110-2-1454, Corps Responsibilities for Non-Federal Hydroelectric Power Development under the Federal Power Act.

ER 1110-2-1457, Hydraulic Design of Small Boat Navigation.

ER 1110-2-1458, Hydraulic Design of Shallow Draft Navigation Projects.

ER 1110-2-1941, Drought Contingency Plans.

ER 1110-2-2902, Prescribed Procedures for the Maintenance and Operation of Shore Protection Works.

ER 1110-2-8151, Monitoring Coastal Projects.

ER 1110-2-8154, Water Quality and Environmental Management for Corps Civil Works Projects.

ER 1110-8-2(FR), Inflow Design Floods for Dams and Reservoirs.

ER 1130-2-406, Shoreline Management at Civil Works Projects.

ER 1130-2-500, Project Operations - Partners and Support (Work Management Policies).

ER 1130-2-510, Project Operations - Hydroelectric Power Operations and Maintenance Policies.

ER 1130-2-520, Project Operations - Navigation and Dredging Operations and Maintenance Policies.

ER 1130-2-530, Project Operations - Flood Control Operations and Maintenance Policies.

ER 1130-2-540, Project Operations - Environmental Stewardship Operations and Maintenance Policies.

ER 1130-2-550, Project Operations - Recreationn Operations and Maintenance Policies.

ER 1140-1-211, Support for Others: Reimbursable Work.

ER 1150-2-302, Annual Report on Local Cooperation Agreements.

ER 1165-2-18, Reimbursement for Non-Federal Participation in Civil Works Projects.

ER 1165-2-21, Flood Damage Reduction Measures in Urban Areas.

ER 1165-2-25, Navigation Policy: Cost Apportionment of Bridge Alterations.

ER 1165-2-26, Implementation of Executive Order 11988 on Flood Plain Management.

ER 1165-2-29, General Credit for Flood Control.

ER 1165-2-30, Acceptance and Return of Required, Contributed,or Advanced Funds.

ER 1165-2-111, Corps of Engineers Activities under the Small Reclamation Projects Act of 1956, as Amended.

ER 1165-2-117, Responsibility for Costs of Improved Standards in Highway and Housing Relocations.

ER 1165-2-118, Federal Participation in Covered Flood Control Channels.

ER 1165-2-119, Modifications to Completed Projects.

ER 1165-2-120, Reimbursement for Advance Non-Federal Construction of Federally Authorized Harbor and Inland Harbor Improvements.

ER 1165-2-121, Flood Control Cost-Sharing Requirements under the Ability-to-Pay Provision - Section 103(m) of P.L. 99-662.

ER 1165-2-123, Single-Owner Situations.

ER 1165-2-124, Construction of Harbor and Inland Harbor Projects by Non-Federal Interests.

ER 1165-2-130, Federal Participation in Shore Protection.

ER 1165-2-131, Local Cooperation Agreements for New Start Construction Projects.

ER 1165-2-132, Hazardous, Toxic and Radioactive Waste (HTRW) Guidance for Civil Works Projects.

ER 1165-2-400, Recreation Planning, Development, and Management Policies.

ER 1180-1-6, Construction Quality Management.

ENGINEER PAMPHLETS (EP)

EP 500-1-2, Corps of Engineers Mobilization and Operations Planning System (CEMOPS).

EP 1130-2-540, Project Operations - Environmental Stewardship Operations and Maintenance Policies.

EP 1165-2-2, Indices of Interagency and International Agreements.

ENGINEER MANUALS (EM)

EM 1110-2-38, Environmental Quality in Design of Civil Works Projects.

EM 1110-2-301, Guidelines for Landscape Planting at Floodwalls, Levees & Embankment Dams.

EM 1110-2-410, Design of Recreation Areas and Facilities - Access and Circulation.

EM 1110-2-1201, Reservoir Water Quality Analyses.

EM 1110-2-1202, Environmental Engineering for Deep-Draft Navigation Projects.

EM 1110-2-1204, Environmental Engineering for Coastal Shore Protection.

EM 1110-2-1205, Environmental Engineering and Local Flood Control Channels.

EM 1110-2-1411, Standard Project Flood Determinations.

EM 1110-2-1607, Tidal Hydraulics.

EM 1110-2-1611, Layout and Design of Shallow-Draft Waterways.

EM 1110-2-1613, Hydraulic Design of Deep-Draft Navigation Projects.

EM 1110-2-1615, Hydraulic Design of Small Boat Harbors.

EM 1110-2-3600, Management of Water Control Systems.

OFFICE MEMORANDUMS (OM)

OM 15-2-1, Chief of Engineers Environmental Advisory Board.

OTHER PUBLICATIONS

Proposed Practices for Economic Analysis of River Basin Projects, Interagency Committee on Water Resources, May 1950 (Revised May 1958).

Principles and Standards for Planning Water and Related Land Resources, U.S. Water Resources Council, September 1973 (Revised 14 December 1979 and 29 September 1980).

Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, U.S. Water Resources Council, 10 March 1983.

U.S. Army Corps of Engineers Tribal Policy Principles,

APPENDIX B

LEGISLATION PERTINENT TO THE WATER RESOURCES PROGRAM OF THE CORPS OF ENGINEERS

B-1. 11 March 1779, Corps of Engineers. Resolved, "That the engineers in the service of the United States shall be formed into a corps and styled the 'Corps of Engineers,' ...That a commandant of the Corps of Engineers shall be appointed by Congress, ..." However, the Corps was mustered out of service in 1783 and was not permanently organized until 1802.

B-2. 7 August 1789, Lighthouse Act of 1789. The ninth statute enacted by the First Congress, this act initiated Federal navigational improvements. It authorized the Secretary of the Treasury to maintain existing lighthouses, beacons, buoys, and piers to aid navigation in the nation's bays, inlets, ports, and harbors, provided that the states would cede the structures to the new federal government. He was also authorized to build a new lighthouse near the entrance to Chesapeake Bay (1 Stat. 53-54).

B-3. 16 March 1802, An Act Fixing the Military Establishment of the United States. Authorizes the President "when he shall deem it expedient, to organize and establish a corps of engineers" and establishes that the Corps "shall be stationed at West Point in the state of New York, and shall constitute a military academy." The Corps traces its continuous existence to this act.

B-4. 30 April 1824, An Act to Procure the Necessary Surveys, Plans, and Estimates, upon the subject of roads and canals (General Survey Act). Authorizes the President to "employ two or more skilfull (sic) engineers, and such officers of the corps of engineers, or who may be detailed to do duty with that corps" to survey "routes of such roads and canals as he may deem of national importance in a commercial or military point of view, or necessary for the transportation of the public mail." (4 Stat. 22-23) Although this act did not authorize surveys of inland rivers, the Corps generally traces its permanent involvement in civil works to this legislation.

B-5. 24 May 1824, Navigation. The first appropriation by Congress for work in inland navigable waters was $75,000 for improving navigation over sand bars in the Ohio River and for removing snags from the Ohio and Mississippi Rivers (4 Stat. 32).

B-6. 20 May 1826, River and Harbor Act of 1826. This was the first act that authorized both surveys and construction for numerous water projects throughout the country. In consolidating in one act both planning and construction, it became the first true river and harbor law.

B-7. 3 March 1841, U.S. Lake Survey. Appropriated $15,000 for a "hydrographic survey of the coasts of the northern and northwestern lakes of the United States" thus initiating the U.S. Lake Survey supervised by the Corps. This survey lasted until 1970, when most of its responsibilities were transferred to the newly established National Oceanic and Atmospheric Administration of the Department of Commerce.

B-8. 11 September 1841, Joint Resolution. Land Titles. A joint resolution, which had the force of law, prohibited the expenditure of

public funds on lands purchased for "public buildings of any kind whatever" until the Attorney General certified the validity of Federal title and the relevant state legislature consented to its purchase. This resolution would ultimately be applied to the sites of structures designed to improve navigation (5 Stat. 468).

B-9. 30 September 1850, Mississippi River Survey. Appropriated $50,000 for a "topographical and hydrographical survey of the Delta of the Mississippi". The Corps' eventual product was the Report Upon the Physics and Hydraulics of the Mississippi River, a massive study by Captain Andrew A. Humphreys and Lieutenant Henry L. Abbot of the Corps of Topographical Engineers, which in its insistence upon "levees only" substantially influenced the Corps' approach to flood problems on the lower Mississippi and other alluvial rivers.

B-10. 31 August 1852, Lighthouse Act of 1852. Created a nine-member Lighthouse Board, headed by the Secretary of the Treasury, to oversee the construction, operation, and repair of Federal lighthouses, light-vessels, beacons, and buoys. Three seats on this board were to be held by Army engineers (10 Stat. 119-20).

B-11. 3 March 1875, River and Harbor Act of 1875. Work by Contract. Section 1 directed that Secretary of the Army apply funds as far as may be advantageous by contract, after public advertisement, with the lowest responsible bidders.

B-12. 14 August 1876, River and Harbor Act. Protection of Navigational Improvements. Section 3 first imposed Federal criminal sanctions for wilfully injuring any federal navigational improvement (19 Stat. 139).

B-13. 28 June 1879, Mississippi River Commission. Federal flood control activity took definite form by the establishment of the Mississippi River Commission with jurisdiction over navigation work and flood control related thereto on the lower Mississippi River (21 Stat. 37, U.S.C. 641-647).

B-14. 14 June 1880, River and Harbor Act of 1880. Authorized a dam at Lake Winnibigoshish on the headwaters of the Mississippi River for navigation purposes. This was the first reservoir built by the Corps of Engineers.

B-15. 24 April 1888, Land Acquisition and Condemnation Proceedings for River and Harbor Improvements. Authorized the Secretary of the Army to initiate condemnation proceedings for or to purchase at a mutually agreed price any lands, rights-of-way, or material needed to maintain, operate, or prosecute authorized works for the improvement of rivers and harbors and to accept donations of lands or materials required for the maintenance or prosecution of such works (24 Stat. 94, 33 U.S.C. 591)

B-16. 11 August 1888, River and Harbor Act. Fishway Construction. Section 11 authorized construction of fishways whenever Federal river and harbor improvements obstruct passage of fish (26 Stat. 426, 33 U.S.C. 608).

B-17. 19 September 1890, River and Harbor Act of 1890. Mississippi River Levees. Congress replaced language in earlier river and harbor appropriation acts allowing the Mississippi River Commission to build or repair levees only for navigation purposes and not to prevent flood damages (22 Stat. 208, 23 Stat. 146, 24 Stat. 329, and 25 Stat. 421)

with more relaxed authority to spend the appropriated funds "for the general improvement of the river, for the building of levees, [and] for surveys. . . in such proportion as in their opinion shall best promote the interests of commerce and navigation" (26 Stat. 450). This initiated Corps activities to provide general flood relief along the Mississippi River. The first comprehensive anti-obstruction law.
Discharge of Wastes. Section 6 first prohibited the discharge into navigable waters of wastes "which shall tend to impede or obstruct navigation," except under permit from the Secretary of the Army.
Building of Structures. Section 7 prohibited the building of structures in navigable waters outside harbor lines or the building of bridge piers and abutments anywhere in those waters without permission of the Secretary of the Army, except for bridges previously authorized.
Removal of Wrecks. Section 8 authorizes the Secretary of the Army to remove wrecks that obstruct navigation if they remain obstructions for longer than two months.
Defacing River and Harbor Improvements. Section 9 prohibits private persons from defacing river and harbor improvements or taking possession of such improvements.
Unauthorized Obstructions. Section 10 provided criminal sanctions for creating or permitting the continuance of any unauthorized obstruction to navigation (26 Stat. 453-55).
Authorization of Harbor Lines. Section 12 authorizes the Secretary of the Army to establish harbor-lines where he thinks it necessary.

B-18. 21 February 1891, Commercial Statistics. Required owners, agents, masters and clerks of vessels arriving or departing from locations on waterway improvements to furnish statistics on vessels, passengers, freight and tonnage (26 Stat. 766, 46 U.S.C. 48). (See Section 11, Public Law 362, 67th Congress)

B-19. 13 July 1892, River and Harbor Act. Dredging Restrictions. Section 5 prohibited the expenditure of money appropriated for the improvement of rivers and harbors, for dredging inside of duly established harbor lines (27 Stat. 111, 38 U.S.C. 628).

B-20. 1 March 1893, Debris Commission. The California Debris Commission was established with certain jurisdiction over hydraulic mining of the territory drained by the Sacramento and San Joaquin River Systems. The Commission was abolished 17 November 1988, by Section 1106, Public Law 99-662.

B-21. 7 August 1894, River and Harbor Act of 1894. Authorization to Regulate New York Harbor. Sections 2 and 3 authorized the supervisor of New York Harbor to regulate fishing, dumping, and the transportation of waste materials within the harbor and to arrest violators.
Rules and Regulations. Section 4 provided that "it shall be the duty of the Secretary of the Army to prescribe such rules and regulations for the use, administration, and navigation of any or all canals and similar works of navigation that now are, or that hereafter may be, owned operated or maintained by the United States as in his judgment the public necessity may require." This section amended section 7 of the 1884 River and Harbor Act and was itself amended by sections 6 and 11 of the 1902 River and Harbor Act.
Disposal of Wastes in Harbors. Section 6 prohibits the placing, discharging, or depositing of any waste into the waters of any harbor or river except for the waste flowing from streets and sewers and "passing therefrom in a liquid state." Notably, the prohibition was not confined to navigable waters but extended to all harbors and

rivers of the United States. The section also prohibited the defacing of bulkheads, jetties, dikes, levees, wharfs, pier, or other works built by the United States and provided criminal penalties.

B-22. 3 March 1899, River and Harbor Act. Permits. Section 9 requires approval of the Chief of Engineers, the Secretary of the Army and the consent of Congress for the construction of bridges, dams, dike, etc., across any navigable water of the U.S. Structures built under state authority in a single state require approval of the Chief of Engineers and the Secretary of the Army (33 U.S.C. 401). Section 10 prohibited placing obstructions to navigation outside established Federal lines and excavating from or depositing material in such waters, unless a permit for the works has been authorized by the Secretary of the Army (30 Stat. 1151, 33 U.S.C. 403).
Harbor Lines. Section 11 authorized the Secretary of the Army to establish harbor lines beyond which no piers, wharves, etc., shall be extended without a permit (30 Stat. 1151, 33 U.S.C. 404).
Refuse. Section 13 prohibited depositing refuse, except that flowing from streets and sewers in a liquid state, into any navigable water (30 Stat. 1152, 33 U.S.C. 407).
Obstructions. Section 15 prohibited obstructions by anchoring vessels and outlines the duties of an owner of a sunken vessel (30 Stat. 1152, 33 U.S.C. 409).
Sunken Vessels. Section 19 authorized removal of sunken vessels or other obstructions to navigation, if not removed by owner. (33 U.S.C. 414).
Vessel Grounding. Section 20 authorized removal or destruction of sunken or grounded vessels in emergencies endangering navigation. (33 U.S.C. 415).

B-23. 13 June 1902, Public Law 154, 57th Congress--River and Harbor Act. BERH. Section 3 authorized the establishment of the Board of Engineers for Rivers and Harbors with a primary function of reviewing all reports upon examinations and surveys authorized by Congress. (32 Stat. 372, 33 U.S.C. 541).

B-24. 17 June 1902, Public Law 161, 57th Congress--Reclamation. The Reclamation Act of 1902 established irrigation in the West as a National policy. The Act authorized the Secretary of the Interior to locate, construct, operate and maintain works for the storage, diversion, and development of waters for the reclamation of arid and semi-arid lands in the Western States (32 Stat. 388, 43 U.S.C. 1457).

B-25. 3 March 1905, Public Law 215, 58th Congress--River and Harbor Act. Refuse Regulations. Section 4 authorized the Secretary of the Army to prescribe regulations to govern the transportation and depositing of refuse in navigable waters (33 Stat. 1147, 33 U.S.C. 419). Section 6 provides for funding of activities associated with implementation of the above.

B-26. 8 June 1906, Antiquities Act. Provides for criminal penalties for anyone desecrating, injuring, excavating, or otherwise destroying any historic or prehistoric ruin or monument without express Federal permission. Authorizes the President to declare by public proclamation historic and prehistoric landmarks as national monuments. Permits Federal agencies to transfer objects of antiquity to properly qualified institutions. (16 U.S.C. 431 -433)

B-27. 3 March 1909 Public Law 317, 6Oth Congress--River and Harbor Act. Lock and Dam Replacement - Free Passage. Section 6 provided for replacement of obsolete locks and dams on authorized waterways. (35 Stat. 818, 33 U.S.C. 5).
Hydropower Development. Sections 11 and 12 directed the Secretary of the Army to acquire, either by condemnation or purchase, land owned and developed by power companies at the Falls of Marys River in Michigan and to revoke their water-power franchises, and they authorized him to lease water-power rights there for "a just and reasonable compensation" as he was building a new lock and dam at the site (35 Stat. 820-22). These provisions led to an important Supreme Court affirmation of Federal multipurpose water development rights and opened the way to many more multipurpose projects.
Contents of Survey Reports. Section 13 directed that reports contain such data as may be practicable to secure regarding the establishment of terminal and transfer facilities, development and utilization of water power for industrial and commercial purposes, and other subjects properly connected with the project (35 Stat. 822).

B-28. 17 June 1910, Public Law 217, 61st Congress -- Lighthouse Act of 1910. The Lighthouse Board was replaced by a wholly civilian Bureau of Lighthouses in the Departments of Commerce and Labor (36 Stat. 537-38).

B-29. 25 June 1910, Public Law 264, 6lst Congress--River and Harbor Act. Stream Flow Measurements. Section 3 directed that surveys of navigable streams include such streamflow measurements and other investigations of the watersheds as necessary for preparation of plans of improvements (36 Stat. 669, 33 U.S.C. 546).

B-30. 27 February 1911, Public Law 425, 6lst Congress--River and Harbor Act. Uniform Freight Classification. Section 1 directed the Corps to adopt a uniform system or freight classification in the collection of statistics related to traffic and to collate ton-mileage statistics upon rivers or inland waterways. Section 1 of 25 July 1912 Act also calls for such a uniform system. (37 Stat. 201, 33 U.S.C. 405).

B-31. 1 March 1911, Public Law 435, 6lst Congress--Conservation of Watersheds. Section 1 enables the states to enter into compacts or agreements with other states or the United States for the purpose of conserving the forests, water supplies and navigability of rivers (36 Stat. 961, 16 U.S.C. 552).

B-32. 25 July 1912, Public Law 241, 62d Congress--River and Harbor Act. BERH Functions. Section 3 authorized the BERH to examine and review previous reports on request by Committee Resolutions (37 Stat. 232).
Future Power. Section 12 authorized the Secretary of the Army on recommendation of Chief of Engineers to provide in any authorized dam for navigation such foundations, sluices, and other works as may be considered desirable for future water power development (37 Stat. 233, 33 U.S.C. 609).

B-33. 4 March 1913, Public Law 429, 62d Congress--River and Harbor Act. Contents of Survey Reports. Section 3 required that additional information be included in reports on terminal and transfer facilities, water power development, and other subjects that could be properly connected with a project (37 Stat. 825, 33 U.S.C. 545).

B-34. 4 March 1915, Public Law 291, 64th Congress--River and Harbor Act. Contributed Funds. Section 4 authorized the Secretary of the

Army to receive contributions from private parties for expenditure with Federal funds on authorized river and harbor improvements (38 Stat. 1053, 33 U.S.C. 560).
Bends. Section 5 provides that channel dimensions include increases at entrances, bends, sidings, and turning places for free movement of vessels.
Anchorages. Section 7 authorized the Secretary of the Army to establish anchorage grounds for vessels in all harbors, rivers, bays and other navigable waters (38 Stat. 1053, 33 U.S.C. 471). NOTE: This function was transferred to Secretary of Transportation by the Department of Transportation Act of 15 Oct 1966, Public Law 89-670.

B-35. 1 March 1917, Public Law 367, 64th Congress--Flood Control Act. Flood Control. Federal construction of flood control improvements was extended outside the Mississippi Valley for the first time. Section 2 authorized a project for the Sacramento River, California (39 Stat. 949, 33 U.S.C. 703).
Contents of Survey for Flood Control. Section 3 provided that all provisions of existing law on reports and projects for rivers and harbors should apply, insofar as applicable, to flood control and prescribed that all surveys for flood control should include a comprehensive study of the watershed, including water power, the effect of the improvement on navigation, and "such other uses as maybe properly related to or coordinated with the project." This legislation is generally considered the first Federal flood control law.
BERH Opinion. Requires BERH, in considering flood control projects, to state its opinion as to Federal interest, share of expense to be borne by the Federal Government, and advisability of adopting projects. (39 Stat. 950, 33 U.S.C. 701).

B-36. 8 August 1917, Public Law 37, 65th Congress--River and Harbor Act of 1917. Condemnation Proceedings. Section 9 authorized the Secretary of the Army to institute condemnation proceedings in the name of the United States for the acquisition of any land or easement whenever any state, any reclamation, flood control or drainage district, or other public agency created by the state is unable to obtain such land or easement for projects authorized by Congress (40 Stat. 267, 33 U.S.C. 593).

B-37. 18 July 1918, Public Law 200, 65th Congress--River and Harbor Act of 1918. Condemnation. Section 5 granted the Secretary of the Army the right to take immediate possession of lands on which he has instituted condemnation proceedings in the name of the United States for the acquisition of dry lands, easements, or rights-of-way needed for authorized river and harbor improvements.
Compensation Determination. Section 6 stated that when only part of a parcel of land is taken for navigational improvements, "any special and direct benefits" which those improvements will cause the remainder of the parcel must be taken into account in determining compensation (40 Stat. 911, 33 U.S.C. 594-95).

B-38. 2 March 1919, Public Law 323, 65th Congress--River and Harbor Appropriation Act. Public Terminal. Section 1 stated the policy of Congress that "...at least one public terminal should exist, constructed, owned, and regulated by the municipality, or other public agency of the state and open to the use of all on equal terms,..." (40 Stat. 1286, 33 U.S.C. 551).
Contract Price. Section 8 provided that contract price should not exceed by 25 percent the estimated cost of doing work by government

plant. (Amended by Public Law 95-269)

B-39. 28 February 1920, Public Law 152, 66th Congress--Transportation Act. Section 500 stated the policy of Congress to promote water transportation. Duties of the Secretary of the Army with the object of promoting water transportation, were outlined. Among the Secretary's duties was "to compile, publish, and distribute, from time to time, such useful statistics, data and information concerning transportation on inland waterways as he may deem to be of value to the commercial interests of the country." This initiated the Corps' Port Series. (41 Stat. 499, 49 U.S.C. 142).

B-40. 5 June 1920, Public Law 152, 66th Congress--Merchant Marine Act of 1920. Section 8 provides that the United States Shipping Board shall cooperate with the Secretary of War in promoting, encouraging, and developing ports and transportation facilities.

B-41. 5 June 1920, Public Law 263, 66th Congress--River and Harbor Appropriation Act. Contents of Survey Reports. Section 2 provided that reports "shall contain a statement of special or local benefit which will accrue to localities affected by such improvement and a statement of general or National benefits, with recommendations as to what local cooperation should be required, if any, on account of such special or local benefit" (41 Stat. 1010, 33 U.S.C. 547).

B-42. 10 June 1920, Public Law 280, 66th Congress--The Federal Water Power Act. Control non-Federal development of hydroelectric power through a licensing system to be administered by the newly created Federal Power Commission (FPC). Public Law 95-91 created the Federal Energy Regulatory Commission to replace functions administered by the FPC. (41 Stat. 1063, 16 U.S.C. 797e).

B-43. 22 September 1922, Public Law 362, 67th Congress. Adoption of Projects Time Limit. Section 9 directs that no projects will be considered for adoption, except with a view to a survey, if five years elapsed since the report on the proposed project was submitted to Congress.
Waterborne Commerce Statistics. Section 11 provides for the principal program governing the collection and compilation of statistics on the water borne commerce of the U.S.
Extension of Jurisdiction of Mississippi River Commission. Section 13 extends jurisdiction of Mississippi River Commission for the purposes of levee and bank protection, to the tributaries and outlets of the Mississippi River between Cairo, Ill. and the Head of the Passes. (42 Stat. 1043, 33 U.S.C. 555).

B-44. 7 June 1924, the Oil Pollution Control Act, 1924. Prohibited the discharge of oil into navigable waters except for certain emergencies, authorized the Secretary of War to prescribe regulations, and authorized Army Engineer officers and officers of the Customs and Coast Guard Service to arrest violators.

B-45. 3 March 1925, Public Law 585, 68th Congress--River and Harbor Act. Contributed Funds. Section 11 authorizes acceptance of funds advanced by local interests for prosecution of rivers and harbors work.

B-46. 21 January 1927, Public Law 560, 7Oth Congress--River and Harbor Act. 308 Reports. Section 1 authorized surveys in accordance with H. Doc. 308, 69th Congress. (Usually referred to as "308

Reports") on comprehensive development for navigation, waterpower, and flood control. This provided Congress basis for some emergency relief projects of the l930's and the basic plan of TVA. (45 Stat. 534).

B-47. 15 May 1928, Public Law 391, 7Oth Congress--The Flood Control Act of 1928. Comprehensive MR&T. Section 1 authorized the comprehensive plan for control of the Mississippi River and tributaries. (45 Stat. 534, 33 U.S.C. 7O2a).

B-48. 3 July 1930, Public Law 520, 7lst Congress--River and Harbor Act. Beach Erosion Board Established. Section 2 established the Beach Erosion Board (BEB). This Act of Congress provided for the Federal Government to make shore and beach protection studies in cooperation with local interests. The BEB was directed to furnish technical assistance and review reports of the investigations (46 Stat. 945, 33 U.S.C. 426). NOTE: The Act of 7 November 1963 abolished BEB, transferred review functions to BERH, and established the Coastal Engineering Research Center.

B-49. 10 February 1932, Public Law 16, 72d Congress--Recreational Boating. "The Fletcher Act" broadened the scope of Federal interest in navigation to include as "commerce" the use of waterways by "seasonal passenger craft, yachts, houseboats, fishing boats, motorboats, and other similar water craft, whether or not operated for hire". (47 Stat. 42, 33 U.S.C. 541)

B-50. 16 June 1933, National Industrial Recovery Act. Under the provisions of this legislation, President Franklin D. Roosevelt authorized the construction of several Corps locks and dams, including Fort Peck and Bonneville.

B-51. 23 April 1934, Payment for Levee Rights-of-Way in the Lower Mississippi Valley (Overton-Dear Act). This Act resolved the bitter controversy which had arisen from conflicting interpretations of the 1928 Flood Control Act. The government abandoned its efforts to compel owners of property along the tributaries of the lower Mississippi River to donate levee rights-of-way at no cost to the Government.

B-52. 30 August 1935, Public Law 409, 74th Congress--River and Harbor Act. Content of Survey Reports. Section 5 required that studies of the improvement of the entrance of the mouth of any river or of any inlet contain information concerning the possible accretion/erosion effects of the improvements on the shoreline for at least 10 miles on either side (49 Stat. 1048, 33 U.S.C. 546a).

B-53. 22 June 1936, Public Law 738, 74th Congress--Flood Control Act. Federal Interest. Section 1 declared flood control to be a proper Federal activity; that improvements for flood control purposes are in the interest of the general welfare; that the Federal Government should improve or participate in the improvement of navigable waters or their tributaries for flood control "if the benefits to whomsoever they may accrue are in excess of the estimated costs, and if the lives and social security of people are otherwise adversely affected" (49 Stat. 1570, 33 U.S.C. 7Ola).
Jurisdiction. Section 2 set forth the jurisdiction of Federal activities and prescribed among other things, "That, hereafter, Federal investigations and improvements of rivers and other waterways for flood control and allied purposes shall be under the jurisdiction of and shall be prosecuted by the Army Department under direction of

the Secretary of the Army and supervision of the Chief of Engineers" (49 Stat. 1570, 33 U.S.C. 7Olb).
Local Cooperation. Section 3 stipulated for the projects authorized therein what have become known as the "a-b-c" requirements of local cooperation; that local interests should: (a) provide without cost to the United States all lands, easements, and rights-of-way necessary for the construction of the project; (b) hold and save the United States free from damages due to the construction works; (c) maintain and operate all the works after completion in accordance with regulations prescribed by the Secretary of the Army (49 Stat. 1571, 33 U.S.C. 7Olc). Requirement (b) was amended by Section 9 of the Water Resources Development Act (WRDA) of 1974 (Public Law 93-251).

B-54. 26 June 1936, An Act For the Improvement and Protection of the Beaches Along the Shores of the United States. Federal Assistance. Section 1 provided for Federal assistance in the construction, but not maintenance, of shore improvement and protection projects to prevent coastal erosion in areas where "Federal interests" were involved.
Investigations. Section 2 authorized the Beach Erosion Board to make investigations to determine "the most suitable means of beach protection and restoration of beaches in different localities" and to advise states, political subdivisions, and individuals of appropriate places for recreational facilities, and to publish its findings.
Beach Erosion Board Opinion. Section 3 directed the Beach Erosion Board, when making reports on potential shore protection projects, to state its opinion on the advisability of the project, the Federal interest in the project, and the share of the expense that should be borne by the United States.

B-55. 19 July 1937, Public Law 208, 75th Congress--Contributed Funds. Authorized the Secretary of the Army to receive and expend funds contributed by states and political subdivisions in connection with funds appropriated by the United States for flood control projects when considered advantageous to the public interest (50 Stat. 518, 33 U.S.C. 7Olh).

B-56. 28 August 1937, Public Law 406, 75th Congress--Flood Control Act. Clearing and Snagging. Section 2 authorized small clearing and snagging projects for flood control, limited in Federal cost per project (50 Stat. 877, 33 U.S.C. 7Olg). Subsequently amended 24 July 1946 by Section 13, Public Law 526, 79th Congress; 24 September 1954 by Section 208, Public Law 780, 83d Congress (these projects are customarily referred to as "Section 208 Projects"); 7 March 1974 by Section 26, Public Law 93-251, and 17 November 1986 by Section 915(b), Public Law 99-662. The latter amended the Federal limit per project to $500,000.

B-57. 20 June 1938, Public Law 685, 75th Congress--River and Harbor Act of 1938. Land Exchange. Section 2 authorized the Secretary of the Army upon the recommendation of the Chief of Engineers, to exchange land or other property of the Government for private lands or property which may be advisable in the execution of authorized work of river and harbor improvement.
Easements. Section 10 authorized the Secretary of the Army to grant easements for rights-of-way for public roads across Federal lands. (52 Stat. 804, 33 U.S.C. 558b).

B-58. 28 June 1938, Public Law 761, 75th Congress--Flood Control Act of 1938. Modified a-b-c's. Section 2 modified the Flood Control Act of 22 June 1936 eliminating the a-b-c requirements for flood control reservoirs, channel improvement or channel rectification projects.

Lands, easements and rights-of-way include highway, railway and utility relocation. Amended by Act of 18 August 1941 (52 Stat. 1215, 33 U.S.C. 701 c-1).
Flood Area Evacuation. Section 3 provided for modification of authorized projects to provide for evacuation of all or parts of flood areas where such action would substantially reduce protection costs of authorized flood walls or levees (52 Stat. 1216, 33 U.S.C. 7Oli).
Future Power. Section 4 authorized installation of facilities for future power use when approved by the Secretary of the Army on recommendation of the Chief of Engineers and the Federal Power Commission (52 Stat. 1216, 33 U.S.C. 7Olj).

B-59. 4 August 1939, Public Law 260, 76th Congress--Reclamation Project Act of 1939. Section 9(b) permitted the Bureau of Reclamation to allocate part of reclamation project costs to flood control and navigation. In connection with the making of such an allocation, the Secretary of Interior shall consult with Chief of Engineers and Secretary of the Army and may perform necessary investigations or studies under a cooperative agreement with the Secretary of the Army (53 Stat. 1193, 43 U.S.C. 485h).

B-60. 1 February 1940, Public Law 409, 76th Congress. Federal Jurisdiction. Repealed the provision of the Joint Resolution of 11 September 1841 requiring state consent to the purchase of land for Federal buildings prior to the expenditure of public funds at the site. The Federal Government would henceforth have the option of obtaining civil and criminal jurisdiction at each site. This law eliminated the legal ability of state governments to veto Federal navigational or flood control projects.

B-61. 21 June 1940, Public Law 647, 77th Congress--Bridge Alterations. The Bridge Alteration Act (Truman-Hobbs Act) provided for apportionment, between the U.S. and the owners, of the cost of altering or relocating railroad and combined railroad and highway bridges, when found unreasonably obstructive to navigation. (Amended 16 July 1952 to be applicable to public highway bridges also). The owner must bear the part of the cost attributable to direct and special benefits accruing to the owner and the U.S. pays the balance including that attributable to the necessities of navigation (54 Stat. 497, 33 U.S.C. 516). Corps responsibility for administration of the Act were transferred to Department of Transportation 15 Oct 1966. Section 6 remains the basis for sharing cost of bridge changes in navigation survey reports.

B-62. 18 August 1941, Public Law 228, 77th Congress--Flood Control Act of 1941. Local Cooperation. Section 2 modified the 1936 and the 1938 Flood Control Acts (FCA) and required the a-b-c requirements only for channel and local protection projects and not for flood control reservoirs. This section also provided that authorization for any flood control project shall expire unless cooperation is furnished within 5 years after notification. This provision has been included in subsequent Flood Control Acts (55 Stat. 638, U.S.C. 701-c).
Emergency Flood Control Work. Section 5 authorized $1 million per year to be used for rescue work or repair, restoration or maintenance of damaged or threatened flood control works. (Section 5 was subsequently amended by Section 12 of the 1946 FCA; Section 206 of the 1948 FCA; Section 210 of the 1950 FCA; Public law 84-99; Section 206 of the 1962 FCA; Section 917 of WRDA 1986; Section 9 of the Farm Disaster Assistance Act of 1987; Section 302 of WRDA 1990; and Section 202 of WRDA 1996.)

Sharing Leasing Monies. Section 7 provided that 25 percent of money from leasing of reservoir lands be paid to the state for schools and roads. Later amended to 75 percent by Public Law 780, 83d Congress. (33 U.S.C. 701c-3)

B-63. 22 December 1944, Public Law 534, 78th Congress--Flood Control Act of 1944. Rights of States. Section 1 declared policy of Congress to recognize rights and interests of the states in water resource development, and requirement for consultation and coordination with affected states (58 Stat. 887, 33 U.S.C. 701-1).
Coordination with Department of Interior. Section 1 calls for coordination with the Department of the Interior in cases involving water rising west of the 97th meridian.
Major Drainage. Section 2 defined major drainage as flood control. This provides legislative basis for consideration of major drainage improvements in flood control investigations and reports (58 Stat. 889, 33 U.S.C. 701a-1).
Recreation. Section 4 authorized providing facilities in reservoir areas for public use, including recreation and conservation of fish and wildlife (58 Stat. 889, 16 U.S.C. 460-b).
Power Disposition. Section 5 provided for disposal by the Secretary of the Interior of surplus electric power from Corps projects (58 Stat. 890, 16 U.S.C. 825-s).
Water Supply. Section 6 authorized disposal by the Secretary of the Army, for domestic and industrial uses, of surplus water available at reservoirs. (33 U.S.C. 708)
Regulations for Use of Storage. Section 7 specified that the Secretary of the Army shall prescribe regulations for the use of storage allocated for flood control or navigation to all reservoirs constructed wholly or in part with Federal funds, except those of the TVA (58 Stat. 890, 33 U.S.C. 709).
Irrigation. Section 8 provided that Corps reservoirs may include irrigation purpose in 17 western states.

B-64. 2 March 1945, Public Law 14, 79th Congress--River and Harbor Act of 1945. Clearing and Snagging. Section 3 authorized small clearing and snagging projects for navigation or flood control. Annual expenditure for Nation limited to $300,000 (59 Stat. 23, 33 U.S.C. 603a). This limit was raised to $1 million per year, 17 November 1986, by Section 915(g), Public Law 99-662.

B-65. 31 July 1945, Public Law 166, 79th Congress--Shore Protection Studies. This Act established authority for the Beach Erosion Board to pursue a program of general investigation and research and to publish technical papers (59 Stat. 508, 33 U.S.C. 426a). (BEB abolished and functions transferred to the BERH by Section 1 and Section 3, respectively, of Public Law 88-172).

B-66. 24 July 1946, Public Law 526, 79th Congress--Flood Control Act of 1946. Submission of reports. Section 2 states that no project or modification not authorized, of a project for flood control or rivers and harbors shall be authorized by the Congress unless a report for such project has been previously submitted by the Chief of Engineers.
R.R. Bridge Alterations. Section 3 authorized the Chief of Engineers to include at Federal expense necessary alterations to railroad bridges on authorized flood-protection projects (60 Stat. 642, 33 U.S.C. 7Olp).
Leases. Section 4 amended Public Law 534, 78th Congress, to include authority to grant leases to non-profit organizations at recreation facilities in reservoir areas at reduced or nominal charges (60 Stat.

642, 16 U.S.C. 460d).
Repair of Facilities Damaged by Operation of Corps Dam. Section 9 authorized repair of highway, railroad, or utility damaged by the operation of a dam or reservoir (60 Stat. 643, 33 U.S.C. 70lq).
Emergency Flood Control Work. Section 12 amends Section 5 of the 1941 FCA to increase the authorized annual funding level from $1 million to $2 million.
Emergency Bank Protection. Section 14 authorized emergency bank protection works to prevent flood damage to highways, bridge approaches and public works. Annual expenditures were limited to $1,000,000 with not more than $50,000 at any single locality (60 Stat. 654, 33 U.S.C. 70lr). NOTE: Amended by Public Law 93-251 which granted authority to protect churches, hospitals, schools, and other non-profit public services. Expenditure limits were raised to $ 15 million a year for the program and $ 1,000,000 per locality, 12 October 1996, by Section 219, Public Law 104-303.

B-67. 13 August 1946, Public Law 727, 79th Congress. Shore Protection Cost Sharing. Authorized Federal participation up to one-third of the cost, but not the maintenance, of protecting shores of publicly-owned property (Amended by Acts dated 28 July 1956, 23 October 1962, 31 December 1970 and WRDAs of 1986 and 1996) (60 Stat. 1056, 33 U.S.C. 426e).

B-68. 14 August 1946, Public Law 732, 79th Congress--Fish and Wildlife Coordination Act. Provides for coordination with Fish and Wildlife Service. This Act amended Act of 10 March 1934 and was amended, in turn, by The Act of 12 August 1958.

B-69. 30 June 1948, Public Law 845, 80th Congress--Water Pollution Control Act. Authorized the Surgeon General to assist in and encourage studies and plans, interstate compacts, and creation of uniform state laws to control pollution (62 Stat. 1155, 33 U.S.C. 1151).
Pollution Control Board. The Federal Water Pollution Control Advisory Board was established. Provisions were made for low interest loans, grants to states for pollution studies, and grants in drafting construction plans.

B-70. 30 June 1948, Public Law 858, 80th Congress--Flood Control Act of 1948. Small Flood Control Projects. Section 205 authorized the construction of small flood control projects not been specifically authorized by Congress. A Federal expenditure limit was placed on each project as well as the total program funds allotted per fiscal year. The latest amendment is Section 915(a), Public Law 99-662, which sets the Federal limit per project at $5 million and the total annual program limit at $40 million. (62 Stat. 1182, 33 U.S.C. 70ls).
Emergency Flood Control Work. Section 206 expanded Section 5 of the 1941 FCA, as amended, to authorize the Chief of engineers to raise , extend, or modify such flood control works.

B-71. 17 May 1950, Public Law 516, Title I--River and Harbor Act of 1950. Consultants. Section 105 authorized the Chief of Engineers to procure temporary or intermittent services of experts or consultants or organizations in connection with civil functions of the Corps of Engineers without regard to the Classification Act (64 Stat. 168, 33 U.S.C. 569a).
Transfer of Bridges. Section 109 authorized the Secretary of the Army to transfer or convey to state authorities or political subdivisions all rights, title and interest of the United States in and to all

bridges constructed or acquired in connection with the improvement of canals, rivers, harbors or flood control works etc., if determined to be in the best interest of the United States (64 Stat. 169, 33 U.S.C. 534).
Title II--Flood Control Act of 1950. Section 210 amended Section 5 of the 1941 FCA, as amended, to increase the annual authorized funding level from $2 million to $15 million, and to authorize the Secretary of the Army to allot funds from other flood control appropriations for immediate works until appropriations are made.

B-72. 17 July 1952, Public Law 579, 82d Congress--Water Pollution Control Act Extension. Extended the provisions of the Water Pollution Control Act (Public Law 845, 80th Congress) for an added three years through fiscal years 1954-1956 (66 Stat. 755, 33 U.S.C. 1159, 1160).

B-73. 7 August 1953, Public Law 212, 83rd Congress--Outer Continental Shelf Lands Act. Section 4(f) extended the authority of the Secretary of the Army to prevent obstructions to navigation in the navigable waters of the United States by including artificial islands and fixed structures located on the outer continental shelf (67 Stat. 463; 43 U.S.C. 1333(f)).

B-74. 4 August 1954, Public Law 566, 83rd Congress--Watershed Protection and Flood Prevention Act. Authorized the Secretary of Agriculture to cooperate with states and other public agencies in works for flood prevention and soil conservation. Established the Small Watershed Program of the Soil Conservation Service, Department of Agriculture.

B-75. 3 September 1954, Public Law 780, 83rd Congress--Flood Control Act of 1954.

B-76. 15 June 1955, Public Law 71, 84th Congress--Hurricane Studies. Authorized studies of the coastal and tidal areas of the eastern and southern U.S. with reference to areas where damages had occurred from hurricanes (69 Stat. 132).

B-77. 28 June 1955, Public Law 99, 84th Congress--Emergency Flood Control Work. Amends Section 5 of the 1941 FCA, as amended, to authorize flood emergency preparation and delete the requirement for maintenance of subject flood control works.

B-78. 28 July 1956, Public Law 826, 84th Congress--Beach Nourishment. Section 1(c) defines periodic beach nourishment as "construction" for the protection of shores, when it is the most suitable and economical remedial measure. Section 1(d) provided for Federal assistance to privately owned shores if there is benefit from public use or from protection of nearby public property (70 Stat. 702, 33 U.S.C. 426e).

B-79. 2 July 1958, Public Law 85-480--Publications. Authorized the Chief of Engineers to publish and sell information pamphlets, maps, brochures and other material on river and harbor, flood control and other civil works activities (72 Stat. 279, 33 U.S.C. 557a-b).

B-80. 3 July 1958 Public Law 85-500,--River and Harbor and Flood Control Act of 1958. Relocation of Governmental Structures. Section 111 authorizes the Chief of Engineers to protect, alter, reconstruct, relocate, or replace any governmental structure or facility to meet a navigation or flood control purpose; or preserve the facility when it is determined that the safety or usefulness will be adversely affected

or threatened by the project. (72 Stat. 303) NOTE: Amended by Section 309, Public Law 89-298.
Hurricane Projects. Section 203 added provisions of local cooperation on three hurricane flood protection projects which established an administrative precedent for cost sharing in hurricane projects. Non-Federal interests were required to assume 30 percent of total first costs, including the value of land, easements and rights of way, and operate and maintain the project. (72 Stat. 297). NOTE: Section 103 of Public Law 99-662 now prescribes hurricane and storm damage reduction project cost sharing.
Water Supply. Section 301 (Water Supply Act of 1958) provided that storage may be included for present and future municipal or industrial water supply in Corps or Bureau of Reclamation projects; the costs plus interest to be repaid by non-Federal entities within the life of the project but not to exceed 50 years after first use for water supply. No more than 30 percent of total project costs may be allocated to future demands. An interest-free period, until supply is first used, but not to exceed ten years, was permitted. (72 Stat. 319, 43 U.S.C. 390b). NOTE: These provisions were modified by Public Law 99-662.
Aquatic Plant Control Program. Section 104 authorized a comprehensive project for control and progressive eradication of water-hyacinth, alligator weed, and other obnoxious aquatic plant growths in eight southern states. (72 Stat. 297, 300).

B-81. 12 August 1958, Public Law 85-624--Fish and Wildlife Coordination Act. Provided that fish and wildlife conservation receive equal consideration and coordination with other project purposes. (72 Stat. 563, 16 U.S.C. 661).

B-82. 28 August 1958, Public Law 85-767. Authorized Federal agencies to design and construct dams in such a manner to support a public highway bridge, including construction of the bridge itself. (72 Stat. 917; 23 U.S.C. 320).

B-83. 27 June 1960, Public Law 86-523--Reservoir Salvage Act. Provides for the preservation of historical and archeological data, by the Secretary of the Interior, which might otherwise be lost as the result of the construction of a dam (74 Stat. 220). Act further amended by Public Law 93-291.

B-84. 14 July 1960, Public Law 86-645--River and Harbor and Flood Control Act of 1960. Small Navigation Projects. Section 107 established a special continuing authority authorizing construction of small navigation projects. Latest amendment is Section 915(d) of Public Law 99-662, which sets the annual program limit at $35 million and the limit on Federal expenditures per project at $4 million. (74 Stat. 486, 33 U.S.C. 577).
Development of Public Port or Industrial Facilities. Section 108 authorizes disposition of property for the purpose of developing or encouraging the development of such facilities (74 Stat. 486; 33 U.S.C. 578).
Flood Plain Information. Section 206 (as subsequently amended by Section 206 of Public Law 89-789) authorized flood plain information studies (74 Stat. 500, 33 U.S.C. 709a).
Road Relocations. Section 207 authorizes the Chief of Engineers to either improve, reconstruct, or maintain existing public roads used for the construction of a project (74 Stat. 501). NOTE: Criteria for design of replacement roads established in Section 13, Public Law 93-251.
Land Acquisition. Title III known as the "Land Acquisition Policy Act

of 1960" established the policy of Congress that owners and tenants whose property is acquired for a project "shall be paid a just and reasonable consideration therefor" (74 Stat. 502, 33 U.S.C. 596).

B-85. 6 September 1960, Public Law 86-717--Forest Conservation. Provided for the protection of forest cover for reservoir areas under the jurisdiction of the Secretary of the Army and the Chief of Engineers (74 Stat. 817, 16 U.S.C. 580m).

B-86. 20 July 1961, Public Law 87-88--Federal Water Pollution Control Act Amendments of 1961. Amended the Federal Water Control Act (70 Stat. 498) to provide for a more effective program of water pollution control, and for other purposes (75 Stat. 204, 33 U.S.C. 1151).
Water Quality Storage. Section 2 amended existing law to include consideration of storage in Federal projects for water quality control, except that such storage shall not be a substitute for adequate treatment or control at the source (75 Stat. 204, 33 U.S.C. 1153). NOTE: Amended and restated by Sec 102(b), Public Law 92-500.

B-87. 14 September 1961, Public Law 87-236. Authorizes the Secretary of the Army to modify certain leases entered into prior to 1 November 1965 for the provision of recreational facilities in reservoir areas (75 Stat. 509; 16 U.S.C. 460d-1).

B-88. 5 September 1962, Public Law 87-639. Joint Investigations. Section 1 authorizes the Secretary of the Army and the Secretary of Agriculture to make joint investigations and surveys of watershed areas and prepare joint reports on those investigations and surveys when authorized by the Public Works Committee of the Senate or House of Representatives.

B-89. 23 October 1962, Public Law 87-874--River and Harbor and Flood Control Act of 1962. Shore Protection. Section 103 amended the Act approved 13 August 1946, as amended by the Act approved 28 July 1956 and indicated the extent of Federal participation in the cost of beach erosion and shore protection (50 percent of the construction cost when the beach are publicly owned or used, and 70 percent Federal participation for seashore parks and conservation areas when certain conditions of ownership and use of the beaches are met--these provisions are modified by the provisions of Public Law 99-662. Also see Section 227 of WRDA 1996).
Small Beach Erosion Projects. Authority for the Secretary of the Army to undertake construction of small beach and shore protection projects was also established under Section 103. (Latest amendment, setting the limit of Federal expenditures per project at $2 million, is Section 915(e) of Pubic Law 99-662.) (76 Stat. 1178, 33 U.S.C. 426g).
Aquatic Plant Control. Section 104 changed cost-sharing so that all research and planning costs prior to construction are borne by U.S.
Survey Studies of U.S. Coastal Areas. Section 110 allows survey studies to be made in the interest of beach erosion control, hurricane protection, and related purposes, provided such studies are authorized by appropriate resolutions of either the Committee on Public Works of the U.S. Senate or the Committee on Public Works of the House of Representatives.
Emergency Flood Control Works. Section 206 amends Section 5 of the 1941 FCA, as amended, to authorize the Chief of Engineers to undertake measures to protect, repair or restore federally authorized hurricane or shore protection projects threatened, damaged or destroyed by wind, wave or water action of other than ordinary nature.

Recreation, Non-Reservoir Projects. Section 207 amended Section 4 of the 1944 Flood Control Act and permitted recreational developments at on-reservoir projects (76 Stat. 1195, 16 U.S.C. 460d). Road Improvement and Replacement. Section 208 amends Section 207(b) of the Flood Control Act of 1960 to allow improvement of existing public roads for construction access to Federal projects and to allow construction of relocated roads to present day standards rather than replacement in kind (76 Stat. 1196, 33 U.S.C. 70lr-1). (Amended by Section 13, Public Law 93-251)

B-90. 16 October 1963, Public Law 88-140--Extension of Right to Water Supply Storage. Extended non-Federal right to use reservoir water supply storage to the physical life of the project. This removed an uncertainty as to the continued availability of the storage space after the 50-year maximum period previously allowed in contracts (77 Stat. 249, 43 U.S.C. 390-c-e).

B-91. 7 November 1963, Public Law 88-172. CERC Established. Section 1 abolished the Beach Erosion Board and established the Coastal Engineering Research Center (77 Stat. 304, 33 U.S.C. 426-1nt). BEB Functions Transferred. Section 3 transferred the review functions of the Beach Erosion Board to BERH (77 Stat. 305, 33 U.S.C. 4263).

B-92. 3 September 1964, Public Law 88-578--Land and Water Conservation Fund Act of 1964. Established a fund from which Congress can make appropriations for outdoor recreation. The fund derives revenue from entrance and user fees, sale of surplus Federal property, and the Federal motorboat fuel tax. Entrance and user fees at reservoirs were made possible by Section 2 (a) which deleted the words "without charge" from Section 4 of the 1944 Flood Control Act as amended (78 Stat. 897, 16 U.S.C. 4601-4). NOTE: Section amended and restated by Section 101(1), Public Law 94-422.

B-93. 9 July 1965, Public Law 89-72--Federal Water Project Recreation Act-Uniform Policies. Required consideration of opportunities for outdoor recreation and fish and wildlife enhancement in planning water resources projects. Recreational use of the project will be coordinated with other existing and planned Federal, state, or local recreational developments. Non-Federal bodies will be encouraged to operate and maintain the project recreational and fish and wildlife enhancement facilities. If non-Federal bodies agree in writing to administer the facilities at their expense and to pay one-half the separable first cost, the recreation and fish and wildlife benefits shall be included in the project benefits and project cost allocated to recreation and fish and wildlife. Fees may be charged by the non-Federal interests to repay their costs. If non-Federal bodies do not so agree, no facilities for recreation and fish and wildlife may be provided except those justified to serve other purposes or as needed for public health and safety. However, project land may be acquired to preserve the recreational potential. If within 10 years after initial project operation there is no local agreement, the land may be used for other purposes or sold (79 Stat. 213, 16 U.S.C. 460-1-12). (Amended by Section 77 Public Law 93-251)

B-94. 22 July 1965, Public Law 89-80 (Amended by Public Law 94-112)--Water Resources Planning Act. Water Resources Council Established. Established a Water Resources Council. The Act establishes river basin commissions and provides for financial assistance to the states (79 Stat. 244, 42 U.S.C. 1962).

B-95. 27 October 1965, Public Law 89-298--River and Harbor and Flood Conrol Act. Administrative Authority. Section 201 permits the Secretary of the Army to administratively authorize water resources development projects where the estimated Federal cost is less than $10 million. Approval by Public Works Committees is required prior to appropriation of funds (79 Stat. 1073, 42 U.S.C. l962d-5). NOTE: Monetary limit increased to $15 million by Section 131, Public Law 94-587.
Work for Other Agencies. Section 219 authorizes accepting orders from other Federal agencies for work or services.
Aquatic Plant Control. Section 302 extended the program nationwide (79 Stat. 1093, 33 U.S.C. 610).
Relocation of Government Facilities. Section 309 amends Section 111 of the R&H Act of 1958 to define further the Federal policy on relocation of structures "or" facilities owned by an agency of government and used in a governmental function (79 Stat. 1094, 33 U.S.C. 633).

B-96. 4 July 1966, Public Law 89-487--Freedom of Information Act. Provided guidelines for public availability of records of Federal agencies. Public Law 90-23, approved 5 June 1967, codified the provisions of Public Law 89-487 (80 Stat. 250 and 81 Stat. 54, 5 U.S.C. 552). Amended by Public Law 93-502.

B-97. 15 October 1966, Public Law 89-670--The Department of Transportation Act. DOT Established. Established the Department of Transportation (80 Stat. 931, 49 U.S.C. l65 lnt).
Navigation Benefits Defined. Section 7(a) stated that standards and criteria for economic evaluation of water resource projects shall be developed by the Water Resources Council, defined "primary direct navigation benefits," and expands the Council to include the Secretary of Transportation on matters pertaining to navigation features of water resource projects.
Transferred Corps Activities. Corps activities transferred to Department of Transportation included:

a. Regulation of the location of vessels at anchor.
b. Prescribing drawbridge operating regulations.
c. Determining and ordering the alteration of obstructive bridges (Truman-Hobbs).
d. Review and determination of the reasonableness of tolls charged for crossing bridges.
e. Administration of laws relating to prevention of pollution of the high seas by oil (Oil Pollution Act, 1961).
f. Control of the location and clearances of bridges and causeways in the navigable waters (80 Stat. 941, 49 U.S.C. 1656).

B-98. 15 October 1966, Public Law 89-665--National Historic Preservation Act of 1966. Directs the Federal Government to provide leadership in preserving, restoring and maintaining the historic and cultural environment of the Nation. Authorizes the Secretary of the Interior to expand and maintain a national register of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology and culture, referred to as the National Register. Also establishes the Advisory Council on Historic Preservation composed of 29 members, one of which is the Secretary of Defense. (80 Stat. 915, 16 U.S.C. 470 et seq.)

B-99. 1 August 1968, Public Law 90-448--Flood Insurance. Title XIII authorized a flood insurance program and provided means for necessary

coordination between agencies and states as required for studies pertaining to land management, zoning or other appropriate arrangements to carry out such authority (82 Stat. 572, 42 U.S.C. 4001).

B-100. 3 August 1968, Public Law 90-454--Estuary Protection Act. Section 4 requires all Federal agencies, in planning for the use or development of water and related land resources, to give consideration to estuaries and their natural resources (82 Stat. 625, 16 U.S.C. 1221 et seq.).

B-101. 13 August 1968, Public Law 90-483--River and Harbor and Flood Control Act of 1968. Mitigation of Shore Damages. Section 111 authorized investigation and construction of projects to prevent or mitigate shore damages resulting from Federal navigation works, at full Federal cost limited to $1 million per project. Amended 17 November 1986 by Sections 915(f) and 940, Public Law 99-662 which, among other things, increased the limit on Federal costs per project to $2 million. (82 Stat. 735, 33 U.S.C. 426i).
Excess Depths Maintenance. Section 117 authorized use of Civil Works funds for maintenance of excess depths required and constructed for defense purposes where the project also serves essential needs of general commerce (82 Stat. 737, 33 U.S.C. 562a).
User Charges. Section 210 restricted (after 31 March 1970) collection of entrance fees at Corps lakes and reservoirs to users of highly developed facilities requiring continuous presence of personnel (82 Stat. 746, 16 U.S.C. 4600d-3).
Reimbursement for Non-Federal Expenditures. Section 215 authorized reimbursement (including credit against local cooperation requirements) for work performed by non-Federal public bodies after authorization of water resource development projects. Execution of a prior agreement with the Corps was required and reimbursement was not to exceed $1 million for any single project. Amended 17 November 1986 by Section 913, Public Law 99-662, 17 November 1988 by Section 12, Public Law 100-676, and 12 October 1996 by Section 224, Public Law 104-303 to increase the limit on reimbursements per project to $5 million. (82 Stat. 747, 42 U.S.C. l962d-5a).

B-102. 2 October 1968, Public Law 90-542--Wild and Scenic Rivers Act. Selection of Wild Rivers. Section 3 listed eight rivers as the initial components of the National Wild and Scenic Rivers System (82 Stat. 907, 16 U.S.C. 1274).
Potential Rivers. Section 5 listed 27 rivers as potential additions to the system. Section 5 (d) required that plans for water resource development consider setting aside certain streams as wild, scenic, or recreational rivers as an alternative to other uses (82 Stat. 910, 16 U.S.C. 1276).

B-103. 2 October 1968, Public Law 90-543--National Trails System Act. Provided for a National system of trails and designates the Appalachian and Pacific Crest Trails as the initial components of the system (82 Stat. 919, 16 U.S.C. 1241).

B-104. 16 October 1968, Public Law 90-577--Intergovernmental Cooperation Act of 1968. Provides for cooperation and coordination of activities among levels of government, improved administration of programs for technical services to states and local governments, intergovernmental coordination on policy and administration of development assistance programs within urban areas, and periodic Congressional review of such grants-in-aid programs (82 Stat. 1098; 42

U.S.C. 4201).

B-105. 24 December 1969, Public Law 91-152--National Flood Insurance Act Amended. Extended insurance to mud slides, and date for local assurances to 31 December 1971 (83 Stat. 397, 42 U.S.C. 4121).

B-106. 1 January 1970, Public Law 91-190--National Environmental Policy Act of 1969. Federal Policy. Section 101 established a broad Federal policy on environmental quality (83 Stat. 852, 42 U.S.C. 4331).
Agency Requirements. Section 102 directed that policies, regulations, and public laws, will be interpreted and administered to the fullest extent possible in accordance with the policies of the Act, and imposes general and specific requirements on all Federal agencies (83 Stat. 853, 42 U.S.C. 4332).
Five-Point Statement. Section 102(2)(C) required a five-point Environmental Impact Statement (EIS) on proposed Federal actions affecting the environment (83 Stat. 853, 42 U.S.C. 4332). NOTE: Section 102(2)(D), added by Public Law 94-83, August 9, 1975, describes statement requirements for any major Federal action funded under a program of grants to states.
CEQ Established. Section 202 established the Council on Environmental Quality (83 Stat. 854, 42 U.S.C. 4341). The duties and functions of the Council are outlined under Section 203, as amended by Public Law 94-52, July 3, 1975 (83 Stat. 855, 42 U.S.C. 4343).

B-107. 3 April 1970, Public Law 91-224--Water Quality Improvement Act of 1970 and Environmental Quality Improvement Act of 1970. CEQ Staff. The Office of Environmental Quality, which provides staff for the Council on Environmental Quality (see Public Law 91-190), was established by Title II of this Act (84 Stat. 114, 42 U.S.C. 4371).

B-108. 31 December 1970, Public Law 91-604, Clean Air Act Amendments. Amended the Clean Air Act of 1963 (PL 88-206).
Control of Pollution from Federal Facilities. Section 118 specifies that any Federal facility, or activity which may result in the discharge of air pollutants, shall comply with Federal, state, interstate, and local requirements respecting control and abatement of air pollution.
Policy Review. Section 309 calls for the Administrator, Environmental Protection Agency to review and comment upon the environmental impact of (1) legislation proposed by any Federal agency (2) newly authorized Federal projects for construction and any major agency action (84 Stat. 1709, 42 U.S.C. l857h-7).

B-109. 31 December 1970, Public Law 91-611--River and Harbor and Flood Control Act of 1970.
Navigation Project Maintenance. Section 103 provided for Federal operation and maintenance of the general navigation features of small-boat harbor projects authorized during calendar year 1970 (84 Stat. 1819, 33 U.S.C. 426-2nt). Amended by Section 6, Public Law 93-251.
Land Acquisition Compensation Defined. Section 111 approved compensation for real property acquired above normal high water mark of navigable waters in connection with any Federal waterway improvement at the "fair market value" of the land, including the highest and best use dependent upon access to navigable waters (84 Stat. 1821, 33 U.S.C. 595a).
Small Projects. Section 112 increased the limit on Federal costs for small navigation and small beach erosion projects from $500,000 to $1,000,000. The annual authorization limit was also raised in each

case to $25,000,000 (84 Stat. 1821). NOTE: limits have subsequently been raised further (most recently by Section 915, Public Law 99-662).
Project Cost Sharing for Charter Fishing Craft. Section 119 provided that charter fishing craft shall be considered as commercial vessels for the purpose of determining cost sharing in small-boat navigation projects (84 Stat. 1822, 33 U.S.C. 577a).
Economic, Social, Environmental Effects. Section 122 provided for submission and promulgation of guidelines, not later than 1 July 1972, for considering possible adverse economic, social, and environmental effects of proposed projects.
Disposal Area Criteria. Section 123 authorized construction, operation, and maintenance of contained spoil disposal areas for the Great Lakes area, subject to specific conditions of coordination with other agencies, local cooperation and applicability with water quality standards (84 Stat. 1823, 33. U.S.C. ll65a).
Hurricane Protection Cost Sharing. Section 208 authorized discretionary modifications in Federal participation in cost sharing for hurricane protection projects (84 Stat. 1829, 33 U.S.C. 426e). Section 103 of WRDA 1986, Public Law 99-662, now specifies this cost sharing.
Planning "Objectives". Section 209 expressed the intent of Congress that the objectives of enhancing regional economic development, the quality of the total environment, including its protection and improvement, the well-being of the people, and the national economic development are the objectives to be included in Federally financed water resource projects (84 Stat. 1829, 42 U.S.C. 1962-2).
Completed Project Review. Section 216 authorized review and report to Congress of the operation of completed projects when found advisable due to significantly changed physical or economic conditions.
Written Agreement. Section 221 provides that the construction of any water resources project by the Corps shall not be commenced until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project (84 Stat. 1831, 42 U.S.C. l962d-5b). Amended 17 November 1988 by Section 912, Public Law 99-662.
Citation Authority. Section 234 provides that persons designated by the Chief of Engineers shall have authority to issue a citation for violations of regulations and rules of the Secretary of the Army, published in the Code of Federal Regulations.

B-110. 2 January 1971, Public Law 91-646--Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970.
Treatment of Displaced Persons. Section 201 established a uniform policy for the fair and equitable treatment of persons displaced as a result of Federal and Federally assisted programs in order that such persons shall not suffer disproportionate injuries as a result of programs designed for the benefit of the public as a whole (84 Stat. 1895, 42 U.S.C. 462). Displacement Payments. Section 202 outlined the moving and related expense payment for persons displaced by Federal programs and projects (84 Stat. 1895, 42 U.S.C. 4622). NOTE: Section 210 of the act made the same benefits available to persons displaced by programs and projects of state agencies with Federal financial assistance.

B-111. 23 December 1971, Public Law 92-222--River Basin Monetary Authorization Act of 1971. Section 4 clarifies that Section 221 of Public Law 91-611 does not apply to storage for future water supply.

B-112. 10 July 1972, Public Law 92-340--Ports and Waterways Act of 1972. Title I provides the Coast Guard with authority for establishment of vessel traffic control systems in congested or

hazardous ports and waterways (other than the Panama Canal) (86 Stat. 424, 33 U.S.C. 1221).

B-113. 11 July 1972, Public Law 92-347--Golden Eagle Passbook and Special Recreation User Fees. Each Federal agency developing, administering, or providing specialized sites, facilities, equipment, or services related to outdoor recreation shall provide for the collection of special recreation use fees for the use of sites, facilities, equipment, or services furnished at Federal expense (86 Stat. 459, 16 U.S.C. 460).

B-114. 8 August 1972, Public Law 92-367--National Dam Safety Act. Authorized a national program of inspection of "dams" for the purpose of protecting human life and property. Calls for an inventory of all dams located in the U.S. and recommendations for a comprehensive national program of dam inspection and regulation (86 Stat. 506, 33 U.S.C. 467).
Amended by Section 215 of WRDA 1996, Public law 104-303.

B-115. 13 October 1972, Public Law 92-487--Federal Loans to Public Agencies for Constructing Local Water Supply Works. The Act of July 4, 1955, as amended, relating to Federal loans for the construction of irrigation distribution systems, is further amended to include the delivery and distribution of municipal and industrial water as an authorized purpose of the program. Repayment of loans for municipal and industrial water shall include interest (86 Stat. 804, 43 U.S.C. 42lc).

B-116. 18 October 1972, Public Law 92-500--The Federal Water Pollution Control Act Amendments of 1972. National Goal. Section 101 established a national goal of eliminating all pollutant discharges into U.S. waters by 1985 and an interim goal of making the waters safe for fish, shellfish, wildlife and people by July 1, 1983 (86 Stat. 816, 33 U.S.C. 1251).
Reservoir Storage for Streamflow Augmentation. Section 102(b) provides that in the planning of any Corps reservoir consideration shall be given to inclusion of storage for regulation of streamflow. Such storage is not to be provided as a substitute for adequate treatment or other methods of controlling waste at the source. The need for, value of, and the impact of storage for the purpose of water quality control are determined by the Administrator of the EPA. The need for and value of storage for regulation of streamflow for other purposes are to be determined by the Corps. The costs of storage are to be non-reimbursable if the benefits are widespread or National in scope.
National Oil and Hazardous Substances Pollution Contingency Plan. Section 311 authorizes the President to prepare and publish a National Contingency Plan for the removal of oil and hazardous substances and establishes a revolving fund that is used to pay the costs for cleaning up oil and hazardous substances discharged into navigable waters.
The Refuse Act Permit Program. Sections 402 and 403 establish a permit program in EPA which is to regulate (or prohibit) the discharge of pollutants into the waters of the United States, to include the territorial sea and which is to be in accordance with the EPA-established effluent limitations previously mentioned. Section 402 replaces the Corps Refuse Act Permit Program under the Act of 1899 without repealing the Act. All permits issued under the Corps program are considered permits under the new EPA program.
Permits for Dredged or Fill Material. Section 404 authorizes a separate permit program for the disposal of dredged or fill material

in the Nation's waters, to be administered by the Secretary of the Army, acting through the Chief of Engineers. Under the program, permits are to be issued, after notice and opportunity for public hearings, for disposal of such material at specified sites. These sites are to be selected in compliance with guidelines developed by EPA in conjunction with the Secretary of the Army. EPA is authorized to forbid or restrict the use of specified areas whenever it determines that disposal of material at a specific site would have an unacceptable adverse effect on municipal water supplies, shellfish, and fishery areas, or recreational activities.
Authority to Maintain Navigation. Section 511(a) provides that nothing in the Act is to be considered as affecting or impairing the authority of the Secretary of the Army to maintain navigation (86 Stat. 816, 33 U.S.C. 1371). NOTE: See Public Law 95-217, October 27, 1977, for amendments.

B-117. 21 October 1972, Public Law 92-516--Federal Environmental Pesticide Control Act. This law revises the Federal Insecticide, Fungicide, and Rodenticide Act. It provides for more complete regulation of pesticides to include regulation, restrictions on use, actions within a single state, and strengthened enforcement (86 Stat. 973, 7 U.S.C. 136).

B-118. 23 October 1972, Public Law 92-532--Marine Protection, Research and Sanctuaries Act of 1972. Bans the unregulated dumping of materials into the oceans, estuaries and Great Lakes, (86 Stat. 1052, 33 U.S.C. 1401).
Policy Statements. Section 2 states that unregulated ocean dumping is injurious to man and the environment and must be strictly controlled.
Prohibited Acts. Section 101 exercises regulatory control, over any materials which are transported from the United States which would be dumped in any ocean waters; over any materials which would be dumped in the territorial sea or the contiguous zone of the United States; and over any materials transported from any location outside the United States which would be dumped in ocean waters by any instrumentality of the United States Government. NOTE: Amended and restated by Act of March 22, 1974 (Public Law 93-254).
Environmental Protection Agency Permits. Section 102 provides that the Administrator of the EPA may issue permits for the dumping of material (not to include dredged material) if he determines that such dumping would not unreasonably degrade or endanger human health, welfare or amenities, or the marine environment, ecological systems, or economic potentialities. The Administrator is permitted to establish and issue various categories of permits including general permits (see Section 104), and to designate dump and no-dump sites or times after consultation with the Secretary of the Army.
Corps of Engineers Permits. Section 103 provides the Secretary of the Army with permit authority over the transportation of dredged material for the purpose of dumping in ocean waters. The Secretary may issue such permits where he determines that such dumping will not unreasonably degrade or endanger human health, welfare or amenities, or the marine environment, ecological systems, or economic potentialities.
Permit Conditions. Section 104 requires that permits granted by either the Administrator or the Secretary of the Army shall designate the amount, type and location of the material to be dumped, and the length of time for the dumping, and, after consultation with the Coast Guard, provide for any special monitoring and surveillance provisions.
Marine Sanctuaries. Title III permits the Secretary of Commerce, after appropriate consultation with affected state and Federal agencies, and public hearings, to designate certain areas of ocean

waters lying as far seaward as the edge of the outer continental shelf and areas of the waters of the Great Lakes as marine sanctuaries which he determines necessary to preserve, restore, such areas for conservation, recreation, ecology or esthetics. He is permitted, after consultation with other interested Federal agencies, to issue regulations controlling activities within these sanctuaries. No permit for activities within such sanctuaries shall be deemed valid unless the Secretary of Commerce shall certify that the permitted activity is consistent with the purpose of Title III and carried out in accordance with the regulations promulgated by him.

B-119. 27 October 1972, Public Law 92-583--Coastal Zone Management Act of 1972. National Policy. Section 302 declares a National interest in the effective management of the coastal zone, that present planning and regulation of land and water uses is in adequate, and that primary responsibilty rests with state and local governments with Federal assistance. (86 Stat. 1280, 16 U.S.C. 1451). Federal-State Coordination. Section 307 requires all Federal agencies with activities directly affecting the coastal zone, or with development projects within that zone, to assure that those activities or projects are consistent with the approved state program. Applicants for Federal licenses shall provide to the agency state certification that the proposed activity complies with the state's approved management program. No Federal license or permit shall be granted by the agency without the state's concurrence or unless the state has failed to act within six months (amended to three months by Public Law 95-372) after receiving the applicant's certification. NOTE: This section amended by Section 6, Act of July 26, 1976 and Section 504 of Act of September 18, 1978. Sections 302, 303, 304, 306, 308, 312, 315, 316, and 318 amended by Public Law 96-464.

B-120. 1 August 1973, Public Law 93-81--Collection of Fees for Use of Certain Federal Outdoor Recreation Facilities. Amends Section 4 of the Land and Water Conservation Fund Act of 1965 (P.L. 88-578). Requires each Federal agency to collect special recreation fees for the use of sites, facilities, equipment or services furnished at Federal expense. NOTE: Amended and restated by Section 1 of Public Law 93-303. (87 Stat. 178).

B-121. 28 December 1973, Public Law 93-205--Conservation, Protection, and Propagation of Endangered Species. Repeals the Endangered Species Conservation Act of 1969. Directs all Federal Departments/Agencies to carry out programs to conserve endangered and threatened species, in consultation with the Secretary of the Interior (or Commerce in appropriate situations), and to preserve the habitat of such species. (87 Stat. 884) NOTE: Section 7 of the Endangered Species Act Amendments of 1978 (Public Law 95-632) authorizes procedures by which a Federal agency, state governor, or license applicant may apply for an exemption to the Act.

B-122. 31 December 1973, Public Law 93-234--Flood Disaster Protection Act of 1973. This law increases limits of coverage authorized under the national flood insurance program; provides for accelerated identification of flood risk zones; requires states or local communities, as a condition of future Federal financial assistance, to participate in the flood insurance program; requires the purchase of flood insurance by property owners who are being Federally assisted in the acquisition/improvement of land in flood hazard areas; extends the flood insurance program to cover losses from the erosion and undermining of shorelines by waves or currents (87 Stat. 975).

B-123. 7 March 1974, Public Law 93-251--Water Resources Development Act of 1974. Project Authorization. Section 1 establishes two phase authorization procedure for major projects.
Maintenance. Section 6 states that the cost of operation and maintenance of the general navigation features of small boat harbor projects shall be borne by the United States.
Hold and Save. Section 9 provides that the requirement that non-Federal interests hold and save the United States free from damages shall not include damages due to the fault or negligence of the United States or its contractors.
Project Deauthorization. Section 12 establishes a procedure for deauthorization of projects that have not received any Congressional appropriations within 8 years. (Superceded by Section 1001, Public Law 99-662.)
Public Road Replacement. Section 13 establishes criteria for design of replacement roads.
Comprehensive Planning Cooperation. Section 22 provides authority for cooperating with any state in preparation of comprehensive plans for water resources development, utilization, and conservation. Amended by Section 221 of WRDA 1996, Public Law 104-303.
Snagging and Clearing Projects. Section 26 raises the project cost limitation to $250,000 and annual program funding limit to $5 million. These limits were raised to $500,000 per project and $7.5 million annually for the program, 17 November 1986, by Section 915(b), Public Law 99-662.
Emergency Bank Protection Projects. Section 27 raises the project cost limitation to $250,000 and program fiscal funding limit to $10 million per year. Project purpose was extended to cover construction, repair, restoration, and modification of emergency streambank and shoreline protection works. Eligibility definition was extended to include churches, hospitals, schools, and similar non-profit public services. Limitations were further raised to $ 1,000,000 per project and $ 15 million annually for the program, 12 October 1996, by Section 219, Public Law 104-303.
Streambank Erosion Control Evaluation and Demonstration Act of 1974. Section 32 established a national streambank erosion prevention and control demonstration program. Authorized conduct of the program for 5 fiscal years with total Federal appropriations not to exceed $25 million. (NOTE: The demonstration program undertaken pursuant to this provision was completed with a report submitted to Congress in April 1982.)
Local Cash Contributions. Section 40 provides general authority to permit local interests to make cash contributions in annual payments as construction proceeds, rather than in a lump sum prior to initiation of construction.
Shoreline Erosion Control Demonstration Act of 1974. Section 54 authorized a program to develop, demonstrate, and disseminate information about low cost means to prevent and control shoreline erosion. Conduct of the program authorized for 5 fiscal years with total appropriations not to exceed $8 million. Provides for establishment of a Shoreline Erosion Advisory Panel. (NOTE: the demonstration program undertaken pursuant to this provision was essentially completed with a comprehensive report submitted to Congress in June 1982.)
Technical and Engineering Assistance. Section 55 authorizes technical and engineering assistance to non-Federal public interests in developing structural and nonstructural methods of preventing damages attributable to shore and streambank erosion.
Small Flood Control Projects. Section 61 raised the Federal limit per

project from $1 million to $2 million only in areas that have been designated disaster areas within preceding 5 years. The program funding limit was increased to $30 million annually. NOTE: Limits were subsequently revised upward by Section 133, Public Law 94-587, Section 2, Public Law 97-140. and Section 915(a), Public Law 99-662.
Flood Plain Management. Section 64 increases the Corps FPMS program appropriation authorization to $15 million annually.
Water Quality Storage. Section 65 permits conversion of water quality storage in authorized reservoirs to another use when EPA determines such storage is unnecessary.
Non-structural Measures for Flood Protection. Section 73 requires that consideration be given to non-structural alternatives for flood damage prevention or reduction. Where such measures are recommended, the non-Federal participation was to be comparable to that for structural protection, but not exceed 20 percent of the project costs. Cost sharing requirements were subsequently modified by Section 103, Public Law 99-662, and Section 202 of WRDA 1996, Public Law 104-303.
Visitor Protection. Section 75 authorizes study of the need for a means of providing visitor protection services at Corps projects.
Fish and Wildlife Enhancement. Section 77 amends the Federal Water Project Recreation Act to increase the Federal share of costs for fish and wildlife enhancement to 75 percent. Cost sharing requirements were subsequently modified by Section 906, Public Law 99-662.
Interest and Discount Rates. Section 80 directs the interest rate for discounting future benefits and computing costs be based on Water Resources Council formula published 24 Dec 1968. It also calls for study and report by the President on principles and standards, discount rates, and cost sharing.
Emergency Water Supplies. Section 82 modified Section 5 of 1941 FCA, as amended, to authorize providing emergency supplies of clean drinking water when contaminated supplies are a threat to public health and welfare of locality. Contamination must result from flood.
Utilization of Regional or Municipal Sewage Treatment Plant. Section 107 authorizes Corps participation in construction cost of regional sewage treatment plants for treating sewage resulting from the operation of recreation and other facilities at Corps projects. (88 Stat. 12)

B-124. 22 March 1974, Public Law 93-254--Implementation of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters. Amends the "Ocean Dumping" Act to make it fully consonant with the treaty responsibilities of the U.S. under the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters, particularly as to the regulation of U.S. vessels carrying or dumping foreign source waste (88 Stat. 50).

B-125. 22 May 1974, Public Law 93-288, Disaster Relief Act Amendments of 1974. Broadens Federal responsibility for disaster assistance, assigns responsibilities to agencies, and establishes coordination among the Federal agencies. Establishes criteria for financial and other aid to needy communities and governmental entities and the forms of aid available . (Amended by Public Law 100-707).

B-126. 24 May 1974, Public Law 93-291--Preservation of Historical and Archeological Data. The Secretary of the Interior shall coordinate all Federal survey and recovery activities authorized under this expansion of the 1960 Act (Public Law 86-523). The Federal construction agency may expend up to 1 percent of project funds with such funds considered non-reimbursable project costs. (88 Stat. 174).

B-127. 7 June 1974 Public Law 93-303--Recreation Use Fees. Amends Section 4 of the Land and Water Conservation Fund Act of 1965 (Public Law 88-578), as amended, to establish less restricted criteria under which Federal agencies may charge fees for the use of campgrounds developed and operated at Federal areas under their control. (88 Stat. 192).

B-128. 22 August 1974, Public Law 93-383--Housing and Community Development Act of 1974. Title I establishes within HUD new community development program block grants and loans to replace several existing grant/loan programs. Section 816 amends the National Flood Insurance Act to provide that any community that has made adequate progress on the construction of a flood protection system meeting the 100-year protection standard, as determined by HUD, shall be eligible for flood insurance at subsidy premium rates if otherwise eligible under the Act. (88 Stat. 633).

B-129. 21 November 1974, Public Law 93-502--Freedom of Information Act Amendments. Provided, among other requirements that: the decision to release or not release records shall be made "within ten days" (as defined therein). (88 Stat. 1561) NOTE: See Public Law 94-409 to require that meetings of Government agencies shall be open to the public.

B-130. 3 January 1975, Public Law 93-627--Deepwater Port Act of 1974. Provides authority for Secretary of Transportation to issue a license for the ownership, construction and operation of a deepwater port.

B-131. 4 January 1975, Public Law 93-643--Federal Aid Highway Amendments of 1974. Authorizes Department of Transportation to construct/reconstruct access roads to reservoir created lakes and established that the road cost sharing would be 70 percent Federal 30 percent local. The law specifically was made applicable to providing access to Corps "lakes". Amended by Public Law 95-599 to change Federal share from 70 to 75 percent.

B-132. 24 March 1976, Public Law 94-241. Approves and sets forth the text of "Covenant to Establish a Commonwealth of the Northern Mariana Islands in Political Union with the United States of America."

B-133. 5 May 1976, Public Law 94-280--Federal Aid Highway Act of 1976. Section 132 amends Chapter I of Title 23, U.S.C. 156, to authorize construction of a public highway or bridge across a Federal public works project where costs and requirements have changed substantially. A National Transportation Policy Study Commission is established by Section 154. (90 Stat. 425).

B-134. 26 July 1976, Public Law 94-370--Coastal Zone Management Act Amendments of 1976. Grants. Sections 4 and 5expanded the requirements for and types of work accomplished under the management program development (Section 305) and administrative (Section 306) grants.
Coastal Energy Impact Program. Section 7directs the Secretary of Commerce to administer and coordinate a coastal energy impact program to assist coastal states in their planning and management of energy developments in their coastal waters.
Interstate Coordination. Section 8encourages the coastal states to coordinate with each other and to develop joint plans for the sake of uniformity. It also gives Congressional consent to agreements and compacts developed between two or more states.

National Shellfish Safety Program. Section 16directs the Secretary of Commerce to undertake a comprehensive review of the molluscan shellfish industry and promulgation of regulations for the national shellfish safety program by the Secretary of Health, Education, and Welfare. (90 Stat. 1013-1033).

B-135. 20 October 1976, Public Law 94-565--Entitlement Lands. This act provides for payments to local governments by the Secretary of the Interior based on the amount of entitlement lands within the local boundaries. Entitlement lands include reservoir areas of water resource projects.

B-136. 22 October 1976, Public Law 94-587--Water Resources Development Act of 1976.
Phase I Studies. Section 101(c) authorizes, upon transmittal of the Chief's recommendation to the Secretary of the Army, the Chief of Engineers to begin the Phase I design memorandum on a project if the Chief finds and transmits to the appropriate Committees of the House and Senate that the project is without substantial controversy and justifies further investigation. (90 Stat. 2917-2948).
Law Enforcement. Section 120 authorizes the Corps to contract with states or their subdivisions to provide for increased law enforcement during periods of peak visitation.
Administrative Authority. Section 131 raises the limit on projects authorzed under Section 201 of Flood Control Act of 1965 from $10,000,000 to $15,000,000.
Continuing Authorities. Section 133 raised the Federal monetary limit for construction of an individual navigation project authorized under Section 107 of the River and Harbor Act of 1960 from $1,000,000 to $2,000,000. For small flood control projects authorized under Section 205 of the Flood Control Act of 1948 it raised the basic limit for an individual project from $1,000,000 to $2,000,000 and for projects within a major disaster area it raised the limit from $2,000,000 to $3,000,000. Limits for Section 107 projects were subsequently raised by Section 915(d), Public Law 99-662, and for Section 205 projects by Section 2 of Public Law 97-140 and Section 915(a), Public Law 99-662.
Regional Benefits. Section 140 authorizes the inclusion of regional economic benefits in the economic analysis of any authorized interstate project which has been partially constructed or is to be constructed at the time of enactment (33 U.S.C. 547a).
Sand Fill. Section 145 authorized the placement of sand obtained from dredging operations on adjacent beaches if requested by the interested state government and in the public interest--with the increased costs paid by local interests. Amended by Section 933, Public Law 99-662, to allow for Federal funding of 50 percent of the increased costs.
Disposal Areas. Section 148 directs the Corps to utilize those management practices which will extend the life of dredged material disposal areas thus keeping the need for new sites to a minimum (33 U.S.C. 4l9a).
Wetlands. Section 150 authorizes the Corps to plan and establish new wetlands utilizing dredged material from any water resources development project.
Permits. Section 154 removes Section 10 permit requirement on wharves and piers in interstate bodies of water which are considered to be navigable based on historical data of interstate commerce.
Periodic Nourishment. Section 156 authorizes the Corps to extend Federal aid in periodic beach nourishment up to 15 years from date of initiation of construction. Amended by Section 934, Public Law 99-662, to allow for extension of up to 50 years.

Hydroelectric Power. Section 167 authorizes the Chief of Engineers to study efficient methods of using hydroelectric power resources at Corps' water resource development projects.
Comprehensive Planning Cooperation. Section 168: Increases the authorized funding in Section 22 of WRDA of 1974 from $2,000,000 to $4,000,000.
Drift Removal. Section 202 establishes the drift and debris removal program. The Corps may undertake a project costing less than $400,000 without Congressional approval. Cost sharing is 2/3 Federal and 1/3 non-Federal. (90 Stat. 2917-2948).
Alaska Hydropower Fund. Section 203 establishes the Alaska Hydroelectric Power Fund (initial sum deposited $25,000,000) for use by the Secretary of the Army to study and develop hydropower facilities in Alaska.

B-137. 20 June 1977, Public Law 95-51--Disaster Relief Act of 1974 Appropriations. Amends Section 5 of the 1941 FCA, as amended, to authorize the Secretary of the Army to construct wells and transport water in drought areas. (91 Stat. 233-234).

B-138. 3 August 1977, Public Law 95-87--Surface Mining Control and Reclamation Act of 1977. Provides for the cooperation between the Secretary of the Interior and the states with respect to the regulation of surface coal mining operations, and the acquisition and reclamation of abandoned mines.
Establishment of Standards. Section 515 provides for the Secretary of the Interior with concurrence of the Chief of Engineers to establish standards and criteria regarding new and existing coal mine waste piles when used as dams or embankments. (91 Stat. 445-532).
Other Federal Agency Assistance. Section 702allows the Secretary to obtain assistance from other Federal agencies.

B-139. 12 October 1977, Public Law 95-128.
Title VII: Extends the time and fiscal constraints of the National Flood Insurance Program. In addition; procedures are established for the purchase and/or designation of flood prone properties. (91 Stat. 1111-1150).

B-140. 27 October 1977, Public Law 95-217--Clean Water Act of 1977. Amends Federal Water Pollution Control Act and extends the appropriations authorization.
Written Agreements. Section 51 requires EPA to enter into written agreements with Secretaries of Agriculture, Army, and Interior to provide maximum utilization of the laws and programs to maintain water quality.
Federal Compliance. Section 60 provides for Federal compliance with all Federal, state, interstate, and local requirements, administrative authority, and process and sanctions in the same manner and extent as other entities.
Processing of Permits. Section 67 provides for the processing of permits for dredged or fill material through the Secretary of the Army acting through the Chief of Engineers and defines requirements to be met in the construction of Federal projects. (91 Stat. 1566).

B-141. 22 October 1977, Public Law 95-220--Federal Program Information Act. Authorizes the preparation and publishing of the catalog of Federal Assistance Programs. (91 Stat. 1617).

B-142. 26 April 1978, Public Law 95-269. Amends Acts of 11 August

1888 and 2 March 1919. Provides conditions under which dredging work is performed by private interest and the Federal dredge fleet. Authorizes a technologically modern minimum Federal dredging fleet. (91 Stat. 218-219).

B-143. Public Law 95-341--American Indian Religious Freedom Act.

B-144. 18 September 1978, Public Law 95-372--Outer Continental Shelf Lands Act Amendments of 1978. Establishes policy for the management of oil and natural gas in the Outer Continental Shelf and to protect the marine and coastal environment, in part, by creating an oil spill liability fund. Section 504 amends Sec. 307 of the Coastal Zone Management Act. The revised section requires that a state provide to the Secretary of Commerce a status report if it has not concurred or objected to a proposed activity within 3 months after having received the applicants certification. (92 Stat. 629).

B-145. 19 October 1978, Public Law 95-474--Port and Tanker Safety Act of 1978. Vests responsibility for establishment of fairways in the Coast Guard.

B-146. 21 October 1978, Public Law 95-502--Internal Revenue Code of 1954, Amendment. Fuel Tax. Section 202 amends the Internal Revenue Code (new Sec. 4042 added) to impose a tax on fuel used by vessels in commercial waterway transportation. Deep-draft ocean-going vessels and passenger vessels, among others, are exempted.
Inland Waterways Trust Fund. Section 203 establishes an Inland Waterways Trust Fund (IWTF) for revenue received from the tax on fuel.
Availability of Funds in IWTF. Section 204 provides that amounts in the Trust Fund shall be available, as provided by appropriation Acts, for construction and rehabilitation for navigation on inland and intracoastal waterways.
Study. Section 205 directs the Secretaries of the Departments of Transportation and Commerce to study inland waterway user taxes and charges in consultation with other agencies.
Relevant Waterways. Section 206 lists inland and intracoastal waterways relevant to Section 4042 of the Internal Revenue Code and the Act. (92 Stat. 1693-1703). (Amended by Section 1405, Public Law 99-662.)

B-147. Public Law 95-563--Contracts Dispute Act of 1978.

B-148. 10 November 1978, Public Law 95-632--Endangered Species Act Amendments of 1978. Amends the 1973 Act (Public Law 93-205) to establish an Endangered Species Interagency Committee to review proposed actions to determine whether exemptions from certain requirements of the Act should be granted. Prescribes a consultation process between Federal agencies and the Secretary of the Interior, Secretary of Commerce, or Secretary of Agriculture, as appropriate, for carrying out programs for the conservation of endangered and threatened species. Directs agencies to conduct a biological assessment to identify endangered or threatened species which may be present. (92 Stat. 3752).

B-149. 31 October 1979, Public Law 96-95--Archaeological Resources Protection Act of 1979. Protects archoeological resources and sites which are on public lands and Indian lands, and fosters increased cooperation and exchange of information between governmental authorities, the professional archaeological community, and private individuals. Establishes requirements for issuance of permits by the Federal land managers to excavate or remove any archaeological

resource located on public lands or Indian lands. (93 Stat. 721, 16 U.S.C. 470ac. et seq.)

B-150. 28 December 1979, Public Law 96-159--Endangered Species Act of 1973. Expanded the Act to protect endangered plants, require the Secretary of Interior--when proposing land as critical habitat--to publish a summary of the proposal and a map in the local newspapers and to require Federal agencies to insure their projects "are not likely" to jeopardize an endangered species. It also authorized all those seeking exemptions from the Act to get permanent exemptions for a project unless a biological study indicates the project would result in the extinction of a species. (93 Stat. 1225)

B-151. 11 December 1980, Public Law 96-511--Paperwork Reduction Act of 1980.

B-152. 8 August 1980, Public Law 96-324--High Seas and Inland Waters Demarcation Lines. Amends Section 2 of the Act of February 19, 1895 (28 Stat. 672) to direct the Coast Guard to establish appropriate identifiable demarcation lines dividing the high seas from harbors, river and other inland waters of the United States for navigation and other purposes. (94 Stat. 1020)

B-153. 29 September 1980, Public Law 96-366--Fish and Wildlife Conservation Act of 1980. Provides funds to states to conduct inventories and conservation plans for conservation of non-game wildlife. Also encourages Federal departments and agencies to use their statutory and administrative authority to conserve and promote conservation in accordance with this act. (94 Stat. 1322, 16 U.S.C. 2901 et seq.)

B-154. 17 October 1980, Public Law 96-464--Coastal Zone Management Improvement Act of 1980. Amends the Coastal Zone Management Act of 1972 (16 U.S.C. 1450 et. seq.) to incorporate numerous minor changes. A new Section, lO6A, provides for preservation of specific areas of recreational or ecological values, and for there development of urban waterfronts and ports. (94 Stat. 2060)

B-155. 21 October 1980, Public Law 96-480--Stevenson-Wydler Technology Innovation Act of 1980.

B-156. 11 December 1980, Public Law 96-510--Comprehensive Environmental Response and Liability Act (CERCLA) of 1980.

B-157. 12 December 1980, Public Law 96-515--National Historic Preservation Act (Amendment of 1980). Amends the National Historic Preservation Act of 1966 and authorizes Secretary of Interior to expand and maintain a National Register of Historic Places. Within one year after the date of enactment the Secretary shall establish in consultation with the Secretary of Defense and other agencies, standards for the preservation of historic properties in Federal ownership or control. (94 Stat. 2987)

B-158. 24 December 1980, Public Law 96-597--Appropriations Act, U.S. Insular Areas. Section 605 made the provisions of Section 22, Public Law 93-251 (Assistance to States), applicable to Guam, American Samoa, the Virgin Islands, the Northern Marianas, and the Trust Territory of the Pacific Islands.

B-159. 29 December 1981, Public Law 97-140--Water Supply Storage in Benbrook Lake, etc. Small Flood Control Projects. Section 2 raises the limit for a project (at a single location) authorized under Section 205 of the Flood Control Act of 1948 from $2,000,000 (or $3,000,000 for projects in declared disaster areas) to $4,000,000. The limit was raised further by Section 915(a), Public Law 99-662. Removal of Private-Use Facilities. Section 6 imposes a moratorium through 30 December 1989 on enforced removal of certain private-use facilities from any Corps reservoir or lake project. Subsequently, by Section 1134, Public Law 99-662, the moratorium was extended indefinitely.

B-160. 12 October 1982, Public Law 97-293--Reclamation Reform Act of 1982. Section 212 makes clear that the provisions of Federal reclamation law are not applicable to lands which receive benefits from water resources projects constructed by the Corps of Engineers, except in the limited circumstances specified in this section.

B-161. 13 October 1982, Public Law 97-304--Endangered Species Act Amendments of 1982. Further amends the 1973 Act (Public Law 93-205) to streamline the listing and delisting process for species and critical habitat designations. Directs the Secretary of the Interior to make determinations regarding species or critical habitats solely on the basis of the best scientific and commercial data available. Defines the period of consultation required between the Secretary of the Interior, another Federal agency and any permit or license applicant (including those for exemptions). Prescribes conditions for the permitted taking of endangered species and the establishment of experimental populations.

B-162. 18 October 1982, Public Law 97-348--Coastal Barrier Resources Act. Establishes policy that coastal barriers and their associated inlets, waterways, and wetlands resources are to be protected by restricting Federal expenditures which have the effect of encouraging development of coastal barriers. The Act provides for a Coastal Barrier Resources System (the extent of which is defined by a set of maps approved by Congress dated 30 September 1982) which identifies undeveloped coastal barriers within which Federal expenditures (including expenditures for flood insurance, roads, bridges, shoreline structures) may not be made. There are some specific exceptions to the expenditure prohibition, including navigation and research works. (16 USC 3501)

B-163. 30 July 1983, Public Law 98-63--Supplemental Appropriations Act of 1983. Aquatic Plant Control. Increased the limitation on annual expenditures by the Corps for the program to $10 million. Volunteers. Authorizes the Corps to accept the services of volunteers as a means of carrying out Corps activities.
Assault on Corps Employees. Makes it a Federal offense to assault or murder a Corps employee; sets penalties.

B-164. 27 March 1984, Public Law 98-242--Water Resources Research Act of 1984. Authorizes an ongoing program of water resources research through the Secretary of the Interior, including the establishment of one water resources research and technology institute in each state and monetary grants to these institutes and other qualified educational institutions, private foundations, private firms, individuals, and agencies of local or state government for research concerning any aspect of a water resource-related problem the Secretary deems to be of national interest.

B-165. 19 October 1984, Public Law 98-498--Marine Sanctuaries Amendments of 1984. Provides amendments to Title III, National Marine Sanctuaries, of the Marine Protection, Research, and Sanctuaries Act of 1972. Includes in Title II, Marine Safety, the Maritime Safety Act of 1984 which specifies vessel inspection and reporting requirements.

B-166. 19 October 1984, Public Law 98-501--Public Works Improvement Act of 1984 (Title I) and Federal Capital Investment Program Information Act of 1984 (Title II). Established a National Council on Public Works Impovement to prepare three annual reports on the state of the nation's infrastructure, including publically-owned water resources projects, and requires the President's budget separately identify and summarize the capital investment expenditures of the U.S., including expenditures on water resources projects.

B-167. 23 December 1985, Public Law 99-198--Food Security Act of 1985. Title XII, Subtitles B and C, provides that persons who produce an agricultural commodity on highly erodible lands or newly converted wetlands shall be declared ineligible for certain benefits provided by the U.S. Department of Agriculture, i.e., commodity price support or production adjustment payments, farm storage facility loans, disaster payments, payments for storage of Commodity Credit Corporation grain, Federal crop insurance, and farm loans administered by the Farmers Home Administration. ("Swampbuster Act")

B-168. 27 August 1986, Public Law 99-402--Federal Lands Cleanup Act of 1985. Provides for a program of cleanup and maintenance of Federal lands and designates the first Saturday after Labor Day of each year as "Federal Lands Cleanup Day." Requires each Federal land management agency, including the Corps, to organize, coordinate, and participate with citizen volunteers and state and local agencies in cleanup and maintenance of Federal public lands, recreation areas, and waterways within the jurisdiction of such agency.

B-169. 17 October 1986, Public Law 99-499--The Emergency Planning and Community Right to Know Act of 1986.

B-170. 20 October 1986, Public Law 99-502--Federal Technology Transfer Act of 1986. This Act authorizes joint efforts with industry through Cooperative Research and Development Agreements (CRDAs) and Licensing Agreements (LAs). A Corps laboratory commander is authorized to enter into CRDAs with interested parties for performing collaborative research and development leading to commercially-viable products or systems, and to enter into LAs for Government-owned inventions or technology that could be commercially exploitable.

B-171. 17 November 1986, Public Law 99-662--Water Resources Development Act of 1986. Project Cost Sharing. Section 101 establishes new requirements for non-Federal interests sharing of costs for Harbor construction and maintenance. Section 103 establishes new cost sharing requirements for Flood Control and Other Purposes. (See Chapter 6 of this EP) (Amended by Sections 201 and 202, Public Law 104-303)
Credit for Non-Federal Flood Control Works. Section 104 provides that the non-Federal costs for certain compatible flood control works, accomplished by non-Federal interests prior to Congressional authorization of a Federal flood contol project, may be credited against the non-Federal share of costs for the Federal project when it becomes authorized.
Study Cost Sharing. Section 105 establishes a requirement that, for Corps feasibility studies, appropriate non-Federal interests

contribute 50 percent of the study costs.
Non-Federal Feasibility Studies. Section 203 provides that non-Federal interests may undertake navigation studies and submit them to the Secretary of the Army for transmittal to Congress.
Non-Federal Project Construction. Section 204 provides that non-Federal interests may contract with the Corps for accomplishment of navigation improvement studies and, in accordance with such studies, may carry out the improvements. Under certain conditions, their costs may ultimately be reimbursed by the United States.
Non-Federal Port Dues. Section 208 allows non-Federal interests to levy tonnage duties or fees on vessels using improved harbors, to finance the non-Federal share of project improvements.
Grants to Non-Federal Interests. Section 212 authorizes grants to a non- Federal interest operating a harbor project, for provision of emergency response services.
Inland Waterways. Section 302 establishes the Inland Waterways Users Board.
Flood Plain Management. Section 402 requires, as a pre-condition for a local protection project, that non-Federal interests must agree to participate in and comply with applicable Federal flood plain management and flood insurance programs. (Amended by Section 202, Public Law 104-303)
Ground Water Damage. Section 403 includes in the definition of flood control "improvements for protection from groundwater-induced damages."
Technical Assistance. Section 703 authorizes technical and engineering assistance to local public agencies in developing plans for rehabilitating former industrial sites and facilities for use as hydroelectric facilities. Section 942 authorizes assistance in developing plans for snagging and clearing navigable streams and tributaries, and for nonstructural renovation. Under both programs, the non-Federal share of Corps costs shall be 50 percent.
Fish Habitat Modification Projects. Section 704(b) authorizes the construction of projects for development of beneficial fish habitat not specifically authorized by Congress. A limit was not placed on the Federal expenditures per project; however, a $5 million limit on total Federal expenditures for the program was established.
Study Deauthorization. Section 710 establishes a procedure for deauthorization of studies that have not received any Congressional appropriations for 5 years.
Project Cost Increase Limitations. Section 902 provides that, excluding the impacts of general price increases and any project additions otherwise authorized, total project costs for any project authorized in Public Law 99-662 may not exceed the authorization estimate by more than 20 percent. (Amended by Section 3(b), Public Law 100-676)
Uneconomic Increments of Projects. Section 903(c) indicates that uneconomic increments may, at full non-Federal expense, be added to an otherwise economically justified project.
Planning. Sections 904 and 905 summarize matters which should be addressed in planning studies and contained in the resultant feasibility report. Included is a requirement for description of a nonstructural alternative to the to the recommended plan (if that is not a nonstructural plan). Section 905(b) establishes that before initiating a feasibility study a reconnaissance is first to be performed at full Federal expense.
Fish and Wildlife Mitigation. Section 906 provides that, for new projects, needed mitigation measures shall be undertaken before or concurrently with project construction. It provides general authority to undertake mitigation measures for projects, whether completed, underway or unstarted, including acquisition of any needed related

lands (excluding condemnation in connection with projects already completed or well underway). It provides that mitigation costs shall be allocated to the project purposes and cost shared accordingly. It requires that feasibility reports contain a specific plan to mitigate fish and wildlife losses, unless a determination is made that there would be negligible adverse impact. Such plans shall provide that impacts on bottomland hardwood forests are mitigated in-kind to the extent possible.

Fish and Wildlife Enhancement. Section 906 also provides that for any project measures recommended to enhance fish and wildlife, costs will be entirely Federal when the benefits have a national character and, where they do not, non-Federal interests shall reimburse 25 percent of the costs. The non-Federal share of operations, maintenance and rehabilitation costs will, in all cases, be 25 percent.

Environmental Measures Justification. Section 907 provides that the benefits from environmental measures included in a project (including measures for fish and wildlife enhancement) shall be deemed to be at least equal to the related project costs.

Mitigation Fund. Section 908 establishes an Environmental Protection and Mitigation Fund from which the undertaking of authorized fish and wildlife mitigation measures may be funded in advance of project appropriations.

Continued Planning and Engineering (CP&E). Authorizes the Corps to proceed with CP&E after the Chief transmits his feasibility study recommendations to the Secretary favoring Congressional authorization of a project.

Section 221 Agreements. Section 912 amends Section 221 of the Flood Control Act of 1970 with respect to written agreements for local cooperation and has added provisions designed to enforce local fulfillment of the agreements.

Reimbursement for Non-Federal Expenditures. Section 913 modifies Section 215 of the Flood Control Act of 1968 to increase the limit of Federal reimbursement costs per project--for non-Federal construction work on an authorized project--to $3 million.

Urban Flood Control. Section 914 provides that, where the Federal costs for improvement measures would be less than $3 million, Corps feasibility reports may consider such measures regardless of drainage area and frequency of flooding.

Continuing Authorities. Section 915 raises the Federal monetary limit for construction of an individual flood control project authorized under Section 205 of the 1968 FCA, as amended, from $4 to $5 million; for a flood control clearing and snagging project under Section 2 of the 1937 FCA, as amended, ("Section 208 project"), from $250,000 to $500,000; for emergency bank protection authorized under Section 14 of the 1946 FCA, as amended, from $250,000 to $500,000; for a navigation project authorized under Section 107 of the 1960 R&H Act, as amended, from $2 to $4 million; for a beach erosion control project authorized under Section 103 of the 1962 R&H Act, as amended, from $1 to $2 million; and for mitigation of shore damages due to a navigation project, pursuant to Section 111 of the 1968 R&H Act, from $1 to $2 million. Section 915 also authorizes use of all of the foregoing authorities in the Trust Territory of the Pacific Islands. For navigation clearing and snagging projects authorized under Section 3 of the 1945 R&H Act, the annual program limitation was raised from $300,000 to $1 million.

Emergency and Disaster Authority. Emergency Water Supplies. Section 917 amends Section 5 of the 1941 FCA, as amended, by deleting the term “drinking” in the provision of emergency supplies of clean water to meet critical needs in contaminated source situations.

Disaster Recovery Efforts. Section 917 further amends Section 5 of the 1941 FCA, as amended, to authorize the Chief of Engineers, in an area where the Corps is already performing flood emergency work, for a 10-day period following a Governor's request for a disaster or emergency declaration under the Disaster Relief Act of 1974, to perform any emergency work essential for the preservation of life and property.

Waterborne Petroleum Product Information Release. Section 919 directs the Secretary to disclose information about petroleum products transported by vessel and reported to the Waterborne Commerce Statistics Center to any State taxing agency upon written request for purposes of administration of State tax laws when State law forbids disclosure to the public.

Waterborne Commerce Non-Compliance: Civil and Criminal Penalties. Section 919 amends 33 U.S.C. 555 by increasing the fine for non-compliance from $100 to $5,000 and added a civil penalty of up to $2,500 per violation.

Acquisition of Recreation Lands. Section 926 provides that lands for project recreation shall be acquired concurrently with land for other project purposes. Also, it authorizes aquisition of lands, as part of a Corps project, for public park and recreation uses.

Interim Use of Water Supply Storage for Irrigation. Section 931 authorizes interim allocation of future water supply storage for irrigation purposes.

Water Supply Act Amendments. Section 932 eliminates the 10-year interest free period for future water supply; modifies the interest rate formula; limits the repayment period to 30 years; and requires allocated annual operation, maintenance and replacement costs to be reimbursed annually. (Amendments apply only to Corps projects.)

Sand Fill. Section 933 modifies Section 145 of Public Law 94-587 to authorize 50 percent Federal cost sharing of the extra costs for using dredged sand from Federal navigation improvements and maintenance efforts for beach nourishment.

Periodic Nourishment. Section 934 modifies Section 156 of Public Law 94-587 to authorize the Corps to extend aid in periodic nourishment up to 50 years from the date of initiation of project construction.

Removal of Wrecks. Section 939 amends Section 15 of the 1899 R&H Act to require owners to reimburse the Corps for costs of removal in excess of salvage value.

Mitigation of Shore Damage. Section 940 amends Section 111 of Public Law 90-483 to allow implementation of nonstructural measures to mitigate shore damages resulting from Federal navigation works; to require local interests to operate and maintain Section 111 measures; and to require cost sharing of implementation costs in the same proportion as for the works causing the shore damage.

Aquatic Plant Control. Section 941 increased the limitation on annual expenditures by the Corps for the program to $12 million.

Historical Properties. Section 943 authorizes restoration, preservation and maintenance of historic properties on Corps lands if they are entered in the National Register of Historic Places.

Dredge Disposal. Section 945 sets limitations on permissable disposal of Corps dredging vessels.

Use of FmHA Funds. Section 950 provides that Farmers Home Administration funds can be used to pay the non-Federal share of any other Federal grant-in-aid program.

Project Deauthorization. Section 1001(a) provides that any project authorized for construction in this Act shall be deauthorized as of the fifth anniversary of its enactment if funds have not been allocated for construction prior to that date. Section 1001(b) establishes a new procedure, replacing the procedure established by Section 12 of Public Law 93-251, for deauthorization of previously

authorized projects or separable elements for which no funds have been obligated for a period of 10 fiscal years. (Amended by Section 52, Public Law 100-676 and Section 228, Public Law 104-303)
Control of Ice. Section 1101 authorizes a limited program for ice research and technical assistance.
California Debris Commission. Section 1106 abolishes this Commission, first established in 1893.
Private Use Facilities. Section 1134 extends, indefinitely, beyond December 31, 1989, prohibition against enforced removal of certain private-use facilities from Corps lands.
Project Modifications to Improve Environment. Section 1135 authorizes review of the operation of completed water resouces projects to determine need for modifications for the purpose of improving environmental quality.
Cost Sharing, Territories. Section 1156 authorizes waiver of non-Federal cost sharing requirements up to $200,000 for all studies and projects in American Samoa, Guam, the Northern Mariana Islands, the Virgin Islands, and the Trust Territory of the Virgin Islands.
Dam Safety. Section 1201 authorizes Corps grants to states that establish and maintain an approved dam safety program, and establishes a National Dam Safety Review Board. Section 1203 requires non-Federal interests which are participating in reimbursable purposes of a project to share in the costs of modifying Corps dams and related facilities resulting from changes deemed necessary for safety purposes. (Amended by Section 215, Public Law 103-404)
Harbor Maintenance Tax. Section 1402 amends the Internal Revenue Code of 1954 to provide for imposition of a tax on any port use.
Harbor Maintenance Trust Fund. Section 1403 amends the Internal Revenue Code of 1954 to provide for establishing a "Harbor Maintenance Trust Fund" in the United States Treasury.
Inland Waterways Tax. Section 1404 amends the Internal Revenue Code of 1954 to modify the schedule for taxes imposed on fuels used in commercial transportation on inland waterways.
Inland Waterways Trust Fund. Section 1405 amends the Internal Revenue Code of 1954 to establish the "Inland Waterways Trust Fund" in the United States Treasury.

B-172. 4 February 1987, Public Law 100-4--Water Quality Act of 1987. Section 407 requires the Administrator of EPA and the Secretary of the Army to enter into an agreement regarding coordination of permitting for log transfer facilities to designate a lead agency and to process permits required under Sections 402 and 404 of the Federal Water Pollution Control Act, where both sections apply, for discharges associated with the construction and operation of log transfer facilities.

B-173. 2 April 1987, Public Law 100-17--Uniform Relocation Act Amendments of 1987 (Title IV). Section 403 provides for the head of a Federal agency to discharge his/her responsibility under the Act (Public Law 91-646) by accepting certification by a state agency that it will carry out such responsibility, if the head of the U.S. Department of Transportation (i.e., lead agency) determines that such responsibility when carried out in accordance with state laws will accomplish the purpose of the Act.

B-174. 27 May 1987, Public Law 100-45--Farm Disaster Assistance Act Of 1987. Section 9 amends Section 5 of the 1941 FCA, as amended, by requiring the Corps to consider benefits to residential, commercial and agricultural establishments in preparing a benefit-cost analysis for any emergency project.

B-175. 1 October 1988, Public Law 100-460--Rural Development, Agriculture, and Related Agencies Appropriation Act, 1989. Section 632 of this Act provides: "Hereafter, none of the funds appropriated in this or any other Act shall be used to alter the method of computing normalized prices for agricultural commodities for use by any Federal agency in evaluating water resources development projects to be undertaken in whole or in part with Federal funds that was in effect as of January 1, 1986." As of the date cited, the U.S. Department of Agriculture (USDA) estimated the normalized prices by using a computer model of the U.S. agriculture sector. (The model is designed to "normalize" prices, i.e., remove any short run seasonal or cyclical variation.) The prices furnished by USDA are used by the Corps and other Federal agencies to evaluate the benefits of projects affecting agriculture.

B-176. 17 November 1988, Public Law 100-676--Water Resources Development Act of 1988. Project Cost Increase Limitations. Section 3(b) extends the provisions of Section 902 of Public Law 99-662 to projects authorized in this and subsequent Acts.
Reservoir Operations. Section 5 requires that there be opportunity for public review and comment before a change is made in reservoir operation involving reallocation of storage or significantly affecting any project purpose.
Collaborative Research and Development. Section 7 authorizes use of Corps labs and research centers for cost shared R&D with non-Federal entities.
Reimbursement for Non-Federal Expenditures. Section 12 further amends Section 215 of the Flood Control Act of 1968 to provide that the limit of Federal reimbursement costs per project may be 1 percent of total project costs if that would be greater than $3 million. For any such project, reimbursement in any one year may not exceed $5 million.
Utility Relocations. Section 13 amends Section 101(a) of Public Law 99-662 to include, retroactively, sponsor costs for related utility relocations as part of sponsor LERRD costs creditable against their required post-construction repayment (over a period not exceeding 30 years) of 10 percent of total project costs.
Flood Plain Management. Section 14 amends Section 402 of Public Law 99-662 to extend Federal flood insurance and flood plain management programs compliance requirements to sponsors of hurricane and storm damage reduction projects.
Contained Disposal Areas, Great Lakes. Section 24 provides that such facilities, developed pursuant to Section 123 of the River and Harbor Act of 1970, may continue to be used by the Corps until filled or no longer needed.
Project Deauthorization. Section 52 extends the provisions of Section 1001(a) of Public Law 99-662 to projects authorized in this and subsequent Acts.

B-177. 23 November 1988, Public Law 100-707--Robert T. Stafford Disaster Relief and Emergency Assistance Act. A major amendment to the Disaster Relief Act Amendments of 1974, Public Law 93-288. Authorized the Federal Government to assist state and local governments in disaster preparedness, response, and recovery efforts. Provided for the appointment of a Federal Coordinating Officer (FCO) to coordinate the overall delivery of Federal assistance. Federal departments and agencies will provide response assistance directly to the state, under the FCO's direction.

B-178. 13 December 1989, Public Law 101-233--North American Wetland Conservation Act. Directs the conservation of North American wetland ecosystems for waterfowl and the other migratory birds and fish and wildlife that depend upon such habitats. Section 9 requires agencies to manage their lands for wetland/waterfowl purposes to extent consistent with missions.

B-179. 18 August 1990, Public Law 101-380--Oil Pollution Prevention, Response, Liability, and Compensation Act of 1989. Section 4112 requires the Secretary of the Army to conduct a study and report in one year on the feasibility of modifying dredges and using them to remove spills of oil and other hazardous substances.

B-180. 5 November 1990, Public Law 101-508--Omnibus Budget Reconciliation Act of 1990. TITLE VI, Subtitle C, reauthorizes the Coastal Zone Management Act and requires Federal activities within or outside the coastal zone, which may affect the natural resources, land uses, or water uses in the coastal zone, to be consistent to the maximum extent practicable with the enforceable policies of a State-approved management plan. TITLE XI, Subtitle B, Section 11214, increases the Harbor Maintenance User Fee from 0.04 percent to 0.125 percent effective 1 January 1991.

B-181. 16 November 1990, Public Law 101-591--Coastal Barrier Improvement Act of 1990. Reauthorizes the Coastal Barrier Resources Act and expands the size of the Coastal Barrier System. Prohibits the use of Federal assistance to develop lands within the system; however, Federal assistance can be used for certain specified activities, including maintenance or construction of improvements of existing Federal navigation channels.

B-182. 16 November 1990, Public Law 101-595--Federal Maritime Commission Authorization Act of 1990. Section 307 exempts dredges from Federal pilotage requirements, unless the Secretary of Transportation determines that a navigation hazard would be created.

B-183. 16 November 1990, Public Law 101-596--Great Lakes Critical Programs Act of 1990. Title I (Great Lakes) sets schedules and deadlines for the EPA Administrator to accomplish a number of tasks including completion of demonstration projects for achieving a specified numerical standard for contaminated sediments at certain lake sites. Section 102 requires the Administrator to publish information concerning the public health and environmental consequences of contaminants in Great Lakes sediment including specific numerical limits on bioaccumulation of toxins. Section 104 directs the Administrator, in consultation with the Secretary of the Army, to develop and implement within one year management plans for Great Lakes confined disposal facilities.

B-184. 16 November 1990, Public Law 101-601--Native American Grave Protection and Repatriation Act. Requires that Federal agencies inventory within 5 years their collection of human skeletal remains and associated funerary objects and identify cultural descendants. Human skeletal remains and funerary objects must be transferred to these cultural descendants for disposition in accordance with their customs if they so request. A summary of all unassociated funerary objects and sacred objects must be completed within three years and records made available to Native American organizations.

B-185. 28 November 1990, Public Law 101-624--Food, Agriculture, Conservation and Trade Act of 1990. Section 1422 modifies the 'Swampbuster' provision of the 1985 Food Security Act to provide for delineation of wetlands which are defined as having a predominance of hydric soils which under normal circumstances support a prevalence of hydrophytic vegetation. It also provides for additional exemptions for activities in wetlands that have been frequently cropped, if a converted wetland is restored. Penalties are reduced when activities were conducted in good faith, if the wetland is being actively restored.

B-186. 28 November 1990, Public Law 101-640--Water Resources Development Act of 1990. Planning and Engineering. Section 301 directs that1`zaq if a non-Federal sponsor contributes 50 percent of the cost of the feasibility study, costs of planning and engineering for the project shall be treated as costs of construction.
Emergency Response. Section 302 amends Section 5 of the 1941 FCA, as amended, to authorize the Secretary of the Army to prepare for emergency response to any natural disaster and to expend funds for emergency dredging to restore Federal navigation channels and waterways after a natural disaster.
Construction of Navigation Projects by Non-Federal Interests. Section 303 amends Section 204 of Public Law 99-662 to permit a non-Federal sponsor to complete a small navigation project initiated under the Section 107 program, and to authorize the Secretary of the Army to reimburse the sponsor for the Federal share of the cost of the project.
Project Modifications for the Improvement of the Environment. Section 304 amends Section 1135 of Public Law 99-662 to delete the time period for the Section 1135 program, and to change the authorized appropriations to $15 million annually to carry out the program.
Ability to Pay. Section 305 directs the Secretary of the Army to consider local, not statewide, economic and financial data when evaluating a non-Federal sponsor's ability to pay and the revised procedures must provide for a reduction in the non-Federal cash contribution required in excess of minimum 5 percent. Revised regulations must be published within 1 year.
Environmental Protection Mission. Section 306 directs the Secretary of the Army to include environmental protection as one of the primary missions of the Corps.
Wetlands. Section 307 establishes for the Corps water resources program an interim goal of no overall net loss of wetlands and a long-term goal to increase the quality and quantity of the Nation's wetlands. Directs the Secretary of the Army to establish an action plan to achieve this goal and others within 1 year. Authorizes the Secretary of the Army to establish a 3-year demonstration program for wetlands restoration, enhancement, and creation. In addition, authorizes the Secretary to establish a program for the training and certification of wetlands delineators.
Flood Plain Management. Section 308 directs that the Secretary of the Army cannot consider for justifying new Federal project benefits from protecting specified new or substantially improved structures built in the flood plain after 1 July 1991. Structures which are not water-dependent would be affected if they are either built in the 100-year flood plain with the first floor elevation less than the 100-year flood elevation after 1 July 1991 or the 10-year flood plain if the county is substantially located within the 100-year flood plain. Also

directs the Secretary to report by 1 January 1992 on the advisability of increasing the non-Federal share in areas where certain new flood plain development occurs after a community enters into the national flood insurance program.

Shoreline Protection. Section 309 directs the Secretary of the Army to report within 1 year on the advisability of not participating in shoreline protection projects unless the state has established a management program which includes restrictions on new development, provisions for the relocation of structures, and for assuring public access.

Reservoir Management. Section 310 directs the Secretary of the Army to establish within 2 years a technical advisory committee to provide to the Secretary and Corps recommendations on reservoir monitoring and options for reservoir research. Also directs the Secretary to ensure that significant opportunities for public participation are provided in developing or revising reservoir operating manuals and report on implementation of this matter by 1 January 1992. (Amended by Section 233, Public Law 103-404)

Reservoir Project Operations. Section 311 directs the Secretary of the Army to report within 6 months on the purposes for which each Corps reservoir project is authorized and the purposes for which it is being operated.

Environmental Dredging. Section 312 authorizes the Secretary of the Army to establish a 5-year, $10 million per year environmental dredging program. The dredging must be performed in accordance with a plan developed by interested Federal and non-Federal officials, and the non-Federal sponsor must agree to pay the disposal costs and 50 percent of the cost of the dredging. (Amended by Section 205, Public Law 103-404)

Protection of Recreational and Commercial Uses. Section 313 directs the Secretary of the Army to consider recreational impacts in planning projects and in operating and maintaining them. The Secretary may expend up to $2 million annually to mitigate for adverse recreational impacts of maintenance, repair, rehabilitation, or reconstruction activities. A non-Federal sponsor must agree to share the costs.

Operation and Maintenance of Federal Hydropower Facilities. Section 314 declares that operation and maintenance of Federal hydropower facilities are to be considered as inherently governmental functions and not commercial activities.

Environmental Planning. Section 315 amends Section 904 of Public Law 99-662 to specify that, under the general requirement that projects enhance the quality of the total environment, preservation and enhancement of the environment are specific factors to be addressed in planning.

Harbor Maintenance Trust Fund. Section 316 amends Section 210 of Public Law 99-662 to authorize the use of appropriations from the Harbor Maintenance Trust Fund to pay up to 100 per cent of the eligible operation maintenance costs assigned to commercial navigation.

Single Entities. Section 317 directs the Secretary of the Army to not consider facilities owned by a state, county, municipality or other public entity as a single owner or single entity for any purpose.

Technical Assistance to Private Entities. Section 318 authorizes the Secretary of the Army to use Corps research and development laboratories to provide assistance on a reimbursable basis to the private sector. The assistance must be within the mission of the Corps and not otherwise obtainable from the private sector. In addition, Section 9 of Public Law 100-676 is amended by removing the 2-year limit on the program to provide technical assistance, on a nonexclusive basis, to U.S. firms working outside the United States.

Cabin Site Leases. Section 320 amends Section 1134 of Public Law 99-

662 to add cabins and trailers to the list of property interests protected from lease cancellation at Corps reservoirs.
Information on Floods and Flood Damages. Section 321 amends Section 206 of Public Law 86-645 to authorize the Secretary of the Army to collect fees from Federal agencies and private persons for flood plain management services and specifically prohibit the Secretary from collecting fees from non-Federal public entities.
Reduced Pricing for Certain Water Supply Storage. Section 322 authorizes the Secretary of Army to provide at a reduced price up to 2 MGD of water to a community of less than 20,000 with a per capita income less than that of two-thirds of the counties in the U.S. The price shall be the greater of (1) the updated construction cost of the water supply storage or $100 per acre foot, whichever is less and (2) the value of the benefits lost by providing the water.
Demonstration of Construction of Federal Project by Non-Federal Interests. Section 404 directs the Secretary of the Army within 1 year, to enter into agreements with two non-Federal interests which permit the non-Federal interests to undertake all or part of a navigation project by utilizing their own personnel or by procuring outside services. The non-Federal cost must not exceed the cost of the Secretary undertaking the project.
Wetlands Enhancement Opportunities. Section 409 directs the Secretary of the Army to submit a report by 20 January 1992 that identifies opportunities for enhancing wetlands in connection with the construction and operation of water projects.
Magnetic Levitation Technology. Section 417 authorizes the Secretary of the Army in fiscal years 1990 and 1991 to conduct research and development activities on magnetic levitation technology or to provide for such activities in cooperation with the Secretary of Transportation. The Secretary may collaborate with non-Federal entities. The non-Federal share of the costs is 50 percent.

B-187. 29 November 1990, Public Law 101-646--Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (Title I). Section 1202 directs the Assistant Secretary of the Army for Civil Works to serve on the Aquatic Nuisance Species Task Force; directs the Task Force to develop a research and technology development program aimed at controlling the zebra mussels in and around public facilities and to make grants for implementation of public facilities management plans of states.
Great Lakes Fish and Wildlife Restoration Act of 1990 (Title II). This title is essentially the same as Title I of Public Law 101-537, except that Section 2009(b) authorizes $1.5 million to be annually appropriated to the Secretary of the Army.
Coastal Wetlands Planning, Protection and Restoration Act (Title III) (also known as the Breaux Bill). Sections 303 and 304 direct a Task Force chaired by the Secretary of the Army to develop within three years a Louisiana Coastal Wetlands Restoration Plan and to carry out restoration projects. Section 305 directs the Director of the Fish and Wildlife Service to make matching grants to other coastal states to carry out coastal wetlands conservation projects. Eighteen percent of the funds appropriated annually from the DOI's Sport Fish Restoration Account are to be used to implement these provisions.

B-188. 17 August 1991, Public Law 102-104--Energy and Water Development Appropriations. Makes appropriations for energy and water development for the fiscal year ending 30 September 1992. Regulatory Program. Title I states that funds may not be expended to delineate wetlands using the 1989 manual, causing the Corps to revert back to use of the 1987 manual.

B-189. 18 December 1991, Public Law 102-240--Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Establishes a national intermodal surface transportation system, authorizes funds for construction of highways, for highway safety programs and for mass transit programs.
Wetlands Mitigation. Sections 1006 and 1007 authorize use of transportation funds for wetlands mitigation efforts, including participation in wetlands mitigation banks.
National High-Speed Ground Transportation Programs. Section 1036 establishes a National Magnetic Levitation Prototype Development Program to be managed by a Program Director appointed jointly by the Secretary of Transportation and Assistant Secretary of the Army for Civil Works. A portion of the funds shall be derived from the Highway Trust Fund.

B-190. 30 September 1992, Public Law 102-372--Tourism Policy and Export Promotion Act of 1991. Amends the International Travel Act of 1961 to assist in the growth of international travel and tourism into the United States.
Tourism Policy Council. Section 15 amends Section 302 of the International Travel Act of 1961 by adding the Chief of Engineers and others as members of the tourism policy council.

B-191. 6 October 1992, Public Law 102-386--Federal Facilities Compliance Act of 1992. Section 102 amends Section 6001 of the Solid Waste Disposal Act to provide that Federal facilities must comply with Federal and state environmental laws and requirements. Section 104 amends section 3007(c) of the Solid Waste Disposal Act to require annual inspection of Federal facilities by the Administrator of EPA. States with an authorized hazardous waste program may also conduct inspections for the purposes of enforcing the facilities' compliance with the State hazardous waste program. The department or agency must reimburse the EPA for the costs of the inspection. At the first inspection, EPA is to conduct comprehensive groundwater monitoring. (42 U.S.C. 690)

B-192. 6 October 1992, Public Law 102-396--Department of Defense Appropriations Act of 1993. Section 9137 states the sense of the Congress that the Corps of Engineers should evaluate new concrete construction technologies to identify those that could, if used in future construction, reduce the extent of damages caused by hurricanes.

B-193. 24 October 1992, Public Law 102-486--Comprehensive National Energy Policy Act. Section 2406 authorizes the Secretaries of Interior and Army to plan, design, construct, operate and maintain power generation improvements and replacements at their projects in the Pacific Northwest Region. They are also authorized to operate and maintain their power facilities that they and the Administrator of the Bonneville Power Administration determine necessary or appropriate with any funds that the Administrator makes available for such purpose.

B-194. 31 October 1992, Public Law 102-575--Reclamation Projects Authorization and Adjustments Act of 1992.
Cost Sharing for New Recreation Facilities. Section 2804 amends P.L. 89-72 (Federal Water Project Recreation Act) regarding cost sharing requirements for the provision of new recreation facilities. The requirement for the sponsor to assume 100 percent of operations, maintenance, and replacement costs is changed to "not less than one half the costs." Although the original law was directed at the Bureau

of Reclamation, these amendments extend to the Corps as well.
Western Water Policy Review. Title XXX directs the President to undertake a comprehensive review of Federal activities in the 19 Western States which affect the allocation and use of water resources. An advisory commission which includes the Secretary of the Army shall assist in the preparation and review of the report.
National Historic Preservation Act Amendments. Title XL amends the National Historic Preservation Act by expanding Tribal Historic Preservation Programs, establishing professional standards, and creating a National Center for Preservation Technology and Training.

B-195. 31 October 1992, Public Law 102-580--Water Resources Development Act of 1992. Ability to Pay. Section 201(a) modifies Section 103(m) of Public Law 100-676 concerning the ability of non-Federal interests to pay under cost-sharing agreements for flood control and agricultural water supply. This ability to pay shall be determined by the Secretary of the Army. Section 201(b) directs the Secretary of the Army to: (1) review regulations on ability to pay in light of locally prevailing conditions such as those associated with specified projects; and (2) amend the regulations to the extent that the Secretary determines necessary to more appropriately take into account locally prevailing conditions which would limit the ability of local interest to participate as non-Federal project sponsors in accordance with established cost-sharing formulas.
Projects for Improvements of the Environment. Amends Section 1135 of Public Law 100-676 to increase annual program limit to $25 million but requires that modifications exceeding $5 million be authorized by Congress.
Voluntary Contributions for Environmental and Recreation Projects. Section 203 authorizes the Secretary of the Army to accept contributions of cash, funds, materials, and services from anyone except project sponsors for a water resources project for environmental protection and restoration or for recreation.
Beneficial Uses of Dredged Material. Section 204(a) establishes a new program for beneficial uses of dredged material for construction, operation or maintenance of an authorized navigation project. Section 204(c) requires non-Federal interests to agree to provide 25 percent of construction costs including all LERR, and 100 percent of OMRR&R associated with the project. Section 204(e) establishes an annual program limit of $15 million.
Definition of Rehabilitation for Inland Waterway Projects. Section 205 establishes a definition for "rehabilitation" for inland and intracoastal waterway projects, to include major project feature restoration, structural modification of a major project component (not exhibiting reliability problems). Routine or deferred maintenance are explicitly excluded.
Construction of Shoreline Protection Projects by Non-Federal Interests. Section 206 authorizes construction of shoreline protection projects on the U.S. coastlines by non-Federal interests subject to permits and approval of the Secretary. Section 206 also allows non-Federal entities to utilize Corps study information or contract with the Corps to do studies, directs monitoring of construction and O&M where appropriate, and authorizes the Secretary of the Army to reimburse non-Federal interests the appropriate Federal share of a project approved for construction.
Cost-Sharing for Disposal of Dredged Material on Beaches. Section 207 modifies section 145 of Public Law 94-587 to authorize political subdivisions of States to enter into agreements (with concurrence of States) for disposal of dredged material on beaches and to consider, and to the maximum extent practicable, accommodate the schedule of the sponsor in providing its share of costs.

Dam Safety Program Extension. Amends Public Law 92-367. Section 209(a) extends the appropriations authority for State Safety Programs element for two years, through FY 1994. Section 209(b) extends the appropriations authority for State Training Programs element for two years, through FY 1994. Section 209(c) extends the appropriations authority for Research Program element for two years, through FY 1994. Section 209(d) extends the appropriations authority for Dam Inventory element for two years, through FY 1994.

Safety Award and Promotional Materials. Section 210 authorizes a $350,000 annual program for safety promotion and employee recognition.

Work for Others. Section 211 modifies the definition of "State" in 10 USC 3036(d) for those eligible for assistance under "Work for Others".

Use of Private Sector Resources in Surveying and Mapping. Section 212 directs the Secretary of the Army to use private sector resources to the maximum extent practicable in carrying out surveying and mapping activities in the civil works program.

Use of Domestic Products. Section 213 reaffirms need for compliance with "Buy American Act" for procurements with funds appropriated to carry out this Act and establishes reporting requirement and defines "domestic product" for this provision.

Rural Project Evaluation and Selection Criteria. Section 214 directs the Comptroller General to report to Congress in 18 months of enactment on legislative and other recommendations to meet identified objectives to enhance water resources development projects in rural areas.

Dredged Material Disposal Areas. Section 216 directs the Secretary of the Army to conduct a study on the need for changes in Federal law and policy with respect to dredged material disposal areas for the construction and maintenance of harbors and inland harbors.

Board of Engineers. Section 223 abolishes the Board of Engineers for Rivers and Harbors as of 180 days after enactment. Duties may be transferred to other elements as determined necessary.

Channel Depths and Dimensions. Section 224 amends Section 5 of the Act of March 4, 1915. (After construction of a navigation project, this will allow required dredging outside authorized dimensions of entrances, bends, sidings, and turning places as necessary to maintain an effective project.)

Challenge Cost-Sharing Program for the Management of Recreation Facilities. Section 225 authorizes the Secretary of the Army to develop and implement a program to accept contributions of funds, materials, and services from non-Federal public and private entities to be used in managing recreation facilities and natural resources.

Debarment of Persons Convicted of Fraudulent Use of "Made in America" Labels. Section 226 directs the Secretary of the Army to debar from contracting with the Federal Government for three to five years a person determined by the Secretary to have intentionally affixed "Made in America" labels on products used in a civil works project and not meeting criteria for such labeling.

Extension of Jurisdiction of Mississippi River Commission. Section 301 extends jurisdiction of the Mississippi River Commission to include Terrebonne Parish and certain areas east of the East Atchafalaya Basin Protection Levee and west of the Mississippi River Levee.

Availability of Contaminated Sediments Information. Section 327 directs the Secretary of the Army to conduct a national study and compile information on contaminated sediments and to report to Congress in one year.

Harbor Maintenance Trust Fund Deposits and Expenditures. Section 330 requires the President to report to Congress on expenditures from and deposits to the Harbor Maintenance Trust Fund by 1 Mar 93 and annually thereafter.

Fish and Wildlife Mitigation. Section 333 modifies Section 906(c) of Public Law 99-662 to provide that costs of LERR required for fish and wildlife mitigation shall be allocated the same as other costs.
International Outreach Program. Section 401(a) authorizes the Secretary of the Army to collect, analyze and make available information and technology from abroad that could improve U.S. waterborne transportation, both inland and deep draft. Efforts can include R&D, training, technology transfer and technical services. Section 401(b) authorizes provision of such assistance to Federal, state and local agencies, other public entities, corporations (profit or nonprofit) and foreign governments. Section 401(c) authorizes that funds to carry out programs can include those deposited in special Treasury account by cooperating entity or organization.
Marine Technology Review. Section 402 authorizes the Secretary of the Army to conduct a study and report to Congress on dredging needs of U.S. ports and harbors based on all relevant physical, economic and world trade factors.
Contaminated Sediment and Ocean Dumping. Title V establishes a National Contaminated Sediment Assessment and Management program.
Section 502(a) establishes a National Contaminated Sediment Task Force to advise the Secretary of the Army and EPA Administrator on implementation of Title V; review reports, programs and pollutants selected for criteria; advise and make recommendations on guidelines and prevention and control measures; and review and advise on means and methods to locate long-term disposal sites.
Section 502(b) establishes membership for the Task Force, designates the Administrator and Secretary as cochairmen; establishes method for provision of clerical and technical assistance and compensation of non-Federal members.
Section 502(c) directs the Task Force to provide a report to Congress within two years on findings and recommendations.
Section 503(a) directs the Administrator to conduct a comprehensive survey of aquatic sediment quality in the United States, including potential source of pollution and within 24 months of enactment to report to Congress on findings with recommendations to prevent contamination.
Section 503(b) directs the Administrator to conduct a comprehensive and continuing monitoring program to assess aquatic sediment quality. The monitoring program includes location and extent of pollution; methods and protocols for monitoring; system for data management; assessment of trends over time; identify locations of where pollutants may pose threats to specific resources; establish clearinghouse for information; and, provide a report to Congress on findings within two years.
Section 504(a) amends Sections 103(c) & (e) of the Marine Protection, Research, and Sanctuaries Act of 1972 (MPRSA) to set procedures and time limits for the Administrator to review and concur, concur with conditions, or nonconcur with a proposed permit by the Secretary for sediment disposal. The permit cannot be issued if a "nonconcur". If a "concur with conditions", the permit issued has to include the specific conditions and require compliance.
Section 505 amends Section 106(d) of the MPRSA to define the applicability of state rules and establish an exception for Federal projects.
Section 506(a) amends Section 102(c) of the Marine Protection, Research, and Sanctuaries Act to direct the Administrator to designate sites or time periods for dumping, and in conjunction with Secretary, to develop a site management plan for each designated site and describe what should be included in plan and periodic review time frames. A deadline of 1 January 1997 is established for development of management plans at all sites.

Section 506(b) amends Section 103(b) of the MPRSA to establish basis for selection and time limits on use of "alternative" disposal sites, designated by the Secretary.
Section 507 amends Section 104 of the MPRSA to ensure consistency with site management plan and set time limit for permits.
Section 508 amends Section 105 of the MPRSA to establish criminal penalties for violation of provisions and authorize seizure and forfeiture of vessels involved in violation.
Section 510 amends Section 112 of the MPRSA to provide that existing reports required to Congress will include specific information on permits issued, actions taken for each permit, and descriptive information on permitted site, material disposed and management practices implemented.

B-196. 16 November 1993, Public law 103-141--Religious Freedom Restoration Act.

B-197. 3 December 1993, Public Law 103-181--Hazard Mitigation and Relocation Assistance Act of 1993. Amends Public Law 93-288, as amended, the Stafford Act, to: (1) increase from 50 to 75 percent of the cost of hazard mitigation measures the amount authorized to be contributed by the President when determined to be cost-effective while substantially reducing the damage or loss suffered in a major disaster; (2) increase the total Federal contributions for mitigation authorized for damages from a major disaster to 15 percent of the estimated aggregate amounts of grants to be provided under such Act for such disaster; and (3) provide the terms and conditions under which the Director of the Federal Emergency Management Agency may provide property acquisition and relocation assistance in connection with flood damaged property. States that the purchase of any real property under a qualified buyout program (the Federally assisted purchase of property damaged by the major Midwest flood of 1993) shall not constitute the making of Federal financial assistance available for the cost of a program resulting in the acquisition of real property or in an owner of real property being a displaced person within the meaning of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.

B-198. 12 February 1994, Public Law 103-211--Emergency Supplemental Appropriations Act of 1994. Makes appropriations to the Department of Agriculture to repair damage to the waterways and watersheds resulting from the Midwest floods and California fires of 1993 and other natural disasters, provided, among other things, that the Secretary of the Army determines that the cost of land and levee restoration exceeds the fair market value of an affected cropland, the Secretary may use sufficient amounts from funds provided under this heading to accept bids from willing sellers to enroll such cropland inundated by the Midwest floods of 1993 in any of the affected States in the Wetlands Reserve Program.

B-199. 26 August 1994, Public Law 103-316--Energy and Water Development Appropriations Act, 1995. Report language directs the Secretary of the Army to take whatever steps are possible to ensure that fees charged be the private lessees for the use of boat launch facilities constructed by the Corps do not exceed those charged by the Corps for the use of similar facilities. In addition, the Secretary is directed to take whatever steps are possible to ensure that individuals who purchase season passes for the use of Corps boat launching facilities can use those passes at all facilities constructed by the Corps even if they are operated by private lessees.

B-200. 23 September 1994, Public Law 103-325--National Flood Insurance Reform Act of 1994 (Title VI). Section 641 amends the Housing and Urban Development Act of 1968 to require the FEMA Director to coordinate all flood and erosion mitigation activities under the Act.

B-201. 5 October 1994, Public Law 103-337--National Defense Authorization Act for FY 1995. Section 1143 directs the Secretary of Defense to establish a plan for the development and deployment of existing defense environmental technologies in support of the dredging requirements of dual-use ports. The plan, to be submitted to Congress not later than 180 days after 5 October 1994 (the date of enactment), shall include: (1) the environmentally secure containment and management of contaminated dredged material, and (2) the decontamination of dredged material.

B-202. 31 October 1994, Public Law 103-426--A bill to authorize the Secretary of the Interior to negotiate agreements for the use of Outer Continental Shelf sand, gravel, and shell resources. Amends the Outer Continental Shelf Lands Act to authorize the Secretary of the Interior to negotiate agreements for the use of sand, gravel and shell resources from the Outer Continental Shelf for use in 1) shore protection, beach restoration or coastal wetlands restoration programs or projects undertaken by a Federal, state or local government entity or 2) a construction project that is funded in whole or in part by or authorized by the Federal Government. The Secretary may assess a fee based on an assessment of the value of the resources and the public interest served by promoting development of the resources. Requires any Federal agency which proposes to make use of sand, gravel and shell resources under provisions of this Act to enter into a MOA with the Secretary concerning the potential use of those resources; and Secretary of the Interior to notify the House Committee on Merchant Marine and Fisheries, the House Committee on Natural Resources, and the Senate Committee on Energy and Natural Resources.

B-203. 10 February 1996, Public Law 104-106--National Defense Authorization Act for FY 1996. Value Engineering for Federal Agencies. Section 4306 amends the Office of Federal Procurement Policy Acy (431 U.S.C. 401 et seq.) to direct that each Executive agency shall establish and maintain cost-effective value engineering procedures and processes.

B-204. 12 October 1996, Public Law 104-303--Water Resources Development Act of 1996. Cost Sharing for Dredged Material Disposal Areas. Section 201 directs that dredged material disposal facilities for O&M be considered a general navigation feature and cost shared in accordance with Title I of Public Law 99-662. The Harbor Maintenance Trust Fund will be the source of the Federal portion of the funds for construction of dredged material disposal facilities for O&M. Project Cost Sharing. Section 202 increases to 35 percent the non-Federal cost sharing requirements for flood control and most environmental restoration projects authorized after the date of enactment of this act. (The Section 1135 Program remains at 25 percent). Revises ability-to-pay rules for flood control projects and requires preparation of a flood plain management plan by the non-Federal sponsors within one year of signing a PCA. Emergency Response. Section 202(e) amends Section 5 of the 1941 FCA, as amended, to authorize implementation of nonstructural alternatives

in the repair or restoration of damaged flood control works.
Levee Owners Manual. Section 202(f) amends Section 5 of the 1941 FCA, as amended, to require the Secretary of the Army to prepare Levee Owners Manual on potentially eligible flood control works, provide to non-Federal interests, and defines the terms “maintenance and upkeep” and “repair and rehabilitation”.
Restoration of Environmental Quality. Section 204 broadens the Section 1135 program to specifically allow restoration work off of project lands as long as it is shown that a Corps project contributed to the degradation of the environment.
Aquatic Ecosystem Restoration. Section 206 authorizes the Secretary of the Army to carry out aquatic ecosystem restoration and protection projects subject to a Federal cost limitation of $5 million per project. Beneficial Uses of Dredged Materials. Section 207 directs that, in connection with carrying out navigation projects, the Secretary may select a disposal method that is not the least cost option if the incremental costs are reasonable in relation to the environmental benefits, including wetlands development and shoreline erosion control.
Environmental Protection and Restoration. Section 210 amends Section 103(e) of Public Law 99-662 to add environmental protection and restoration as another project purpose with a non-Federal cost share of 35 percent.
Construction of Flood Control Projects by Non-Federal Interests. Section 211 allows non-Federal interests to construct authorized flood control projects.
Emergency Bank Protection. Section 219 amends Section 14 of the 1946 FCA to increase program expenditure limits to $15 million per year and $1 million per locality.
Reimbursement for Non-Federal Expenditures. Section 224 amends Section 215 of the 1968 FCA, as amended, to increase the limit on reimbursements per project to $5 million.
Planning Assistance to States. Section 221 expands the Planning Assistance to States Program to include ecosystem and watershed planning. Increases the annual program limit and per state limit.
State and Federal Review Period. Section 223 changes the Federal review period for feasibility studies from 90 down to 30 days.
Shore Protection. Section 227 clarifies shore protection policy to maintain a Federal interest in shoreline and beach protection and restoration, including the use of periodic beach nourishment.
Hopper Dredges. Section 237 directs initiation of a program to increase the use of private industry hopper dredges in navigation maintenance.

B-205. 26 October 1996, Public Law 104-332--National Invasive Species Act. Establishes a national ballast-water management program to reduce the introduction and spread of foreign aquatic species in all U.S. waters.
Public Facility Research and Development. Section 2(e) amends subtitle C of the Nonindigeneous Aquatic Nuisance Prevention and Control Act of 1990 to direct the Assistant Secretary of the Army, in consultation with the Aquatic Nuisance Species Task Force, to develop a program of research, technology development, and demonstration for the environmentally sound control of zebra mussels in and around public facilities.
Dispersal Barrier Demonstration. Section 2(e) amends subtitle C of the Nonindigeneous Aquatic Nuisance Prevention and Control Act of 1990 to direct the Assistant Secretary of the Army, in consultation with the Aquatic Nuisance Species Task Force, to investigate and identify environmentally sound methods for preventing and reducing the dispersal of aquatic nuisance species between the Great Lakes-Saint

Lawrence drainage and the Mississippi River drainage through the Chicago River Ship and Sanitary Canal, including any of those methods that could be incorporated into the operation or construction of the lock system of the Chicago River Ship and Sanitary Canal.

B-206. 12 November 1996, Public Law 104-333--Omnibus Parks and Public Lands Management Act of 1996. National Recreation Study. Section 1021 amends the Land and Water Conservation Fund Act of 1965 to require the President to appoint a nine-member advisory commission (to include the Secretary of the Army or his/her designee) to review the current and anticipated demand for recreational opportunities at lakes and reservoirs managed by the Federal government. Once the review is complete, the commission is to submit a report addressing the extent of water related recreation at Federal manmade lakes and reservoirs and develop alternatives to enhance the opportunities for such use by the public.

B-207. 12 June 1997, Public Law 105-18--Emergency Supplemental Appropriations Act.
Susquehanna River Basin Compact and the Delaware River Basin Compact Membership. Section 3001 directs that, beginning in FY 1997, U.S. members and alternates appointed under the Susquehanna River Basin Compact and the Delaware River Basin Compact shall be Presidentially appointed and Senate-confirmed Regular Army officers of the Corps of Engineers.
Consultation and Conferencing under the Endangered Species Act. Section 3003 suspends reviews mandated by the Endangered Species Act for flood-control projects if it is determined that the repairs are necessary to prevent an imminent disaster.

B-208. 19 November 1997, Public Law 105-85--National Defense Authorization Act for Fiscal Year 1998. Report on the Command Selection Process for District Engineers of the Army Corps Of Engineers. Section 508 directs that not later than 31 March 1998, the Secretary of the Army shall submit to Congress a report on the command selection process for officers serving as Corps District Engineers.

B-209. 5 October 1998, Public Law 105-270--Federal Activities Inventory Reform Act. Requires the head of each executive agency to annually submit to the Director of the Office of Management and Budget (OMB) a list of their functions that, in the judgment of the agency, are not inherently governmental functions. The entry for each activity on the list is to include: (1) the fiscal year for which the activity first appeared on a list prepared under this Act; (2) the number of full-time employees (or its equivalent) that are necessary for the performance of the activity by a Federal Government source; and (3) the name of a Federal Government employee responsible for the activity from whom additional information about the activity may be obtained. Directs the OMB Director to review each list and consult with the agency regarding the content of the final list for that fiscal year. The agency must then transmit a copy of the list to Congress and make the list available to the public. After the notice of public availability of a list is published by OMB, each time the agency considers contracting with a private sector source for the performance of such an activity, it must use a competitive process to select the source (except as may otherwise be provided in other laws, Executive Orders, regulations, or any executive branch circular setting forth requirements or guidance that is issued by competent executive authority).

APPENDIX C

EXECUTIVE ORDERS PERTINENT TO THE WATER RESOURCES PROGRAM OF THE CORPS OF ENGINEERS

C-1. Executive Order 10913, 18 January 1961, Amending Executive Order No. 10584 Prescribing Rules and Regulations Relating to the Administration of the Watershed Protection and Flood Prevention Act. (P.L. 566, 83rd Congress, as amended). Sections 3 and 4 provide for notification and coordination of agencies in the use, conservation, and development of water and related land resources.

C-2. Executive Order 11017, 27 April 1962, Providing for Coordination with Respect to Outdoor Recreation Resources and Establishing the Recreation Advisory Council. This order establishes the Recreation Advisory Council which shall provide policy advice to heads of Federal agencies, on matters affecting outdoor recreation resources, and facilitate coordinated efforts among the various Federal agencies.

C-3. Executive Order 11200, 2 March 1965, Providing for Establishing User Fees Pursuant to the Land and Water Conservation Fund Act of 1965. This order provides criteria for designating areas where entrance, admission and other recreation user fees will be charged. Section 5 prescribes the establishment of these fees.

C-4. Executive Order 11426, 31 August 1968, Federal and State Liaison and Cooperation. This order directs and outlines additional duties of the Director of the Office of Emergency Planning in his capacity as the President's liaison with the Governors of the States and Territories.

C-5. Executive Order 11472, 29 May 1969, Establishing the Environmental Quality Council and the Citizens Advisory Committee on Environmental Quality. This order established a council and committee to advise and assist the President with respect to environmental quality matters. (Amended by E.O. 12007, 22 Aug 77.)

C-6. Executive Order 11514, 5 March 1970, Protection and Enhancement of Environmental Quality. Section 2 of the order outlines the responsibilities of Federal agencies in consonance with Title I of the National Environmental Policy Act of 1969. (Amended by E.O. 11991, 24 May 77.)

C-7. Executive Order 11592, 16 May 1971, Delegates Certain Authority of the President to the Director of the Office of Management and Budget. The Director of OMB is empowered to grant approvals authorized, or required to be granted by the President, by any provisions of the River and Harbor Act of 1970 and the Flood Control Act of 1970.

C-8. Executive Order 11593, 13 May 1971, Protection and Enhancement of the Cultural Environment. Section 2 of the order outlines the responsibilities of Federal agencies in consonance with The National Environmental Policy Act of 1969, The National Historic Preservation Act of 1966, The Historic Sites Act of 1935, and the Antiquities Act of 1906. Section 3 outlines specific responsibilities of the Secretary of the Interior including review and comment upon Federal agency procedures submitted under this order.

C-9. Executive Order 11643, 8 February 1972, Environmental Safeguards on Activities for Animal Damage Control on Federal Lands. This order

states a Federal policy to restrict the use of chemical toxicants for mammal or bird damage control on any Federal lands or in any Federal control programs as authorized by law. Included are chemical toxicants which cause any secondary poisoning effects. (Amended by E.O. 11870, 18 Jul 75 and E.O. 11917, 28 May 76.)

C-10. Executive Order 11644, 8 February 1972, Use of Off-Road Vehicles on the Public Lands. This order establishes a uniform Federal policy regarding the use of vehicles such as trail bikes, snowmobiles, dune-buggies and others, on public lands. Section 3 provides guidance for establishing zones of use for such vehicles. (Amended by E.O. 11989, 24 May 77.)

C-11. Executive Order 11735, 3 August 1973, Assignment of Functions under Section 311 of the Federal Water Pollution Control Act, as amended. Delegates authority to the Administrator of the Environmental Protection Agency and the Secretary of the Department in which the Coast Guard is operating for determinations of threats due to discharge of oil or hazardous substances. (Amended by E.O. 12418, 5 May 83.)

C-12. Executive Order 11747, 7 November 1973, Delegating Certain Authority of the President under the Water Resources Planning Act, as amended. Section 1 authorizes the Director of the Office of Management and Budget to approve rules, procedures, arrangements, and provisions relating to coordination of the Federal planning assistance program and utilization of Federal agencies administering related programs. (This was revoked by E.O. 12608, 9 Sep 87.) Section 2 designates and empowers the Chairman of the Water Resources Council to approve standards and procedures vested in the President by Section 103 of the Water Resources Planning Act.

C-13. Executive Order 11795, 11 July 1974, Delegating Disaster Relief Functions Pursuant to the Disaster Relief Act of 1974. All but Section 3 revoked by E.O. 12148. The Secretary of Agriculture may still exercise Section 409 of Public Law 93-288 concerning food coupons and distribution during relief activities.

C-14. Executive Order 11814, 11 October 1974, Activation of the Energy Resources Council. This order is in response to Section 108 of the Energy Reorganization Act of 1974 (P.L. 93-438). The Secretary of the Interior is designated as Chairman. Additional officials including the Secretary of Defense are members. Functions of the Council include development of a single national energy policy and program.

C-15. Executive Order 11821, 27 November 1974, Inflation Impact Statements. This order directs that major proposals for legislation, and for the promulgation of regulations or rules by any executive branch agency must be accompanied by a statement which certifies that the inflationary impact of the proposal has been evaluated.

C-16. Executive Order 11870, 18 July 1975, Environmental Safeguard on Activities for Animal Damage Control on Federal Lands. This order amends E.O. 11643 of the same title. Section 1 adds to the Federal policy, the assurance that where chemical toxicants are used pursuant to Section 3(b), only those combinations of toxicants and techniques will be used which best protect nontarget wildlife species and individuals. (Also see E.O. 11917, 28 May 76.)

C-17. Executive Order 11917, 28 May 1976, Animal Damage Control on

Federal Lands. This order further amends E.O. 11643 by adding that agency heads may authorize the use of sodium cyanide in Federal programs or on Federal lands, in accordance with regulations, and subject to all present restrictions and those prescribed hereafter by EPA.

C-18. Executive Order 11921, 11 June 1976, Adjusting Emergency Preparedness Assignments to Organizational and Functional Changes in Federal Departments and Agencies. This order amends E.O. 11490 of October 1969. The Corps or other Defense elements, under the guidance of the Department of Interior, will develop plans and programs to help meet emergency water requirements in watershed areas under their jurisdiction. In accordance with the Department of Transportation and other Federal agencies, emergency plans and procedures will be developed for: improvement, rehabilitation, operation and maintenance of Federally authorized river and harbor projects, locating and removing obstructions to navigation, and dredging to clear and straighten navigation channels. Plans and procedures will also be developed for management, control and allocation of water resources, including establishing priorities for water use during emergencies. Amended by E.O. 12656 to transfer the lead in emergency water requirements preparedness planning to the Secretary of the Army.

C-19. Executive Order 11954, 7 January 1977, Federal Property Review. Amended by E.O. 12030, 15 December 1978. Revoked by E.O. 12348, 25 February 1982.

C-20. Executive Order 11988, 24 May 1977, Flood Plain Management. This order outlines the responsibilities of Federal agencies in the role of flood plain management. Each agency shall evaluate the potential effects of actions on flood plains, and should not undertake actions which directly or indirectly induce growth in the floodplain, unless there is no practical alternative. Agency regulations and operating procedures for licenses and permits should include provisions for the evaluation and consideration of flood hazards. Agencies are required to prepare their procedures in consultation with the Water Resources Council, the Federal Insurance Administration, and the Council on Environmental Quality. Construction of structures and facilities on flood plains must incorporate flood proofing and other accepted flood protection measures. Agencies shall attach appropriate use restrictions to property proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties. This order revokes E.O. 11296, 10 August 1966. (This order was modified by E.O. 12148 by deleting "Federal Insurance Administration" and substituting "Director of the Federal Emergency Management Agency.")

C-21. Executive Order 11989, 24 May 1977, Off-Road Vehicles in Public Lands. Agency heads are authorized to close areas or trails, within their jurisdiction, to off-road vehicles which cause adverse effects to soil, vegetation, wildlife, wildlife habitat, culture or historic resources. Fire, military, emergency, and law enforcement vehicles are excluded, when used for emergency purposes. This order amends E.O. 11644, 8 February 1972.

C-22. Executive Order 11990, 24 May 1977, Protection of Wetlands. This order directs Federal agencies to provide leadership in minimizing the destruction, loss or degradation of wetlands. Section 2 of this order states that, in furtherance of the National Environmental Policy Act of 1969, agencies shall avoid undertaking or assisting in new construction located in wetlands unless there is no practical alternative. Each agency will provide opportunity for early

public review of plans and proposals for construction in wetlands, including those whose impact is not significant to require EIS preparation. Section 9 exempts assistance provided for emergency work, essential to protect lives, health, and property performed pursuant to Sections 305 and 306 of the Disaster Relief Act of 1974. (Amended, to delete reference to the Water Resources Council in Section 6, by E.O. 12608, 9 Sep 87.)

C-23. Executive Order 11991, 24 May 1977, Relating to Protection and Enhancement of Environmental Quality. Section 1 of this order amends Section 3(h) of E.O. 11514, by directing the Council of Environmental Quality to issue guidelines to Federal agencies for implementing procedural provisions of NEPA (1969). These regulations will include procedures for early EIS preparation and require impact statements to be concise, clear, and supported by evidence that agencies have made the necessary analyses. The Council will resolve conflicts between agencies, concerning the implementation of NEPA and Section 309 of Clean Air Act, as amended.

C-24. Executive Order 12007, 22 August 1977, Termination of Certain Advisory Committee. This order terminates several presidential advisory committees, including the Citizens Advisory Committee on Environmental Quality, which was established by E.O. 11472. This order also amends Section 4 of E.O. 11514 in reference to the Committee.

C-25. Executive Order 12030, 15 December 1977, Termination of the Federal Property Council. This order terminates the Federal Property Council established by E.O. 11724, of 25 June 1973, and amends E.O. 11954 of 7 January 1977.

C-26. Executive Order 12088, 13 October 1978, Federal Compliance with Pollution Control Standards. The head of each Executive agency is responsible for ensuring that all necessary actions are taken for the prevention, control and abatement of environment pollution, with respect to Federal facilities and activities under control of the agency. Each agency head will consult with the Administrator of EPA, state, interstate, and local agencies concerning the best techniques and methods for pollution control and prevention. Each agency is directed to submit an annual environmental pollution control plan to the Director of OMB. Section 1-4 describes this plan. This order revokes E.O. 11752 of 17 December 1973.

C-27. Executive Order 12113, 4 January 1979, Independent Water Project Review. This order provided that Federal agencies that prepare comprehensive regional or river basin plans, and formulate and evaluate water and related land resources plans, were to follow a current set of principles, standards and procedures established by the Water Resources Council. The order directed the Council to ensure impartial technical reviews of preauthorization reports or proposals, and preconstruction plans for Federal or Federally assisted water and land resources projects and programs. It required that reports, proposals and plans must be submitted to the Council for review prior to approval by Agency heads and subsequent submission to OMB for authorization or funding requests. The order was amended by E.O. 12141, 5 June 1979; it was revoked by E.O. 12322, 17 September 1981.

C-28. Executive Order 12114, 4 January 1979, Environmental Effects Abroad of Major Federal Actions. This order pertains to Federal agencies whose actions have significant effects on the environment

outside of the United States, its territories and possessions. Agencies will establish a program for exchanging environmental information. This program will provide information to decision makers, facilitate cooperative use of information among Federal agencies, and facilitate environmental cooperation with foreign nations. The order directs agencies to establish procedures for preparing documents (EIS's, summary environmental analyses, etc.) in connection with Federal action abroad. Sections 2-3 and 2-4 describe the categories of these actions and the necessary appropriate documents. Actions exempt from this Order are described in Section 2-5. The Department of State and the Council on Environmental Quality will provide consultation on procedures for implementing this Order.

C-29. Executive Order 12148, 20 July 1979, Federal Emergency Management. This order establishes a new lead agency for civil preparedness, which includes earthquake and other natural emergencies. The director will be responsible for promotion of dam safety. Revises E.O. 11795 by revoking all portions except Section 3. Amends E.O. 11988 by deleting "Federal Insurance Administration" and substituting "Director of the Federal Emergency Management Agency". This order was itself amended by E.O. 12381.

C-30. Executive Order 12291, 17 February 1981, Federal Regulation. Section 1 defines, relative to agency regulations, a "major rule." Section 2 sets forth requirements of regulations with respect to benefits and costs to society. Section 3 requires development of a "regulatory impact analysis" for each major rule. Section 4 requires agency finding that a major rule is within the law and consistent with congressional intent and inclusion of a memorandum to that effect in the Federal Register at the time of promulgation.

C-31. Executive Order 12319, 9 September 1981, River Basin Commissions. This order provided for termination of the six river basin commissions established pursuant to Title II of the Water Resources Planning Act of 1965. The Pacific Northwest River Basins Commission, Great Lakes Basin Commission, Ohio River Basin Commission, New England River Basins Commission, and Missouri River Basin Commission were terminated as of 30 September 1981. The Upper Mississippi River Basin Commission was terminated as of 31 December 1981.

C-32. Executive Order 12322, 17 September 1981, Water Resources Projects. This order revokes E.O. 12113, as amended (thereby doing away with independent water project review by the Water Resources Council). It provides that: before any agency submits to Congress, for approval, appropriations, or legislative action, any report, proposal or plan relating to a Federal or Federally assisted water and related land resources project or program, such report, proposal or plan shall be submitted to OMB. OMB shall review each report, proposal or plan for consistency with: the policy and programs of President; the principles and standards established by the Water Resources Council (18 CFR 711) or other such guidelines issued subsequent to the date of this E.O.; and other laws, regulations and requirements relevant to the planning process. The agency report, proposal or plan, when thereafter submitted to Congress, shall include astatement of the advice received from OMB based on its review.

C-33. Executive Order 12372, 14 July 1982, Intergovernmental Review of Federal Programs. Supercedes prior procedures for obtaining state and local government coordination and review of proposed Federal assistance and direct Federal development. Provides that Federal

agencies shall rely for such purposes, to the extent permitted by law, upon the processes established by each state. Provides that each state may, as part of its process, select the kinds of Federal programs with which it desires to be consulted--excluding others from review and comment. Provides for revocation of OMB Circular A-95. Amended by E.O. 12416, 8 April 1983.

C-34. Executive Order 12381, 8 September 1982, Delegation of Emergency Management Functions. Amends E.O. 12148 to delegate to the Director of the Federal Emergency Management Agency (FEMA) certain functions vested in the President by the Disaster Relief Act of 1974, the Earthquake Hazards Reduction Act of 1977, and the Federal Civil Defense Act of 1950.

C-35. Executive Order 12407, 22 February 1983, Federal Regional Councils. Terminated the councils originally established pursuant to E.O. 11647, 8 February 1972.

C-36. Executive Order 12498, 4 January 1985, Regulatory Planning Process. Estabishes (complementary to E.O. 12291) a regulatory planning process in which the agencies will propose their overall regulatory program for the forthcoming year to OMB which, after review, will compile the Administration's annual regulatory program. Section 3 provides that proposed regulations subsequently submitted which are at variance with the original submittal or were not included in the approved program may be returned to the agencies by OMB for reconsideration.

C-37. Executive Order 12512, 29 April 1985, Federal Real Property Management. Invested the Domestic Policy Council as the forum for approving Government-wide real property management policies. Required all Executive departments to set annual real property management goals and designated OMB as the agency to review progress towards those goals. Revoked E.O. 12348 of 25 February 1982.

C-38. Executive Order 12580, 23 January 1987, Superfund Implementation. Delegates to Executive departments and agencies various functions vested in the President by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended. Establishes a National Response Team (NRT), which includes the Department of Defense, for Superfund matters. Establishes the Administrator of the Environmental Protection Agency (EPA) as the chairman of the NRT and a Coast Guard representative as vice-chairman. The NRT is to oversee the National Contingency Plan (NCP). The E.O. delegates enforcement responsibilities to the EPA, in conjunction with the Attorney General. Clean-up responsibilities are the responsibility of the agency which has jurisdiction over the particular sites or facilities. Amended by E.O. 13016 dated 28 August 1996.

C-39. Executive Order 12612, 26 October 1987, Federalism. Directs Federal agencies and departments to minimize Federal actions that would limit the policymaking discretion of the States and to grant to States the maximum administrative discretion possible. If an agency plans through adjudication or rule-making to preempt State law, the agency must provide all affected states the opportunity to participate in the proceedings.

C-40. Executive Order 12615, 19 November 1987, Performance of

Commercial Activities. Established an ongoing study effort throughout the Federal establishment directed toward identifying of commercial activities by the Federal agencies and determining whether they could be performed more economically by private industry.

C-41. Executive Order 12630, 15 March 1988, Governmental Actions and Interference with Constitutionally Protected Property Rights. Required the Department of Justice to issue guidelines to enable Executive departments and agencies to evaluate the risk of effecting a fifth amendment taking through their policies and actions. The E.O. requires an analysis of possible "taking" problems be submitted to OMB in advance of proposed actions that impact private property in furtherance of "public health and safety" concerns. The E.O. seeks to reduce the possibility of a "regulatory taking" being embedded in the actions and policies of the Federal Government.

C-42. Executive Order 12656, 18 November 1988, Assigning Emergency Preparedness Responsibilities to Federal Departments and Agencies. Assigns national security preparedness responsibilities to Federal departments and agencies. DOD's responsibilities include: develop and maintain, in cooperation with other departments and agencies, national security plans and programs; develop and maintain damage assessment capabilities and assist FEMA Director and heads of other departments and agencies in developing and maintaining capabilities to assess attack damage; acting through the Secretary of the Army, develop overall plans for the management, control and allocation of all usable waters from sources within the jurisdiction of the U.S.; develop plans to assure emergency operations of waterways and harbors; and develop plans for provision of potable water.

C-43. Executive Order 12770, 25 July 1991, Metric Usage in Federal Government Programs. Designates the Secretary of Commerce to direct and coordinate efforts by Federal departments and agencies to implement Government metric usage in accordance with Section 3 of the Metric Conversion Act (15 U.S.C. 205b), as amended by Section 5164(b) of the Trade and Competitive Act. All Executive branch departments and agencies of the United States Government are directed to take all appropriate measures within their authority to carry out the provisions of this order which include: "(a) use, to the extent economically feasible.., the metric system of measurement in Federal Government procurements, grants, and other business-related activities...", and "(b)...The transition to use of metric units in Government publications should be made as publications are revised on normal schedules or new publications developed..."

C-44. Executive Order 12777, 18 October 1991, Implementation of Section 311 of the Federal Water Pollution Control Act of October 18, 1972, as Amended, and the Oil Pollution Act of 1990. Revises Executive Order 12580 and specifies responsibilities and procedures to be followed in the event of accidental discharges of oil or hazardous substances into the waters of the United States. Specifies lead agencies for issuing regulations concerning financial responsibility for accidental discharges.

C-45. Executive Order 12803, 30 April 1992, Infrastructure Privatization. Directs Federal agencies and departments to review procedures affecting the management and disposition of federally financed infrastructure assets owned by state and local governments

and to modify those procedures to encourge "appropriate privatization of such assets consistent with this order." Federal agencies and departments are to assist state and local governments in their efforts to advance the objectives of the E.O. by approving state and local governments' requests to privatize infrastructure assets if the non-Federal entity (1) agrees to use the proceeds to invest in additional infrastructure assets, and (2) demonstrates that a "market mechanism, legally enforceable agreement, or regulatory mechanism" is in place that will ensure that the infrastructure asset will be used for its originally authorized purpose.

C-46. Executive Order 12805, 11 May 1992, Integrity and Efficiency in Federal Programs. Establishes a President's Council on Integrity and Efficiency and an Executive Council on Integrity and Efficiency to "identify, review, and discuss areas of weakness and vulnerability in Federal programs and operation to fraud, waste, and abuse", and to develop plans that will promote economy and efficiency in Government programs.

C-47. Executive Order 12862, 11 September 1993, Setting Customer Service Standards. Directs Federal agencies and departments to identify and survey customers (individual or entity served), establish and measure results against service standards, address barriers to being the best in the business, provide customers with choices, make information and services easily accessible, and address complaints. A customer service plan is required to be published.

C-48. Executive Order 12866, 30 September 1993, Regulatory Planning and Review. Designed to "reform and make more efficient the regulatory process," this E.O. directs Federal agencies and departments with regulatory programs to evaluate alternatives to regulation, assess the risks posed by the substances or activities under their jurisdiction, and to develop the most cost-effective manner of meeting the regulatory objective. The E.O. establishes that each Federal agency shall "avoid regulations that are inconsistent, incompatible, or duplicative with its other regulations or those of other Federal agencies". Furthermore, regulations are to be drafted in such a way as to impose the least burden on society and in "simple and easy to understand" language. Directs OMB (Office of Information and Regulatory Affairs (OIRA)) to review proposed regulations and designates the Vice-President as the principal advisor to the President on regulatory matters. Directs Federal agencies and departments to submit to OIRA a program that will establish a periodic review of agency regulations. Prescribes the process for drafting and publishing regulations.

C-49. Executive Order 12893, 26 January 1994, Principles for Federal Infrastructure Investments. Starting with the Fiscal Year 1996 budget submission, directs Federal agencies and departments to make a systematic analysis of programs’ benefits and costs for major programs (a single account or grouping of accounts greater than $50 million annually); to conduct periodic reviews of operation and maintenance practices to consider a variety of management practices that can improve the return from infrastructure investments; and to submit implementation plans to the OMB by 15 March 1994.

C-50. Executive Order 12898, 11 February 1994, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Directs Federal agencies and departments to make achieving environmental justice a part of their mission "to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance

Review." Establishes an Interagency Working Group on Environmental Justice, which includes the Department of Defense, to develop guidelines for Federal agencies. Directs agencies to "collect, maintain, and analyse information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income." Federal agencies are also to collect and analyse information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence.

C-51. Executive Order 12962, 7 June 1995, Recreational Fisheries. Directs Federal agencies to improve the quantity, function, sustainable productivity, and distribution of U.S. aquatic resources for increased recreational fishing opportunities by means of a number of duties. Establishes a National Recreational Fisheries Coordination Council consisting of seven members (including one designated by the Secretary of Defense). The “Coordination Council” is charged with developing a comprehensive Recreational Fishery Resources Conservation Plan. Directs all Federal agencies to identify and minimize conflicts between recreational fisheries and their responsibilities under the Endangered Species Act of 1973. Expands the role of the Sport Fishing and Boating Partnership Council.

C-52. Executive Order 13007, 24 May 1996, Indian Sacred Sites. Directs each Executive Branch agency with statutory or administrative responsibility for the management of Federal lands, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to (1) accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies are to maintain the confidentiality of sacred sites.

C-53. Executive Order 13016, 28 August 1996, Amending Executive Order 12580, 23 January 1987, Superfund Implementation. Amends E.O. 12580 by adding two new subsections to section 4. Subsection (c)(3) is added to delegate the functions vested in the President by sections 106(a) and 122 (except subsection (b)(1)) of the Act) to the Secretaries of the Interior, Commerce, Agriculture, Defense, and Energy, to be exercised only with the concurrence of the Coast Guard, with respect to any release or threatened release in the coastal zone, Great Lakes waters, ports, and harbors, affecting (1) natural resources under their trusteeship, or (2) a vessel or facility subject to their custody, jurisdiction, or control. Such authority is not to be exercised at any vessel or facility at which the Coast Guard is the lead Federal agency for the conduct or oversight of a response action. Subsection (d)(3) is added to delegate the functions vested in the President by sections 106(a) and 122 (except subsection (b)(1)) of the Act) to the Secretaries of the Interior, Commerce, Agriculture, Defense, and Energy, to be exercised only with the concurrence of the Administrator, with respect to any release or threatened release affecting (1) natural resources under their trusteeship, or (2) a vessel or facility subject to their custody, jurisdiction, or control. Such authority is not to be exercised at any vessel or facility at which the EPA Administrator is the lead Federal official for the conduct or oversight of a response action.

C-54. Executive Order 13048, 11 June 1997, Improving Administrative Management in the Executive Branch. Establishes an Interagency

Council on Administrative Management as an interagency coordination mechanism to address administrative management matters not currently being addressed by the President's Management Council, the Chief Financial Officers Council, and the Chief Information Officers Council. The Council shall be chaired by the Deputy Director for Management of the Office of Management and Budget and shall include one senior administrative management official from each of numerous named agencies, including the Department of Defense and the Department of the Army. The Council shall plan, promote, and recommend improvements in Government administration and operations and provide advice to the Chair on matters pertaining to the administrative management of the Federal Government.

C-55. Executive Order 13057, 26 July 1997, Federal Actions in the Lake Tahoe Region. Directs the Secretary of Agriculture, the Secretary of the Interior, the Secretary of Transportation, the Administrator of the Environmental Protection Agency, the Secretary of the Army, and the heads of any other Federal agencies operating in the Region that choose to participate to establish a Federal Interagency Partnership on the Lake Tahoe Ecosystem. The Partnership shall, among other things, facilitate coordination of Federal programs, projects, and activities within the Lake Tahoe Region and promotion of consistent policies and strategies to address the Region's environmental and economic concerns; ensure that Federal agencies closely coordinate with the States of California and Nevada and appropriate tribal or local government entities to facilitate the achievement of desired terrestrial and aquatic ecosystem conditions and the enhancement of recreation, tourism, and other economic opportunities within the Region; encourage the development of appropriate public, private, and tribal partnerships for the restoration and management of the Lake Tahoe ecosystem and the health of the local economy; and support appropriate actions to improve the water quality of Lake Tahoe through all appropriate means, including restoration of shorelines, streams, riparian zones, wetlands, and other parts of the watershed; management of uses of the lake; and control of airborne and other sources of contaminants. The Partnership shall negotiate with the States of California and Nevada, the Washoe Tribal Government, the Tahoe Regional Planning Agency, and interested local governments to develop a Memorandum of Agreement to facilitate coordination among the parties to the Agreement and document areas of mutual interest and concern and opportunities for cooperation, support, or assistance.

C-56. Executive Order 13061, 11 September, 1997, Federal Support of Community Efforts Along American Heritage Rivers. Establishes National policy that the American Heritage Rivers initiative has three objectives: natural resource and environmental protection, economic revitalization, and historic and cultural preservation. Directs executive agencies to (1) coordinate Federal plans, functions, programs, and resources to preserve, protect, and restore rivers and their associated resources important to our history, culture, and natural heritage; and (2) develop plans to bring increased efficiencies to existing and authorized programs with goals that are supportive of protection and restoration of communities along rivers. No new regulatory authority is created as a result of the American Heritage Rivers initiative. This initiative will not interfere with matters of State, local, and tribal government jurisdiction. Establishes that the President will designate rivers that meet certain criteria as "American Heritage Rivers." Establishes policy that communities shall nominate rivers as American Heritage Rivers and the Federal role will be solely to support community-based efforts to preserve, protect, and restore these rivers and their communities.

Stipulates the process for nominating an American Heritage River. The President is to designate ten rivers as American Heritage in the first phase of the initiative.
Established the American Heritage Rivers Interagency Committee, which is to be permanently co-chaired by the Chair of the CEQ and is to be composed of the following members or their designees at the Assistant Secretary level or equivalent: (1) the Attorney General; (2) the Secretaries of Defense the Interior, Agriculture, Commerce, Housing and Urban Development, Transportation, Energy; (3) the Administrator of the Environmental Protection Agency; (4) the Chair of the Advisory Council on Historic Preservation; (5) the Chairperson of the National Endowment for the Arts; and (6) the Chairperson of the National Endowment for the
Humanities. (Amended by E.O. 13093, 27 July 1998.)

C-57. Executive Order 13073, 4 February 1998, Year 2000 Conversion. Establishes policy that agencies shall, among other things: (1) assure that no critical Federal program experiences disruption because of the Y2K problem; (2) assist and cooperate with State, local, and tribal governments to address the Y2K problem where those governments depend on Federal information or information technology or the Federal Government is dependent on those governments to perform critical missions; and (3) cooperate with the private sector operators of critical national and local systems, including the banking and financial system, the telecommunications system, the public health system, the transportation system, and the electric power generation system, in addressing the Y2K problem. Establishes the President's Council on Year 2000 Conversion. Directs Agency Heads to assure that efforts to address the Y2K problem receive the highest priority attention in the agency, to assure that the policies established in this order are carried out, and to identify a responsible official to represent the head of the executive department or agency on the Council with sufficient authority and experience to commit agency resources to address the Y2K problem.

C-58. Executive Order 13080, 8 April 1998, American Heritage Rivers Initiative Advisory Committee. Establishes an Advisory Committee consisting of up to 20 members appointed by the President from the public and private sectors. The Committee is directed to review nominations from communities and recommend to the President up to 20 rivers for consideration for designation as American Heritage Rivers. From the rivers recommended for consideration, the President shall designate ten as American Heritage Rivers. The Committee is to consider whether the natural, economic (including agricultural), scenic, historic, cultural, and/or recreational resources featured in the application are distinctive or unique, and whether the community's plan of action addresses all three American Heritage Rivers objectives -- natural resource and environmental protection, economic revitalization, and historic and cultural preservation. The Committee is to be supported both administratively and financially by the Secretary of Defense, acting through the Assistant Secretary of the Army for Civil Works and shall terminate no later than 2 years from the date of this order. (Amended by E.O. 13093, 27 July 1998.)

C-59. Executive Order 13084, 14 May 1998, Consultation and Coordination with Indian Tribal Governments. Orders that, in formulating policies
significantly or uniquely affecting Indian tribal governments, agencies
shall be guided, to the extent permitted by law, by principles of respect for Indian tribal self-government and sovereignty, for tribal treaty and other rights, and for responsibilities that arise from the

unique legal relationship between the Federal Government and Indian tribal governments. Directs each agency to have an effective process to permit elected officials and other representatives of Indian tribal governments to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities. Orders that, to the extent practicable and permitted by law, no agency shall promulgate any regulation that is not required by statute, that significantly or uniquely affects the communities of the Indian tribal governments, and that imposes substantial direct compliance costs on such communities, unless: (1) funds necessary to pay the direct costs incurred by the Indian tribal government in complying with the regulation are provided by the Federal Government; or (2) the agency, prior to the formal promulgation of the regulation, provides to the Director of OMB a description of the extent of the agency's prior consultation with representatives of affected Indian tribal governments, a summary of the nature of their concerns, and the agency's position supporting the need to issue the regulation, and makes available to the Director of OMB any written communications submitted to the agency by such Indian tribal governments.

C-60. Executive Order 13089, 11 June 1998, Coral Reef Protection. Establishes a policy that all Federal agencies whose actions may affect U.S. coral reef ecosystems must: (1) identify those actions; (2) utilize their programs and authorities to protect and enhance the conditions of such ecosystems; and (3) to the extent permitted by law, ensure that any actions they authorize, fund, or carry out will not degrade the conditions of such ecosystems. Exceptions may be allowed under the following conditions: (1) during time of war or national emergency; (2) when necessary for reasons of national security, as determined by the President; (3) during emergencies posing an unacceptable threat to human health or safety or to the marine environment and admitting of no other feasible solution; or (4) in any case that constitutes a danger to human life or a real threat to vessels, aircraft, platforms, or other man-made structures at sea, such as cases of *force majeure* caused by stress of weather or other act of God. Federal agencies whose actions affect U.S. coral reef ecosystems are ordered, subject to the availability of appropriations, to provide for implementation of measures needed to research, monitor, manage, and restore affected ecosystems, including, but not limited to, measures reducing impacts from pollution, sedimentation, and fishing.
Directs the Secretaries of the Interior and Commerce, through the Administrator of the National Oceanic and Atmospheric Administration to co-chair a U.S. Coral Reef Task Force, whose members shall include, but not be limited to, the Administrator of the Environmental Protection Agency, the Attorney General, the Secretaries of the Interior, Agriculture, Commerce, Defense, State, and Transportation, the Director of the National Science Foundation, the Administrator of the Agency for
International Development, and the Administrator of the National Aeronautics and Space Administration. The Task Force is to oversee implementation of the policy and Federal agency responsibilities set forth in this order, and guide and support activities under the U.S. Coral Reef Initiative. Duties of the U.S. Coral Reef Task Force are to include coordination of a comprehensive program to map and monitor U.S. coral reefs and to develop and implement, with the scientific community, research aimed at identifying the major causes and consequences of degradation of coral reef ecosystems.

C-61. Executive Order 13093, 27 July 1998, American Heritage Rivers, Amending Executive Orders 13061 and 13080. Increases the number of

rivers that the President may designate as American Heritage Rivers, by ordering that the second sentence of both section 2(d)(1) of E.O. 13061 and of section 2(a) of E.O. 13080 are amended by deleting "ten" and inserting "up to 20" in lieu thereof.

C-62. Executive Order 13101, 14 September 1998, Greening the Government through Waste Prevention, Recycling, and Federal Acquisition. Orders that, consistent with the demands of efficiency and cost effectiveness, the executive agencies shall incorporate waste prevention and recycling in the agency's daily operations and work to increase and expand markets for recovered materials through greater Federal Government preference and demand for such products. Establishes as National policy that preference be given to pollution prevention, whenever feasible; and that pollution that cannot be prevented should be recycled; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner. Disposal should be employed only as a last resort. Directs agencies to comply with executive branch policies for the acquisition and use of environmentally preferable products and services and implement cost-effective procurement preference programs favoring the purchase of these products and services. Creates a Steering Committee, a Federal Environmental Executive (FEE), and a Task Force, and establishes Agency Environmental Executive (AEE) positions within each agency, to be responsible for ensuring the implementation of the E.O. Directs that within 6 months of the date of this order, the EPA Administrator shall, in consultation with the Federal Environmental Executive, prepare guidance for use in determining Federal facility compliance with section 6002 of RCRA and the related requirements of this EO. EPA inspections of Federal facilities conducted pursuant to RCRA and the Federal Facility Compliance Act and EPA "multi-media" inspections carried out at Federal facilities will include, where appropriate, evaluation of facility compliance with section 6002 of RCRA and any implementing guidance. EPA is ordered to develop guidance within 90 days from the date of this order to address environmentally preferable purchasing. The guidance may be based on the EPA's September 1995 Proposed Guidance on the Acquisition of Environmentally Preferable Products and Services and comments received thereon. Directs each executive agency that has not already done so to initiate a program to promote cost-effective waste prevention and recycling of reusable materials in all of its facilities. The recycling programs implemented pursuant to this section must be compatible with applicable State and local recycling requirements.

APPENDIX D

OFFICE OF MANAGEMENT AND BUDGET CIRCULARS

This appendix lists Office of Management and Budget instructions of a continuing nature applicable to or of interest to civil works.

No.	Subject	Date
A-1 (Revised)	Office of Management and Budget system of Circulars and Bulletins to Executive departments and establishments	08/07/52
A-3 (Revised)	Governmental periodicals	05/02/85
A-11 (Revised)	Preparation and submission of budget estimates	
	Transmittal Memorandum No. 71	07/01/98
A-16 (Revised)	Coordination of surveying and mapping activities	05/06/67
A-18 (Revised)	Policies on construction of family housing	10/18/57
	Transmittal Memorandum No. 1	08/23/67
A-19 (Revised)	Legislative Coordination and Clearance	07/31/72
	Transmittal Memorandum No. 1	09/20/79
A-25	User Charges	09/23/59
	Transmittal Memorandum No. 1	07/08/93
	Transmittal Memorandum No. 2	04/16/74
A-34 (Revised)	Instructions on budget execution	07/15/76
	Transmittal Memorandum No. 14	11/07/97
A-50	Audit followup	09/29/82
A-67	Coordination of Federal activities on the acquisition of certain water data	08/28/64
A-70 (Revised)	Federal credit policy	08/24/84
A-73	Audit of Federal operations and programs	06/20/83
A-76	Performance of commercial activities	08/04/83
	Transmittal Memorandum No. 1	08/12/85
	Transmittal Memorandum No. 13	03/02/94
	Revised Retirement Cost Factors	
	Transmittal Memorandum No. 6	03/04/88
A-87 (Revised)	Cost principles for State and Local Governments	01/15/81
A-89 (Revised)	Catalog of Federal Domestic Assistance	08/17/84
A-94 (Revised)	Discount rates to be used in evaluating time-distributed costs and benefits	02/25/93

A-97 (Revised)	Rules and regulations permitting Federal agencies to provide specialized or technical services to state and local units of government under Title III of the Inter-governmental Cooperation Act of 1968	08/29/69
	Transmittal Memorandum No. 1	03/27/81
A-99	Direction and control of litigation	06/30/70
A-102 (Revised)	Uniform administration requirements for grants-in-aid to state and local governments	03/03/88
A-104	Comparative cost analysis for decisions to lease or purchase general purpose real property	03/02/87
A-105	Standard Federal Regions	04/04/74
A-106	Reporting requirements in connection with prevention, control, and abatement of environmental pollution at existing Federal facilities	12/31/74
A-120	Guidelines for the use of consulting services	01/04/88
	Transmittal Memorandum No. 1	11/19/93
A-123 (Revised)	Internal control systems	08/04/86
A-125	Prompt payment	12/12/89
A-127	Financial management systems	12/19/84
	Transmittal Memorandum No. 1	07/23/93
A-130	Management of Federal information resources	12/12/85
	Transmittal Memorandum No. 2	07/15/94
Memo (Actg Adm)	Designation under 44 U.S.C. 3509 and 3510 of the U.S. Army Corps of Engineers as a “Central Collection Agency” for certain data on U.S. Foreign Waterborne Transportation	09/28/98

APPENDIX E

INTERAGENCY AGREEMENTS RELATED TO WATER RESOURCES

E-1. Army-Interior.

a. 16-17 October 1944, Missouri River Basin (S.D. 247, 78th Congress). Agreement on the coordination of plans and the responsibilities for development of main stream and tributaries in the Missouri River Basin.

b. 25 July 1947, Middle Rio Grande Project (H.D. 653, 8lst Congress). A joint agreement on a unified plan for control of floods, irrigation, and use of water on the Middle Rio Grande Basin in New Mexico. Sets forth the works to be constructed by each agency in completing the unified plan. The comprehensive plan of the two agencies, in substantial accord with the joint agreement, was approved by the Congress in the Flood Control Act of 1948.

c. 11 April 1949, Columbia River Basin (H.D. 531 and 473, 8lst Congress). Agreement between the Corps of Engineers and the Bureau of Reclamation on principles and responsibilities for the comprehensive plans of development in the Columbia River Basin. Also provides for agency construction responsibility for projects under construction, authorized or recommended in the comprehensive plans of development.

d. 9 September 1953, Snake River Basin. Agreement on division of planning responsibility and responsibility for recommending projects on the Snake River. Based upon specific reaches of the main stream and tributaries entering the main stream in those reaches.

e. 20 August 1954. Agreement between the U.S. Fish and Wildlife Service (USFWS) and the Corps of Engineers specifies procedures for carrying out sound planning on fish and wildlife matters related to river basin projects of the Corps of Engineers under the Coordination Act of 1946. (P.L.732, 79th Congress).

f. 6 April 1955. Agreement between USFWS and the Corps specifies the procedures and general provisions for carrying out general plans for fish and wildlife management as specified in Section 3 of the Coordination Act of 1946.

g. 31 December 1958, Central Valley Basin, California. Comprehensive agreement dividing responsibilities for planning and construction of water resources projects, for integrated operation of facilities, and for marketing of services.

h. 19 February 1962, Joint Policies Relative to Reservoir Project Lands. Changed the former real estate policy adopted in 1953 to one providing essentially for fee acquisition.

i. March 1962, Texas River Basins Projects. By direction of the Vice President, representatives of the Bureau of Reclamation, Corps of Engineers, Agriculture, and the State of Texas agreed on construction responsibilities among those agencies for the individual projects in the basin plan. Transmitted to the Vice President by representatives of the U. S. Study Commission and endorsed by the State of Texas.

j. 14 March 1962, Alaska, Columbia, and Missouri River Basin.

Agreement on principles, procedures and designations of responsibility in planning and carrying out Federal water resource development activities in Alaska, the Columbia River Basin, and the Missouri River Basin.

k. 2 November 1970. Agreement between the Corps and the Bureau of Reclamation to reinforce the coordination of engineering design and construction practices through a common philosophy and alignment of methodology. The agreement provides for exchange of information on design standards, criteria, guide specifications, cost estimating guidelines and lists of engineer computer programs.

l. 2 February 1973. Memorandum of Agreement between the Secretaries of Army and Interior sets forth the principles and procedures for coordination of Corps and Bureau of Land Management (BLM) programs where the Corps constructs and operates water resources projects in the adjacent lands administered by BLM.

m. 11 July 1976. Memorandum of Agreement between the U.S. Geological Survey (USGS) and the Corps relating to use of the Geological Survey's National Water Data Storage and Retrieval System (WATSTORE).

n. 8 June 1978. Memorandum of Understanding between the USGS and the Corps which recognizes the Corps as a participating member of the National Water Data Exchange (NAWDEX).

o. 31 August 1978. Memorandum of Understanding between the USGS and the Corps which establishes procedures for implementing cooperation on the exchange of available information. Such information includes results of research and investigations of regional and local geology, seismology, and hydrology that are relevant to site selection and design considerations for Corps facilities, such as dams and other critical installations.

p. 13 May 1980. Agreement between USFWS and the Corps covering principles to be used by both agencies in the conduct and funding of activities in accordance with the Fish and Wildlife Coordination Act of 1958. This was amended by a further agreement dated 21 September 1982.

q. 16 March 1984. Memorandum of Understanding to formulize a system of annual meetings, both regionally and in Washington, D.C., between the Corps and the Bureau of Reclamation, to discuss each agency's current water resources planning and construction agenda with the overall objective of avoiding duplication of efforts.

r. 8 November 1985. Memorandum of Agreement for review and processing of permit applications under the Section 404, Section 10, and Section 103 programs.

s. 10 January 1989. Memorandum of Agreement to provide coordination and cooperation for the conservation, development and management of habitat for waterfowl and associated wetland species on Army civil works projects, in response to goals set forth in the joint United States and Canadian North American Waterfowl Management Plan.

t. 26 October 1992. Memorandum of Agreement between the Corps and the Bureau of Reclamation for the mutual backup of satellite data

collection.

u. 30 November 1994. Memorandum of Understanding between the Army and the USGS to cooperate in the Federal Interagency Sedimentation Project (FISP). MOU provides that activities and interagency staff of FISP will be located at the Waterways Experiment Station. Other agencies are invited to participate.

v. 23 June 1995. Memorandum of Understanding between the Army and the U.S. Department of the Interior concerning the trasnsfer, operation, maintenance, repair, and rehabilitation of the Columbia River Treaty Fishing Access Sites.

E-2. Defense-Interior.

a. 8 March 1983. Transfer Agreement concurred in by the Federal Emergency Management Agency (FEMA) 28 March 1983. Provides for transfer to the Secretary of Defense acting through the Secretary of the Army of responsibilities and functions assigned to the Secretary of the Interior under E.0. 11490. That E.O., issued 28 October 1969 (and amended by E.0. 11921 issued 11 June 1976) provided that the Secretary should: prepare a national emergency plan and develop preparedness programs covering all usable waters, from all sources within the jurisdiction of the United States, which can be managed controlled and allocated to meet emergency requirements; give appropriate consideration to emergency preparedness factors in the conduct of regular agency functions; and be prepared to implement, in the event of an emergency, the prepared plan for such event.

b. 14 June 1985. Memorandum of Understanding to provide a framework whereby research activities can be closely coordinated in the wildlife and ecological sciences, vertebrate pest management, land management, and other areas of mutual interest.

E-3. Army-Interior-Federal Power Commission (now known as Federal Energy Regulatory Commission). 12 March 1954. Agreement that the costs of combining reservoir project purposes shall be allocated in proportion to the distribution of resulting savings. The following three methods were considered acceptable: Separable Cost-Remaining Benefit (SCRB), Alternative Expenditures, and Use of Facilities.

E-4. Army-Agriculture.

a. 23 June 1948. Memorandum of Understanding between the Corps and the Soil Conservation Service (SCS) (now Natural Resources Conservation Service (NRCS)) which provides for each agency to keep the other advised of its current drainage and related water management activities, exchange technical information, and correlate drainage improvement measures.

b. 19 March 1959. Agreement between Corps and SCS (now NRCS) which provides for consultation between the agencies with a view to reaching a mutually satisfactory decision as to whether the Corps of Engineers or the SCS (now NRCS) should provide the Federal flood control assistance desired by local urban areas. Supplemented by agreement of 23 September 1965.

c. 13 August 1964. Memorandum of Agreement provides policy guidelines for the use, development and management of lands under

control of the Departments of Army and Agriculture in the vicinity of Corps water resource projects within or partly within the National Forest System. Supersedes the agreement of 16 December 1946.

d. 23 September 1965. Agreement between the Corps and SCS (now NRCS) provides a basis for establishing responsibilities, policies and coordination in the preparation of flood protection plans for areas in which there is a mutual interest, including those affecting urbanized areas.

e. 7 January 1983. Memorandum of Agreement for review and processing of permit applications under Section 404, Section 10, and Section 103 programs.

f. 20 May 1986. Memorandum of Agreement between Army and SCS (now NRCS) provides for cooperation in the execution of emergency assistance for repair and restoration of non-Federal water control facilities damaged by floods.

E-5. Defense-Agriculture. 27 March 1963. Memorandum of Understanding for the conservation of forests, vegetative cover, soil, and water on lands administered by the Department of Defense.

E-6. Army-Transportation.

a. 25 April 1969. Agreement between the Corps and the U.S. Coast Guard (USCG) which provides that the USCG upon prior application will inspect Corps of Engineers vessels.

b. 28 January 1970. Agreement on procedures between Bureau of Public Roads (now known as Federal Highway Administration) and the Corps for incorporation of betterments at non-Corps expense in the relocations of highways due to construction of Corps reservoir projects.

c. 18 April 1973. Memorandum of Agreement between the Corps and USCG to clarify areas of jurisdiction and responsibilities under Federal statutes to regulate certain activities in navigable waters of the United States. Agreement covers alteration of bridges; construction, operation and maintenance of bridges and causeways as distinguished from other types of structures; closure of waterways and restriction of passage through or under bridges; design flood flows; and provides for mutual coordination and consultation on projects and activities in or affecting navigable waters.

d. 7 September 1976. Agreement between the Corps and USCG intended to help the parties effectively utilize their resources and to delineate their responsibilites in carrying out the surveillance and enforcement of federally contracted ocean dumping activities associated with Federal navigation projects.

e. 7 May 1977. Memorandum of Understanding between the Corps and USCG to clarify the responsibility for safety on the navigable waters of the U.S. as a result of the Ports and Waterways Safety Act of 1972 (PL 92-340).

f. 26 November 1984. Memorandum of Understanding between Army and the Maritime Administration (MARAD) to define those areas of research, development and engineering activities in which the Corps

and MARAD can jointly apply their technical capabilities and to promote cooperation and integration of their activities in port and waterway development, navigation projects, and related areas.

g. 16 October 1985. Memorandum of Agreement between the Corps and USCG to clarify respective responsibilities for marking and removal of sunken vessels and other obstructions to navigation.

h. 23 February 1994. Agreement between the Corps and USCG to provide the mechanism for cooperative efforts in establishing wide-area Differential Global Positioning System (DGPS) navigation coverage in Corps project areas.

E-7. Army-Environmental Protection Agency (EPA).

a. 15 April 1971. Agreement on division of responsibility for providing additional assistance to state and local governments for enhancing environmental quality and for meeting cost-effectiveness requirements for investments in pollution abatement.

b. 22 November 1974. Agreement defines the relationship between areawide waste treatment management planning conducted by the Corps under the Urban Studies Program and areawide waste treatment management planning authorized under Title II of the Federal Water Pollution Control Act Amendments of 1972 and administered by EPA. The agreement also acknowledges that the Corps may provide technical assistance in Section 208 (Public Law 92-500) planning outside the Corps Urban Studies Program.

c. 25 March 1976. Memorandum describing ways in which the Corps can participate in state and areawide water quality planning and management programs authorized under Section 208 and 303 of Public Law 92-500.

d. 8 July 1980. Interagency agreement for the Corps to act as EPA's agent in the construction of sewage treatment facilities under the Construction Grants Program. The mission normally includes: review of plans and specs for biddability and constructability, review of change orders, site inspections of construction, and providing training and assistance to state personnel and grantees. This revision of an earlier agreement placed additional responsibility on the Corps to discover and remedy safety deficiencies.

e. 3 December 1984. Interagency Agreement which defines the management and technical assistance the Corps will provide EPA for implementation of the Superfund program (responses to problems of hazardous substances).

f. 19 January 1989. Agreement concerning the determination of the geographic jurisdiction of the Section 404 Program and the application of the exemptions under Section 404(f) of the Clean Water Act.

g. 19 January 1989. Agreement concerning Federal enforcement of the Section 404 Program.

h. 19 January 1989. Agreement concerning Section 404 Enforcement Memorandum of Agreement procedures regarding the applicability of previously issued Corps permits.

i. 6 February 1990. Agreement to articulate policy and procedures to be used in the determination of the type and level of

mitigation for the Section 404 Regulatory Program.

j. 11 August 1992. Memorandum of Agreement for review and processing of permit applications under the Section 404, Section 10, and Section 103 programs.

E-8. Army-Nuclear Regulatory Commission. 2 July 1975. Memorandum of Understanding between the Corps and the Nuclear Regulatory Commission defining the roles each agency shall play in the licensing of nuclear plants to avoid conflicting and unnecessary duplication of efforts and of standards related to overall public health and safety and environmental protection.

E-9. Army-Commerce.

a. 1947. Interagency agreement between the Corps, U.S. Customs, and Department of Commerce, Bureau of the Census regarding the provision of waterborne import, export, intransits, and vessel movement data to the Corps.

b. 17 November 1975. Memorandum of Agreement regarding the use of the Geostationary Operational Environmental Satellite (GOES).

c. 2 July 1982. Memorandum of Agreement for review and processing of permit applications under the Section 404, Section 10, and Section 103 programs.

d. 6 September 1985. Memorandum of Understanding between the Corps and the Department of Commerce on assistance of the Corps in real estate acquisitions for the National Weather Service.

e. 31 January 1991. Cooperative Agreement between the Army and the National Oceanic and Atmospheric Administration to establish a continuing cooperative nationwide National Marine Fisheries Service and Corps Habitat Restoration and Creation Program.

f. 31 January 1994. Memorandum of Agreement between the Army and the Economic Development Administration (EDA) for the provision of Corps support on EDA’s Levee Restoration Program.

g. 21 July 1995. Memorandum of Agreement between the Army and the National Oceanic and Atmospheric Administration for cooperative activities and reimbursable technical assistance. Cooperative activities include policy and regulatory development and implementation potentially affecting coastal and ocean resources.

h. 20 October 1998. Agreement concerning the transfer of the U.S. Foreign Waterborne Transportation Statistics Program between the U.S. Army Corps of Engineers, Maritime Administration, and U.S. Bureau of the Census.

i. October 1998. National Interest Determination for U.S. Army Corps of Engineers to receive and use certain Census Bureau confidential export data including: Access to Shippers Export Declaration (SED), Outbound In-transit files (7513), SED for In-transit Goods, and hard copy 7513.

E-10. Army-Federal Emergency Management Agency.

a. 8 June 1973. Memorandum of Agreement with the Office of Emergency Preparedness (predecessor of FEMA) prescribing policies and procedures governing reimbursement to the Corps for expenditures in

providing disaster assistance.

b. 9 May 1987. Memorandum of Agreement outlining Army and FEMA responsibilities to cooperatively fund and manage hurricane evacuation studies.

c. 29 September 1992. Agreement to establish a mutual understanding of the responsibilities of the Army and FEMA for delivering management and administrative assistance in implementing the National Dam Safety Program.

E-11. Army-Housing and Urban Development. 11 October 1979. Memorandum of Agreement on review of permit applications which affect the urban environment.

E-12. Army-Energy.

a. 22 November 1980. Memorandum of Understanding between the Corps and the Department of Energy on promotion of sound hydropower development.

b. 2 November 1981. Memorandum of Understanding between the Department of the Army and the Federal Energy Regulatory Commission (FERC) on non-Federal development of hydropower at Corps of Engineers projects.

c. 26 August 1987. Memorandum of Understanding between the Department of the Army and the Department of Energy on assistance of the Corps in real estate acquisitions for the Department of Energy.

E-13. Other Agreements.

a. Army-Federal Inspector, ANGTS. 16 May 1980. Memorandum of Understanding between the Corps of Engineers and the Office of the Federal Inspector, Alaska Natural Gas Transportation System. Memorandum provides for technical assistance by the Corps in the areas of frost heave and other cold-region problems.

b. Multiple agencies. 16 December 1980. Interagency Agreement for nonstructural damage reduction measures as applied to common flood disaster planning and post-flood recovery practices. (The signatory agencies were: the FEMA; the Departments of Agriculture, Army, Commerce, Health and Human Services, Education, Housing and Urban Development, Interior, Transportation; the EPA; the Small Business Administration; and the Tennessee Valley Authority (TVA).)

c. Army-Tennessee Valley Authority. 12 August 1985. Memorandum of Understanding covering regulation of waters of mutual concern. It applies to public activities in the Tennessee River basin for which both TVA and Army permits are required and activities of TVA for which an Army permit may be required.

d. Army-Defense. 18 September 1987. Memorandum of Agreement providing for reimbursable technical assistance by Army to the Office of Economic Adjustment, DoD, in connection with study of water resources in the Federeated States of Micronesia and the Republic of the Marshall Islands.

e. Army-Girl Scouts of America. 16 November 1990. Establishes a framework for cooperation to assist each other in areas of mutual concern to the extent permitted by law.

f. Multiple Agencies. 3 December 1990. Memorandum of Understanding to provide a framework for cooperative activities necessary to develop, implement, maintain, and enhance a Watchable Wildlife Program on Federal and State lands, and to assist private landowners. (The signatories were the Departments of Agriculture, Interior, Defense and several non-governmental organizations.)

g. Army-Health and Human Services. 29 January 1991. Sets forth the relationship between the Corps and the Public Health Service for emergency planning and response. Establishes procedures whereby each agency may provide each other with certain services and expertise relating to the development of disaster response plans.

h. Army-NASA. 30 October 1991. Agreement defines areas of mutual interests and develops a framework for cooperative programs related to NASA's Mission-To-Planet-Earth Program including: data information and management systems; analytical, modeling and predictive tools; the development of earth observing instruments and the conduct of related research investigations.

i. Multiple agencies. 1 May 1992. Agreement concerning implementation of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). Signatory agencies committed to removing any unnecessary impediments to construction of transportation projects and to streamline and improve the efficiency of the environmental review and clearance process. (The signatory agencies were the Departments of Army and Transportation and the EPA.)

j. Multiple agencies. 24 November 1992. Agreement to establish and carry out a coordinated research, development and support effort related to Geographical Information Systems (GIS) technology and specifically the Geographic Resources Analysis Support System (GRASS) software. (The signatories to the agreement were the Corps, the SCS (now NRCS), the USGS and the National Park Service.)

k. Multiple agencies. July 1994. Agreement to set forth the principles for a Coastal America Partnership for Action to protect, restore, and maintain the Nation's coastal living resources. (The signatory agencies were the Departments of Agriculture, Air Force, Army, Commerce, Defense, Energy, Housing and Urban Development, Interior, Navy, Transportation and the EPA.)

l. Multiple agencies. 14 July 1994. Agreement establishing a partnership for Chesapeake Bay ecosystem management. (The signatory agencies were the Departments of Agriculture, Air Force, Army, Defense, Housing and Urban Development, Interior, the Defense Logistics Agency, NOAA, USCG, the Federal Highway Administration, the Corporation for National and Community Service, the National Civilian Community Corps, the Susquehanna River Basin Commission, the Smithsonian Institution, the Commonwealths of Pennsylvania and Virginia, the State of Maryland, the District of Columbia and the Chesapeake Bay Commission.)

m. Multiple Agencies. September 1994. Memorandum of Understanding to establish a general framework for cooperation and participation among the cooperators in the exercise of their responsibilities under the Endangered Species Act. (Signatory agencies were the Departments of the Interior, Transportation, Army,

Defense, Agriculture and the EPA).

n. Multiple Agencies. 9 May 1995. Memorandum of Understanding to establish a general framework for coordination and cooperation between the signatory agencies and the Walt Disney Corporation. The agreement provides a foundation to work in partnership on issues of common interest and to jointly plan and carry out mutually beneficial programs and activities consistent with each organization's mission and objectives. (Signatory agencies were the Departments of the Army, Interior and Agriculture and the Walt Disney Corporation).

o. Army-American Waterways Operators. 19 August 1997. Agreement establishing a partnership to strengthen the communication and working relationship between the Corps and the barge and towing industry toward the mutually-shared objective of improving the operational and financial efficiencies of the inland waterways infrastructure.

p. Army-Bass Anglers Sportsman Society. 5 June 1996. Agreement establishing a framework for communication, cooperative activities, and research necessary to maintain and enhance the productivity of sportfishery resources, consistent with other fishery goals on the Corps waterways, maintain and enhance public fishing opportunities on the Corps system, and to increase public understanding of the importance of aquatic environment to sportfish species.

q. Army-Port of Oakland. 23 September 1998. Agreement establishing a mutual framework governing the feasibility study for improvements to the Oakland Harbor, California. To provide appropriate assistance to the Port in the Port's development of a feasibility level study for channel deepening and related improvements at Oakland Harbor, California, for a Federal navigation project servicing the Port and such other related goods or services as may be agreed upon in the future.

r. Army-Appalachian Regional Commission. 6 May 1997. Agreement establishing the mutual framework governing the respective responsibilities of the parties for the design of the Cullman Duck River Water Supply Dam, Cullman, Alabama, and related acquisition activities.

s. Army-U.S. Customs. 3 December 1997. Agreement regarding exchange of waterborne in-bond data and acceptance of responsibility regarding disclosure of information.

t. Army-U.S. Customs. 22 April 1998. Agreement that confidential or proprietary waterborne transportation data received from Customs will be used only for the National Waterborne Transportation Statistics Program (including release to the Maritime Administration) and internal Corps use. In event of unauthorized release by the Corps, the Corps will intercede on Customs behalf and assume responsibility.

APPENDIX F

INDEX

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Ability-to-pay	6-3d(4),5f,8
Access Channels	12-6
Access Roads	B-88,131
Active Projects	8-4a(1)
Advanced Funds	8-5
Advance Maintenance Dredging	12-23
Aesthetic Design	9-5
Agricultural Drainage	13-9b
Agricultural Water Supply	18-2i
Aids to Navigation	12-11
Air Pollution Control, Federal Facilities	B-107
Alaska Hydroelectric Power Fund	B-136
Alaska Power Administration	16-5
Alcoholic Beverages	17-6d
Allocation of Costs	5-11
	16-3
	17-5
	18-2c
Alternative Plans	3-1a
	5-6a(3),
	7d(1)(c)
	12-3h
Anchorages	B-34
Appropriations	8
Appropriations Committees	3-3d
	8-1d,2c,6b
	23-6a,
Aquatic Plant Control	20
	23-10
	B-79,88,94
	B-158,165
Archaeological Preservation and Salvage	5-7c(2)g
	B-82,126,147
Architect-Engineers, Use of	4-4c(2)
	9-9
Assignment of Studies	7-2a
ASA(CW)	2-2a
Authorization Committees	2-1a and b
	5-1
	7-3
Bank Protection	2-1b
	14-8a
	15-3
Barge Fleeting Areas	12-1b,7
Barrier Act, Coastal Resources	B-157
Beach Erosion Control	2-1b
	12-22
	14-1
Beach Nourishment	11-2e
	12-22
	14-1d
	B-77,136
Bends, Widening of	9-4b
	B-34

Subject/Keyword(s) Ch. No./App. Ltr. - Para. No.

Benefits, Navigation..... 12-3
B-96
Benefits, Environmental Measures..... B-165
Benefits, Flood Damage Reduction..... 13-1
B-53
Benefits, Hydroelectric Power..... 16-2
Benefits, Inland Waterways..... 12-3,4
Benefits, Land Enhancement..... 12-21b
Benefits, Recreation..... 17-4
Benefits, Shore Protection..... 14-5
Berthing Areas..... 12-6
Board of Engineers for Rivers and Harbors (BERH)..... 2-1c
4-2d(2)
5-13b
7-2c
14-1a
B-23,32,35
Bonneville Power Administration..... 16-5
23-8b
Borrow Areas..... 6-10c(2)
Bridge Alterations for Flood Control..... 10-4a
B-66
Bridge Alterations for Navigation..... 10-4b
B-61
Bridges Across Public Works..... B-133
Bridges on Federal Dams..... B-81
Bridges, Transfer Authority..... B-71
Budgetary Information, Disclosure..... 8-1f
Budgeting..... 4-4c
8
Bureau of Census, Bureau of Customs..... 12-13a
Bureau of Mines..... 23-8b
Bureau of Reclamation..... 2-3b
23-8b
24-7
California Debris Commission..... B-20,165
Capabilities..... 8-1e
Cemeteries..... 10-2d(2)
Continuation of Studies..... 5-2a(3)
Channels, Navigation..... 9-4b
12-1f,19,20
Charter Fishing..... 12-4a(1)
B-109
Charges for Water Withdrawal..... 18-2d
Civil Preparedness Lead Agency (FEMA)..... C-29
Civil Works Program..... 2-2
4
Clean Water Act..... 2-1d(1)
3-5
18-3a
22-2,3,4
24-12b(2)
B-140
Coastal Engineering Research Board (CERB)..... 4-2d(1)
Coastal Engineering Research Center..... 4-2e(2)
14-1a
B-48,90
Coastal Projects, Monitoring of..... 11-14

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Coastal Barrier Resources Act	24-17 B-157
Coastal Zone Management Act	22-3g 24-18 B-119,134 B-143,151
Coast Guard	11-2a(3) 12-7,14 22-2a(2) B-112,144,149
Cold Regions Research and Engineering Laboratory (CRREL)	4-2e(4)
Collection of Data	5-13
Command Goals and Objectives	4-1a
Command Inspections	4-1b
Command Management Review (CMR)	4-4a 9-7
Commercial Fishing Benefits	12-3
Community Development Program	24-6 B-128
Concessions	17-6a
Condemnation	10-2b,3c 19-3b B-15,36,37
Condition Surveys	12-19
Consequential Damages	1-3
Conservation Pool	10-2a
Construction	10 B-11,38
Construction Deficiencies	11-4
Construction Engineering Research Laboratory (CERL)	4-2e(3)
Construction of Flood Control Projects by Non-Federal Interests	13-18
Consultants, Use of	9-10 B-71
Contingencies	5-7c
Continuation of Planning and Engineering (CP&E)	B-136,165
Continuing Authorities Program	2-1b 5-1,2d,12 6-3d(3) 10-1b
Contracting Out	3-9 4-4a(2) 10-6
Contributed Funds	8-5 B-34,45,55
Conveyance Facilities for Water	18-2h B-115
Coordination with States and Agencies	7-2d
Cost Allocation	5-11
Cost Estimating	5-7c
Cost Sharing	6 B-165
Cost Sharing Exceptions	6-3e(1)
Cost Sharing for Aquatic Plant Control	6-11 21-1
Cost Sharing for Beach Erosion Control	6-10 14-1c

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Cost Sharing for Fish and Wildlife Enhancement.....	6-14
Cost Sharing for Fish and Wildlife Measures.....	6-13
	19-5
Cost Sharing for Flood Control.....	6-5
	13-7,10
Cost Sharing for Hydroelectric Power.....	6-6
	16-3
Cost Sharing for Hurricane and Storm Damage Reduction	6-10
	14-3c
Cost Sharing for Irrigation.....	6-8
	18-2e and i
Cost Sharing for Navigation.....	6-12
	12-6
Cost Sharing for Pacific Territories.....	6-3e(2)
Cost Sharing for Planning Studies.....	5-2a(2)
	12-6a
Cost Sharing for Recreation.....	6-4c,9
	17-5
Cost Sharing for Water Quality Enhancement.....	6-12
Cost Sharing for Water Supply.....	6-7,8
Council on Environmental Quality (CEQ).....	2-2d
	3-10a
	24-2
Courts.....	2-4
Crediting.....	5-12f
	8-6
	10-1f,4b(3)
	13-12
	B-165
Cultural Resources.....	3-4
	19-37,38,39
	21-3e
Cumulative Effects.....	3-1d
Damages, Due to Negligence.....	11-8
	B-123
Damages, Project Related.....	11-8,11
	12-25
	B-66,100
Dam Safety.....	B-114,165
Dam Safety Assurance.....	11-6
	22-3j
Danger Zones.....	12-15
	21-2a(1)
Deauthorization of Projects.....	3-3b
	5-12b
	7-5b
	B-165,170
Deauthorization of Studies.....	5-1c
	7-5a
	B-165
Deepwater Ports.....	B-130
Deferred Payments.....	6-4a(1),5,15
Deferred Projects.....	8-4a(2)
Deficiencies, Design or Construction.....	11-4
Degree of Protection.....	9-4a
Department of Agriculture.....	2-2c
	5-10,13,14
	B-74,87

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	B-162,169
	E-4,5
Department of Commerce	2-2c
	19-1
	22-3g and h
	24-11,18,23
	E-9
Department of Energy	2-2c
	16-5,8
	24-22
	E-12
Department of Housing and Urban Development (HUD)	2-2c
	24-6
	E-11
Department of the Interior	2-2c
	6-8
	10-2a
	11-1i
	16-3
	18-5b
	19-17
	24-10,11
	B-135,138
	B-152,159
	E-1,2,3
Department of Transportation (DOT)	2-2c
	11-10b
	B-96,130,167
	E-6
DOT,Corps Functions Transferred to	B-96
Design Deficiencies	11-14
Design Flood	13-4
Directorate of Civil Works	4-2b
Disaster Assistance	13-15
	B-137,165
Discharge of Dredged or Fill Material	3-5b
Discontinuation of Maintenance, Navigation Projects	11-13
Discount Rate	5-7f(3)
Disposal Areas	11-2a(4),5
	B-136
Disposal Areas for the Great Lakes	B-109,170
Disposal of Property	10-11
	11-10
	13-2c
Division Review	7-2b
Donations of Lands	10-2b
Donations of Materials	11-12
Drainage Improvements	13-9
Dredging Excess Depths	B-100
Dredged Material Disposal	12-21,22
	B-116
Dredged Material, Use of	10-8
	12-21b
	B-136,165
Dredging Statistics	12-12d
Drift Removal	12-16
	B-136,189
Drought	18-5d

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Easements	10-2b and d
	11-9
	B-57
Emergency Activities	14-8
Emergency Bank Protection	2-1b
	6-5e
	11-2b(3)
	14-8a
Emergency Clearing for Navigation	6-4d
	11-2a(3)
Emergency Flood Control Work	6-5a
	13-15
	14-8b
	B-62,76
Emergency Water Supply	18-5a
	B-123,137,165
Endangered Species	19-6
	24-11
	B-121,146
	B-148,156
Energy Conservation	11-15
	21-3m
EFARS	4-4a
ECs, EPs, ERs, ETLs	4-4a
	23-9,10
Engineer Topographic Engineering Center (TEC)	4-2e(7)
Entitlement Lands	B-135
Entrance Fees	B-91,100
Environmental Advisory Board	4-2d(4)
Environmental Assessment (EA)	7-1b
	20-2b
Environmental Design	3-10
	9-5
Environmental Dredging	11-2a(5)
Environmental Impact Statement (EIS)	3-2,5
	7-1b,2c
	20-2b
	24-2
Environmental Protection Agency (EPA)	2-1c
	7-2c
	9-10a
	11-2a(5),12a
	18-3
	20-2
	21-2,3
	23-10b
	24-15,16,17
	B-107
	D-7
Environmental Quality (EQ)	2-3a and b
	5-6a(4),8
Estimating Costs	5-7c
Estuarine Protection Act	21-3b(5)
	B-99
Evacuation	10-3d
	13-5,14c
	B-58
Exceptions to NED Plan	5-9a

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Executive Orders	C
Executive Order 11988, Flood Plain Management	3-6 13-2b and c 21-3k C-20
Executive Order 11990, Protection of Wetlands	3-7 19-13 C-22
Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations	3-11,C-50
Executive Order 13007, Indian Sacred Sites	3-12,C-52
Fast-Land Channel Cuts	10-4a and b
Feasibility Cost Sharing Agreement (FCSA)	5-12a
Feasibility (Survey) Reports	7-1 12-25a B-165
Feasibility Studies	4-4a 5-2a,12 7-1d
Feature Design Memoranda	9-1b
Federal Agencies, Related Programs	24
Federal Emergency Management Agency (FEMA)	13-1a,13,15b 24-19 C-29,34 E-10
Federal Energy Regulatory Commission (FERC)	16-3,4a,6,7,9 24-12 B-42 E-3
Federal Facilities, Flood Plains	13-2c
Federal Highway Administration	23-8b
Federal Water Power Act	B-42
FERC Licenses	6-6 16-5c 24-12
Fees, Public Use	17-5d
Field Operating Activities (FOAs)	4-2c,4
Financial Capability Statement	5-12a
Financial Costs	5-7c
Finding of No Significant Impact (FONSI)	3-2
Fish and Wildlife	10-1c,1d(2) 11-1h,7,9b 17-1,6b(2) 19-16,17,20,21 21-3c B-63,92,123
Fish and Wildlife Conservation Act	B-150
Fish and Wildlife Coordination Act	6-1a(4) 11-1i 19-17 21-3c B-68,80
Fish and Wildlife Enhancement	6-14 10-1d(2) 11-2f 17-1b(4) B-165

Subject/Keyword(s) Ch. No./App. Ltr. - Para. No.

Fish and Wildlife Mitigation..... 5-7c,7f
6-13
19-20,21
B-165
Fish and Wildlife Report..... 7-1a(4)
Fish and Wildlife Service..... 9-10a
19-17,18
21-3c
23-8b
24-11,19
Fish Passage Facilities..... B-16
Fletcher Act..... 12-3a
B-49
Fleeting Areas..... 12-1b,8
Flood Control..... 9-4a
11-2b
13
B-35,53,58
Flood Damage Prevention/Reduction..... 13
Flood Emergency Response and Recovery (P.L. 84-99)... 11-2b(2)
13-15
14-8b
18-5a
B-76
Flood Insurance..... 13-10a and d,13
24-21
B-98,104,122
B-128,139,157
Flood Plain Information Studies..... B-83
Flood Plain Management (FPM)..... 3-9
13-2
21-3k
B-123,165,170
Flood Plain Regulation..... 13-10d,14a
Floodproofing..... 3-9
13-5
Flood Warning..... 13-5
Flowage Easements..... 10-2a
Forest Management..... 11-1h
B-84
Forest Service..... 24-4,9
Freeboard..... 9-4a
10-2a
13-5
Freedom of Information Act..... 5-14
B-95,129
Future Power Provisions..... 16-8
B-32,58
Future Recreation Provisions..... 17-3d and f
Future Water Supply Provisions..... 10-1d(4)
B-79,111
Gambling..... 17-6e
GEneral Design Memorandums (GDMs)..... 9-1a(4)
General Navigation Features (GNF)..... 6-4a
10-4b
12-6
General Services Administration (GSA)..... 11-10
Government Structures..... B-79,94

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Green Book	2-3a
Groundwater	13-9d
	18-2f
	B-165
Harbor Lines	B-8,10
High Seas Demarcation Lines	B-149
Hired Labor	10-6c
Historical Preservation	3-4
	5-7c(2)(g)
	21-3e
	24-18
	B-82,97,126
	B-152,165
Housing of Project Personnel	10-9
HQUSACE	4-2a,4
Hurricane Protection	14-3
	B-79
Hurricane Studies	B-75
Hydroelectric Power	16
	24-12
	B-42,63
Hydroelectric Power Fund, Alaska	B-136
Hydrologic Engineering Center (HEC)	4-2e(1)
	23-6a
Ice Control	B-165
Inactive Projects	8-4a(3)
Indian Affairs	1-2d
	21-3e
Indian Sacred Sites	3-12
Inland Waterways	6-4b
	10-3a(2)
	12-4,6
Inland Waterway Trust Fund	12-12b
	B-145,165
Inspection of Local Protection Projects	11-2c
Issue Resolution Conferences (IRCs)	4-4a
	5-2a(3)
Institute of Water Resources	4-2e(1)
	23-7a
Intensification Benefits	13-14b
Interagency Agreements	2-2f
	E
Interdisciplinary Planning	5-6d(1)
Interest Rate	5-7f(3)
	B-123
Intergovernmental Cooperation Act	22-2
	B-103
International Boundary and Water Commission (IBWC)	2-2e(2)
International Joint Commission (IJC)	2-2e(1)
International Streams	1-2d
Interstate Compacts	1-2g
	2-4b
	4-3
	B-31
Irrigation	6-8
	18-2e and i
	B-24,63,165
Joint Costs	5-11

Subject/Keyword(s) Ch. No./App. Ltr. - Para. No.

Joint Studies of Watersheds..... B-87
Land Acquisition..... 5-7c(2)(h)
B-83,109,165
Land and Water Conservation Fund..... 24-5
B-91
Land Disposal..... 10-11
Land Enhancement..... 12-21b
Land Exchanges..... B-57
Lands, Entitlement Payments to Local Governments..... B-135
Lands, Forest Service..... 24-9
Lands for Recreation..... 10-3a(3)
B-92
Lands for Fish and Wildlife Mitigation..... 6-13
19-3
Lands for Flood Control Projects..... 6-5
10-2,3
Lands for Navigation Projects..... 6-4
Lands for Hurricane and Storm Damage Reduction
Projects..... 6-10
10-3a(2)
B-170
Lands for Port Developments..... 11-10f
12-9,10
B-83
Lands for Recreational Developments..... 6-9
Lands for Reservoirs..... 10-2
Lands for Shore Protection Projects..... 10-3a(1)
Law Enforcement..... 11-1g
B-136
Leases of Project Lands..... B-62,66,86
Legislative Landmarks (Corps Civil Works)..... 2-1c
Legislative Phase I Studies..... 5-2b
7-1a(2),3c
Letters of Intent..... 5-12a
17-1b(1),3
Levees and Floodwalls..... 13-6c
Life Cycle Project Managers..... 4-4b
5-6d(1)
Local Cooperation..... 1-4
5-12
10-1,13
11-2g
12-6
13-8,10
Local Cooperation for Beach Erosion Control..... 14-6
Local Cooperation for Flood Control..... 13-8,10
B-53,58,62
Local Cooperation for Navigation..... 12-6
Local Cooperation for Streambank Protection..... 15-3c
Local Cooperation, Use of Other Federal Funds..... 10-1e
Local Interests, Transfer of Projects to..... 10-12
Local Protection Projects..... 11-2c
13-10
Locally Preferred Plans..... 3-1f
5-9b
B-165
Location Benefits..... 13-14b
Lock and Dam Replacements..... 12-24

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	B-27
Lock Statistics	12-12b
Maintenance of Flood Control Projects	11-2b,c and d
Maintenance of Navigation Projects	11-2a,13 12-1f,23 B-100,116,123
Maintenance of Shore Protection Projects	11-2e 14-1c
Major Rehabilitation Program	11-3
Marine Sanctuaries	21-2f, 3e,3h,4c 24-12b(3) B-118,160
Marketing Corps-Produced Power	16-5
Mineral Rights	5-7c(2)(h) 10-2b
Minimum Facilities, Recreation	17-3 B-92
Minimum, Low-Flow Releases	16-8c
Mississippi River Commission (MRC)	4-2d(3) B-13,43
Mississippi River and Tributaries (MR&T)	11-2d B-47
Mitigation Banks for Corps Civil Works Projects	3-18
Mitigation, Cultural Resources	3-4
Mitigation, Fish and Wildlife	5-7c(2),7f(3) 6-13 19-20,21
Mitigation of Damages from Project Construction and Operation	6-1c 11-8 B-66
Mitigation of Shore Damages due to Navigation Projects	2-1b 12-25 B-100,165
Mitigation, Power Plant Releases	16-8b
Mobilization	3-11
Modification of Projects	18-2
Mud Slides	B-104
Multiple Use	12-7c
National Economic Development (NED)	2-3a and b 5-6,7 12-1,3,22
National Dam Safety Act	B-114
National Environmental Policy Act (NEPA)	2-1d(5),2d,4c 3-2,7 7-1b and c,2c 24-2,13 B-105
National Estuary Program	24-22 B-166
National Flood Insurance Program	13-10a and d 13-13
National Historic Preservation Act	B-97,152
National Marine Fisheries Service	19-17,18a,b, and c 21-3c

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	23-8b
	24-11
National Park Service (NPS)	3-4
	9-10a
	24-4,5,20
National Weather Service	11-10b
	13-4c
	24-23
National Recreation Areas	24-8
National Resources Conservation Service (NRCS)	2-3b
	24-8b
	24-3,13,14
National Trails System	24-10
	B-102
National Wild and Scenic Rivers System	24-4
Native American Tibal Governments	2-2e(4)
Naming Projects	5-1b
Navigable Waters of the U.S	1-2a
	12-2
	21-4
Navigation	12
	21-3n
	B-5,109,123
Navigation Channels	9-4b
Navigation Projects, Condition Surveys	12-19
Navigation Projects, Induced Shore Damages	12-25
	B-100,165
Navigation Servitude	1-3
	10-4b(5)
	11-8
	12-1c
NED Benefits	5-7d
	12-3,4,
	13-14
NED Plan	5-7f(1)
Net Benefits	5-7f
	12-3e
New Starts	8-3
Non-Corps Reservoirs	B-63
Non-Federal Hydropower at Corps Sites	16-9
	24-12b
Non-Federal Hydropower Sites	16-10
Nonstructural Measures for Flood Control	2-1d(3)
	6-5b
	10-3d(1)
	13-3b,7,10
	17-3a
	B-123
Nonstructural R&D	23-6f
Notice of Intent	3-2a
OCE	4-2a
Ocean Dumping	12-21c
	21-2f
	B-118,124
Office of Management and Budget (OMB)	2-2b
	5-6c,13b
	7-2
	8-1,2b(1),3

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	9-3a
	11-1
	12-13a
	14-1c(1)
	22-3a
	23-7a
	C-12,32
OMB Budget Circulars	3-9
	22-5
	D
Off-Road Vehicles	17-6b(2)
	C-10,21
Operations, Maintenance and Replacement	5-7c(2)(i)
	8-2c(1)(c)
	11
Operations and Maintenance Costs for Water Supply	18-2b
Operations and Maintenance Manual	10-12
Operations and Maintenance of Mitigation Features	19-21c
Operations and Maintenance of Recreation Faci1ities	17-5b
Opportunity Cost	5-7c
Opposition of a State	3-3
Other Social Effects (OSE)	2-3b
	5-6a(4)
Overdepth Dredging	12-23
Payment, Local Cooperation	5-12d
Performance Measurement System	12-13c
Periodic Letters	4-1c
Periodic Beach Nourishment	11-2e
	14-1d
	B-77,136,165
Period of Analysis	5-7a
Permits	3-5
	12-11c
	21-2
	24-18
	B-22,116,
	118,119
	B-136,139,166
Pest Management, Pesticide Control	11-2a(4),11
	B-117
Planning Assistance to States	5-4
	B-123,136,153
Planning, Cost Sharing for	5-2a(2)
	12-26a
Planning, Engineering and Design	5-2e
Planning Guidance Notebook	5-5
Planning Studies	5
	12-26a
Planning Reports	7
Policies, Corps	12-26a
Ports and Waterways Facilities	12-12c
Port Series	B-39
Post Authorization Change (PAC) Notification Report	9-3
Preauthorization Studies and Reports	5-12a
	7-1,2
	12-26a
	16-9
Preconstruction Engineering and Design (PED)	5-3

Subject/Keyword(s) Ch. No./App. Ltr. - Para. No.

7-4
9
12-5b
Price Level..... 5-7b
Prime Farmland..... 24-13
Principles and Guidelines (P&G)..... 2-3b
5-5,6,11d
7-1b and c
12-1,3
Principles and Standards..... 2-3a
Private Beaches, Protection of..... 14-1c(2)
Private Faci1ities, Navigation Access to..... 12-1b,7
Private Use of Project Lands..... 11-1n,9
17-6c
B-154,165
Probable Maximum Flood (PMF)..... 13-4d
Programming, Budgeting and Appropriations..... 8
Progressive Development..... 12-7d
Project Authorization..... 7-3
B-43
Project Authorization Expiration..... 7-5b(1)and 2
B-62
Project Classification..... 8-4
Project Cooperation Agreement (PCA)..... 5-12
8-5b
10-1c
11-2b(1)
Project Construction by Others..... 5-12d
8-6
12-26
13-12
Project Cost Estimate Increases..... B-165,170
Project Deauthorization 3-3b
5-12b
7-5b
B-123,165,170
Project Housing..... 10-9
Project Lands, Disposal of..... 10-11
11-10
Project Lands for Port Development..... 12-10
Project Lands, Leases for Other Use..... 11-1,9
Project Life..... 5-7a
Project Management..... 11-1
B-158,163
Project Managers (PMs)..... 4-4b
Project Modifications..... 9-3
B-165
Project Names..... 5-1b
Project Recommendations..... 5-13
7-1b
Public Access..... 11-1
Publications..... 5-15
B-78
Public Interest Review..... 21-3a
Public Law 84-99..... 11-2b(2)
13-15
14-8b
18-5a

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	B-76
Public Law 89-72	17-1b
	B-92
Public Law 566 Program	24-3
	B-74
	C-1
Public Notice	7-2c
Public Participation	3-1e
	5-6d(2)
Public Ports	12-10
	B-83
Public Terminal	12-6
	B-38
Public Use of Beaches	14-1b(2)
Public Use of Project Lands	11-9
Public Works Committees	2-1a and b
	5-1
	7-3
Pumped Storage Power	16-6
Railroad Bridges	10-4a(2),b(1)
Real Estate Acquisition	10-2,3
	24-20,21
	B-83,109
	C-37
Real Estate Disposal	10-11
	11-10
	12-10
	C-37
Reclamation Acts	1-2b
	25-7
	B-24,59,155
Reconnaissance Phase of Study	5-2
	7-1c
	16-9a
Reconnaissance Report	21-1a,2a
Record of Decision (ROD)	3-2b
	7-2c
Recreation	10-1c and d(1)
	11-1e,7
	14-2
	17
	21-2e
	24-5
	B-63,86,92
Recreational Navigation	6-4c
	12-6
	B-49
Recreation Developments, Completed Projects	17-3d
Recreation Developments, Non-Reservoir Projects	17-3a
	B-88
Recreation Developments, Nonstructural Projects	17-3a
Recreation Developments, Shore Protection Projects	17-3b
Recreation, National Areas	24-8
Recreation on Forest Service Lands	24-9
Regional Commissions	4-3
Regional Economic Development (RED)	2-1d(4),3
	5-6a(4)(c)
	12-3d

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	B-109,136
Register of Historic Places	B-152
Regulation of Flood Plains	13-2,3b,7,10d
Regulation of Non-Corps Reservoirs	B-63
Regulatory Program	2-4d
	3-5
	21
	B-22,25,73
	B-116,140
Reimbursement by Non-Federal Interests	17-5c
	18-2a and d
	B-123
Reimbursement for Work of Others	8-6
	12-1f,26
	B-100,165
Release of Information on Corps Studies	5-14
Relocations	5-7c(2)(f)
	6-4a
	10-1c,2d,4
	12-6
	13-10
Relocations Assistance	5-7c(2)(f)
	10-1c,3c
	B-110,167
Relocations of Bridges	10-4
Relocations of Cemetaries	10-2d(2)
Relocations of Towns	10-2d(3)
Relocations of Utilities	10-4a(3),b(3)
Relocations Services of Owners	9-10b
Relocations Special Authority	10-10
	B-79,94
Removal of Facilities	10-4a(4),b(4)
Rental Receipts	11-1
Report Assignments	7-2a
Report Recommendations	5-13
Report Review	7-2
Reports Reviewed by Local Entities	C-33
Reports Reviewed by OMB	5-13b
	7-2e
Reports, Sales of	5-15
Research and Development (R&D),Civil Works	23
Reservoir Clearing	10-7
Reservoir Lands	10-2
Reservoir Releases	9-6
	13-6a
	16-8
	B-170
Reservoir Salvage Act	3-4
	B-82
Reservoir Water Supply Storage	18-2
Reservoirs	13-6a
Reservoirs, Changes in Water Control Plans	11-7
	16-8
	17-3e
Reservoirs, Non-Corps	13-16
Restrictive Interest, Use	12-7
	14-1c(2)
	B-63

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Retaining Works	10-8
	11-2a(4)
	12-6
Risk and Uncertainty	5-7e
River Basin Commissions	2-2c
	4-3
	B-93
	C-31
Road Relocation Standards	10-2d(1)
	B-88,123
Road Rights-of-Ways	B-57
Roads Across Public Works	B-133
Roads Used for Access	B-88,131
Roads Used for Construction	B-83
St. Lawrence Seaway	12-12d
Sale of Corps Publications	5-15
	12-18
	B-79
Seaplane Operations	11-1m
Section 22, Planning Assistance to States (P.L. 93-251)	5-4
Section 3 Projects	6-4d
	11-2a(3)
	B-64,165
Section 14 Projects	2-1b
	11-2b(3)
	14-8a
	15-3
	B-66,123,165
Section 103 Projects	2-1b
	B-88,109,165
Section 107 Projects	2-1b
	B-83,109
	B-136,165
Section 111 Projects	2-1b
	12-25
	B-100,165
Section 205 Projects	2-1b
	B-70,123,136
	B-154,165
Section 208 Projects	2-1b
	B-56,123,165
Section 201, 1965 Flood Control Act	2-1b
	7-3b
	B-94,136
Section 215, 1968 Flood Control Act	8-6
	26-100,165,170
Section 216, 1970 Flood Control Act	5-2d
	16-9c
	B-109
Section 216 Reports	7-1a(3),(4)
Section 221, 1970 River and Harbor Act	10-1
	B-109,111,165
Sensitivity Analysis	5-7e
	12-3f
Separable Costs-Remaining Benefits	5-11
	16-3

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	17-5a
	C-3
Separable Elements	6-3
Sewage Treatment Plants	11-1j
	B-123
Sharing Responsibility	1-4,5
	B-63
Shore Damages Induced by Navigation Projects	12-24
	B-100,165
Shore Damages	14-1b
Shore Protection Projects	11-2e
Single Purpose Water Supply	18-2g
Single User	12-7
	13-11
Small Beach Erosion Control Projects	2-1b
Small Business	10-6d
Small Flood Control Projects	2-1b
Small Navigation Projects	2-1b
Small Reclamation Projects	24-7
Snagging and Clearing for Flood Control	2-1b
	B-56
Snagging and Clearing for Navigation	2-1b
	B-64
Social Effects	2-1d(4),3
Soil Erosion Control of Project Lands	11-1k
Southeastern Power Administration	16-5
Southwestern Power Administration	16-5
Standard Project Flood (SPF)	13-4b
State and Agency Review	7-2d
State Participation in Studies	5-6d(3)
Streambank Erosion Control	15
	B-123
Streambank Protection	2-1b
	11-2b(3)
	14-8a
	15-3
Streamflow Measurements	B-29
Streamflow Regulation	18-3b,4c
	B-116
Structural Flood Control Measures	13-3b,6
Study Deauthorization	5-1c
	7-5a
Subsistence Fishing	12-4b
Substitute Facilities	10-2d(1)
Superfund Program	24-15
	C-38
Support for Others	22
Surface Mining Control Act	B-138
Surplus Water	18-2d
	B-63
Survey Reports, Contents of	B-27,33,35,41
	B-52,165
Survey Studies and Reports	5-2a(1)
	7-1a(1)
	8-2c(1)(a)
	B-66
Swampbuster Act	24-14
	B-162

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Systems Analysis	12-3g
Technical Assistance	13-2a 14-7 15-5 24-6 B-123,165
Technical Managers (TMs)	4-4b
Tennessee Valley Authority (TVA)	2-3b 11-10 23-10b B-46 D-13c
Trails	17-6b 24-10 B-102
Transfer of Projects to Local Interests	10-12
Treasury, U.S	5-7f(3) 6-6,8 16-3 17-5d
Truman-Hobbs Act	10-4b B-61,96
Two Phase Authorization	B-123
Two Phases of Planning	5-6c 7-1c
Unemployed or Underemployed Labor Resources	5-7d(2)
Unique Farmland	24-13
Unit-Day Recreational Values	17-4b
Urban Drainage	13-9c B-165
Urban Studies	13-7
User Charges and Fees, Navigation	12-12 B-165
User Charges and Fees, Recreation	14-1b(2) 17-1b(5),5d B-91,92,100 B-113,120,127 C-3
Utility Relocations	10-4a(3),b(3) 12-6 B-165
Utility Relocations for Navigation	6-4a
Value Engineering	9-8
Vessel Data	12-12a
Visitor Centers	11-1b
Volunteers	B-158,163
Washington Level Review	7-2c
Waterborne Commerce	12-3a
Waterborne Commerce Information Release	12-12a,B-165
Waterborne Commerce Non-Compliance: Penalties	12-12a,B-165
Waterborne Commerce Statistics	12-12a B-18,30,43
Waterborne Commerce Statistics Center	4-2e(1)
Water Control Plans	18-3b,5c and d
Water Quality	3-5 9-5

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
	11-7
	18
	21-3d
	B-69,72,85,116
Water Quality Certificate	3-5b
	10-5
	12-21a
Water Quality Storage	B-85,116,123
Water Resource Council (WRC)	2-2c,3a
	4-3
	13-2c
	B-93
	C-12,32
Water Resources Development Act (WRDA) of 1986	2-1c
	6-2 thru 19
	B-165
Water Resources Support Center	4-2e(1)
Water Rights	5-7c(2)(h)
	18-4
Water Supply	10-1c
	18
	21-3l
	B-63,79,115,165
Water Supply, Emergency	13-15a
	18-5a
	B-123,137
	E-2a
Water Supply, Future	10-1d(3)
	18-2a
Water Supply Storage	B-79,89
Watershed Joint Studies	B-87
Watershed Perspective	3-20
Watershed Protection	24-3
	B-74
Waterways Experiment Station (WES)	4-2e(2)
	11-14
	20-1c
Waterway User Charges and Fees	12-12
Well-Being of People	2-1d(4)
	B-109
Western Area Power Administration	16-5,10
Wetland Conservation, Protection	3-7
	19-10,11,12,13
	21-3b
Wetlands Creation	2-1d(2)
	10-8
	19-14,15
	B-136
Widening of Bends	9-4b
	12-20a
	B-34
Wild and Scenic Rivers	B-101
Windfall Benefits	5-12d
	13-10c(1)
With-and-Without Analysis	3-1b
	5-6a(2)
	13-14
Work-in-kind	5-12d

Subject/Keyword(s)	Ch. No./App. Ltr. - Para. No.
Work for Others	14-1c(1) 22 23-8 24-1,20,21 B-94
Wrecks, Abandoned	24-18
Wrecks, Removal of	12-17 B-22,165

Comments on this pamphlet are welcome. Particularly desired are suggestions about how it might be made more useful, informative and readable. Please address comments to:

Chief, Policy Division
(Attn: CECW-A)
Directorate of Civil Works
HQ, U.S. Army Corps of Engineers
20 Massachusetts Avenue, NW.
Washington, D.C. 20314-1000

(202) 761-0847